



# **PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE**

**112<sup>th</sup> Report to Parliament**

## **Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects**

**December 2012**

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**Parliament of Victoria  
Public Accounts and Estimates Committee**

**Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects**

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# DUTIES OF THE COMMITTEE

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The Public Accounts and Estimates Committee is a joint parliamentary committee constituted under the *Parliamentary Committees Act 2003*.

The Committee comprises seven members of Parliament drawn from both Houses of Parliament.

The Committee carries out investigations and reports to Parliament on matters associated with the financial management of the State. Its functions under the Act are to inquire into, consider and report to the Parliament on:

- any proposal, matter or thing concerned with public administration or public sector finances;
- the annual estimates or receipts and payments and other budget papers and any supplementary estimates of receipts or payments presented to the Assembly and the Council; and
- any proposal, matter or thing that is relevant to its functions and has been referred to the Committee by resolution of the Council or the Assembly or by order of the Governor in Council published in the Government Gazette.

The Committee also has a number of statutory responsibilities in relation to the Office of the Auditor-General. The Committee is required to:

- recommend the appointment of the Auditor-General and the independent performance and financial auditors to review the Victorian Auditor-General's Office;
- consider the budget estimates for the Victorian Auditor-General's Office;
- review the Auditor-General's draft annual plan and, if necessary, provide comments on the plan to the Auditor-General prior to its finalisation and tabling in Parliament;
- have a consultative role in determining the objectives and scope of performance audits by the Auditor-General and identifying any other particular issues that need to be addressed;
- have a consultative role in determining performance audit priorities; and
- exempt, if ever deemed necessary, the Auditor-General from legislative requirements applicable to government agencies on staff employment conditions and financial reporting practices.



# TERMS OF REFERENCE

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57<sup>th</sup> Parliament

Received from the Legislative Assembly on 5 May 2011

## **Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects**

That under s 33 of the Parliamentary Committees Act 2003, an inquiry be referred to the Public Accounts and Estimates Committee for consideration and report no later than 14 December 2012 on:

- (a) the competencies and skills that public sector managers require for the effective evaluation, decision making and oversight of significant infrastructure projects and protection of the public interest;
- (b) the extent to which Government policies such as the National Public Private Partnership Policy and Guidelines and the Partnerships Victoria Requirements specify these requisite competencies and skills, and support the Department of Treasury and Finance's application of these across the public sector;
- (c) strategies in place within the public sector for the development of such requisite competencies and skills and for their ongoing refinement and enhancement through knowledge-building from the sharing of best practice examples and guidance in the public sector;
- (d) whether particular significant infrastructure projects have been developed and implemented in a manner which aligns with the public interest and maximises transparency and accountability for the life-cycle of the project;
- (e) relevant infrastructure delivery strategies and practices, including in public-private partnerships, in relation to enhancing public sector expertise in place in other Australasian jurisdictions and relevant jurisdictions outside Australia; and
- (f) the merits of centralisation versus decentralisation of available skilled experts in the Victorian public sector during the life-cycle stages of public-private partnership projects, including considering any benefits that may be derived from greater flexibility to contract specialist services from external sources.



# ACRONYMS AND ABBREVIATIONS

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ALT	Alliance Leadership Team
AMT	Alliance Management Team
ANAO	Australian National Audit Office
AQF	Australian Qualifications Framework
BER	Building the Education Revolution
CAPM	Capital Asset Pricing Model(ing)
CCAP	Construction Contracts Advisory Panel
CHP	Children’s Health Partnership
COAG	Council of Australian Governments
D&C	Design and Construct
DBI	Department of Business and Innovation
DHS	Department of Human Services
DIIRD	Department of Innovation, Industry and Regional Development (former)
DIT	Department of Infrastructure and Transport (Commonwealth)
DOH	Department of Health
DOJ	Department of Justice
DOT	Department of Transport
DPC	Department of Premier and Cabinet
DPCD	Department of Planning and Community Development
DPI	Department of Primary Industries
DSE	Department of Sustainability and Environment
DTF	Department of Treasury and Finance
EA	Engineer's Australia
GL	gigalitres
HVHR	High-Value and High-Risk
ICE	Institution of Civil Engineers (UK)
ICT	Information and Communication Technology

IUK	Infrastructure UK
IWG	Infrastructure Working Group
Kamco	Keane Australia Micropayment Consortium
KPI	Key Performance Indicator
MCCD	Melbourne Convention Centre Development
MCET	Melbourne Convention and Exhibition Trust
MMA	Melbourne Market Authority
MMRP	Melbourne (Wholesale) Market Relocation Project
MOU	Memorandum of Understanding
MPA	Major Projects Authority (UK)
MPV	Major Projects Victoria
National PPP Guidelines	<i>National Public Private Partnership Policy and Guidelines</i>
NeHTA	National E-Health Transition Authority
NOP	Non-Owner Participant
NTS	New Ticketing System
OECD	Organisation for Economic Co-operation and Development
OHIS	Office of Health Information Services
OSP	Office of Strategic Projects (Western Australia)
P3	Public-Private Partnership (Canada)
PAA	Project Alliance Agreement
PCG	Project Control Group
PFI	Private Finance Initiative
PPP	Public Private Partnership
PRINCE2	PRojects IN Controlled Environments 2
PSC	Public Sector Comparator
PV	Partnerships Victoria
PWC	Public Works Committee (South Australia)
RCH	Royal Children's Hospital



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RFP	Request for Proposal
RFT	Request for Tender
RVEEH	Royal Victorian Eye and Ear Hospital
SMART (Infrastructure Facility)	Simulation, Modelling, Analysis, Research and Teaching Facility
SSA	State Services Authority
TeCaP	Technical Competency Assessment Program
TfL	Transport for London (UK)
TOC	Target Outrun Cost
TTA	Transport Ticketing Authority
VAGO	Victorian Auditor-General's Office
VDP	Victorian Desalination Plant
VfM	Value-for-Money
VPSECF	Victorian Public Sector Employment Capability Framework
WAPAC	Western Australian Public Accounts Committee



# CHAIRMAN'S FOREWORD

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Infrastructure expenditure matters. Large sums of public money are allocated to significant infrastructure projects each year. The Victorian Budget Papers for 2012-2013 refer to \$5.8 billion of infrastructure investment including \$2.7 billion of new projects. Overall, in 2012-13 there will be \$41 billion in public sector capital projects including public private partnerships underway in Victoria.

If delivered well, infrastructure can enhance services to the public and improve the productivity of the State. If delivered poorly, potential benefits are not fully realised and significant additional cost can accrue to the taxpayer.

On 5 May 2011, the Committee was requested by the Victorian Parliament's Legislative Assembly to conduct an *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects*. The Inquiry's terms of reference focus on the competencies and skills required to successfully deliver major infrastructure projects but are also broad ranging in terms of infrastructure project management generally.

Drawing on the terms of reference, the Committee established the following two main aims for the Inquiry:

- to explore innovative strategies for identifying and harnessing infrastructure competencies and skills; and
- to promote best practices and continuous improvement in the planning, management and delivery of significant infrastructure projects.

The Committee sought to draw on the specialised knowledge, experience and skills of public sector agencies, private sector organisations and academia.

In addition, the Committee examined six of the State's more recent major infrastructure projects to identify lessons to inform the decision-making and implementation of future infrastructure projects. The specific projects selected for review were all commenced under the previous Government and in some cases, the current Government is endeavouring to complete them. Projects were examined against the criteria of alignment with the public interest and maximising transparency and accountability. Positive performance was noted in relation to some of the projects reviewed, however, the Committee's examination also highlighted that there were areas of poor performance on a number of projects.

The Committee also heard testimony from both the Auditor-General and the Ombudsman about some other instances of major infrastructure projects being poorly managed in Victoria. Their concerns have been expressed in a number of previous reports to the Parliament.

Evidence presented to the Committee suggests that there are strengths in Victoria's current system, particularly in relation to the quality of the State's published infrastructure policies and guidelines. However, the Inquiry also identified a number of areas where improvements are needed. The Committee's recommendations are designed to address these areas and strengthen decision-making and performance in future infrastructure projects.

Victoria is not alone in facing a number of these problems. The Committee heard evidence that other jurisdictions, within Australia and overseas, have also experienced difficulties with cost overruns and project delays.

The Committee has identified reforms in a number of these jurisdictions which it considers Victoria can learn from. One of the issues which has been brought to the attention of the Committee, and has been the subject of significant international research, is the impact of

optimism bias and strategic misrepresentation in the planning of major projects resulting in advice to decision-makers that is not objective and impartial.

It is considered that methods, such as reference class forecasting which uses similar projects as benchmarks, could assist in addressing the issue of overly optimistic and/or deliberately unrealistic project cost and delivery timeframes.

Other reforms noted by the Committee include the centralisation of key public infrastructure planning and procurement functions into dedicated, independent bodies, at arms-length from departmental structures, including central treasury.

The Committee's recommendations have, in part, been based on these better-practice reforms.

As a result of this Inquiry, the Committee has concluded that the structure of Victoria's public services needs to be changed in the infrastructure planning and delivery areas. The Committee considers that these changes will assist Victoria to more successfully deliver significant infrastructure projects in the future and to maintain the confidence of the Parliament, community and industry that Victoria is, and will continue to be, at the forefront in the planning and delivery of significant public infrastructure projects.

It should be noted that the Victorian Government also made an extensive submission in 2012 to Infrastructure Australia which outlined a number of longer-term infrastructure projects including the proposed East West Tunnel. The submission also stated that to properly plan for Victoria's future infrastructure requirements Victoria is developing long-term planning frameworks including the Metropolitan Planning Strategy, Regional Growth Plans, and the Victorian Freight and Logistics Plan. The committee considers that the Government should formalise these and other policies and plans into a regularly updated future pipeline of major projects.

The major changes recommended by the Committee include:

- a new advisory body to recommend priorities for infrastructure investment in Victoria, subject to confirmation by the Government, depending on available funding, including a formalised, 'pipeline' of future projects;
- a new body to be a centre of excellence for project development and delivery with overall responsibility for ensuring that Victoria has the necessary expertise and capability to deliver major infrastructure projects successfully. The transfer of appropriate experts and functions from some agencies to this new body will be necessary; and
- a strengthening of the oversight and accountability mechanisms, especially around the delivery of significant infrastructure projects.

The Committee wishes to express its appreciation for the attention that has been given by all parties in the furnishing of submissions, the provision of evidence at public hearings and in written responses to questionnaires from the Committee.

I wish to thank my colleagues on the Committee for their bi-partisan and collegiate approach, exemplified on this Inquiry. In particular I wish to thank the Committee's Secretariat, most capably led by the Executive Officer, Valerie Cheong, for its dedication in assisting the Committee on a multiplicity of activities associated with this Inquiry.



**Philip R. Davis MP**  
**Chairman**

# FINDINGS AND RECOMMENDATIONS OF THE COMMITTEE

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## CHAPTER 2 Recommended Future Directions for Victoria's Infrastructure Planning and Delivery

### 2.2 Where to from here?

**RECOMMENDATION 1:** The Government establish a new advisory body, the Victorian Infrastructure Council, with the roles and responsibilities set out in Section 2.2.1 of this Report. *page 11*

**RECOMMENDATION 2:** The Government establish a new body, the Victorian Infrastructure and Skills Authority, with the roles and responsibilities set out in Section 2.2.2 of this Report. *page 12*

**RECOMMENDATION 3:** The Victorian Infrastructure and Skills Authority work towards improving the level of detail about the required competencies and skills to deliver infrastructure projects in Victorian guidance materials. The Authority should take the Australian Qualifications Framework as a model for the appropriate level of detail. *page 13*

**RECOMMENDATION 4:** The Victorian Infrastructure and Skills Authority work towards more wide-spread use of project management frameworks by constructing agencies. To facilitate this, the Authority should identify and disseminate existing frameworks that are best suited to being models for other entities. *page 13*

**RECOMMENDATION 5:** The Victorian Infrastructure and Skills Authority review the centrally facilitated training to identify areas where it might be usefully expanded. As part of this process, the Authority should conduct a formal survey of constructing departments and agencies. The Authority should also consider the merits of partnering with tertiary institutes to develop project leadership and project management courses that could be available to all departments and agencies. *page 14*

**RECOMMENDATION 6:** The Victorian Infrastructure and Skills Authority be established with a board of non-executive directors with proven, relevant expertise. *page 14*

**RECOMMENDATION 7:** A Parliamentary Committee be given responsibility for oversight of the Victorian Infrastructure and Skills Authority. *page 15*

**RECOMMENDATION 8:** The Department of Treasury and Finance's role overseeing expenditure (including the High-Value and High-Risk Framework) be supplemented by the Victorian Infrastructure and Skills Authority having responsibility for ensuring that departments and agencies are following best practice when they deliver infrastructure projects and that projects are being delivered efficiently and effectively. *page 16*

**RECOMMENDATION 9:** The Victorian Infrastructure and Skills Authority develop performance measures that detail its effectiveness and the value it adds. These measures should be reported on annually. *page 16*

**RECOMMENDATION 10:** The Victorian Infrastructure and Skills Authority progressively publish non-commercial information about all major projects (except where there are commercial sensitivities or risk to the project). *page 16*

## 2.3 Further reasons for change

**FINDING:** The Committee has noted disappointing performance on some major infrastructure projects as have the Auditor-General and the Victorian Ombudsman. *page 18*

**FINDING:** The Government introduced the High-Value and High-Risk Framework in 2011 to provide greater scrutiny over projects classified as high-value or high-risk. However, this represents only a minority of projects. The Committee has recommended that the Victorian Infrastructure and Skills Authority have overall responsibility for ensuring that all projects are following best practice guidelines. *page 20*

**FINDING:** The Department of Treasury and Finance informed the Committee of Victoria's reputation for the high quality of its infrastructure policies and guidelines. The Committee has noted scope for improvements to these guidelines in detailing required competencies and skills. *page 22*

**FINDING:** Under current arrangements, there is no central responsibility for ensuring that best-practice guidance is followed. The Committee has identified a number of cases of it not being followed. The Committee has recommended increased oversight to reduce this. *page 22*

**FINDING:** The Auditor-General recently reported on serious problems with Major Projects Victoria's performance. The Committee considers that stronger governance needs to be in place around any agency with such significant responsibilities. Given the current problems with Major Projects Victoria, the Committee believes that it should be replaced by a new body with stronger oversight and reporting requirements. *page 23*

**RECOMMENDATION 11:** Major Projects Victoria's functions are to be incorporated into the new Victorian Infrastructure and Skills Authority. *page 23*

**FINDING:** Concerns have been raised about role confusion with respect to the Department of Treasury and Finance, which is responsible for both assisting with project proposals and assessing those proposals on behalf of Government. The new structure recommended by the Committee would separate these roles, with the Department of Treasury and Finance focused on advice to Government and assurance roles. *page 24*

**FINDING:** The Committee has been informed that required competencies and skills have not been present in some major infrastructure projects. The lack of central responsibility for identifying required competencies and skills and monitoring whether or not they are present may be a factor contributing to this. The Committee's recommended structure makes the Victorian Infrastructure and Skills Authority explicitly responsible for ensuring the required competencies and skills are present in the public sector and on project teams for major projects. *page 25*

**FINDING:** An anticipated advantage of establishing the Victorian Infrastructure and Skills Authority is that it would have a better capacity than most agencies to retain staff, as it would have a constant flow of projects. The Victorian Infrastructure and Skills Authority would also need the ability to provide appropriate levels of remuneration to attract and retain experienced and skilled staff. *page 26*

**FINDING:** A transfer of appropriate experts in infrastructure development, procurement and delivery from the Department of Treasury and Finance, Major Projects Victoria and the Department of Planning and Community Development to the Victorian Infrastructure and Skills Authority as a centre of excellence would enhance Victoria's capacity as an informed buyer. Being an informed buyer provides a number of benefits in project procurement and delivery. The Committee has recommended the establishment of the Victorian Infrastructure and Skills Authority as a centre of excellence in part to ensure that the Victorian public sector can have that informed buyer status. *page 26*

## 2.4 Contemporary better practice informing the Committee’s recommendations

**FINDING:** The Committee has identified reforms in a number of other jurisdictions which it considers offer lessons for Victoria. These reforms generally include centralisation of infrastructure planning and procurement into dedicated, independent bodies. The Committee’s recommendations have, in part, been based on these better-practice reforms. *page 28*

## CHAPTER 3 Term of Reference (a) – Requisite Competencies and Skills for Infrastructure Management

### 3.2 Responsibility for strategic policy and management of infrastructure skills across the public sector

**FINDING:** Notwithstanding the involvement of numerous participants, no organisation has prime and dedicated responsibility for macro policy and the strategic management of Victoria’s infrastructure capability. This position means there is an unstructured approach to key strategic functions involving:

- the monitoring and assessment of emerging national and international trends, including contemporary industry directions, on best practice for identifying and developing critical infrastructure competencies and skills;
- management of the Government’s infrastructure talent pool, including strategies for addressing identified crucial skill shortages and inefficient duplications across the public sector;
- provision of specialist advice and guidance to agencies on infrastructure skills; and
- preparation of leading edge skills matrices for all categories of procurement models utilised in Victoria and all key phases of the life-cycle of projects within those categories. *page 32*

**FINDING:** The absence of such a vital state-wide coordinating function on infrastructure skills represents a serious shortcoming in Victoria’s existing practices. *page 32*

**FINDING:** Existing practices within Victoria on infrastructure skills management are informal in nature. They do not give assurance to the Committee that decisions on skills taken by numerous parties across the public sector optimise deployment of the Government’s infrastructure talent and maximise value-for-money. *page 34*

**FINDING:** The Government should move to strengthen the strategic management of its infrastructure capability and the quality of its decision-making on public sector-wide infrastructure skills. Assignment of such responsibility to a dedicated independent body would be an effective means of realising these aims. *page 34*



### 3.3 Best practice public sector skills and competencies in major infrastructure projects

**FINDING:** The approach used by Evans & Peck in articulating best practice infrastructure competencies and skills provides a useful indicative framework for the Government to pursue further research. Such research should be aimed at creating a sustainable basis to support the reaching of optimal decisions across the public sector on the calibre and composition of project teams. *page 51*

**FINDING:** This strengthened decision-making should, in turn, make a significant contribution to achieving more reliable performance of major infrastructure projects against time and cost benchmarks and in successfully generating planned community benefits. *page 51*

**FINDING:** In furthering the work of Evans & Peck on minimum best practice skills, the Government should identify those additional skills that are particularly critical to effective delivery of projects under different procurement models and at different stages of projects under those models. These additional skills could be separately recorded in a best practice infrastructure skills register and cross-referenced to the published policies and guidelines for those procurement models. *page 51*

**FINDING:** Specific attention should also be directed by the Government to the formulation of the professional and personal qualities and behaviours, including attributes and attitudes, needed by project personnel to support the effective application of core competencies and skills. Work in this area should explore innovative strategies for articulating the full set of qualities and behaviours vital to upholding of the public interest throughout all phases of major infrastructure projects. *page 51*

**FINDING:** The further research advocated by the Committee would logically fit within the role and strategic functions of Victorian Infrastructure and Skills Authority, the new independent body proposed by the Committee in the preceding recommended future directions chapter. That body would be assigned dedicated responsibility for overseeing the planning, management and delivery of significant infrastructure projects in Victoria. *page 51*

**FINDING:** The Government's creation in 2011 of its High-Value and High-Risk oversight process, with widened rigour applying to major infrastructure projects, represents a strengthening of central governance over such projects in Victoria. *page 55*

**FINDING:** The Department of Treasury and Finance’s initiative in developing a detailed draft technical paper on governance under its revised life-cycle management guidelines is also a recent positive initiative. The draft’s wide-ranging guidance complements the central High-Value and High-Risk scrutiny framework. It constitutes a valuable source of advice to constructing agencies across the public sector to support their decision-making on governance structures and functions for their individual major projects. Higher standards of project governance should result from compliance by constructing agencies with the guidance. *page 55*

**FINDING:** These are valuable improvement actions to strengthen project governance in Victoria. However, the material developed to date remains relatively limited in the coverage of core competencies and skills, and matching professional qualities and behaviours, for members of governance bodies established for large infrastructure projects. *page 56*

**FINDING:** There is scope for the Government to conduct further work in this area with a view to developing a suite of requisite competencies, skills and behaviours specifically relating to members of governance bodies created for infrastructure projects. The results of such work could be integrated into a Best Practice Infrastructure Skills Register. Such a Register has been advocated by the Committee in earlier paragraphs for recording the key expertise needed of personnel directly involved in the management and delivery of projects. *page 56*

**FINDING:** This further work on governance practices would fit neatly with the responsibilities of Victorian Infrastructure and Skills Authority, the new independent body advocated by the Committee in the preceding Future Directions chapter (Chapter 2). *page 56*

## **CHAPTER 4 Term of Reference (b) – Specification of Requisite Competencies and Skills**

### **4.3 Central agency infrastructure documentation**

**FINDING:** While the Commonwealth Government and the Department of Treasury and Finance provide a range of guidance material, constructing agencies differed in their opinions as to its coverage of competency and skill requirements. Some agencies preferred to rely on their own documentation. *page 60*

**FINDING:** Familiarity with any single set of central agency guidances will not provide the reader with a comprehensive exposure to the competencies that are identified in term of reference (a). In contrast, familiarity with the entire suite of documents will provide a more comprehensive exposure. However, even across the entire suite of documents, the level of detail provided about competencies is low. *page 63*

**FINDING:** There is little coverage of competency and skill requirements in the *National Public Private Partnership Policy and Guidelines*, *Partnerships Victoria Requirements* and *National Alliance Contracting Guidelines*. While the purpose of these documents is to provide consistent principles and practices for those procurement models, the articulation of competencies and skills to enhance better procurement practices should be an objective of future updates of those documents. page 65

**FINDING:** The Department of Treasury and Finance's current review of the *Investment Lifecycle and High Value/High Risk Guidelines* is a positive step in providing a common understanding of competency and skill requirements for infrastructure management. However, with the exception of project management skills/expertise and financial modelling, they currently provide only a basic listing of each competency. page 67

**FINDING:** The *Gateway Review Process* requires that evidence be provided that required competencies and skills are present at the different stages of a project. However, it does not specify what these competencies and skills are. page 68

**FINDING:** A larger proportion of the competencies and skills required for effective infrastructure delivery are identified in the State Services Authority's *Victorian Public Sector Employment Capability Framework* than in other documentation. The Framework has also been used as a basis for competency standards in one constructing agency. page 69

**FINDING:** In discharging its past policy functions for public construction procurement, the Department of Planning and Community Development has issued directions, guidance and tools related to tendering procedures and contractual provisions. However, these do not address competency and skill requirements for infrastructure management. page 70

**FINDING:** The *Victorian Code of Practice for the Building and Construction Industry* only discusses skills and competencies at a very high level. page 70

#### 4.4 Major Projects Victoria

**FINDING:** The Department of Business and Innovation noted that Major Projects Victoria identifies skills for each role on a project-by-project basis. page 71

## 4.5 Constructing agency documentation

**FINDING:** Constructing agency documentation addressing competency requirements for infrastructure management varied widely in both nature and content, giving rise to inconsistent practices of articulation of competency and skill requirements. Some agencies appear to have comprehensive frameworks detailing requisite competencies. Others seem only to list competency requirements within position descriptions used to advertise for new staff. *page 72*

**FINDING:** The Department of Justice is currently mapping its *Project Management Excellence* Framework to Australian project competency standards and working to meet Registered Training Organisation (RTO) accreditation requirements. The likely outcome of this initiative is that the framework will evolve into a set of competency requirements in accordance with the Australian Qualifications Framework. *page 73*

**FINDING:** The Department of Transport identifies requisite experience, knowledge and capabilities for different seniority levels of project management positions in its Career Pathways and Development Planning Toolkit. *page 73*

**FINDING:** VicRoads' TeCaP workforce capability management system is one of the more advanced approaches to identifying infrastructure management competencies across Victoria's constructing agencies. Its structure also aligns closely with Australian Qualifications Framework competency models. *page 74*

## 4.6 Private sector service provider competencies and skills

**FINDING:** The government has established panels of 'pre-approved' private sector service providers to assist agencies in delivering infrastructure projects. Use of a 'panel provider' is mandatory except in the case of the Commercial and Advisory Services panel. *page 75*

**FINDING:** Publicly available information on the qualifications and experience required for inclusion on a Victorian Government Purchasing Board provider panel varies across panels. Without access to accurate, complete and verified information about the specific competencies of providers, agencies may not be making a fully informed choice when procuring competencies. *page 76*

**RECOMMENDATION 12:** Specific criteria for inclusion on Victorian Government Purchasing Board provider panels should be made publicly available. *page 76*

## 4.7 Future directions

**FINDING:** To achieve a common understanding of the competencies required for effective infrastructure provision and management, a central framework that provides detailed definitions of the competencies identified in term of reference (a) is needed. *page 77*

**RECOMMENDATION 13:** The proposed Victorian Infrastructure and Skills Authority, develop a central framework that provides detailed definitions of competencies required for effective infrastructure provision and management. *page 77*

## CHAPTER 5 Term of Reference (c) – Development, Refinement and Enhancement of Skills

### 5.2 Identifying competencies and skills gaps

**FINDING:** Constructing agencies are currently responsible for identifying what competencies and skills they need in their workforce. Agencies with more regular delivery of infrastructure projects may be better able to do this. Centrally facilitated knowledge sharing among agencies would be helpful. *page 80*

**FINDING:** Evidence received by the Committee suggests that there have been unaddressed skills gaps in infrastructure teams in the Victorian public sector. *page 81*

**FINDING:** A number of sources suggest that there are shortages of some skills in Victoria, especially in engineering and ICT. This may be a factor contributing to skills gaps in agencies. *page 82*

**FINDING:** The Department of Treasury and Finance takes an informal approach to identifying skills gaps in agencies and has not conducted sector-wide audits of the public service. The State Services Authority indicated that skills audits may be difficult and of limited value but that some research in this area may be beneficial. However, the State Services Authority has produced guidance to assist agencies in identifying and addressing skills gaps. *page 84*

**FINDING:** VicRoads uses an electronic system called TeCaP to measure staff members' skills and competencies. The information gathered can be used to identify skills gaps at an individual and a unit level. VicRoads can then develop a training program meeting the identified needs and can monitor change over time. Other agencies may find adopting this system useful for workforce planning. *page 85*

**RECOMMENDATION 14:** The State Services Authority examine VicRoads' TeCaP system to assess whether it should be recommended for use more widely in the public sector for workforce planning. *page 85*

**FINDING:** Agencies have a variety of methods for identifying skills gaps, ranging from regular, formal process to informal processes and as-needed skills audits on particular units. *page 86*

### 5.3 Developing the required competencies and skills

**FINDING:** The Department of Treasury and Finance currently facilitates a number of training programs focused on specific areas of infrastructure project delivery. The Department has told the Committee that it is currently looking at expanding its programs. Constructing agencies may have valuable suggestions as to what additional training it would be useful for the Department to focus on. *page 88*

**FINDING:** The Major Projects Leadership Academy has been established in the United Kingdom to increase the skills of senior responsible owners and program directors in leadership, technical understanding and commercial capability. A similar program for Victorians may be of benefit. The Department of Treasury and Finance has suggested a cross-jurisdictional approach, given the scale of infrastructure programs in Victoria. *page 89*

**FINDING:** A number of agencies have developed project management frameworks as a basis for developing their staff. The Committee was informed that these have encouraged consistency and best practice across the agency, and have facilitated governance and working with consultants and contractors. The Committee considers that such frameworks would benefit all constructing agencies. *page 90*

**FINDING:** Some agencies have adapted the frameworks of other agencies. This task could be assisted by a central agency identifying frameworks best suited to being used as models. *page 90*

**FINDING:** Several witnesses suggested to the Committee that there have been deficiencies in the project management of some infrastructure projects. Agencies expressed a variety of views regarding project management accreditation. Some agencies mandate it but others do not. Some agencies have partnered with educational institutes to provide training which leads to recognised project management qualifications. The Committee considers that this, supplemented with on-the-job practical experience ('experiential learning'), represents better practice. *page 93*

**FINDING:** It is not practicable for all agencies to partner with educational institutes to provide training which leads to recognised project management qualifications. However, a central agency would be well placed to do this on behalf of other agencies. *page 93*

**FINDING:** The variation of projects and contexts across agencies means that, for some agencies, developing their own programs may be more appropriate. It is important that any such programs be centrally monitored to ensure that they are effective and appropriate. *page 93*

**FINDING:** A number of agencies emphasised the importance of experiential or ‘on the job’ learning to supplement formal training. Some agencies provide opportunities for staff to gain experience on increasingly complex projects, but other agencies expect staff to have gained experience in previous employment before joining the agency. *page 94*

#### 5.4 Ongoing enhancement and refinement of competencies and skills

**FINDING:** The Gateway Review Process provides a mechanism for ensuring that lessons learnt are identified. However, many projects are not being comprehensively put through that process. The High-Value and High-Risk Framework requires projects that meet the high-value and high-risk criteria to go through all recommended Gateway Reviews. However, there is no such requirement for other projects. *page 96*

**FINDING:** The Committee believes that the responsibilities of the Victorian Infrastructure and Skills Authority should include ensuring that lessons learnt are identified at the end of projects. *page 97*

**FINDING:** The Committee was informed that some agencies have established electronic tools to store and share lessons learnt from past projects. Other agencies have not established formal mechanisms. The Committee considers that best practice includes establishing formal systems to identify, record and share lessons learnt from infrastructure projects. *page 99*

**FINDING:** A variety of cross-agency reference groups and communities of practice has been established in Victoria to facilitate sharing of experiences between agencies. These groups should be assessed periodically as to their effectiveness. *page 100*

**FINDING:** In some cases, staff from the Department of Treasury and Finance have been embedded in constructing agencies' project teams. Central agencies, especially the Department of Treasury and Finance, have been represented on the steering committees of other agencies' projects. The Committee heard evidence that these arrangements can be useful for sharing knowledge of best practice. However, the Committee has concerns about this giving the Department of Treasury and Finance conflicting roles. *page 101*

**FINDING:** The Auditor-General has found that agencies have not always produced business cases and post-project reports at appropriate standards. The Department of Treasury and Finance has not provided feedback about these shortcomings to agencies. The new High-Value and High-Risk Framework requires the Department to be more responsible for the quality of business cases of projects that meet the high-value or high-risk criteria, but not other projects. The Committee has recommended increased oversight as part of its changes in Chapter 2. *page 103*

**RECOMMENDATION 15:** Central agencies that receive copies of key documents (such as business cases and post-project reports) provide feedback to the departments and agencies that submit them about any aspects of these documents that are below standard. *page 103*

**FINDING:** The Department of Treasury and Finance collects large amounts of information about successes and problems on projects across the public sector through the Gateway Review Process. The Department has stated that it intends to produce a 'Lessons Learnt Website' which will make lessons learnt from these projects available to other agencies. *page 104*

**FINDING:** There are currently few requirements for post-project reporting in Victoria. This reduces the public sector's capacity to learn from past projects, especially projects where problems have been encountered. *page 105*

**FINDING:** The Commonwealth Government has produced two volumes of best practice case studies for infrastructure projects. These bring together best practice examples from around Australia. However, they do not discuss the competencies and skills that made the selected projects successful. *page 106*

**FINDING:** The Committee has been informed that there is scope for increased consideration of experiences in other jurisdictions when planning infrastructure projects. 'Reference class forecasting' has been identified as a potential way of doing this. It has been suggested that this or a similar technique should be a part of all business cases. *page 107*



**RECOMMENDATION 16:** The requirements for business cases be modified so that all future business cases have regard to similar projects in other jurisdictions. A formal technique such as ‘reference class forecasting’ should be adopted for making appropriate comparisons.

*page 108*

## **CHAPTER 6 Term of Reference (d) – Alignment of Projects with the Public Interest and Maximisation of Transparency Accountability over the Project Life**

### **6.8 The Melbourne Convention Centre Development project**

**FINDING:** The role of the Department of Treasury and Finance in the Melbourne Convention Centre Development project has been poorly defined. Advice given by Department of Treasury and Finance to the Department of Business and Innovation has not been binding and the Department of Treasury and Finance has not had an oversight role.

*page 173*

**FINDING:** The risk-adjusted Public Sector Comparator for the Melbourne Convention Centre Development project has not been revealed. This has prevented a clear demonstration of value-for-money.

*page 175*

**FINDING:** No post-project evaluation (Gate 6 – Benefits Evaluation) has been carried out for the Melbourne Convention Centre Development project. This also prevents the demonstration of value-for-money.

*page 175*

**FINDING:** The scoping for the Melbourne Convention Centre Development project as detailed did not change significantly throughout the procurement phase.

*page 176*

**FINDING:** A range of benefits has been identified for the Convention Centre Development project. However, while there is evidence that these benefits have been achieved, the realisation of some items noted as benefits has only been estimated.

*page 177*

**FINDING:** There was a manageable number of stakeholders for the Melbourne Convention Centre Development project. All stakeholders supported the preferred option.

*page 177*

**FINDING:** A Public Private Partnership was chosen over a Design and Construct procurement model, although figures supporting this decision have not been revealed. *page 178*

**FINDING:** The structured negotiation process allowed an analysis of two very different proposed options for the project. *page 179*

**FINDING:** Compensation for losing bidders in structure negotiation may have the effect of encouraging a greater level of innovation in options presented by the private sector. *page 180*

## 6.10 The Victorian Desalination Plant

**FINDING:** Variations in the reported value and cost of the Victorian Desalination Plant can cause misunderstanding about the real cost of the investment. *page 217*

## 6.11 The Melbourne Wholesale Market Relocation Project

**FINDING:** The Department of Treasury and Finance has stated that it has provided advice to the Government about the Melbourne Wholesale Markets Relocation project. Unfortunately, the Committee has not been able to verify the nature of The Department of Treasury and Finance's advice and its involvement. Due to Cabinet confidentiality, The Department of Treasury and Finance has been unable to reveal what that advice was. *page 226*

**FINDING:** There is disagreement over the involvement of the Department of Treasury and Finance during the procurement phase of the Melbourne Wholesale Markets Relocation project. *page 227*

**FINDING:** The new high-value, high-risk process has altered the involvement of the Department of Treasury and Finance in capital projects. *page 228*

**FINDING:** The need for the Melbourne Wholesale Market Relocation Project has not been clearly articulated. *page 230*

**FINDING:** Stakeholder management has been a critical issue in the outcome of the Melbourne Wholesale Market Relocation Project. *page 230*

**FINDING:** The Committee has received no evidence that the option of not continuing to have a central market was comprehensively assessed. *page 232*

**FINDING:** Value-for-money on the trading floor procurement, while not demonstrated, is likely to have been achieved. *page 233*

**FINDING:** Actual benefits of the alternative uses for the site identified in the original business plan have yet to be confirmed. *page 234*

## **CHAPTER 8 Term of Reference (f) –Centralisation, Decentralisation and Use of Private Contractors in PPP Projects**

### **8.2 The Victorian context**

**FINDING:** The number of PPP projects delivered in Victoria makes it difficult for most constructing agencies to develop expertise. However, the Department of Treasury and Finance has a larger role in projects procured through PPPs than most other projects. Major Projects Victoria has also delivered several PPP projects on behalf of other agencies and has a dedicated PPP unit. *page 273*

### **8.3 Merits of centralised, decentralised and contracted skills**

**FINDING:** The merits of locating experts within constructing agencies relate to them being likely to have a better understanding of the agency and its service delivery environment than decentralised staff or external contractors. *page 274*

**FINDING:** The key merits of centralised public sector experts is that they are likely to have more breadth and depth of experience and to be best placed to ensure consistency across the public sector. *page 274*

**FINDING:** External contractors and consultants may bring broader experience, more specialised skills and higher levels of qualification, expertise or experience to projects. *page 275*

## 8.4 Flexibility in acquiring experts

**FINDING:** The cost of external contractors and consultants was noted as a factor when determining whether experts should be decentralised, centralised or external. The Victorian Ombudsman and the Victorian Auditor-General’s Office have both recently suggested that there are areas where the Government might achieve savings by reducing its reliance on contractors. Initiatives at the Federal level and in the United Kingdom have sought to reduce costs by increasing the skills of the public sector and reducing the use of contractors and consultants. An examination of practices in Victoria may identify areas where savings could be made through similar measures. *page 280*

**RECOMMENDATION 17:** The Government undertake work to identify areas where cost benefits could be achieved by increasing skills within the public sector (either through training existing staff or hiring new staff) and reducing the use of contractors and consultants. Areas for consideration should include project management and ICT. *page 281*

**FINDING:** The Committee was informed that a key issue with the use of external contractors is the potential that skills and knowledge might not be passed on to the constructing agency when the contractor leaves. The Department of Treasury and Finance indicated that this is an area that could be improved and suggested strategies to mitigate the risk. In the United Kingdom, agencies are required to develop skills transfer plans when engaging contractors. The Victorian Infrastructure and Skills Authority, a new body recommended by the Committee, should provide advice to agencies on strategies to ensure that skills and knowledge are transferred. *page 282*

**FINDING:** Knowledge and skills transfer between central agencies that procure and deliver infrastructure and the line agencies that use the infrastructure is also important. To effectively deliver projects over their entire life-cycle, the Victorian Infrastructure and Skills Authority will have to ensure that it has appropriate mechanisms for skills and knowledge transfer when projects transition from construction to operation and responsibility is transferred from the central agency to the line agency. *page 282*

**FINDING:** The Committee heard evidence that there are a number of financial benefits to the Government maintaining an informed buyer status. The Committee therefore considers that this must be factored into any decision as to whether experts should be within the public sector or contracted in. *page 284*

**FINDING:** Though a number of witnesses suggested that it is important to retain experts within the public sector to maintain the public sector’s informed buyer status, the Department of Treasury and Finance did not accept this. The Committee considers that the Victorian Infrastructure and Skills Authority would improve Victoria’s ability to act as an informed buyer through being a centre of excellence and through its oversight of constructing agencies.

*page 286*

**FINDING:** Although agencies may outsource a number of roles in project delivery, they remain accountable for the project. Contract management and oversight have been identified as important governance roles that ought to be retained in the public sector wherever possible. The Committee was informed that some agencies have not been undertaking their oversight roles sufficiently. The Committee considers that increased central oversight of agencies, to hold them to account for the projects they manage, would improve this situation.

*page 287*

## 8.5 Factors restricting where skills can be acquired

**FINDING:** There are substantial variations in the number and scale of infrastructure projects from one year to the next, especially PPP projects. In addition, relatively few details about projects in future years are available. These factors impact on the public sector’s ability to hire people in ongoing roles and on the private sector’s ability to meet demands on it.

*page 290*

**FINDING:** Providing more certainty about future investment and a more even flow of projects (especially PPPs) would assist the public sector to retain staff. The Committee was informed that this has occurred in Ontario, Canada, and has brought a number of other benefits with it as well.

*page 292*

**FINDING:** Secondments to other jurisdictions may assist the Victorian public sector to retain skilled experts by providing them with opportunities for continued work when projects are not available in Victoria. Secondments could also be a valuable learning opportunity. The Committee considers that Victoria should liaise with other jurisdictions to establish such arrangements.

*page 293*

**FINDING:** The Department of Transport and VicRoads have sought to retain skilled experts through lulls in the number of projects by engaging them in other productive roles (such as planning) and through secondments to portfolio agencies. These options could be considered generally by agencies when conducting workforce planning.

*page 294*



## 1.1 Background to the Inquiry

The Committee was asked by the Victorian Parliament's Legislative Assembly on 5 May 2011 to conduct an:

*Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects*

The Committee was required to consider and report, no later than 14 December 2012, to the Parliament on:

- (a) the competencies and skills that public sector managers require for the effective evaluation, decision making and oversight of significant infrastructure projects and protection of the public interest;
- (b) the extent to which Government policies such as the National Public Private Partnership Policy and Guidelines and the Partnerships Victoria Requirements specify these requisite competencies and skills and support the Department of Treasury and Finance's application of these across the public sector;
- (c) strategies in place within the public sector for the development of such requisite competencies and skills and for their ongoing refinement and enhancement through knowledge-building from the sharing of best practice examples and guidance in the public sector;
- (d) whether particular significant infrastructure projects have been developed and implemented in a manner which aligns with the public interest and maximises transparency and accountability for the life-cycle of the project;
- (e) relevant infrastructure delivery strategies and practices, including in Public Private Partnerships, in relation to enhancing public sector expertise in place in other Australasian jurisdictions and relevant jurisdictions outside Australia; and
- (f) the merits of centralisation versus decentralisation of available skilled experts in the Victorian public sector during the life-cycle stages of Public Private Partnership projects, including considering any benefits that may be derived from greater flexibility to contract specialist services from external sources.

On 5 May 2011, the Treasurer issued a media release stating:<sup>1</sup>

*... a key priority for the Coalition Government is to ensure that significant infrastructure projects are properly managed, delivered on time, and on budget.*

*This inquiry will assist the Government to continue implementing best practice project development and management.*

*It is essential that all major infrastructure projects deliver long term benefits for the community and are delivered on time and on budget.*

*The Government looks forward to receiving the report of the Committee that will assist the Coalition Government as part of our strategy to achieve these objectives.*

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<sup>1</sup> Hon. K. Wells MP, Treasurer, *Inquiry to identify best practice policy initiatives for management of government infrastructure projects*, media release, 5 May 2011

The Treasurer's comments signify the Government's expectations from the Inquiry. They also show that the Government considers delivering projects on time and on budget and delivering long-term benefits to be key attributes of successful delivery.

The Government referred to the Inquiry in its November 2011 submission on nominated projects to Infrastructure Australia. That organisation is the peak advisory body on infrastructure for the Australian Government. The submission described the Inquiry as one of several initiatives underway in Victoria to improve the State's performance, outcomes and value-for-money from infrastructure projects.

The Government's expectations from the Inquiry reinforce the importance of infrastructure and its management to Victoria. Infrastructure has the potential to enhance productivity and create key employment opportunities, thereby facilitating economic growth in the State. The Government's comments also reflect the large amount of public money that is spent on infrastructure delivery each year and the importance of ensuring that the money is spent effectively.

## 1.2 Scope of the Inquiry

Drawing on the title, the Committee established the following two main aims for the Inquiry:

- to explore innovative strategies for identifying and harnessing infrastructure competencies and skills; and
- to promote best practices and continuous improvement in the planning, management and delivery of significant infrastructure projects.

The Committee has focussed on how Victoria can further build on its current strategies for infrastructure investment. It has examined past projects to learn about what was successful and what could be improved. It is hoped that these lessons will advance the understanding of the required skills and improve decision-making in future infrastructure projects.

The Committee has interpreted the Inquiry's six terms of reference as bringing together a number of key drivers that support effective delivery of infrastructure projects, including:

- the competencies and skills needed by public sector project managers in a continually evolving managerial environment – this environment is characterised by increasing participation of the private sector in the financing, construction and delivery of projects, particularly with Public Private Partnerships (PPPs) and Alliances;
- the quality of governance arrangements in place for significant infrastructure projects;
- the soundness of government strategies in harnessing the competencies and skills necessary to successfully deliver projects and to optimise ongoing outcomes for the community;
- the manner in which governance and management lessons from past project experiences are applied to benefit decision-making in future projects;
- initiatives in other national and international jurisdictions for enhancing expertise in managing infrastructure projects; and
- an effective balance of centralised, decentralised and external expertise in the management of PPPs.



The Inquiry covers a broad range of topics relating to a complex industry. The Committee has therefore sought to draw on the specialised knowledge, experience and skills of particular parties within the industry as well as academia.

For the purpose of the Inquiry, the Committee defined ‘significant infrastructure projects’ as projects with an estimated or actual capital expenditure exceeding \$50 million.

The use of this benchmark is consistent with that used in Victoria’s PPP and Alliancing policies. It also encompasses any infrastructure project with an estimated investment greater than \$100 million. The Government has adopted that benchmark as one of its criteria for designating projects as ‘High-Value and High-Risk’ (HVHR). The HVHR framework was established in 2011 and provides for expanded central scrutiny of major projects.

The Committee has also considered matters of significance concerning smaller projects that came to its attention during the Inquiry.

### 1.3 The Committee’s work program

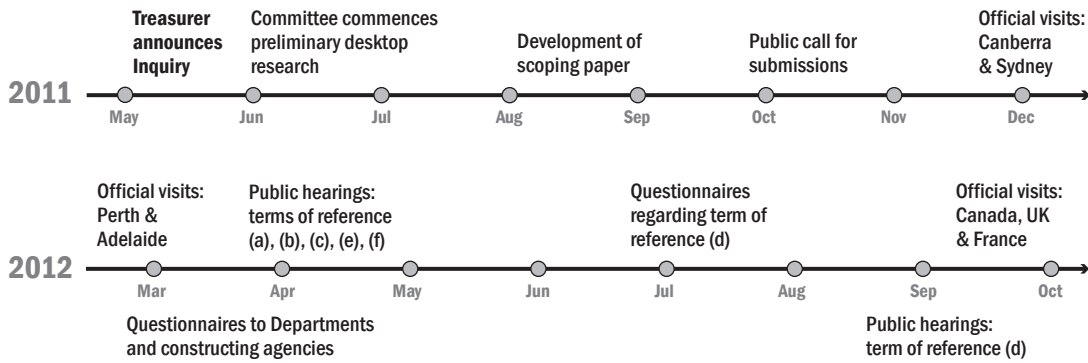
The Committee’s approach to the Inquiry has been to gather relevant information and material from a wide range of sources. However, it has not approached the Inquiry as an audit in which all evidence is verified. It is heavily reliant on the evidence furnished to it.

The Committee’s work program has encompassed consideration of:

- public submissions (and supplementary information) from a diverse range of public and private sector parties;
- responses to several detailed questionnaires sent to the Department of Treasury and Finance (DTF), the Department of Planning and Community Development, the State Services Authority and Victoria’s principal constructing agencies;
- insight and views from the Auditor-General and the Ombudsman;
- public hearings with witnesses from the public and private sectors in March 2012 – these hearings principally involved terms of reference (a), (b), (c), (e) and (f);
- public hearings on term of reference (d) in August 2012 with key witnesses, including some private sector contractors;
- an additional two public hearings in October 2012 for term of reference (d) with DTF and the Department of Transport;
- information gathered on official visits to Canberra, Sydney, Adelaide and Perth in 2011 and 2012 to explore the views and experiences of key private and public sector organisations and individuals; and
- material and views obtained from official visits during September 2012 to selected organisations in Canada, the United Kingdom (UK) and Paris – these visits enabled the Committee to obtain first-hand insights into international strategies and identify opportunities for strengthening Victoria’s infrastructure expertise and its planning, management and delivery of infrastructure projects.

The timing of these tasks is summarised in Figure 1.1

**Figure 1.1 Timing of the Committee’s work program for the Inquiry**



Source: Public Accounts and Estimates Committee Secretariat

The Committee is appreciative of the attention that has been given by all parties to the furnishing of submissions, the provision of evidence at public hearings and to responding to questionnaires.

The information provided to the Committee by a number of parties is quite extensive. It has enabled the Committee to benefit from the skills and knowledge of industry participants. These parties include personnel fulfilling key policy advisory roles or possessing deep-seated experience in infrastructure management and delivery.

## 1.4 Structure of the report

The Committee has structured its report principally in line with the Inquiry’s terms of reference. It has devoted separate chapters to:

- recommended future directions for Victoria’s infrastructure planning and delivery – drawing on the findings of the six terms of references, the Committee identifies structural changes that may assist Victoria to more successfully deliver significant infrastructure projects in the future;
- term of reference (a) – requisite competencies and skills for infrastructure management;
- term of reference (b) – specification of requisite competencies and skills in Victoria’s infrastructure policies and guidelines;
- term of reference (c) – development, refinement and enhancement of infrastructure competencies and skills, including mechanisms for sharing knowledge and lessons learnt;
- term of reference (d) – examination of six selected projects against the criteria of maximising transparency, maximising accountability and aligning with the public interest;
- term of reference (e) – global and national developments relevant for enhancing infrastructure management expertise in Victoria’s public sector; and
- term of reference (f) – the merits of acquiring expertise in the management of PPPs from centralised, decentralised or private sector sources.

The major changes identified in the chapter on recommended future directions include the establishment of two new independent bodies to assist with infrastructure planning and delivery – the Victorian Infrastructure and Skills Authority and the Victorian Infrastructure Council. The Committee considers that creating these bodies will address a number of significant issues that were identified through the course of this Inquiry.

The chapter also recommends additional oversight and accountability mechanisms. The scale of infrastructure investment and the potential high cost of poor decisions make these essential.

These recommendations have come from the Committee's investigation of the terms of reference and the remainder of the report addresses each of these in turn.

Terms of reference (a), (b), (c) and (f) address different elements of the development and management of core infrastructure expertise. There is therefore a clear interrelationship between these four terms of reference.

For example, term of reference (b) addresses the extent of coverage of competencies and skills in policies and guidelines but uses the results of the Committee's work under term of reference (a) as its main evaluative criteria. Similarly, term of reference (c) is concerned with the development by constructing agencies of key infrastructure competencies and skills and the sharing of associated best practice examples. It also is linked to term of reference (a).

These interrelationships are identified in the four chapters. They are presented in a manner which complements the Committee's aim of promoting best practice in the identification and harnessing of core infrastructure expertise and achieving optimal outcomes in future infrastructure projects.

The Committee selected six projects for examination under term of reference (d) as shown in Figure 1.2.

**Figure 1.2 The six projects examined under term of reference (d)**

Design and Construct model	ICT-enabled project		Public Private Partnership		
Melbourne Markets Redevelopment	HealthSMART	myki	Melbourne Convention Centre Development	The new Royal Children's Hospital Project	Victorian Desalination Plant

Source: Public Accounts and Estimates Committee Secretariat

These projects encompass a range of project types. They include projects that have been recognised for their better practice characteristics as well as those that have experienced problems in their management and delivery. In addressing term of reference (d), the Committee's overriding aim has been to evaluate how effectively lessons learnt have been captured and disseminated. This includes both the lessons from successes and the lessons from difficulties that have been experienced.

The chapter on term of reference (e) identifies the key developments on contemporary infrastructure management in other jurisdictions that have come to the Committee's attention. Its visits to selected national and global jurisdictions, summarised below in Figure 1.3, have been valuable sources of information.

**Figure 1.3 The Committee’s official visits for evidence-gathering**

November/December 2011	Commonwealth of Australia (Canberra), New South Wales (Sydney)
February 2012	Western Australia (Perth), South Australia (Adelaide)
September 2012	Province of British Columbia (Victoria), Province of Ontario (Toronto), Canada (Ottawa), United Kingdom (London), OECD (Paris)

Source: Public Accounts and Estimates Committee Secretariat

The Committee has also referred to these developments in the chapters on the other terms of reference where these developments have suggested opportunities for improvements in Victoria.

The Committee’s recurring emphasis across all aspects of the Inquiry on ways to strengthen decisionmaking and performance in future infrastructure projects forms the basis of its findings and recommendations presented in this report.

## 1.5 Cost of the Inquiry

The cost of this Inquiry was approximately \$405,890 over two financial years.

# CHAPTER 2 RECOMMENDED FUTURE DIRECTIONS FOR VICTORIA'S INFRASTRUCTURE PLANNING AND DELIVERY

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## 2.1 Introduction

As a result of this Inquiry, the Committee has concluded that the structure of Victoria's public services needs to be changed in the infrastructure planning and delivery areas. The Committee considers that a number of changes will assist Victoria to more successfully deliver significant infrastructure projects in the future.

The major changes recommended by the Committee include:

- a new advisory body to recommend priorities for infrastructure investment in Victoria, subject to confirmation by the Government, including its 'pipeline' of projects into the future;
- a new body to be a centre of excellence for project development and delivery and have overall responsibility for ensuring that Victoria has the capability to deliver projects successfully; and
- strengthened oversight and accountability mechanisms, especially around initial project analysis and delivery.

The new bodies would take over a number of responsibilities currently located within the Department of Treasury and Finance (DTF), Major Projects Victoria (MPV) and previously assigned to the Department of Planning and Community Development (DPCD) and would centralise experts currently spread across those agencies.

This chapter explains these overall changes and the main reasons for them.

As prefaced in Chapter 1, the remaining chapters of this Report relate to each of the terms of reference of the Inquiry in detail. Those chapters provide more detailed findings and more specific recommendations. They present the results of the Committee's examination of the wide-ranging evidence gathered from many sources during the Inquiry, including its official national and international visits.

Overall, Victoria has a number of existing strengths in infrastructure management. The Committee particularly notes the widely acknowledged quality of its published infrastructure policies and guidelines. Although the Committee has found that these could be strengthened with respect to competencies and skills, the Committee recognises that they have served as models for a number of other jurisdictions.<sup>2</sup>

Despite this, the Committee has found that the planning and delivery of a number of recent significant infrastructure projects have been unsatisfactory. Both the Victorian Auditor-General and Ombudsman have made unfavourable findings about the management and delivery of several major infrastructure projects. The Committee has concluded that Victoria's policies and guidelines are not enough to ensure successful project delivery. They need to be accompanied by independent bodies to assess, monitor and strengthen infrastructure practices.

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2 Department of Treasury and Finance, submission to the Committee, 3 February 2012, p.17

The Committee acknowledges the initiatives taken by the Government since 2010 to improve infrastructure delivery. These include the creation of a central scrutiny process for High-Value and High-Risk (HVHR) projects. The Committee considers the Government's initiatives to be valuable but believes that additional reforms are necessary for the State to fully address its current sub-optimal features, so that it can command a prime position to compete nationally and globally for investment funding for Victorian infrastructure projects.

Victoria is not alone in encountering difficulties with infrastructure delivery. The Committee's recommendations have in large part been based on best practice it has observed in other jurisdictions attempting to tackle similar issues.

The Committee's recommended direction is also based on the need for Parliamentary, community and industry confidence that Victoria is, and will continue to be, at the leading edge in the planning and delivery of significant infrastructure projects.

## 2.2 Where to from here?

The Committee has concluded that important structural reform is required in Victoria if it is to retain its leading-edge reputation for infrastructure planning and delivery. This chapter sets out the changes that the Committee considers will improve Victoria's position.

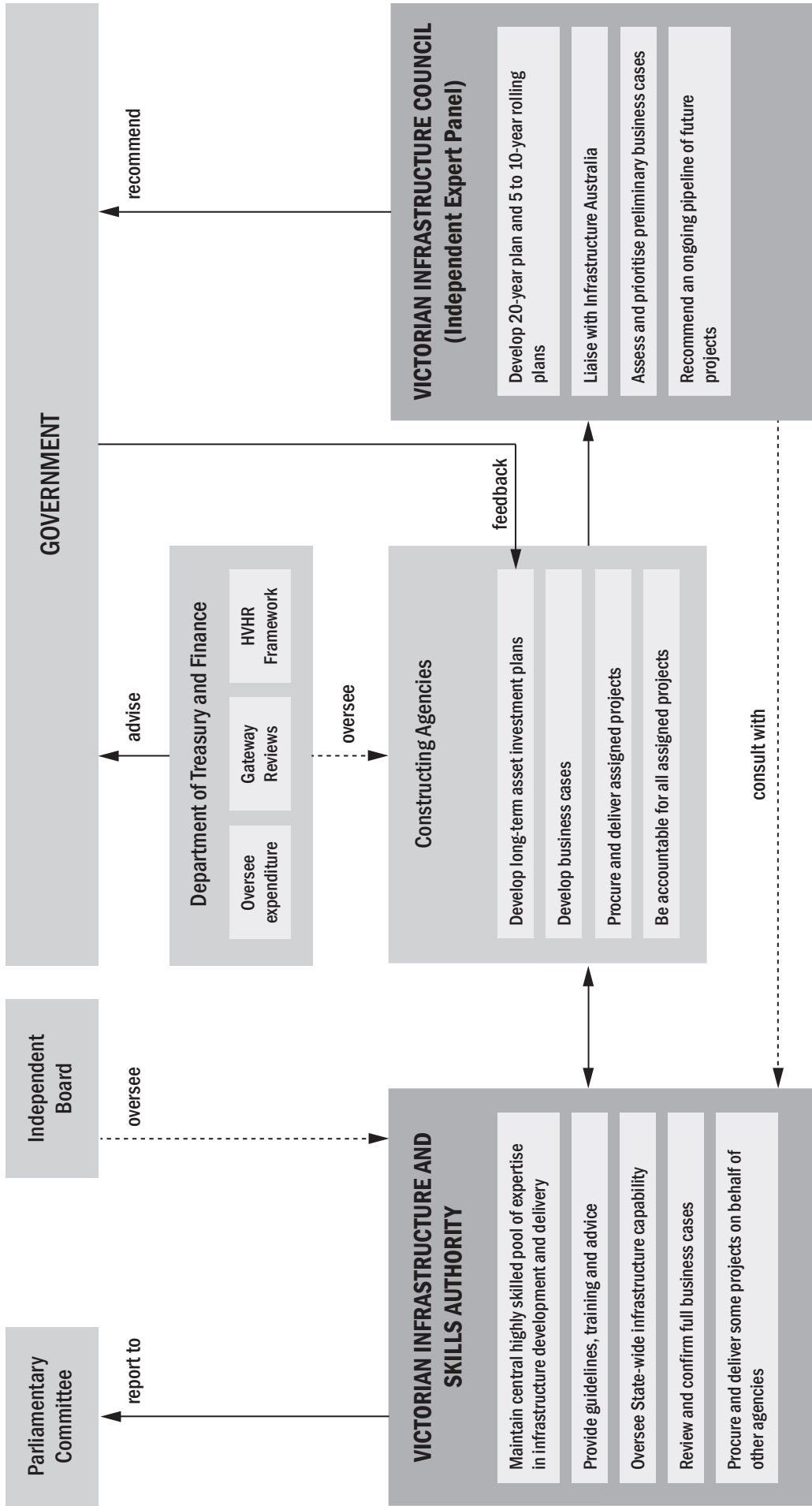
These changes have deliberately been set out at a high level. Many of the details and consequences of these changes have not been prescribed (including required legislative changes). The Committee leaves these details for the Government to determine. The changes recommended in this chapter are designed to be a starting point for the Government, based on the evidence presented to the Committee about Victoria and emerging trends in better practice, nationally and globally (see Sections 2.3-2.4).

The Committee's recommended future directions centre on two new dedicated infrastructure bodies:

- an independent infrastructure advisory body ('the Victorian Infrastructure Council'); and
- an independent infrastructure implementation body ('the Victorian Infrastructure and Skills Authority').

The roles and relationships of these two bodies are summarised in Figure 2.1 and detailed in the text below.

Figure 2.1 Recommended new bodies, their responsibilities and relationships



Source: Public Accounts and Estimates Committee

## 2.2.1 The Victorian Infrastructure Council – proposed roles and responsibilities

The core role of the Victorian Infrastructure Council would be the identification and analysis of possible new projects for inclusion in an ongoing pipeline of future projects.

The responsibilities of the Victorian Infrastructure Council would include:

- being a key source of policy and other advice to Government on overall infrastructure priorities and directions;
- recommending an infrastructure vision for Victoria and associated long-term planning strategies (including a twenty-year strategic infrastructure plan and 5 to 10-year rolling plans);
- advising Government on the priority of proposed projects; and
- acting as the principal liaison body on the behalf of the Government with Infrastructure Australia on national infrastructure matters;

As part of their mandated long-term planning process, departments are required to identify required asset investment over the next 10 years. These plans are provided to the Government, and departments receive feedback from the Government.<sup>3</sup> The Committee proposes that these plans should be provided to the Victorian Infrastructure Council, along with any other relevant asset investment plans by these or other public sector agencies.

The Victorian Infrastructure Council would need to work closely with all parts of the public sector, including constructing agencies, DTF and the proposed Victorian Infrastructure and Skills Authority. It would need to liaise with Infrastructure Australia to understand Commonwealth funding priorities. The Council could also have the capacity to access independent expert advice, where required, to confirm information or assumptions put to it by public sector bodies.

The Victorian Infrastructure Council would recommend a 20 year strategic plan and 5 to 10-year rolling plans based on this information and the Council's own analysis of Victoria's needs.

In addition, all agencies would be required to provide preliminary business cases for new projects to the Victorian Infrastructure Council in the first instance, which would assess them before they go to the Government for funding approved. Based on its long-term plans, the Council would recommend priority rankings for proposed projects.

Relative certainty around the Government's future plans for infrastructure investment is important, as this can make workforce planning for both the public and private sectors more effective. The Committee was informed that advance knowledge about opportunities can provide greater lead times and increases in the pool of potential bidders. These issues are discussed further in Section 8.5.2 of this Report.

A solution adopted in some jurisdictions is the publication of a detailed infrastructure 'pipeline' with details of future projects and an even spread of projects. The Committee considers that the Government should formalise such a pipeline. Based on the Victorian Infrastructure Council's longer-term plans and information provided by agencies, the Council would recommend these future projects to the Government. The Committee considers that the Government should publish this pipeline to assist both public and private sectors.

<sup>3</sup> Department of Treasury and Finance, *A Guide to Corporate and Long-Term Planning*, June 2012



This would be particularly beneficial for the Victorian Infrastructure and Skills Authority discussed in Section 2.2.2. A known and ongoing flow of projects will assist it to hire and retain skilled experts (see Section 2.3.7 below).

The Victorian Infrastructure Council would comprise an independent expert panel which will need a multidisciplinary secretariat to support it. The Committee suggests that this may consist of suitably skilled staff from the Department of Premier and Cabinet. However, the Committee leaves it to the Government to determine these details.

The Committee also leaves it to the Government to determine details of the Council's membership, such as the numbers, backgrounds and method of appointment.

**RECOMMENDATION 1:** The Government establish a new advisory body, the Victorian Infrastructure Council, with the roles and responsibilities set out in Section 2.2.1 of this Report.

## 2.2.2 The Victorian Infrastructure and Skills Authority – proposed roles and responsibilities

It is proposed that the Victorian Infrastructure and Skills Authority be established as a centre of excellence in project procurement and delivery. Based on this capacity, the Victorian Infrastructure and Skills Authority would:

- develop and promulgate infrastructure guidelines;
- promote better practice across all constructing agencies, including facilitating training and providing advice;
- review and confirm full business cases submitted by agencies, providing advice based on its expertise and experience in procurement and delivery;
- procure and deliver certain projects on behalf of other agencies;
- oversee the implementation of projects being delivered by constructing agencies (over all phases of a project's life-cycle);
- oversee that constructing agencies are following best practice guidelines (see further details in Section 2.2.3)
- monitor Victoria's infrastructure capability and advise Government about emerging problems or opportunities (including identifying industry trends, skills gaps and inefficient skills duplications across the public sector);
- sign-off on proposals for the composition and skills profile of teams for major projects submitted by agencies and facilitate any necessary transfers between agencies to optimise project teams;
- sign-off on proposals for governance mechanisms overseeing major infrastructure projects submitted by agencies; and
- operate on a self-funding basis through the charging of fees to agencies for its review and evaluative services.

The Victorian Infrastructure and Skills Authority may consider establishing a dedicated unit for IT projects, as these often have additional or different complexities to other types of project.

The Committee proposes that the delivery functions of the Victorian Infrastructure and Skills Authority would primarily relate to projects with a capital budget in excess of \$50 million. The oversight and capability monitoring should relate to all capital expenditure.

The Victorian Infrastructure and Skills Authority would become a hub of centralised expertise which would be available to all agencies. However, the Committee notes its findings in relation to term of reference (f) (see Chapter 8 of this Report) that successful projects require not only centralised expertise but also input from the agencies which will ultimately deliver services using the infrastructure. It would therefore be essential for the Authority to establish strong collaborative arrangements with Victoria's constructing agencies.

For projects procured and delivered by the Authority, it would also be important that effective processes are in place to hand responsibility for the project from Authority to the line agency when the infrastructure becomes operational. This is especially significant for public private partnerships projects, where the public sector has an ongoing relationship with the builder. These processes may include detailed knowledge transfer processes and continued access to the Victorian Infrastructure and Skills Authority staff for as long as required.

The Committee also considers that the Authority should not be required to deliver a project if it considers that insufficient preparatory work including on the business case has taken place or if the proposed project is unrealistic.

As a dedicated centre of excellence in project procurement and implementation, the Victorian Infrastructure and Skills Authority would assume a number of functions currently undertaken by other bodies, including:

- the Department of Planning and Community Development's previous responsibilities for policy advice and guidance on public construction in Victoria (i.e. primarily tendering and contractual guidelines – see Section 4.2.3 of this Report). On 21 August 2012, the Minister for Finance became responsible for public construction procurement in Victoria. Public construction procurement policy functions are being transferred to DTF;
- work undertaken by DTF's Partnerships Victoria unit; and
- the roles and responsibilities of Major Projects Victoria.

In suggesting this arrangement, the Committee is aware that the Victorian Infrastructure and Skills Authority would make MPV redundant. While the Victorian Infrastructure and Skills Authority would provide many of the functions currently provided by MPV, it would do so with independence and in the context of having a broader focus and having overall responsibility for ensuring that Victoria has the capacity to deliver infrastructure projects.

It would also deliver projects in a context of significantly more scrutiny and accountability than MPV currently has. Given the recent findings of the Auditor-General (see Section 2.3.4), the Committee considers this to be particularly important.

**RECOMMENDATION 2: The Government establish a new body, the Victorian Infrastructure and Skills Authority, with the roles and responsibilities set out in Section 2.2.2 of this Report.**

In addition to these core roles, the Committee's examination of the terms of reference identified a number of specific issues where action is warranted. The actions which would be best taken by the Victorian Infrastructure and Skills Authority are detailed below.

## Guidance

As indicated in Chapter 4, the Committee considers that Victoria's infrastructure guidance could be improved with respect to the required competencies and skills. While many competencies and skills are identified, these are rarely specified in detail.

The production and maintenance of guidance material for the public sector would be a key role for the Victorian Infrastructure and Skills Authority. The Committee considers that the Authority should work towards better articulation of infrastructure competencies and skills. In some cases, the Authority would have ownership of the guidance materials. In other instances, the Authority may have to work with other agencies to achieve this.

The Committee has recommended in this report that the Victorian Infrastructure and Skills Authority develop a central framework with detailed definitions of competencies required for infrastructure projects (see Section 4.7).

The Committee also believes that more detailed explanations of competency and skills requirements (or cross-references to the central framework) could be beneficial in other guidance such as the *Investment Lifecycle and High Value/High Risk Guidelines* and the Partnership Victoria guidance (see Section 4.3.2).

In defining competencies and skills, the Committee believes that the Australian Qualification Framework should serve as a useful model of the appropriate level of detail (see Section 4.3.2).

**RECOMMENDATION 3:** The Victorian Infrastructure and Skills Authority work towards improving the level of detail about the required competencies and skills to deliver infrastructure projects in Victorian guidance materials. The Authority should take the Australian Qualifications Framework as a model for the appropriate level of detail.

The Committee has also suggested that the Victorian Infrastructure and Skills Authority look into project management frameworks, with a view to these being more wide-spread among constructing agencies (see Section 5.3.2). The Committee considers that the Authority could be helpful in identifying and disseminating existing frameworks that might serve as models for other agencies to adopt.

**RECOMMENDATION 4:** The Victorian Infrastructure and Skills Authority work towards more wide-spread use of project management frameworks by constructing agencies. To facilitate this, the Authority should identify and disseminate existing frameworks that are best suited to being models for other entities.

## Training

As discussed in Section 5.3.1, DTF currently facilitates a number of training courses relating to infrastructure projects. Under the new arrangements proposed by the Committee, the responsibility for these would fall to the Victorian Infrastructure and Skills Authority. The Committee considers that this is an opportunity to expand the amount of centrally facilitated training.

As noted in Section 5.3.1, the Department of Justice suggested additional areas that would be beneficial. The Committee believes that a formal survey of all constructing departments and agencies would be a useful way for the Victorian Infrastructure and Skills Authority to identify additional training that should be offered centrally.

The Committee also believes that consideration should be given to partnering with tertiary institutes to develop:

- a project leadership course similar to the United Kingdom's Major Projects Leadership Academy (see Section 5.3.1); and
- a project management course that is customised to the public sector and contributes to recognised qualifications (see Section 5.3.2).

These courses could be available to all constructing departments and agencies.

**RECOMMENDATION 5:** The Victorian Infrastructure and Skills Authority review the centrally facilitated training to identify areas where it might be usefully expanded. As part of this process, the Authority should conduct a formal survey of constructing departments and agencies. The Authority should also consider the merits of partnering with tertiary institutes to develop project leadership and project management courses that could be available to all departments and agencies.

### 2.2.3 Oversight and accountability

The Committee considers that oversight and accountability are critical issues in relation to infrastructure delivery. The Government introduced additional oversight through the High-Value and High-Risk Framework in 2011 (see Section 2.3.2 below). However, the Committee considers that additional oversight and accountability mechanisms would assist in the successful delivery of infrastructure projects.

In the light of the Auditor-General's recent findings about Major Projects Victoria, the Committee considers that effective oversight mechanisms over the Victorian Infrastructure and Skills Authority will be particularly important (see further in Section 2.3.4 below).

In a number of previous inquiries, the Committee has also recommended increased transparency about the delivery of asset investment. Without the publication of information about what is originally planned and what is actually achieved, it is impossible for the Parliament or community to scrutinise the effectiveness of Victoria's public sector in delivering infrastructure projects. The Committee considers it essential that the new arrangements include strong oversight and accountability requirements.

#### Organisational oversight

The Committee advocates that the Victorian Infrastructure and Skills Authority be established under legislation with an independent board of management. This board would comprise non-executive directors with proven expertise in project implementation.

**RECOMMENDATION 6:** The Victorian Infrastructure and Skills Authority be established with a board of non-executive directors with proven, relevant expertise.

## Parliamentary oversight

As a statutory body of government, the Victorian Infrastructure and Skills Authority would be subject to annual financial audits and periodic performance audits conducted by the Auditor-General. The results of these audits would fall within the overseeing role of the Public Accounts and Estimates Committee.

Consideration should also be given to establishing dedicated parliamentary oversight for the Authority through Parliament's Economic Development and Infrastructure Committee.

**RECOMMENDATION 7: A Parliamentary Committee be given responsibility for oversight of the Victorian Infrastructure and Skills Authority.**

## Oversight of constructing agencies

The Committee also considers that there needs to be increased oversight of other agencies that are directly delivering infrastructure projects.

As part of its core budget management function, DTF should continue to oversee agencies' expenditure and ensure that funds are being spent efficiently and effectively. The Committee suggests that this would include retaining the HVHR Framework and facilitating independent Gateway Reviews.

However, the majority of infrastructure expenditure in a year is on projects not meeting the HVHR criteria (see Section 2.3.2 below). In addition, DTF does not, in general, ensure that agencies follow best practice guidelines in delivering projects (see Section 2.3.2 below).

The Committee considers that, in contrast, the Victorian Infrastructure and Skills Authority should have a mandate to oversee that agencies follow best practice guidelines. Where this is not the case without good reason, the Authority should investigate the causes and recommend appropriate action to Government.

A number of areas of inconsistent practice have been identified by the Committee in addressing the terms of reference. The Committee considers that the Victorian Infrastructure and Skills Authority's oversight should include the examination of:

- the processes agencies have in place to identify and address skills gaps (see Section 5.2.2)
- whether or not agencies have project management frameworks, the standard of these frameworks, and the extent to which they are adhered to (see Section 5.3.2);
- the quality of training opportunities provided by agencies, especially project management training (see Section 5.3.2);
- whether agencies have the requisite skills to be informed buyers (see Section 8.4.3);
- mechanisms in place to identify, record and share lessons learnt at the end of projects (see Sections 5.4.1-2); and
- processes in place to ensure that skills and knowledge are transferred from consultants and contractors to agency staff (see Section 8.4.2).

For all of these matters, the Committee considers that the Victorian Infrastructure and Skills Authority should monitor agencies' practices to ensure that they accord with best practice guidelines.

The Authority should also have a clear responsibility to recommend that a project be modified or discontinued if it considers that the project is not progressing successfully and cannot be brought on track. It would also have the capacity to decline procurement and delivery if it considers a project's business case to be inadequately developed and costed.

The Committee considers that DTF will have a strengthened oversight capacity by removing its project delivery functions. This will prevent any possible role conflict, in which DTF is responsible both for assisting agencies to develop proposals and for assessing those proposals (see Section 2.3.5 below).

**RECOMMENDATION 8:** The Department of Treasury and Finance's role overseeing expenditure (including the High-Value and High-Risk Framework) be supplemented by the Victorian Infrastructure and Skills Authority having responsibility for ensuring that departments and agencies are following best practice when they deliver infrastructure projects and that projects are being delivered efficiently and effectively.

## Public reporting

Currently, MPV is not required to disclose much information about its performance to Parliament or the community. This occurs because MPV is one part amongst many within the Department of Business and Innovation, rather than an independent entity. As a consequence, in the Department of Business and Innovation's 2011-12 annual report, only one page of the report of operations is dedicated to MPV. In the 2012-13 budget papers, only one performance measure was set relating specifically to MPV's performance.

By making the Victorian Infrastructure and Skills Authority independent, the Committee expects to see a much higher degree of public reporting on an annual basis. The annual reports should clearly document the extent to which the Authority achieves performance targets and efficiently and economically manages its resources. In particular, the performance targets should measure the value the Authority adds to Victoria's infrastructure delivery system, and not just record the tasks it undertakes.

**RECOMMENDATION 9:** The Victorian Infrastructure and Skills Authority develop performance measures that detail its effectiveness and the value it adds. These measures should be reported on annually.

The Committee would also like to see the Victorian Infrastructure and Skills Authority publicly release non-commercial information about projects progressively throughout their life-cycles. For example, this would start with the release of the business case 60 days after financial close for all major projects (except where there are commercial sensitivities or risk to the project). A number of issues associated with transparency are discussed in Chapter 6 of this Report.

**RECOMMENDATION 10:** The Victorian Infrastructure and Skills Authority progressively publish non-commercial information about all major projects (except where there are commercial sensitivities or risk to the project).

## 2.3 Further reasons for change

Infrastructure expenditure matters. Large sums of public money are allocated to significant infrastructure projects each year. If delivered well, infrastructure can enhance services to the public and improve the productivity of the State. If delivered poorly, there can be substantial costs which need to be funded from public money, and the consequence of lost opportunities.

If Victoria develops a poor reputation in infrastructure procurement and delivery, there could be serious consequences to its capacity to deliver projects. Consequences could include a lack of confidence by investors and construction contractors in Victoria's infrastructure industry. This could have a detrimental impact on the State's national and international competitiveness and its ability to attract key industry participants to bid for projects.

Evidence presented to the Committee suggests that there are strengths in Victoria's current system. However, the Inquiry also identified a number of areas where improvements are needed. The Committee's recommendations are designed to address these areas.

The key drivers for change are noted in this section. Additional areas are noted throughout the remaining chapters of this Report.

### 2.3.1 Serious instances of unsatisfactory performance

In its submission to the Inquiry, DTF recognised that:<sup>4</sup>

*Despite the State's leadership in the development of infrastructure policies and guidance, Victoria has not been immune to difficulties in the effective delivery of major infrastructure projects. This is evidenced by unbudgeted cost increases and/or delivery delays experienced by a number of major projects in recent years.*

The less-than-satisfactory performance in certain projects was highlighted by the Government in the lead up to its first State Budget in 2011. In an 'economic and financial statement', the Treasurer referred to 'a range of capital projects beset by inadequate management and very significant cost overruns.'<sup>5</sup>

The Treasurer went on to say that the 'aggregate impact of these new cost pressures is estimated to be in the order of \$2 billion.'<sup>6</sup> There has been a number of projects to which the Government has felt the need to provide additional funding, though the basis for that estimate has been disputed.

As part of this Inquiry, the Committee examined six selected projects in detail. Chapter 6 of this Report provides the results of this examination. Projects were examined against the criteria of maximising transparency and accountability and alignment with the public interest. Chapter 6 identifies the positive performance of some projects. However, it also highlights that there were areas of poor performance in a number of these projects.

The Committee also heard testimony from both the Auditor-General and the Ombudsman about some other instances of major infrastructure projects being poorly managed in Victoria. Concerns have also been expressed by these officers in a number of reports to Parliament.

<sup>4</sup> Department of Treasury and Finance, submission to the Committee, 3 February 2012, p.17

<sup>5</sup> Hon. K. Wells MP, Treasurer, *Victorian Economic and Financial Statement*, April 2011, p.1

<sup>6</sup> *ibid*, p.6

In particular, a November 2011 report to Parliament, prepared by the Ombudsman in consultation with the Auditor-General, expressed serious reservations on the standard of management of a suite of major Information and Communication Technology (ICT)-enabled projects. This report included wide-ranging criticism of Victoria's management framework for such projects, including the central agency role of DTF. The report's Foreword included the following comments:<sup>7</sup>

*In Victoria over the last few years, in our respective roles as Auditor-General and Ombudsman, we have tabled in Parliament a number of reports relating to ICT-enabled projects. These reports have identified significant shortcomings in the public sector's management of such projects and have included numerous recommendations about how such management can be improved.*

*Despite these reports, we see little sign of lessons learnt in the public sector. The evidence to date is that the public sector is not managing ICT-enabled projects effectively, as demonstrated by the current difficulties that Victoria is facing in this area and the increasingly adverse public comment about major ICT-enabled projects. A new and more disciplined approach is required if the government is to avoid being faced with continuing cost overruns and failures to deliver.*

The report found that:<sup>8</sup>

*... despite the extensive guidance and literature available, agencies are making the same mistakes around planning, governance, project management and procurement that our offices have observed and reported on for some years. This includes the lack of accountability of those responsible for these project failures, especially senior agency executives and the Department of Treasury and Finance.*

The report made 58 recommendations for improving the planning and delivery of current and future ICT-enabled projects.

**FINDING:** The Committee has noted disappointing performance on some major infrastructure projects as have the Auditor-General and the Victorian Ombudsman.

The Government has, since coming to office, implemented some amendments to the processes surrounding the procurement of infrastructure including:

- introduction of the High-Value and High-Risk Framework;
- revision of the Investment Lifecycle Guidelines; and
- commitment to reform of Major Projects Victoria.

The Committee welcomes ongoing refinement to the approach of the Government to infrastructure procurement.

<sup>7</sup> Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.3

<sup>8</sup> *ibid.*



### 2.3.2 The High-Value and High-Risk Framework

The Committee heard evidence from both the Auditor-General and the Ombudsman's office about there being an 'oversight deficit' in Victoria.<sup>9</sup>

A key response by the Government has been the introduction of the High-Value and High-Risk (HVHR) Framework in 2011. According to the guidelines, this Framework applies more rigorous scrutiny and approval procedures to projects meeting any of the following criteria:<sup>10</sup>

- a total estimated investment over \$100 million;
- identified as high-risk through the Gateway Project Profile Model; or
- identified by the Government as high-risk.

The HVHR Framework requires greater involvement from DTF and the Treasurer, particularly at the early stages of a project.

During all phases, DTF is required to be on steering committees or similar groups for HVHR projects to provide advice.<sup>11</sup> DTF informed the Committee that it has clarified the role of these representatives and established a HVHR Assurance Sub-Committee to oversee DTF's monitoring and advisory functions.<sup>12</sup> In addition, DTF makes use of the Gateway Review Process, a process in which independent experts review projects at key points throughout a project's life-cycle (see Section 5.4.1 of this Report for further details). All HVHR projects are required to go through all six Gateway Reviews.<sup>13</sup>

In the early stages of a project, the Treasurer's approval is required for the business case and key points in the tendering process.<sup>14</sup> Any critical or urgent issues identified through Gateway Reviews 1 to 4 must be reported to DTF along with recommended action plans in response.<sup>15</sup> Reviews 1 to 4 examine the project up to and including the tendering decision.

During the implementation phase, DTF expects:<sup>16</sup>

*... regular reporting from departments on progress of the project against time lines, cost and all of those elements, including milestone achievements. On the basis of that we make an assessment about whether the project has risks associated with it, whether they be of timeliness or cost, and we then provide advice to government on actions that they can take to remedy those situations.*

However, the crucial assurance mechanism of the Treasurer's approval is only required during the delivery phase if there is a major variation to the contract.<sup>17</sup> Issues identified through Gateway Reviews 5 and 6 are not required to be reported to DTF.<sup>18</sup> In the absence of these

9 Mr D. Pearson, Auditor-General of Victoria, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 21 August 2012, p.4; Mr J. Taylor, Deputy Ombudsman, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 22 August 2012, p.15

10 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Overview*, July 2012, p.14

11 Department of Treasury and Finance, response to the Committee's questionnaire, received 9 November 2012, pp.1-3; Department of Treasury and Finance, *Reporting Gateway Red Flags: A Guide for Departments and Agencies*, n.d., p.7

12 Department of Treasury and Finance, response to the Committee's questionnaire, received 9 November 2012, pp.2-3

13 Department of Treasury and Finance, *Reporting Gateway Red Flags: A Guide for Departments and Agencies*, n.d., p.1

14 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Overview*, July 2012, p.15

15 Department of Treasury and Finance, *Reporting Gateway Red Flags: A Guide for Departments and Agencies*, n.d., p.1

16 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 20 March 2012, p.4

17 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines: Overview*, July 2012, p.15

18 Department of Treasury and Finance, *Reporting Gateway Red Flags: A Guide for Departments and Agencies*, n.d., pp.7-8

formal requirements, it is not clear how comprehensive DTF's information about projects in the delivery phase will be.

DTF expressed the following view to the Committee of the benefits that it expects from the HVHR Framework:<sup>19</sup>

*The new HVHR process in Victoria is directed at ensuring the guidance and processes are thoroughly and consistently applied to provide increased certainty to the Government that major investments will be successfully delivered. The greater rigour surrounding the development and monitoring of HVHR projects should encourage skill and capability development across the public sector as well as driving stronger application (and compliance) with the relevant policy and guidance material.*

It is too early to tell how effective the HVHR Framework is. The Committee considers that it has potential to reduce unsatisfactory project performance.

However, the Committee notes that it is limited to only projects meeting the high-value and high-risk criteria. This is only a minority of asset investment in any year. In 2012-13, for example, the estimated expenditure on non-HVHR projects represents between 63 and 88 per cent of the estimated total for the public sector.<sup>20</sup> The Committee also notes that the Framework is more strongly weighted to the pre-delivery stages of projects.

In addition, the Committee notes that there were 42 projects with total estimated investments over \$100 million listed in the 2012-13 budget papers which were not included in the list of HVHR projects.<sup>21</sup>

The Committee therefore considers that in addition to the HVHR Framework, the Victorian Infrastructure and Skills Authority should monitor project delivery for all projects to ensure that identified best practices are being followed through the entire life-cycle of all projects. This has been recommended above (see Section 2.2.2).

**FINDING:** The Government introduced the High-Value and High-Risk Framework in 2011 to provide greater scrutiny over projects classified as high-value or high-risk. However, this represents only a minority of projects. The Committee has recommended that the Victorian Infrastructure and Skills Authority have overall responsibility for ensuring that all projects are following best practice guidelines.

### 2.3.3 Ensuring best practice is followed

Over the past two decades, Victoria has held a reputation for its leading approach to infrastructure management. Central to this reputation has been the high standard of its infrastructure policy documentation and guidelines. DTF informed the Committee that a number of Victoria's infrastructure policies and guidelines have been recognised as quality benchmarks by Australasian and international jurisdictions.<sup>22</sup> Some guidelines have even

19 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.17

20 Based on estimates in Budget Paper No.4, *2012-13 State Capital Program*, May 2012. Only a range can be given, as individual estimates for some HVHR projects are not given in the budget paper due to commercial sensitivities.

21 Comparing the lists on pages 3-4 of Budget Paper No.4, *2012-13 State Capital Program*, May 2012, with the details of projects in Chapters 2 and 3. This does not include public private partnerships projects.

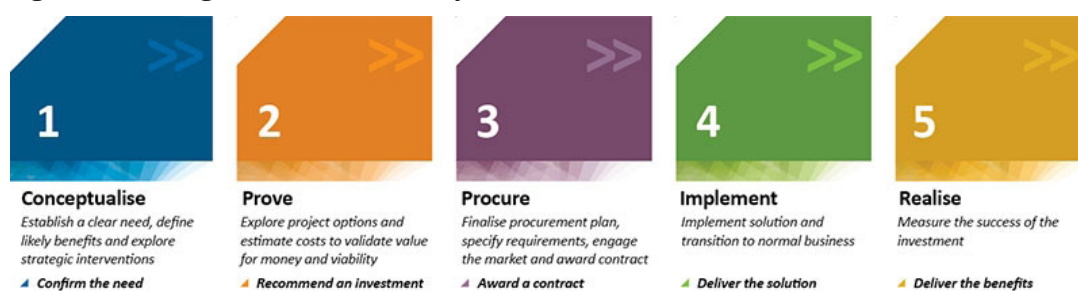
22 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.17

been adopted by other jurisdictions or served as a basis for the development of their own guidelines.<sup>23</sup>

Key among the guidelines for infrastructure projects is the *Investment Lifecycle Guidelines*. In 2012, DTF commenced revising parts of these guidelines. The Committee understands this revision is still in progress.

The life-cycle guidelines provide wide-ranging assistance to constructing agencies across five identified stages of the investment cycle (see Figure 2.2).

**Figure 2.2 Stages of the investment cycle**



Source: Department of Treasury and Finance, 'Overview – Investment Lifecycle and High Value/High Risk Guidelines', <[www.lifecycleguidance.dtf.vic.gov.au/section.php?section\\_ID=1](http://www.lifecycleguidance.dtf.vic.gov.au/section.php?section_ID=1)>, accessed 20 November 2012

The revised guidelines integrate the requirements of the HVHR process. They also include an expanded technical tool on governance and, from the Committee's viewpoint, a promising first step to identification of requisite competencies and skills across the five project stages.

As discussed in Chapter 4, however, the Committee's analysis of the competencies and skills in the Guidelines shows that there is substantial scope to improve the level of detail given about the competencies and skills.

Moreover, the Committee has concluded from this Inquiry that strong infrastructure policy documentation and guidance has not always equated with competent application of the policies or strict adherence to the guidelines by constructing agencies. In some cases, the guidance was not mandatory. In many cases, adherence to the guidance was not monitored, nor was action taken when agencies were not following the guidance. As DTF explained to the Committee:<sup>24</sup>

*DTF is responsible for ensuring that frameworks, policies, guidelines and standards are established and ensure generic training is available for departments to inform general procurement practices. DTF also provides specific guidance and facilitates specialist training in relation to procuring infrastructure services. Departments are accountable for delivering projects and are also responsible for ensuring their projects and staff apply and adhere to these guidelines and are appropriately trained.*

It appears to the Committee that, as a result of devolving responsibility to departments and not monitoring it, the guidelines have not been followed in some cases. The failure of agencies to use the pre-HVHR Gateway Review Process stands as an example of this (see Section 5.4.1 in general and Section 6.6.4 about the HealthSMART Program). The Committee was also informed about deficiencies in business cases and post-project reports that were not corrected by DTF (see Section 5.4.3). Based on a number of audits, the Victorian Auditor-General's

23 *ibid.*

24 Department of Treasury and Finance, response to the Committee's questionnaire, received 9 November 2012, p.10

Office expressed concern to the Committee about the failure to monitor compliance with guidelines.<sup>25</sup>

Ensuring that agencies follow the guidance is an important means to reduce the risk of poor decision-making and poor management practices.

A stronger and more reliable mechanism is necessary to ensure that infrastructure projects are consistently delivered in line with the high standard articulated in policy documentation and associated guidance. This requires monitoring of whether or not the guidance is adhered to and taking action where it is not. This has been built into the recommended roles for the Victorian Infrastructure and Skills Authority (see Section 2.2.2 above).

**FINDING:** The Department of Treasury and Finance informed the Committee of Victoria's reputation for the high quality of its infrastructure policies and guidelines. The Committee has noted scope for improvements to these guidelines in detailing required competencies and skills.

**FINDING:** Under current arrangements, there is no central responsibility for ensuring that best-practice guidance is followed. The Committee has identified a number of cases of it not being followed. The Committee has recommended increased oversight to reduce this.

### 2.3.4 Problems with Major Projects Victoria

The Auditor-General reported serious concerns about Major Projects Victoria (MPV) in October 2012.<sup>26</sup>

MPV is a business unit within the Department of Business and Innovation (DBI). It is charged with responsibility for delivering certain major projects. In 2011-12, it '*managed approximately \$2.5 billion worth of major projects*'.<sup>27</sup> It also has a key role in providing specialist support services to public sector agencies, particularly the smaller agencies, to augment their infrastructure planning and management.

The importance of MPV's role and responsibilities accentuates the criticism made by the Auditor-General. This criticism included:<sup>28</sup>

*MPV is not able to demonstrate that it operates and manages infrastructure projects effectively, efficiently or economically.*

*...Poor oversight by DBI and the lack of effective internal controls have contributed to poor governance standards and a lack of organisational integrity and accountability ...*

25 Victorian Auditor-General's Office, submission to the Committee, received 9 November 2011, pp.2-3

26 Victorian Auditor-General's Office, *Managing Major Projects*, October 2012

27 Department of Business and Innovation, *Annual Report 2011-12*, September 2012, p.9

28 Victorian Auditor-General's Office, *Managing Major Projects*, October 2012, pp.vii-viii

*MPV's governance and operational shortcomings are pervasive and should be addressed as a priority.*

*MPV has reported to Parliament that it has achieved 100 per cent performance over a 14-year period. This raises questions about whether Parliament and the community have been reliably informed, and highlights fundamental shortcomings of MPV's and DBI's governance.*

*MPV adopts employment practices that do not represent value-for-money and lack transparency and integrity. These practices have included employees resigning and being re-engaged soon after to perform the same work at a much higher cost to the public.*

In response to the report, the Minister for Major Projects indicated that:<sup>29</sup>

*In addition to accepting the Auditor-General's recommendations in full, I will refer this report to the Better Services Implementation Taskforce for its strong advice on any structural reform which could lead to enhanced administration of major projects.*

The Better Services Implementation Taskforce consists of experienced executives from the public and private sector whose role is to improve Government services.<sup>30</sup>

The Committee considers that a key component that allows MPV to operate as it currently does is a lack of sufficient oversight. While structural reform within MPV might improve some of the problems, the Committee considers that much stronger oversight mechanisms need to exist around any agency with MPV's significant roles and responsibilities.

This need for stronger oversight and the serious problems with MPV identified by the Auditor-General have contributed to the Committee's recommendation that MPV be dissolved and replaced by a new body (the Victorian Infrastructure and Skills Authority) with much stronger oversight and reporting requirements in place (see Section 2.2.2 above).

**FINDING:** The Auditor-General recently reported on serious problems with Major Projects Victoria's performance. The Committee considers that stronger governance needs to be in place around any agency with such significant responsibilities. Given the current problems with Major Projects Victoria, the Committee believes that it should be replaced by a new body with stronger oversight and reporting requirements.

**RECOMMENDATION 11:** Major Projects Victoria's functions are to be incorporated into the new Victorian Infrastructure and Skills Authority.

<sup>29</sup> Hon. Dr D. Napthine MP, Minister for Major Projects, *Fixing Labor's Major Projects Failures*, media release, 10 October 2012

<sup>30</sup> Hon. T Baillieu MP, Premier, *Implementation Taskforce Established*, media release, 18 March 2012

### 2.3.5 Potential conflict and confusion in the Department of Treasury and Finance's roles

The Victorian Auditor-General's Office (VAGO) raised a concern with the Committee about there being a potential 'role conflict' in DTF under the current arrangements. In particular, VAGO raised concerns about DTF having responsibility for:<sup>31</sup>

- actively participating in developing business cases and project initiation; and
- providing objective advice to Government about whether or not projects should be approved.

More generally, DTF is responsible for providing advice to agencies on project delivery and for monitoring the progress of projects and providing advice to Government.<sup>32</sup>

This situation was summarised in the advice the Committee received from Evans & Peck:<sup>33</sup>

*Confusion around the roles and accountability of DTF was raised by numerous agencies. DTF's multiple roles of assurance and decision-making (as an investor) and its expert technical input role participating in the project's development and delivery are conflicting and this leads to confusion around roles, responsibility and accountability, particularly for PPP projects.*

...

*Combining the assurance (investor) function with the technical input function in DTF has created role confusion and has blurred accountability, adversely affecting the working relationship between line agencies and DTF. It is important that DTF has sustained capability to carry out its assurance and oversight role as investor. Strengthening the assurance and independent oversight roles of DTF while separating and centralising technical skills and access to precedent project documentation and materials will contribute to a retained skill base and learning and greater consistency across government. This independence is only possible if DTF does not also provide input in an owner's or deliverer's role.*

The Committee's new structure sees DTF's responsibilities focused solely on assurance as the investor. Central advice and assistance with projects would be responsibilities of the Victorian Infrastructure and Skills Authority. The Committee considers that this will assist DTF to more clearly monitor the Government's investment and to focus on providing the best advice to Government.

**FINDING:** Concerns have been raised about role confusion with respect to the Department of Treasury and Finance, which is responsible for both assisting with project proposals and assessing those proposals on behalf of Government. The new structure recommended by the Committee would separate these roles, with the Department of Treasury and Finance focused on advice to Government and assurance roles.

31 Mr P. O'Connor, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 20 March 2012, p.3 and 21 August 2012, p.14; cf. Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 21 August 2012, pp.2-3

32 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 21 August 2012, pp.2-3

33 Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, pp.5-6

### 2.3.6 Responsibility for competencies and skills

Three of the Inquiry's terms of reference require the Committee to look at competencies and skills in the public sector. As DTF informed the Committee, '*the responsibility for securing, developing and maintaining project capabilities rests largely with individual departments and agencies*'.<sup>34</sup> As detailed in Chapter 4, the guidance that has been produced by central agencies in this area is mostly very high-level.

The Committee was informed by a number of witnesses that there have been cases where project staff have not had the required competencies and skills (see Section 5.2.1). The Committee considers that a lack of central responsibility for competencies and skills may be one contributing factor.

The Committee has recommended that the Victorian Infrastructure and Skills Authority assume responsibility for identifying what competencies and skills are required in the Victorian public sector, along with monitoring whether these skills and competencies are present (see Section 2.2.2 above). In addition to this strategic responsibility, the Committee proposes that agencies delivering their own major projects provide proposals for their teams to the Victorian Infrastructure and Skills Authority. The Victorian Infrastructure and Skills Authority could ensure that the proposed teams contain the required competencies and skills. The Victorian Infrastructure and Skills Authority could also facilitate transfers of skilled experts between agencies where necessary.

The Committee believes that this central responsibility for competencies and skills should improve Victoria's infrastructure procurement and delivery.

**FINDING:** The Committee has been informed that required competencies and skills have not been present in some major infrastructure projects. The lack of central responsibility for identifying required competencies and skills and monitoring whether or not they are present may be a factor contributing to this. The Committee's recommended structure makes the Victorian Infrastructure and Skills Authority explicitly responsible for ensuring the required competencies and skills are present in the public sector and on project teams for major projects.

### 2.3.7 Retention of skilled staff within the public sector

As discussed in Chapter 8 of this Report, the Committee heard evidence that a number of advantages would come from retaining more skilled, experienced staff within the public sector. These advantages include the possibility of reduced costs and better project outcomes. Chapter 8 looks at this matter specifically in relation to public private partnerships projects, but the same principles apply to all infrastructure projects.

The fluctuations in the number of infrastructure projects being delivered by most agencies make retaining skilled staff within the agency difficult (see Section 8.5.2). One solution to this is retaining staff permanently or for longer periods within a central agency. Through such an arrangement, staff can be provided with a career path and with opportunities to develop, without having to move jobs and potentially be lost from the public sector. This is one of the functions recommended for the Victorian Infrastructure and Skills Authority.

34 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.11

As noted in Section 2.2.2 above, a clearly identified pipeline of projects will assist the Victorian Infrastructure and Skills Authority in retaining these staff and providing them with clear career paths.

Salary restrictions have also been identified as a factor limiting the public sector's ability to attract and retain staff (see Section 8.5). It is therefore important that the Victorian Infrastructure and Skills Authority be given the flexibility to employ staff with the remuneration it considers to be required. The Victorian Infrastructure and Skills Authority should also explore options for non-financial incentives, such as those detailed by the State Services Authority to the Committee (see Section 8.5.1).

The Government may also choose to use the Victorian Infrastructure and Skills Authority to address the problem of there being limited opportunities for recent engineering graduates because both public and private sector bodies currently tend to only employ experienced staff (see Section 5.3.2).

**FINDING:** An anticipated advantage of establishing the Victorian Infrastructure and Skills Authority is that it would have a better capacity than most agencies to retain staff, as it would have a constant flow of projects. The Victorian Infrastructure and Skills Authority would also need the ability to provide appropriate levels of remuneration to attract and retain experienced and skilled staff.

### 2.3.8 The need to be an 'informed buyer'

Another major concern raised with the Committee was the public sector's capacity to act as an 'informed buyer'. As detailed in Section 8.4.3, being an informed buyer allows the public sector to make better decisions and achieve better outcomes in procuring and delivering projects. The Committee also heard that it can encourage the private sector to bid for projects and avoid adversarial relationships.

One of the motivations behind establishing the Victorian Infrastructure and Skills Authority as a centre of excellence has been to enhance Victoria's capacity as an informed buyer. The Victorian Infrastructure and Skills Authority would bring together experts currently spread across the public sector in DTF, MPV and DPCD. A transfer and centralisation of appropriate experts in infrastructure development, procurement and delivery from those agencies would help build a Victorian human resource base of highly skilled and experienced staff within the Victorian Infrastructure and Skills Authority. This mobilisation would also facilitate Victoria's informed buyer status.

**FINDING:** A transfer of appropriate experts in infrastructure development, procurement and delivery from the Department of Treasury and Finance, Major Projects Victoria and the Department of Planning and Community Development to the Victorian Infrastructure and Skills Authority as a centre of excellence would enhance Victoria's capacity as an informed buyer. Being an informed buyer provides a number of benefits in project procurement and delivery. The Committee has recommended the establishment of the Victorian Infrastructure and Skills Authority as a centre of excellence in part to ensure that the Victorian public sector can have that informed buyer status.



## 2.4 Contemporary better practice informing the Committee's recommendations

Victoria is not alone in facing a number of these challenges. The Committee heard evidence that other jurisdictions have also experienced difficulties with cost overruns and project delays on infrastructure projects.

The Committee's research identified a number of other jurisdictions which have implemented measures to address these difficulties. Chapter 7 of this Report discusses in detail the approaches and practices in other jurisdictions examined by the Committee.

Contemporary initiatives in four jurisdictions particularly stood out to the Committee as better practice structural reforms for infrastructure planning and delivery. The Committee's recommended reforms have in part been based on these developments. The jurisdictions are:

- the Canadian Province of British Columbia, under which Partnerships British Columbia has been established as a government-owned incorporated body funded through fee-for-service arrangements. This body provides expert consultancy advice to agencies within the Province for the planning and procurement of major projects. It has a key role in the review of business cases and will, if deemed necessary, participate more widely in a project's management and delivery. It is viewed in industry circles as a principal catalyst for achieving consistency of approach to project planning and management across the Province;
- the Canadian Province of Ontario, through the creation of Infrastructure Ontario. This body operates as a Crown corporation with wide-ranging responsibility for the delivery of infrastructure projects. It is a key element of the centralisation of infrastructure oversight in the Province. It was established on the premise that the right central framework must be in place for the Province to deliver major projects on time and on budget. A feature of its structure is the operation of a lending business unit, which can provide finance for projects through the issue of bonds. However, this approach is not necessarily recommended for Victoria, where the Treasury Corporation of Victoria has already been established;
- the United Kingdom, following the establishment of the Major Projects Authority as part of a range of reforms introduced in the UK Cabinet Office. These reforms are directed at strengthening the management and delivery of public sector infrastructure projects in the UK, including the capability of key project officials. The Major Projects Authority also has strategic training and development arrangements with the University of Oxford; and
- New South Wales, following the creation in July 2011 of Infrastructure NSW. This organisation has been assigned a range of responsibilities. These include preparation of five-year infrastructure plans, development of project implementation plans for major infrastructure projects, provision of advice on project funding models and the conduct of reviews of completed infrastructure projects.

The Committee was informed that a key reason for these reforms has been experiences in those jurisdictions with projects coming in over budget, beyond set timeframes or not delivering expected benefits to the community. The reforms have been prompted by resultant reputational damage, deep-seated community and industry criticisms and an awareness of the impact of poor infrastructure performance on the economic standing of the jurisdictions.

A common feature of these reforms has been the centralisation of key infrastructure planning and procurement functions. Dedicated bodies have been established at arm's length to departmental structures, including central treasury agencies.

This approach facilitates a total and continual focus on all aspects of infrastructure management. The jurisdictions view such reforms as providing greater assurance about the delivery of infrastructure projects. Jurisdictions have regarded previous frameworks, in which infrastructure responsibility was spread across the public sector and combined with the responsibilities of other government bodies including central treasury agencies, as hampering successful project delivery.

Strong collaborative arrangements appear to have been established between the new organisations and other public sector agencies. In the Canadian provinces of British Columbia and Ontario, there is strong collaboration with the respective government treasury agencies. The oversight and review functions of the new centralised bodies on project business cases and procurement directions are regarded as key informed inputs to treasury deliberations on budget submissions for individual projects.

The Committee also heard during its visits to Canada and the UK that the reforms have generated favourable reactions from the private sector. The UK reforms are at an early stage. However, the Committee heard that the directions taken in British Columbia and Ontario, and the results achieved to date, have led to greater private sector confidence that infrastructure projects coming to the market will proceed on a structured and efficient basis and will be completed.

**FINDING:** The Committee has identified reforms in a number of other jurisdictions which it considers offer lessons for Victoria. These reforms generally include centralisation of infrastructure planning and procurement into dedicated, independent bodies. The Committee's recommendations have, in part, been based on these better-practice reforms.

# CHAPTER 3 TERM OF REFERENCE (A) – REQUISITE COMPETENCIES AND SKILLS FOR INFRASTRUCTURE MANAGEMENT

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## 3.1 The assessed scope of term of reference (a)

Term of reference (a) requires the Committee to consider and report on:

*the competencies and skills that public sector managers require for the effective evaluation, decision making and oversight of significant infrastructure projects and protection of the public interest.*

This term of reference deals with the competencies and skills required of public sector managers to facilitate optimal decision-making in the management and delivery of significant infrastructure projects in Victoria. It applies, with separate attention, to all categories of infrastructure projects.

The main categories of infrastructure projects in Victoria are Public Private Partnerships (PPPs), Alliances and traditionally financed and procured projects. Definitions of these project types are included in the next chapter of this Report on term of reference (b).

Term of reference (a) requires consideration of competencies and skills at all levels and stages of project management and delivery. Its ambit extends to project governance structures. These structures oversee project management and delivery. They may take the form of steering committees, multi-disciplinary project review teams, review functions of central agencies and Gateway Reviews under Victoria's Gateway framework.

It introduces the concept of protection of the public interest and all that might be entailed in terms of competencies and skills by that concept.

The significance of the focus on competencies and skills within this term of reference is reinforced by the view expressed to the Committee by the Department of Treasury and Finance (DTF) that:<sup>35</sup>

*Having access to the appropriate quantity, quality and mix of resources and skills is critical to successful delivery of infrastructure projects.*

Its significance is also accentuated by the continually evolving participation and oversight environment for infrastructure projects. This evolving environment is particularly evident with PPPs and Alliances. These types of projects have an increasing involvement of the private sector in their financing, construction and delivery. The implications of this changing scene for infrastructure competencies and skills are integral to the matters requiring attention under term of reference (a).

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35 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.3

## 3.2 Responsibility for strategic policy and management of infrastructure skills across the public sector

In this chapter, the Committee's assessment of requisite competencies and skills to support optimal decision-making in infrastructure projects is preceded by its evaluation of the adequacy of Victoria's structural framework for managing infrastructure expertise at the strategic level. This approach has been taken to emphasise the importance of a sound structural framework to enhancing, on a sustainable basis, the State's infrastructure capability.

### 3.2.1 Absence of dedicated responsibility for infrastructure competencies and skills

#### Spread of responsibility across the public sector

The Committee has found that responsibility for infrastructure competencies and skills is spread across a number of public sector agencies. No organisation has a prime strategic and co-ordinating function for managing infrastructure capability on a state-wide basis.

As explained in Chapter 5 of this Report, the Department of Treasury and Finance undertakes, as part of its central agency functions, some key skills development roles for infrastructure management. These roles include PPP leadership courses, contract management training and project alliancing training, all through the University of Melbourne.

This aspect of DTF's work reflects the importance that is placed on the provision of central support to individual constructing agencies. This support is founded on Victoria's devolved resource management framework. As explained to the Committee by DTF, *'the responsibility for securing, developing and maintaining project capabilities rests largely with individual departments and agencies.'*<sup>36</sup> This responsibility extends to determining the type and nature of specialist skills required for any particular project.<sup>37</sup>

In addition to central training opportunities, several sources of assistance are available to agencies for securing the skills necessary for particular projects. As advised by DTF to the Committee, these sources of help comprise:<sup>38</sup>

- internal dedicated resources within the State's infrastructure-intensive departments;
- specific skill sets primarily via DTF's procurement advisers in PPPs and project alliancing and the specialist services coming from Major Projects Victoria (MPV);
- pre-approved panels such as the Commercial and Financial Advisory Services Panel, comprising suitably qualified contractors and consultants, which can assist agencies in various aspects of project management, including the critical task of development of business cases; and
- the external private sector market offering resources that are normally outside the skill sets covered by the pre-approved panels.

36 *ibid*, p.11

37 *ibid*, p.8

38 *ibid*.

In addition to these central inputs on infrastructure skills, the State Services Authority (SSA) may conduct occasional research associated with infrastructure capability. However, its responsibility relates to broader public sector employment strategies and provision of wider guidance to agencies on employment management, including workforce planning. It has, for example, developed a series of capability frameworks addressing:<sup>39</sup>

- leadership within the public sector;
- the public sector's employment capability;
- the attributes and specific skills required of 'great managers' in order to succeed in any public sector management role; and
- human resource capability.

The SSA pointed out to the Committee that these capability frameworks are generic and should be used by agencies in conjunction with other frameworks such as those that specify technical specialist capabilities. From the Committee's viewpoint, infrastructure and procurement management would be such a specialist framework.

The evidence provided to the Committee by the SSA indicated that it does not have a direct ongoing strategic function specifically relating to infrastructure competencies and skills.

A further participant in Victoria's infrastructure sector has been the Department of Planning and Community Development (DPCD). It had a key role in public construction policy under Part 4 of the *Project Development and Construction Management Act 1994*. This role, which is being transferred to DTF, includes the development and issue of Ministerial Directions and associated guidance covering tendering procedures and contractual provisions for public construction.

DPCD advised the Committee that it has not specified the competencies and skills required of public sector managers in public construction procurement of. It views this area as the direct responsibility of individual agencies. It indicated that the two Ministerial Directions are aimed at ensuring a high degree of consistency in the way agencies approach the building and construction industry for tenders and in the form of contracts used to engage industry suppliers.<sup>40</sup> There has therefore been limited strategic interaction by it with DTF or other agencies on optimum infrastructure competencies and skills.

DPCD did, however, emphasise to the Committee the importance of its role as Chair of Victoria's Construction Contracts Advisory Panel (CCAP). The Committee was informed that the CCAP brings together construction contract experts from across the public sector. It leads cross-portfolio best practice actions in public construction tendering and contracting principles and practices to support the Government's public construction procurement policies.<sup>41</sup> The CCAP does not directly address best practice in skills management of tenders and contracts across agencies.

39 State Services Authority, response to Committee's questionnaire, received 29 May 2012, p.2

40 Department of Planning and Community Development, response to Committee's questionnaire, received 6 March 2012, pp.6-7

41 *ibid*, p.2

**FINDING:** Notwithstanding the involvement of numerous participants, no organisation has prime and dedicated responsibility for macro policy and the strategic management of Victoria's infrastructure capability. This position means there is an unstructured approach to key strategic functions involving:

- the monitoring and assessment of emerging national and international trends, including contemporary industry directions, on best practice for identifying and developing critical infrastructure competencies and skills;
- management of the Government's infrastructure talent pool, including strategies for addressing identified crucial skill shortages and inefficient duplications across the public sector;
- provision of specialist advice and guidance to agencies on infrastructure skills; and
- preparation of leading edge skills matrices for all categories of procurement models utilised in Victoria and all key phases of the life-cycle of projects within those categories.

**FINDING:** The absence of such a vital state-wide coordinating function on infrastructure skills represents a serious shortcoming in Victoria's existing practices.

### Implications to Victoria of the absence of dedicated responsibility on infrastructure competencies and skills

The Committee recognises the importance of the various functions on infrastructure competencies and skills undertaken by the organisations mentioned in the above paragraphs. In addition, as commented on in Chapter 5 of this Report, a number of constructing agencies in Victoria have implemented positive initiatives to strengthen their infrastructure capability.

Despite these positives, a key weakness in Victoria's existing framework is the afore-mentioned absence of a dedicated mechanism for overseeing the Government's public sector-wide infrastructure talent pool. Such a mechanism is necessary to provide assurance that the discharge of the roles and responsibilities on infrastructure skills and competencies by various agencies across the public sector consistently constitute efficient and effective deployment of the resources within that talent pool.

Relevant to this issue was the following evidence given by DTF's Secretary to the Committee on Victoria's strategies for overseeing infrastructure skill sets across the public sector:<sup>42</sup>

*We do not maintain a central skills register, but we have 11 departments and a number of entities that do this. We work with them constantly, and their infrastructure procurement delivery units are well known to us, so when particular projects come up where, in discussions with departments, we identify skill needs, we will try to put them in touch with other departments where we think the skills are or identify individuals who could be moved from one organisation to another to meet those gaps.*

<sup>42</sup> Mr G. Hehir, Secretary, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.11

*We also try to keep an overview of what is happening with the flow of projects. If we think that a particular entity is not going as well as they should because of a skills gap, we will have conversations with them about the need to fill that. There are obvious examples like the federal government stimulus packages in education and housing where you have this large ramp-up in expenditure. We were in discussions with those departments from day one about, 'Have you got the right skills? Where can you access them when you are ramping up a program of that nature?' We are always having conversations with people about that type of stuff, and the people in the commercial division who work on these types of projects know the people who do the projects and try to put them in touch with each other, but it is not a formal process. I am not certain that a formal process is necessary, because it is very defined — the groups that are involved in these things.*

These comments emphasised to the Committee the informal nature of current practices.

As discussed in Section 5.2.2 of this Report, the identification of skills gaps is also devolved to individual agencies with informal involvement from DTF.

The Committee received evidence from a number of sources that there have been unaddressed skills gaps in Victoria (see Section 5.2.1). The Committee believes that the informal and devolved approach currently in place may be a contributing factor to this situation.

From the information presented to the Committee during its Inquiry, it cannot be confident that the current scattered approach to this key element of infrastructure management ensures that the Government has the best possible policy advice and guidance available to reach optimum decisions on the strength of Victoria's overall infrastructure capability and the calibre of project teams. There are no definite signs of such assurance immediately evident to the Committee from the current arrangements. This is not to suggest that the various tasks on infrastructure skills allocated across the public sector are poorly managed. It does suggest though that an assumption is necessary that all of the decisions made across the public sector on infrastructure competencies and skills are systematically co-ordinated to achieve optimal outcomes on a Government-wide basis.

### 3.2.2 What action is required by the Victorian Government?

The preceding paragraphs in this chapter emphasise the importance of decisive action by Government to strengthen its strategic management of infrastructure competencies and skills.

DTF informed the Committee that, over the past decade, '*considerable progress has been made in building the required competencies across the Victorian public sector.*' It added that this task '*will continue as the State seeks to continue to improve its project delivery and respond to continually emerging procurement methodologies and changing expectations.*'<sup>43</sup> The Committee supports such continuous improvement directions.

On needed structural reform, the Committee considers that the Government has a number of options on the assignment of dedicated responsibility for overseeing and managing its infrastructure capability. These options include assignment of such a role to:

- DTF – this could adversely add to the burden of DTF's already considerable central agency functions. The Committee also questions whether such a task appropriately sits within DTF's remit.

43 Department of Treasury and Finance, submission to the Committee, 3 February 2012, p.11

- DPCD – its past public construction role has been principally limited to tendering procedures and contractual provisions, with a focus on consistency of approach rather than skills. The role is being transferred to DTF.
- MPV- it provides specialist services to agencies on infrastructure matters but the extensive criticism on its performance in the Auditor-General’s October 2012 report to Parliament does not give confidence to the Committee that, in its current form, MPV would be a suitable repository for a major strategic role on skills.
- SSA – its principal role is with broader public sector employment strategies. Any assignment of specialist functions such as infrastructure skills would not be consistent with, and could even impede, this key role.
- A specialist Skills Commission or Statutory Authority on Infrastructure – a separate independent body which integrates expertise in all aspects of skills management and training and provides technical and commercial advice to agencies on project planning, Business Case review and confirmation, procurement options and delivery services.

As outlined in the preceding recommended future directions chapter of this Report, the Committee’s preferred approach involves the centralising of responsibility for infrastructure competencies and skills within a new stand-alone body, the Victorian Infrastructure and Skills Authority. It sees this direction as integrating responsibility for better practice, including full accountability for project management and delivery, with responsibility for better practice in skills training and management. To the Committee, such integration is essential as there is an intrinsic relationship between leading edge project performance and optimal management of the State’s infrastructure expertise. Better practice in one concept is needed for attainment of better practice in the other. The two concepts cannot be mutually exclusive.

**FINDING:** Existing practices within Victoria on infrastructure skills management are informal in nature. They do not give assurance to the Committee that decisions on skills taken by numerous parties across the public sector optimise deployment of the Government’s infrastructure talent and maximise value-for-money.

**FINDING:** The Government should move to strengthen the strategic management of its infrastructure capability and the quality of its decision-making on public sector-wide infrastructure skills. Assignment of such responsibility to a dedicated independent body would be an effective means of realising these aims.

### 3.3 Best practice public sector skills and competencies in major infrastructure projects

As mentioned in the introductory paragraphs to this chapter, this term of reference deals with the competencies and skills required of public sector managers to facilitate optimal decision-making in the management and delivery of significant infrastructure projects in Victoria. It applies, with separate attention, to all categories of infrastructure projects.

During the course of its Inquiry, the Committee received extensive information and comments from many parties, representing both private and public sectors and academia, on the competencies and skills necessary to support decision-making in major infrastructure projects. This extensive input has been very useful to the Committee’s deliberations.



At an early stage of the Inquiry, the Committee identified that the focus in Victoria's published infrastructure policies and guidelines is on the roles and responsibilities of project participants rather than on core competencies and skills. Any references to competencies and skills are generally limited to brief generic titles of requisite expertise. These characteristics of the infrastructure policies and guidelines are addressed in the following chapter on term of reference (b).

The Committee was also cognisant that relatively limited contemporary information had been published in Australia on infrastructure competencies and skills in the context of the requirements of term of reference (a). This view was influenced by the fact that this term of reference extended to all procurement models, all key phases of project management and all levels of project personnel. It also requires evaluation of all that might be entailed in terms of competencies and skills by the concept of protection of the public interest.

### 3.3.1 Results of specialist research on best practice infrastructure competencies and skills

It was against the above background that the Committee determined to place a strong emphasis on the commissioning of leading edge research which draws out all of the competencies and skills of infrastructure managers, including, where possible, professional attributes and attitudes, necessary for successful management, oversight and delivery of projects. The aim of this research direction was to differentiate between:

- key roles and responsibilities at defined project management levels; and
- the competencies and skills required to facilitate effective fulfilment of those roles and responsibilities.

For this purpose, the Committee commissioned the services of Evans & Peck, an Australian-based international consulting firm with wide experience of infrastructure projects in Victoria, across Australia and globally.

On 2 November 2012, Evans & Peck submitted its final report on the results of all of its specialist research conducted on behalf of the Committee. This research related to terms of reference (a), (d) and (f) and was designed to support the Committee's deliberations pertaining to those segments of its Inquiry.

The full report of Evans & Peck is available on the Committee's website ([www.parliament.vic.gov.au/paec](http://www.parliament.vic.gov.au/paec)).

The following paragraphs address the matters reported to the Committee by the firm on best practice infrastructure competencies and skills in response to term of reference (a).

#### The role of government in project delivery

Before presenting its findings on best practice infrastructure expertise, Evans & Peck included in its report a description of the three key roles of government in project delivery and the related capability requirements for successful delivery of those roles. In this area, Evans & Peck reported that:<sup>44</sup>

<sup>44</sup> Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, pp.9-10

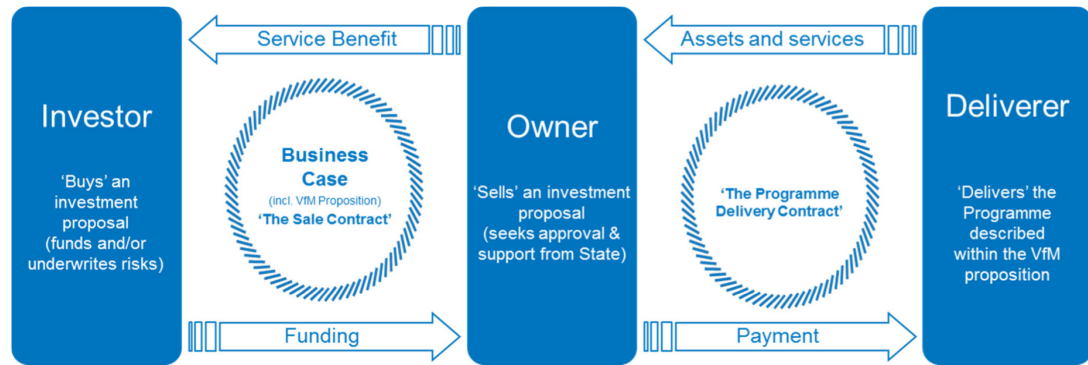
*Major infrastructure projects are delivered by government to provide a public service outcome. It is important when considering the skills and competencies required to distinguish the three key roles government undertakes, the distinctly different objectives of each of the roles and the subsequent differences in required capability for each role:*

- *Government as the **investor**, determines investment priorities, approves specific business cases and provides the funding, and/or underwrites the risks. In Victoria, this role is generally undertaken by the DTF and/or Federal Government Department as co-funder. The 'investor' assesses the relative value of the proposed project against the many other projects proposed by other 'owners', taking a portfolio approach to assess the set of projects that will offer best value for money in terms of service outcomes against whole of government priorities.*
- *Government as the **owner**, identifies the community need and possible solutions for funding by the State and prepares the business case, which may include a requirement for a major infrastructure asset; and is responsible for delivering the service outcome outlined in the business case. This role is typically undertaken by the line agency or department that will ultimately own and manage the asset to be delivered, and be responsible for the service outcomes that the asset provides. The owner establishes the corporate policy in relation to the project, provides funding, approves procurement within its delegations, and provides appropriate high level liaison and representation.*
- *Government as the **project deliverer**, manages the delivery of the project to provide the major infrastructure asset that addresses the community need identified in the business case. This role is to deliver the asset, but the agency or Department does not necessarily own the asset nor have accountability for the outcomes it delivers or enables.*

*Clarity regarding which role an individual/organisation within government is undertaking is fundamental to good outcomes. For example, good practice requires that there is clear delineation between development of the business case and the decision to approve it. Whilst the investor may require certain information of a particular quality to be provided in the business case, it is the owner who is accountable for the business case. Similarly, the deliverer may contribute information to the business case in terms of cost and risk profile of the delivery of the related infrastructure asset, however overall accountability, for the business case remains with the owner. This clarity of roles ensures that the ultimate owner of the asset, who has the best understanding of the service outcome required, owns the business case that describes the service outcome and the required asset.*

Evans & Peck included in its report the following diagrammatic presentation (Figure 3.1) of the relationships between these roles of government.

The firm emphasised that, in undertaking these roles, the Government must demonstrate high levels of capability, integrity and transparency in processes while pursuing value-for-money outcomes in the public interest.

**Figure 3.1 Roles of government in project delivery**

Source: Evans & Peck, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects – Final Report, December 2012, p.10 as adapted from Commonwealth Department of Infrastructure and Transport, National Alliancing Contracting Guidelines – Guidance Note 4: Reporting Value-for-Money Outcomes, July 2011, p.8

### Victoria's investment life-cycle framework

The firm's introductory text to its findings on best practice infrastructure expertise also included an outline of Victoria's investment life-cycle framework. This outline identifies the five phases of a project's life-cycle as devised by DTF. As mentioned in the preceding recommended future directions chapter, these phases, Conceptualise, Prove, Procure, Implement and Realise, underpin DTF's recent wide-ranging revision of its investment life-cycle guidelines.

These five phases and the above-mentioned three key roles of government in project delivery are reflected in Evans & Peck's tabulations of infrastructure competencies and skills.

### Specialist's tabulations of best practice infrastructure competencies and skills

Evans & Peck has compiled two tables to identify its assessment of the normative competencies and skills required for the delivery of major infrastructure projects in the public sector.

Table 3.1 shows the specific project activities according to each of the five designated phases of a project's life-cycle and the applicable role of government (investor, owner or deliverer). Evans & Peck considers the identified project activities are necessary to effectively deliver major infrastructure projects.

**Table 3.1 Specific project activities by life-cycle phase and role**

Project activity	Conceptualise	Prove	Procure	Implement	Realise
	KEY: ■ = Investor, ● = Owner, ◆ = Deliverer				
1. Strategic assessment	●	■●			■●
2. Business case development	●	■●◆	●◆		■●
3.1 Scope definition	●	■●◆	●◆		
3.2 Scope management			●◆	●◆	
4. Technical review and oversight	●	■●◆	●◆	●◆	
5. Cost management	●	●◆	●◆	●◆	
6. Risk management	●	■●◆	●◆	●◆	
7. Stakeholder engagement	●	■●	●◆	●◆	
8. Communications	●	■●	●◆	●◆	

Project activity	Conceptualise	Prove	Procure	Implement	Realise
	KEY: ■ = Investor, ● = Owner, ◆ = Deliverer				
9.1 Project leadership – business case	●	●			
9.2 Project leadership – procurement			◆●		
9.3 Project leadership – delivery				◆●	
9.4 Project management & co-ordination	●	●	◆●	◆●	
10. Project funding and financing strategy		■●	■●		
11. Procurement strategy		◆●			
12. Value for money assessment		■●	■◆●		
13. Commercial structuring and documentation development			■◆●		
14. Transaction management			◆●		
15. Tender evaluation & financial review			■◆●		
16. Expenditure review & oversight			■●	■●	
17. Scheduling – definition, preparation & management			◆●	◆●	
18.1 Contract management – project development		●	◆●		
18.2 Contract management – delivery				◆	
19. Project controls		●	◆●	◆●	
20. Evaluation of project performance					■◆●

Source: Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, p.14

The second table, Table 3.2, represents the core outworking of Evans & Peck’s specialist advice to the Committee on term of reference (a). It presents the firm’s assessment of best practice infrastructure competencies and skills. The table incorporates:

- the purpose of the project activities identified in its Table 3.1;
- a description of the work involved in the undertaking of those activities; and
- the essential competencies and skills required to execute this work.

Evans & Peck indicates in its report to the Committee that the tabulated best practice competencies and skills have been identified through its ‘*research and practical experience at the front line of the development and delivery of major infrastructure projects.*’<sup>45</sup>

45 *ibid*, p.13

**Table 3.2 Definition of best practice skills and competencies required to develop and deliver major infrastructure projects**

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<b>1. Strategic Assessment</b>	<ul style="list-style-type: none"> <li>Identify the portfolio strategic planning context of the service need</li> <li>Identify service need</li> <li>Identify and measure benefits</li> <li>Identify the range of strategic options available to address the need and deliver the benefits</li> </ul>	<ul style="list-style-type: none"> <li>Provide advice as required to investor, owner or deliverer to assist in understanding and defining strategic context of service needs/problems and importance of benefits</li> <li>Strategic options assessment</li> <li>Develop benefit management plan</li> <li>Contribute to scope definition framework, risk management and value management</li> <li>Benchmarking</li> </ul>	<ul style="list-style-type: none"> <li>Relevant technical/professional qualification</li> <li>Relevant domain or portfolio technical experience and expertise</li> <li>Experience in strategic portfolio analysis and planning</li> <li>Modelling</li> </ul>
<b>2. Business case development</b>	<ul style="list-style-type: none"> <li>Develop overall value for money proposition that is deliverable</li> </ul>	<ul style="list-style-type: none"> <li>Develop business case for investment and 'roadmap' for the project including: <ul style="list-style-type: none"> <li>service need and project objectives</li> <li>proposed benefits, how they will be measured, benefits realisation plan</li> <li>details of the proposed solution, including a clearly defined scope, risks and budget</li> </ul> </li> <li>TBL [triple bottom line] impacts and cost benefit analysis</li> <li>schedule, procurement strategy and delivery arrangements</li> </ul>	<ul style="list-style-type: none"> <li>Relevant professional qualification</li> <li>Critical insight and strategic thinking</li> <li>Expertise and experience in strategic planning in relevant domain/portfolio</li> <li>Deep expertise in writing, information structure and presentation</li> <li>Commercial acumen and understanding of project procurement and delivery arrangements</li> <li>Technical, commercial, economic and social analysis</li> </ul>
<b>3.1 Scope definition</b>	<ul style="list-style-type: none"> <li>Solution meets standards and delivers required benefits</li> <li>Define scope to be delivered</li> <li>Robust cost estimate with appropriate allowance for risks</li> <li>Innovative design incorporated into program</li> </ul>	<ul style="list-style-type: none"> <li>Articulate required scope clearly in an easy-to-understand framework including a robust basis for scope inclusions and exclusions</li> <li>Optimise scope to what is actually needed to achieve the identified benefits</li> <li>Identify opportunities for design innovation</li> <li>Robust 'whole of life' cost estimating with appropriate allowance for risks</li> <li>Community consultation and statutory approvals</li> </ul>	<ul style="list-style-type: none"> <li>Strategic/critical thinking</li> <li>Experience in value management and benchmarking</li> <li>Relevant professional qualification</li> <li>Extensive experience and expertise in leading multi-disciplined design teams</li> <li>Demonstrated understanding of relevant Design Standards</li> <li>Ability to liaise with industry to identify design innovations</li> <li>Understanding of delivery process</li> <li>Strong project and risk management expertise</li> <li>Strong collaborative skills, multiple stakeholders</li> </ul>

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<b>3.2 Scope management</b> <ul style="list-style-type: none"> <li>• verification</li> <li>• monitoring</li> <li>• adjustment</li> <li>• control</li> </ul>	<ul style="list-style-type: none"> <li>• Solution meets standards</li> <li>• Innovative design incorporated into program</li> </ul>	<ul style="list-style-type: none"> <li>• Communicate required scope</li> <li>• Ensure compliance to required scope and designs</li> <li>• Identify opportunities for design innovation</li> <li>• Manage stakeholder influence on scope</li> </ul>	<b>Essential Competencies &amp; Skills</b> <ul style="list-style-type: none"> <li>• Relevant professional qualification</li> <li>• Strong stakeholder engagement and management skills</li> <li>• Extensive experience in leading multi-disciplined design teams</li> <li>• Demonstrated understanding of relevant Design Standards</li> <li>• Ability to liaise with industry to identify design innovations</li> <li>• Understanding of delivery process</li> <li>• Strong project management skills</li> </ul>
<b>4. Technical review and oversight</b>	<ul style="list-style-type: none"> <li>• Identify and assess project options</li> <li>• Define and develop scope</li> </ul>	<ul style="list-style-type: none"> <li>• Contribute to identifying service need and benefits</li> <li>• Undertake project options assessment</li> <li>• Define and detail scope</li> <li>• Prepare concept and reference designs</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant tertiary and professional qualification and accreditation</li> <li>• Demonstrated understanding of relevant Design Standards</li> <li>• Ability to liaise with industry to identify design innovations</li> </ul>
<b>5. Cost management</b> <ul style="list-style-type: none"> <li>• estimation</li> <li>• planning</li> <li>• budgeting</li> <li>• monitoring</li> <li>• control</li> </ul>	<ul style="list-style-type: none"> <li>• Project cost plan accurate and controlled</li> <li>• Project cost profile identified and articulated at all stages</li> </ul>	<ul style="list-style-type: none"> <li>• Plan and manage costs</li> <li>• Quantify and incorporate changes</li> <li>• Prepare project cost plan</li> <li>• Quantify project risks and cost/schedule impacts</li> <li>• Develop risk-adjusted cost</li> </ul>	<ul style="list-style-type: none"> <li>• Professional qualification</li> <li>• Experience and knowledge of constructability or delivery issues</li> <li>• Understanding of influences on cost: design, quantities, industry cost rates and broader industry</li> <li>• Understanding of project risks and impact on costs</li> </ul>
<b>6. Risk management</b> <ul style="list-style-type: none"> <li>• review</li> <li>• mitigation</li> <li>• planning</li> <li>• control</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and articulate project risks</li> <li>• Establish project risk management plan</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate identification of project risks</li> <li>• Facilitate quantification of risks</li> <li>• Establish risk management plan including accountabilities, process and regular updates</li> </ul>	<ul style="list-style-type: none"> <li>• Professional qualification</li> <li>• Experience and knowledge of constructability or delivery issues</li> <li>• Ability to articulate project risks and impact</li> </ul>
<b>7. Stakeholder engagement</b>	<ul style="list-style-type: none"> <li>• Effective stakeholder engagement, support and contributions across life-cycle of the project</li> </ul>	<ul style="list-style-type: none"> <li>• Map stakeholder influences on scope</li> <li>• Develop stakeholder engagement strategy, including involvement of end-users</li> <li>• Develop and maintain engagement and plans</li> <li>• Establish feedback loops to assess effectiveness of processes and activities</li> <li>• Support executive in external inquiries</li> </ul>	<ul style="list-style-type: none"> <li>• Experience and expertise in stakeholder engagement and management</li> <li>• Knowledge of key stakeholders and their issues for this Project</li> <li>• Understanding of existing engagement mechanisms</li> <li>• Understanding of end to end Project delivery processes</li> </ul>

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<b>8. Communications</b>	<ul style="list-style-type: none"> <li>Optimised collaboration and support for the project</li> <li>Effective delivery of key messages into community and external media</li> </ul>	<ul style="list-style-type: none"> <li>Develop communications strategy</li> <li>Develop communications content</li> <li>Establish feedback loops to assess effectiveness of processes and activities</li> <li>Establish project 'brand'</li> <li>Ensure consistency in communications external and internal</li> <li>Support executive in external inquiries</li> </ul>	<ul style="list-style-type: none"> <li>Experience and expertise in media liaison</li> <li>Experience and expertise in communications management</li> <li>Understanding of existing communication mechanisms</li> <li>Understanding of end to end project processes</li> </ul>
<b>9.1 Project Leadership</b> <ul style="list-style-type: none"> <li>business case/ project development</li> </ul>	<ul style="list-style-type: none"> <li>Lead the project definition and business case preparation process</li> </ul>	<ul style="list-style-type: none"> <li>Oversee inception and project development phases</li> <li>Steer project approvals process</li> <li>Oversee preparation of business case and associated processes</li> <li>Make decisions about project direction and scope</li> <li>Manage work-streams and design process</li> <li>Manage steering or project control group</li> </ul>	<ul style="list-style-type: none"> <li>Likely to have relevant professional qualification</li> <li>Demonstrated strategic subject matter knowledge and expertise</li> <li>Strong commercial skills and preferably also has understanding of technical, procurement and delivery issues</li> <li>Strong project management skills</li> <li>Strong communications skills</li> <li>Leadership skills, including decisiveness and willingness to be accountable</li> <li>Effective management skills</li> <li>Knowledge of industry environment</li> <li>Understanding of policy objectives</li> <li>Demonstrated stakeholder and relationship management skills</li> <li>Demonstrated ability to work decisively and to tight time frames under pressure</li> <li>Respected in industry</li> </ul>
<b>9.2 Project Leadership</b> <ul style="list-style-type: none"> <li>procurement</li> </ul>	<ul style="list-style-type: none"> <li>Procurement undertaken to support program</li> <li>Procurement meets probity and procurement requirements</li> </ul>	<ul style="list-style-type: none"> <li>Pragmatic and timely assessment of tenders against assessment criteria</li> </ul>	<ul style="list-style-type: none"> <li>Strong commercial skills</li> <li>Knowledge of industry environment</li> <li>Understanding of policy objectives</li> <li>Strong project management skills</li> <li>Strong communications skills</li> <li>Effective management skills</li> <li>Leadership skills, including decisiveness and willingness to be accountable</li> <li>Demonstrated stakeholder and relationship management skills</li> <li>Demonstrated ability to work to tight time frames under pressure</li> </ul>

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<p><b>9.3 Project Leadership</b></p> <ul style="list-style-type: none"> <li>• <b>delivery</b></li> </ul>	<ul style="list-style-type: none"> <li>• Accountable for delivering program on time on budget to required standards</li> <li>• Achieving relevant policy objectives</li> <li>• Ensure Program operates efficiently and effectively</li> <li>• Inform key stakeholders</li> <li>• Escalate issues outside of the Program as required</li> <li>• Ensure consistency and commitment across life of program</li> <li>• Compliance with all relevant standards</li> <li>• Accurate reporting and forecasting</li> <li>• Effective financial management</li> </ul>	<p><b>Work</b></p> <ul style="list-style-type: none"> <li>• Achieve policy objectives</li> <li>• Own Program strategy</li> <li>• Identify, manage and resolve risks and issues</li> <li>• Engage with stakeholders</li> <li>• Accurate timely reporting</li> <li>• Resolve complex issues including cross-functional and cross-organisational issues</li> <li>• Lead program strategy and implementation</li> <li>• Drive synergies across work-streams</li> <li>• Facilitate adherence to the program processes</li> <li>• Resource planning and allocation</li> <li>• Managing, monitoring, and performance of all delivery providers</li> <li>• Oversee establishment and allocation of technical experts to support delivery programs to ensure compliance with all relevant delivery standards</li> </ul>	<p><b>Essential Competencies &amp; Skills</b></p> <ul style="list-style-type: none"> <li>• Detailed knowledge of relevant department</li> <li>• Good communication skills</li> <li>• Strong PM [project management] capabilities</li> <li>• Good knowledge of Owner functions</li> <li>• Good knowledge of entities the Program must engage with effectively</li> <li>• Demonstrated understanding of the Program interdependencies</li> <li>• Extensive experience in managing the performance of delivery providers</li> <li>• Demonstrated commercial expertise</li> <li>• Ability to solve complex problems across multiple interfaces</li> <li>• Strong stakeholder engagement skills</li> <li>• Effective management skills</li> <li>• Leadership skills, including decisiveness and willingness to be accountable</li> <li>• Understanding of policy objectives</li> <li>• Media experience and skills</li> </ul>
<p><b>9.4 Project Management &amp; Coordination</b></p>	<ul style="list-style-type: none"> <li>• Early identification of Program wide issues and strategic issues to be addressed</li> <li>• Provision of information to Project Director</li> <li>• Accurate, timely, relevant reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Liaise with Executive to understand Program reporting requirements</li> <li>• Establish Program reporting regime</li> <li>• Accuracy of reporting</li> <li>• Timeliness of reporting</li> <li>• Identification of anomalies</li> <li>• Highlight cost and schedule issues</li> <li>• Development and ongoing optimisation of the Program Plan</li> <li>• Manage performance of external service providers</li> <li>• Establish and maintain project governance including financial and procedural controls</li> <li>• Provide an 'arm's length' view on Program performance and key issues</li> <li>• Identify trends and strategic issues</li> <li>• Provide support to Project Director in analysing issues</li> <li>• Contribute to Program strategy</li> </ul>	<ul style="list-style-type: none"> <li>• Knowledge of existing reporting regimes and mechanisms</li> <li>• Understanding of existing reporting requirements</li> <li>• Experienced in multi-project program cost and schedule control</li> <li>• Proficient in industry recognised cost and schedule control software packages</li> <li>• Demonstrated project management skills, including ability to work to tight time frames under pressure and decisiveness</li> <li>• Strong data analysis skills to ensure consistency and appropriateness of data</li> <li>• Strong program development and optimisation skills</li> <li>• Understanding of end to end project delivery processes</li> <li>• Strong analytical skills</li> <li>• Ability to identify trends and issues in detailed data</li> <li>• Good communication skills</li> <li>• Good report writing skills</li> </ul>



Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<b>10. Project funding and financing strategy</b>	<ul style="list-style-type: none"> <li>Determine how the funding over time is to be procured for the construction and operation of an asset</li> </ul>	<ul style="list-style-type: none"> <li>Full integrated needs analysis and outcomes requirements analysis</li> <li>Decide internal or private sector finance, budgetary impact, what can be achieved within the defined budget over time, how the whole of life costing might vary for different options, including the balance between construction and recurrent funding</li> <li>May also involve a justification on defined criteria of various funding approaches. It usually involves modelling and qualitative analysis of financial criteria</li> </ul>	<ul style="list-style-type: none"> <li>Relevant financial qualifications</li> <li>An understanding of the terms and conditions and pricing of various forms of private and public sector finance, or the future likely trends in this, of government budgetary and financing mechanisms</li> <li>An ability to examine management accounts and understand the overall impact in terms of current revenues and costs and the impact of service and physical changes to the supporting asset base</li> </ul>
<b>11. Procurement strategy</b>	<ul style="list-style-type: none"> <li>Identify optimal procurement strategy for project</li> <li>PPPs only - Public Sector Comparator (PSC). Used most commonly at business case stage to compare PPP procurement against traditional government-funded construction and operations procurement and operating models to assess whether there is value for money in adopting a PPP model or not</li> </ul>	<ul style="list-style-type: none"> <li>Identify project characteristics relevant to procurement strategy</li> <li>Identify external considerations including industry demand and community issues</li> <li>Determine best procurement strategy to deliver project and achieve value for money outcomes</li> <li>Developing a raw PSC based on a government reference design and preliminary costing</li> <li>Adjust raw PSC for the risk transfer to the private sector that would occur in a PPP as against a traditional procurement model</li> <li>May be reviewed prior to RFP [request for proposal]-stage when the detail of the project is more developed to confirm the decision</li> <li>Further review may be needed prior to contract close as the negotiation stage can significantly impact both the design and the risk transfer</li> </ul>	<ul style="list-style-type: none"> <li>Professional qualification</li> <li>Experience and knowledge of constructability or delivery issues</li> <li>Understanding of project risks</li> <li>Understanding of government procurement requirements</li> <li>Understanding of industry environment</li> <li>Costing, high level design, modelling,</li> <li>Capital Asset Pricing Model (CAPM) know-how</li> <li>Experience in quantification and definition of project risks</li> <li>Experience in selecting the correct CAPM factors for the systematic risk, precedent experience</li> </ul>
<b>12. Value for Money assessment</b>	<ul style="list-style-type: none"> <li>Identify financial and economic impacts of project</li> <li>Identify relative merits of different procurement options and 'do-nothing' case</li> </ul>	<ul style="list-style-type: none"> <li>Quantify benefits and undertake cost benefit analysis</li> <li>Articulate unquantified benefits</li> <li>Quantify systematic and project risk transfer for different delivery models</li> <li>Assess qualitatively additional value to government</li> <li>Undertake sensitivity tests</li> </ul>	<ul style="list-style-type: none"> <li>Finance or economics qualification</li> <li>Financial and economic modelling</li> <li>Capital Asset Pricing Modelling (CAPM)</li> </ul>

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<b>13. Commercial structuring and documentation development</b>	<ul style="list-style-type: none"> <li>All steps leading to finalised commercial documentation for the delivery of a project</li> </ul>	<ul style="list-style-type: none"> <li>To formulate practical, deliverable commercial structures and later documentation, and negotiate these with the private sector subsequent to getting internal sign off</li> </ul>	<ul style="list-style-type: none"> <li>Hands-on negotiation experience in the particular delivery model</li> <li>Some exposure to relevant legal documentation and standard approaches</li> <li>Understanding of state risk appetite</li> <li>Understanding of private sector risk appetite</li> </ul>
<b>14. Transaction management</b>	<ul style="list-style-type: none"> <li>Management of each stage of a project's development in line with policy</li> <li>Pragmatic and timely assessment of tenders against assessment criteria</li> </ul>	<ul style="list-style-type: none"> <li>Prepare standard bid documentation such as RFP's</li> <li>Manage assessment and valuation process being undertaken by Assessment and Valuation Service Providers</li> <li>Coordinate assessment and valuation output</li> <li>Verify output received from Service Providers</li> <li>Review and recommend outcomes for final approval</li> <li>Contribute to program optimisation</li> </ul>	<ul style="list-style-type: none"> <li>Strong commercial skills</li> <li>Knowledge of industry environment</li> <li>Understanding of relevant policies</li> <li>Strong project management skills</li> <li>Strong communications skills</li> <li>Demonstrated stakeholder and relationship management skills</li> <li>Demonstrated ability to work to tight time frames under pressure</li> </ul>
<b>15. Tender Evaluation and Financial Review</b>	<ul style="list-style-type: none"> <li>Bid financial evaluation and Value-for-Money (VfM) calculation</li> <li>Analysis of bids to check robustness and to compare their financial parameters including VfM on a common basis</li> </ul>	<ul style="list-style-type: none"> <li>Review of financial model and submitted financial structure and terms and conditions. Interrogation of unknowns and anomalies. Assessment of risk transfer and VfM comparison of discounted cash flows.</li> </ul>	<ul style="list-style-type: none"> <li>Financial modelling</li> <li>Financial products</li> <li>Typical finance terms and conditions</li> <li>Commercial evaluation capability</li> </ul>
<b>16. Expenditure review and oversight</b>	<ul style="list-style-type: none"> <li>Expenditure governance and control</li> </ul>	<ul style="list-style-type: none"> <li>Manage payment of expenses reconciled against activity as per contractual arrangements and within jurisdictional requirements</li> </ul>	<ul style="list-style-type: none"> <li>Professional qualification</li> <li>Experience and expertise in managing contracts and public sector financial management requirements</li> </ul>
<b>17. Scheduling</b> <ul style="list-style-type: none"> <li>definition and preparation</li> <li>management</li> </ul>	<ul style="list-style-type: none"> <li>Identify timeframes for delivery</li> <li>On time delivery</li> </ul>	<ul style="list-style-type: none"> <li>Prepare development and delivery program, including approvals, procurement, construction and commissioning</li> <li>Identify critical path activities</li> <li>Identify delay risks and impacts on schedule</li> </ul>	<ul style="list-style-type: none"> <li>Professional qualifications in engineering, construction or similar</li> <li>Experience and expertise in developing and delivering projects, particularly scheduling</li> <li>Understanding of approvals, procurement, construction and commissioning timeframes and risks and impacts on schedule</li> </ul>

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<p><b>18.1 Contract management – project development</b></p>	<ul style="list-style-type: none"> <li>Communicate requirements and how consultant outputs will be used and by whom</li> </ul>	<ul style="list-style-type: none"> <li>Develop clear, specific briefs and process of selecting preferred consultant</li> <li>Efficiently procure services by using panel arrangements as appropriate and without imposing unnecessary tendering costs via inappropriately competitive or bureaucratic processes</li> <li>Determine appropriate and efficient fee arrangements (eg lump sum, time basis)</li> <li>Undertake tender assessments</li> <li>Review consultant outputs and coordinate views from other parties in an efficient manner</li> <li>Determine what should be done in-house and what can be procured externally</li> <li>Ensure a good outcome for government and consultants</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrated understanding of industry environment</li> <li>Strong project management skills</li> <li>Strong communication skills</li> <li>Sufficiency of knowledge and awareness of the portfolio and service to be able to manage the scope of the consultancy effectively</li> <li>Sufficient commercial, contractual and negotiating skills to manage this area</li> <li>Strong analytical skills</li> </ul>
<p><b>18.2 Contract management - delivery</b></p>	<ul style="list-style-type: none"> <li>Contractor program delivered on time on budget</li> <li>Contractual terms met by service providers</li> </ul>	<ul style="list-style-type: none"> <li>Establish procurement process and frameworks</li> <li>Conduct procurement activities to support Delivery Managers</li> <li>Monitor and review contract performance</li> <li>Report on contract performance</li> <li>Manage Contractor program delivery</li> <li>Identify and resolving obstacles that could inhibit performance of the Contractors</li> <li>Identify trends or recurring issues which should be communicated to the whole of Program</li> <li>Identify process or policy changes that would assist Program progress</li> <li>Provide monitoring and reporting of Program progress as required</li> <li>Ensure value for money is achieved</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrated understanding of industry environment</li> <li>Contract management skills</li> <li>Hands on experience in management of significant contractor delivered projects (~10-15 years' experience)</li> <li>Good communication skills</li> <li>Good stakeholder engagement and management skills</li> <li>Strong analytical skills</li> <li>Demonstrated strong commercial and contractual skills</li> <li>Strong negotiation skills</li> <li>Demonstrated understanding of procurement policies and requirements</li> <li>Strong project management skills</li> <li>Strong reporting capability</li> </ul>

Project Activity	Activity Purpose	Work	Essential Competencies & Skills
<b>19. Project controls</b>	<ul style="list-style-type: none"> <li>Schedule and cost control</li> <li>Information management</li> <li>Quality Assurance</li> </ul>	<ul style="list-style-type: none"> <li>Document control and information management</li> <li>Management of change and the MoC [Management of Change] system</li> <li>Monitor, consolidate and report integrated budget and schedule, progress and gaps</li> <li>Ensure compliance and optimised operation of established project policies, systems and management standards</li> <li>Implementing established quality strategy, plan, procedures and auditing</li> </ul>	<ul style="list-style-type: none"> <li>Professional qualifications in a relevant discipline</li> <li>Deep expertise in quality planning, assurance and control</li> <li>Expert knowledge in project planning, scheduling and costing</li> <li>Earned value analysis and reporting</li> <li>Strong information analysis and reporting skills</li> <li>Good communication, negotiation and advisory skills</li> </ul>
<b>20. Evaluation of project performance</b> <ul style="list-style-type: none"> <li>services provided</li> <li>investment</li> <li>project delivery</li> </ul>	<ul style="list-style-type: none"> <li>Lessons learned and continuous improvement</li> </ul>	<ul style="list-style-type: none"> <li>Identify and capture lessons learned against approved business case objectives</li> <li>Recommend necessary improvementst</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrated understanding of industry environment</li> <li>Strong communication and stakeholder engagement skills</li> <li>Sufficiency of knowledge and awareness of the portfolio and service to be able to assess effectiveness of outcomes</li> <li>Sufficient commercial and contractual knowledge to assess effectiveness of outcomes</li> <li>Strong analytical skills</li> </ul>

Source: Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure — Final Report*, December 2012, pp.15-19

In its commentary on the above tables, Evans & Peck states that they ‘are not an exhaustive list of every specific activity, skill and competency that is required - these vary across sectors and types of projects.’<sup>46</sup>

This view was also expressed to the Committee by other parties during the Inquiry. For example, the Department of Justice (DOJ) advised the Committee that:<sup>47</sup>

*In DOJ’s experience, the specific skill mix required can depend upon the nature of the project. For example, the proposed construction of a new facility may require more extensive community consultation than refurbishment of an existing facility, and hence stronger external stakeholder management skills may be required in the project team for the new building compared to the project team for the refurbishment project.*

*The required skill and capability mix can also depend upon the delivery method chosen for the project. For example, if a project is delivered as a PPP, the balance between commercial/legal and technical skills will be weighted more heavily to commercial/legal skills than would be the case if the project was delivered using a design and construct contract. More specifically, this means that greater financial analysis and modelling skills are required for a PPP during the procurement stage, whereas the need for construction management skills during the construction stage will not be as great in the PPP as it would be in design and construct procurement.*

...

*DOJ believes that project teams for Victorian government PPP projects are usually well resourced with extensive specialist external support involved. This adds to the project management costs, but provides benefits through improved risk mitigation. In contrast, traditionally delivered projects are often delivered by smaller teams, with some external support services (for example, architects, external legal advice). While this can reduce project management costs, it can also mean that these specialist resources are not on hand to mitigate risks up front, and instead are called in to deal with risks after they have materialised. This can compromise value for money outcomes.*

Evans & Peck also indicates, with regard to its tabulations on competencies and skills, that additional specialist skills and advice is commonly provided by external advisors to the public sector. It expresses the view that ‘determining the level of skills and competencies that should be retained within government and what should be outsourced is a most significant and strategic decision that strikes at the heart of the role of government and what can be delegated.’<sup>48</sup> This particular issue pertains to term of reference (f) of the Committee’s Inquiry and is addressed in Chapter 8.

### **Additional work on infrastructure competencies and skills required by the Government**

The Committee considers that the specialist research conducted by Evans & Peck represents a suitable basis for the Government to undertake further work on leading edge infrastructure competencies and skills. Such additional work should seek to identify any additional

46 *ibid.*, p.20

47 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, pp.3-5

48 Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, p.20

competencies and skills that are specifically required for the different procurement models and particularly for PPPs and project alliances.

This further work by the Government should also involve examination of the optimum way in which best practice competencies and skills are documented and disseminated in guidance to constructing agencies across the public sector. The Committee considers a useful initial step would be to categorise the research findings of Evans & Peck as minimum infrastructure capabilities for all project types. These minimum specifications could form the basis of an infrastructure skills register along the lines of a Best Practice Skills Register for Victoria's Public Sector Infrastructure Projects. Any further competencies and skills required for particular procurement models, including at designated project stages, could be separately identified in this Best Practice Register and cross-referenced to relevant segments of Victoria's infrastructure policies and guidelines relating to these procurement models.

The Government's further examination of requisite infrastructure competencies and skills should also explore avenues for expansion of the essential competencies and skills submitted to the Committee by Evans & Peck to articulate the matching professional qualities and behaviours of project personnel. This area requires contemporary research to examine how professional and personal characteristics, including attributes and attitudes, can complement in an innovative sense formal descriptions of infrastructure competencies and skills and facilitate their optimum application during projects.

This latter aspect of the codification of competencies and skills for infrastructure projects was briefly considered by the Committee during its Inquiry and particularly in relation to the yardstick of protection of the public interest. This important yardstick included in term of reference (a) necessitated consideration of any specific qualities or behaviours required of project participants in protecting the public interest.

### **The yardstick of protection of the public interest**

For the purpose of its Inquiry, the Committee formed the view that protection of the public interest, when applied to infrastructure projects, equates in its basic form to responsible and efficient planning and implementation of projects, with decision-making attuned at all times to achievement of an optimal outcome for the community.

The Committee has found that, generally, limited specific attention has been directed by public sector agencies to supplementing identified competencies and skills with matching professional and personal qualities deemed necessary to ensure that the public interest is adequately served at all stages of infrastructure projects.

DTF advised the Committee that:<sup>49</sup>

*The public interest should be protected by governance activities across the public sector. The skills and competencies required to assess and provide advice on public interest essentially involve good analytical and policy advisory skills and sound judgement.*

*The department researched the development of the public interest test in its current formulation. The public interest is protected by a range of processes in addition to the public interest test outlined in the guidance material, for example through the involvement of stakeholder groups and consultation during the project lifecycle. For*

49 Department of Treasury and Finance, response to Committee's questionnaire, received 22 May 2012, p.5

*PPP projects the public interest test must be considered at the business case stage and updated during the procurement process at each key milestone.*

*At the most fundamental level the public sector's purpose is to serve the public interest and to apply a range of skills to that end.*

The public interest test referred to by DTF is spelt out in some detail in Annexure 7 of the Partnerships Victoria Requirements of the national PPP guidelines. It covers a range of criteria including accountability and transparency, consumer rights, community consultation and public access.<sup>50</sup> The test does not, however, specify requisite competencies and skills in applying the guidance.

The more recent coverage of competencies and skills in DTF's life-cycle guidelines, revised during 2012 and mentioned in Chapter 4 of this Report, provides a useful high-level description of the capabilities required in infrastructure management and how they relate to the public interest. The capabilities are identified as:<sup>51</sup>

- *high-level roles such as public policy development, long-term planning (e.g. transport and urban design) and governance;*
- *broad-based areas surrounding commercial and legal acumen, service delivery and stakeholder management, and the integration of these aspects in the policy context; and*
- *more specific application of technical skills in areas such as contract development and management, engineering and design, financial analysis, project costing, project and risk management and communications.*

The linking in the guidelines of these capabilities to the public interest is then expressed as follows:<sup>52</sup>

*All of these skills are required to varying degrees in different stages to ensure the investment achieves the optimal value-for-money outcome in the public interest. The public interest is also served by balancing the requirement for in-house skill development and knowledge management with the efficiency of engaging appropriate private sector expertise. In this context, it is worth noting that **government cannot transfer the risks surrounding the public interest.***

The Committee concurs with the broad thrust of these views on the public interest articulated by DTF in its life-cycle guidelines. It considers, however, that there is a case for more extensive coverage of the skills necessary in infrastructure decision-making to uphold the public interest and the qualities and behaviours required of project managers to effectively achieve this end.

A joint submission to the Committee from two prominent academics in the infrastructure field also raised some interesting points relating to infrastructure skills and protection of the public interest. The Committee was informed that:<sup>53</sup>

50 Department of Treasury and Finance, *National PPP Guidelines: Partnerships Victoria Requirements*, January 2010, Annexure 7, pp.5-8

51 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Overview*, p.38

52 *ibid.*

53 Prof. G. Hodge, Monash University and A/Prof. C. Duffield, University of Melbourne, submission to the Committee, received 15 November 2011, p.1

*Competencies and skills may pertain to high-level matters concerning infrastructure projects such as governance, transport planning, urban design and public policy analysis matters, all of which can help to underpin infrastructure delivered in 'the public interest'. Broad based skills involve the integration of both policy and commercial acumen as well as a detailed understanding of the specifics of particular service delivery requirements and a healthy dose of common sense to interpret the context of the day. It also contains narrower concerns around project choice, infrastructure design details and characteristics of the commercial deal undertaken using skills from disciplines such as law, contracts, engineering and finance, for example. These later skills can enable commercial matters to be dealt with at the highest standards of technical capability and at the highest standards of integrity with respect to the public interest. Both high level skills and narrower skills are required to meet the public interest.*

The Committee considers these points raised by the two academics would be very relevant to any future research on the specific qualities needed of project managers to consistently and effectively uphold the public interest.

Mindful of the issues raised with it during the Inquiry, the Committee's deliberations during the Inquiry included some initial considerations on how core infrastructure skills could be expanded to encompass the professional and personal qualities of project managers in order to effectively uphold the public interest throughout the life-cycle of projects. The Committee concluded from some exploratory work that such qualities could, as a minimum, include:

- strength of character – to facilitate a strong focus on serving the public interest during all phases of project management;
- depth of integrity – to ensure that at all times project decision-making has, as a key priority, the upholding of the public interest; and
- ability to furnish fearless advice – reflected in the capability of project personnel to furnish fearlessly-independent advice to superiors, Ministers and other representatives of government, with such advice attuned always to protection of the public interest.

The Auditor-General conveyed some pertinent views to the Committee during the Inquiry on the latter managerial quality of furnishing fearless advice.

In evidence given on project planning, the Auditor-General stated:<sup>54</sup>

*On planning, there are a few questions that come to mind when you look at it from an external perspective. Are we jumping to solutions instead of properly assessing needs? In a sense, we are working from an idea or perceived solution and then immediately operationalising that rather than the needs. Are we retrofitting a project to an announcement or an idea rather than doing a proper options analysis and running the discipline over it of 'What is the outcome we want?' and then starting from that and working back through the various ways of getting it rather than suggesting an obvious way to achieve the outcome and limiting our options?*

Comment was also made by the Victorian Auditor-General's Office to the Committee that *'the reality is that a lot of business cases are retrofitted to ministerial announcements.'*<sup>55</sup>

54 Mr D. Pearson, Auditor-General of Victoria, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, pp.2-3

55 Mr P. O'Connor, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.8



If this alleged practice of retrofitting project business cases to Government announcements was widespread, it would clearly have an adverse impact on the quality of decision-making during the planning and management of major infrastructure projects in Victoria. The exhibiting by project personnel of strength of character, depth of integrity coupled with a strong commitment to furnishing fearless advice to government at all stages of an infrastructure project would help to mitigate risks inherent in retrofitting the planning parameters of projects to early Government announcements on those projects.

**FINDING:** The approach used by Evans & Peck in articulating best practice infrastructure competencies and skills provides a useful indicative framework for the Government to pursue further research. Such research should be aimed at creating a sustainable basis to support the reaching of optimal decisions across the public sector on the calibre and composition of project teams.

**FINDING:** This strengthened decision-making should, in turn, make a significant contribution to achieving more reliable performance of major infrastructure projects against time and cost benchmarks and in successfully generating planned community benefits.

**FINDING:** In furthering the work of Evans & Peck on minimum best practice skills, the Government should identify those additional skills that are particularly critical to effective delivery of projects under different procurement models and at different stages of projects under those models. These additional skills could be separately recorded in a best practice infrastructure skills register and cross-referenced to the published policies and guidelines for those procurement models.

**FINDING:** Specific attention should also be directed by the Government to the formulation of the professional and personal qualities and behaviours, including attributes and attitudes, needed by project personnel to support the effective application of core competencies and skills. Work in this area should explore innovative strategies for articulating the full set of qualities and behaviours vital to upholding of the public interest throughout all phases of major infrastructure projects.

**FINDING:** The further research advocated by the Committee would logically fit within the role and strategic functions of Victorian Infrastructure and Skills Authority, the new independent body proposed by the Committee in the preceding recommended future directions chapter. That body would be assigned dedicated responsibility for overseeing the planning, management and delivery of significant infrastructure projects in Victoria.

### 3.3.2 Project governance

As identified in the introductory paragraphs to this chapter, the ambit of term of reference (a) extends to project governance structures. These structures play a critical role in overseeing project management and delivery. They may take the form of steering committees, multi-disciplinary project review teams, review functions of central agencies and gateway reviews under Victoria's Gateway framework.

#### The Department of Treasury and Finance's perspectives and initiatives on governance

During the Inquiry, DTF expressed the following views to the Committee on effective governance for infrastructure projects:<sup>56</sup>

*Effective governance is of paramount importance to ensure successful project delivery. The Project Steering Committee/Board provides high-level oversight of implementation and management of the project and ensures that both the project team and contractors are held accountable for effective delivery of the project. The members of governance bodies must comprise individuals who possess the range of capabilities, experience and skills to support sound decision making. The particular skills required of governance bodies have a high level of commonality from project to project but may vary with the investment's lifecycle phase- for example, whether the project is in its procurement phase or delivery/contract management phase. Broadly speaking, effective governance bodies for infrastructure projects benefit from a breadth of knowledge covering legal, financial, project management, general management, operational management, construction and subject matter knowledge. The effectiveness of the governance body's leadership can critically impact decision-making, governance effectiveness and therefore project success.*

*A second aspect of governance is the management of external project relationships with key stakeholders. External stakeholders range from key users of the infrastructure, customers to other special interest groups (this group may include neighbours, peak bodies, lobby groups and other impacted parties). An important aspect of project management is involving the stakeholders at the right point in time, in the right way and through the most appropriate governance mechanism. This may involve separating stakeholders into groups due to their different nature and level of interest. It is rare that the impacted stakeholders are part of the formal Project Board as the Project Board has a broader role, on behalf of the investor, focussing on the delivery of the entire project within the allocated funding.*

These comments from DTF are useful. They touch on but do not elaborate on the competencies and skills required of governance bodies to facilitate effective oversight of infrastructure projects.

As part of its extensive revision during 2012 of Victoria's investment life-cycle guidelines, DTF has developed an informative draft technical guide on project governance.<sup>57</sup> Acknowledgements in the guide include the Project Management Excellence model developed by the Department of Justice.<sup>58</sup>

56 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.7

57 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Project Governance (Draft)*, July 2012

58 *ibid.* p.iv

The information presented in the draft governance guide is comprehensive. It covers the key roles and responsibilities of governance parties, including project steering committees, in infrastructure projects. It also addresses variations on governance structures that might apply to different procurement models, including PPPs and project alliances.

The draft guide includes reference to the Government's High-Value and High-Risk (HVHR) assurance process as a key element of a stronger governance framework for HVHR-designated projects. Comment on this important step taken by the Government to bring about greater scrutiny of major Victorian infrastructure projects is given in the preceding recommended future directions chapter of this Report.

On the attributes of members of project steering committees, the draft governance guide identifies the following requisite characteristics of such members:<sup>59</sup>

*For effective board performance, individual members and the board as a group need to have a broad range of skills, expertise and personal attributes. Accountability, strategic thinking, networking and teamwork are core competencies for all types of boards and committees. It may also be desirable to appoint board members with specific expertise in areas such as finance, investment, law, human resources, marketing or public sector administration. A board may include persons with superior knowledge of the particular sector and who may have valuable professional networks (though care should be taken to avoid potential conflicts of interest). Members, however, should not be appointed solely on the basis of functional expertise. Appropriate emphasis should also be placed on the skills and personal attributes required for effective board performance.*

While these identified characteristics relate to organisational governance structures such as boards of management, they mirror to a degree the equivalent requisite characteristics of members of governance bodies for major infrastructure projects.

### **The work to date of the State Services Authority on governance**

The SSA has an important responsibility in promoting high standards of governance in the Victorian public sector. It advised the Committee that, to date, its focus has been on formal boards of governance for bodies that have legislated responsibility for a single organisation. The SSA indicated it has '*only recently been considering other governance situations*'.<sup>60</sup> Such situations would include governance of infrastructure projects.

### **Comments to Parliament on governance by the Ombudsman**

In a November 2011 report to Parliament on a suite of Information and Communication Technology [ICT]-enabled projects, conducted in consultation with the Auditor-General, the Ombudsman made mention of poor governance arrangements for particular ICT projects. The Ombudsman expressed the view that:<sup>61</sup>

59 *ibid*, p.15 and sourced from Department of Premier and Cabinet, *Appointment and Remuneration Guidelines for Victorian Government Boards, Statutory Bodies and Advisory Committees*, July 2011 (updated July 2012), p.6

60 State Services Authority, response to Committee's questionnaire, received 29 May 2012, p.3

61 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.18

*Having a well-functioning steering committee (the committee) is integral to the success of a project and should include a committee chairperson who is ultimately responsible for the project with the advice of the committee. The committee must have people with relevant experience to provide advice.*

### **Commentary on governance by the Committee's engaged specialist, Evans & Peck**

In its report to the Committee, Evans & Peck included a separate section on project governance.<sup>62</sup> This part of the firm's report addressed the purpose and functions of governance structures, the types of governance models that can be used for major infrastructure projects and the characteristics of effective governance arrangements for projects.

Evans & Peck considers that the functions of a governing entity or committee for a major infrastructure project are to:<sup>63</sup>

- *establish 'board' style leadership structure and governance with project team;*
- *ensure the project team understands the owner's project objectives;*
- *remove barriers preventing reasonable progress of project;*
- *monitor and recommend corrective actions to the owner;*
- *ensure the project team has access to necessary resources and timely decision making; and*
- *ensure accurate and timely reporting to owner.*

Evans & Peck consider that members of the governing entity or committee should have the following experience and capability:<sup>64</sup>

- *subject matter expertise;*
- *experience in board/steering committee role;*
- *understanding of project risks;*
- *understanding of project costs;*
- *strong communication and negotiation skills; and*
- *strong leadership skills and industry credibility.*

Evans & Peck further states that:<sup>65</sup>

*An effective governance arrangement should ensure the high standards of integrity and transparency required of public sector procurement processes. Effective governance should also manage any material issues that might otherwise lead to significant time and cost overruns and possible failure to achieve the owner's project objectives.*

62 Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, pp.20-2

63 *ibid*, p.21

64 *ibid*.

65 *ibid*.

The specialist firm elaborated on these qualities of effective governance arrangements in the following terms:<sup>66</sup>

*Timely decision-making is critical to the successful delivery of any project. The governance structure should include clearly delegated authority to ensure decisions are made in a timely and efficient manner. Delegated authority levels should be subject to governance controls over expenditure for project decisions outside the project scope as defined by the investor.*

*Effective project governance relies on timely, accurate and transparent monitoring and reporting of project progress and performance to the project owner, investor and deliverer. Performance standards and benchmarks (e.g. time, costs, compliance with standards) should be agreed and incorporated in the delivery contract to ensure the performance requirements are clearly understood and they can be objectively measured and monitored.*

*Effective and efficient project governance is dependent on protocols that guide communication, interaction and approval processes between deliverer, owner and key stakeholders.*

The Committee supports these attributes of effective project governance as identified by Evans & Peck. Their importance is reinforced by a recently published view that:<sup>67</sup>

*Seeing governance as fundamentally about performance in a transparent and accountable manner would shift us away from checklists to focusing on the future and values and behaviours. While this may be a trivial distinction to some, it is possible to have entities that fulfil their compliance obligations and are well controlled, yet lack strategy and vision and fail to achieve optimum value creation.*

*Good governance can improve effectiveness by enabling corporations to set the right goals and achieve them in the right manner by creating appropriate formal systems, high-performance cultures and ethical behaviours.*

The principles underpinning this assessment of good governance, while reflecting a wider organisational perspective, are equally applicable to large infrastructure projects.

**FINDING:** The Government's creation in 2011 of its High-Value and High-Risk oversight process, with widened rigour applying to major infrastructure projects, represents a strengthening of central governance over such projects in Victoria.

**FINDING:** The Department of Treasury and Finance's initiative in developing a detailed draft technical paper on governance under its revised life-cycle management guidelines is also a recent positive initiative. The draft's wide-ranging guidance complements the central High-Value and High-Risk scrutiny framework. It constitutes a valuable source of advice to constructing agencies across the public sector to support their decision-making on governance structures and functions for their individual major projects. Higher standards of project governance should result from compliance by constructing agencies with the guidance.

<sup>66</sup> *ibid*, p.22

<sup>67</sup> Dr E. Tsahuridu, CPA Australia, 'An abundance of governance', *INTHEBLACK*, September 2012, p.69

**FINDING:** These are valuable improvement actions to strengthen project governance in Victoria. However, the material developed to date remains relatively limited in the coverage of core competencies and skills, and matching professional qualities and behaviours, for members of governance bodies established for large infrastructure projects.

**FINDING:** There is scope for the Government to conduct further work in this area with a view to developing a suite of requisite competencies, skills and behaviours specifically relating to members of governance bodies created for infrastructure projects. The results of such work could be integrated into a Best Practice Infrastructure Skills Register. Such a Register has been advocated by the Committee in earlier paragraphs for recording the key expertise needed of personnel directly involved in the management and delivery of projects.

**FINDING:** This further work on governance practices would fit neatly with the responsibilities of Victorian Infrastructure and Skills Authority, the new independent body advocated by the Committee in the preceding Future Directions chapter (Chapter 2).

### 3.3.3 Other matters relevant to infrastructure capability raised by Evans & Peck

Under the heading ‘Challenges and gaps in Victoria’s public sector competencies and skills’ in Section 2.6 of its final report to the Committee,<sup>68</sup> Evans & Peck discuss organisational capability for infrastructure delivery (Evans & Peck’s Report, Section 2.6.1) and the adequacy of commercial and technical expertise within the public sector to support that organisational capability (Evans & Peck’s Report, Section 2.6.2).

In each case, Evans & Peck has developed its commentary and reached findings based on its review of the six projects selected for examination by the Committee under term of reference (d), as well as ‘*industry reports, state and federal government inquiries and research.*’<sup>69</sup> These latter bases for the reported information on the two topics therefore constitute evidential sources that extend to some degree beyond the boundaries of the Victorian public sector.

Nevertheless, the Committee considers that the issues raised by Evans & Peck on the two subjects are worthy of consideration by the Government. The material produced by Evans and Peck should assist the Government in determining what aspects of organisational capability and commercial and technical expertise, in the context of the firm’s findings, offer potential for specific improvement actions within the Victorian public sector.

68 Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, pp.22-30

69 *ibid*, pp.23

## CHAPTER 4 TERM OF REFERENCE (B) – SPECIFICATION OF REQUISITE COMPETENCIES AND SKILLS

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### 4.1 Introduction

#### 4.1.1 The assessed scope of term of reference (b)

Term of reference (b) requires the Committee to consider and report on:

*the extent to which Government policies such as the National Public Private Partnership Policy and Guidelines and the Partnerships Victoria Requirements specify these requisite competencies and skills, and support the Department of Treasury and Finance's application of these across the public sector.*

This term of reference requires the Committee to evaluate National and Victorian infrastructure policies and guidelines. The evaluation is specifically focused on how much they cover the competencies and skills identified in relation to term of reference (a).

The Committee considers that it is important for the required competencies and skills to be clearly identified if high calibre teams are to be put together. As noted by the State Services Authority:<sup>70</sup>

*To get the right person for any job it is necessary to accurately define what the person needs to be able to do, and then to use techniques that effectively assess their capacity to do it. Both elements are necessary for good job fit – the best selection tools in the world will still select the wrong person if the job description does not accurately reflect what is required.*

For this term of reference, the Committee has focused on the Department of Treasury and Finance (DTF), selected constructing agencies and Major Projects Victoria.

The Committee has also made some observations about infrastructure-related service provider panels.

#### 4.1.2 Infrastructure procurement models

Most infrastructure in Victoria is procured using one of three models:

- Design and Construct (D&C) – often referred to as ‘traditional procurement’, governments use contractors for the design and construction of projects and fund them through government revenue. Under this approach, government is responsible for overall project management and project risk resides predominantly with government;
- Public Private Partnerships (PPPs) – partnerships between government and the private sector, with the private sector providing the financing, construction and delivery of projects on behalf of government. A PPP arrangement usually specifies in advance which risks are carried by the private parties and which by government; and

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<sup>70</sup> State Services Authority, *The VPS Employment Capability Framework: Strengthening the professionalism and adaptability of the Victorian Public Service*, December 2006, p.11

- Alliancing – a model in which government and private parties collaborate in decision making and risk sharing.

Procurement approaches can vary within each of these categories according to each project's specific characteristics. In addition, some projects may involve a combination of approaches.

Most entities consulted during the Inquiry advised the Committee that many of the same skills are required across all forms of procurement and contract management.

## 4.2 Victoria's infrastructure management framework

Victoria's devolved management framework means that each agency is responsible for ensuring it has competent and experienced infrastructure project teams. Nevertheless, a number of central agencies at a State and National level determine policies and provide guidance at a whole-of-government level. Constructing agencies supplement this with their own policies.

### 4.2.1 Australian Government

Two sets of National guidelines are critical to infrastructure delivery in Victoria:

- the *National Public Private Partnership Policy and Guidelines* (National PPP Guidelines); and
- the *National Alliance Contracting Guidelines*.

Both of these guidelines have drawn heavily on previous guidance materials produced by Victoria's Department of Treasury and Finance.

### 4.2.2 Department of Treasury and Finance

DTF has the prime responsibility for infrastructure policies and guidelines in Victoria. This responsibility is wide-ranging and includes:

- *Partnerships Victoria Requirements* – which expand on the National PPP guidelines with a Victorian focus;
- *Investment Lifecycle and High Value/High Risk Guidelines* – currently being revised by DTF, these guidelines provide practical assistance to all parties developing investment projects in Victoria. They are supported by various management tools, including Victoria's Investment Management Standard and Investment Logic Maps;
- Victoria's *Gateway Review Process* – described by DTF as an '*independent assurance mechanism to review the progress of projects throughout the investment lifecycle*';<sup>71</sup> and
- a range of additional material relating to asset management generally.

71 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.16



### 4.2.3 Department of Planning and Community Development

Up until 21 August 2012, the Department of Planning and Community Development (DPCD) had responsibility for policies and standards governing public construction in Victoria. This responsibility now resides with DTF. DPCD has issued directions addressing tendering procedures and contractual provisions. They are issued under the authority of the *Project Development and Construction Management Act 1994*.

DPCD advised the Committee that these directions are aimed at achieving consistency in the way agencies approach the private sector for tenders and in the forms of contracts used.<sup>72</sup>

From 21 August 2012, the Minister for Finance became responsible for implementing the Victorian *Code of Practice for the Building and Construction Industry*.<sup>73</sup> The Department of Planning and Community Development advised the Committee that the Code is effectively a ‘standard’ that specifies the behaviour expected by the Government of all parties involved in public construction, including public bodies and suppliers.<sup>74</sup>

### 4.2.4 State Services Authority

The State Services Authority (SSA) is responsible for providing advice to agencies on public sector employment, workforce planning and management, governance and conduct. To this effect, the Authority provides, among other things, a suite of ‘capability frameworks’ to assist agencies in identifying the ‘*personal qualities, knowledge and skills they see as necessary for performing the work of the agency*’.<sup>75</sup>

### 4.2.5 Victoria’s constructing agencies

Individual constructing agencies have also developed their own policy documentation for infrastructure management. The Committee has observed that some agencies have developed quite extensive material.

### 4.2.6 Major Projects Victoria

This business unit within the Department of Business and Innovation (DBI) provides specialist support services in infrastructure management for public sector agencies, particularly the smaller agencies. Major Projects Victoria does not issue publicly available documentation specifying competency and skill requirements.

72 Department of Planning and Community Development, response to the Committee’s questionnaire, received 6 March 2012, p.6

73 Excluding the Code’s industrial relations content - Department of Planning and Community Development, response to the Committee’s questionnaire, received 6 March 2012, p.7

74 Department of Planning and Community Development, response to the Committee’s questionnaire, received 6 March 2012, p.7

75 State Services Authority, response to the Committee’s questionnaire, received 29 May 2012, p.2

## 4.3 Central agency infrastructure documentation

### 4.3.1 Agencies' assessments of the guidance

DTF advised the Committee that the *National Public Private Partnership Policy and Guidelines* 'provide extensive information on the specific skills and competencies required in key roles within the project team, including the project director, probity practitioners, commercial managers and technical managers'.<sup>76</sup>

The Department indicated that '*Project Alliancing Guidelines and Investment lifecycle Guidelines (for non-PPP projects) also highlight the need for appropriately structured and resourced project teams to be used to deliver projects*',<sup>77</sup> although '*the skills required are not specified to the same level of detail as in the PPP Guidelines*'.<sup>78</sup> DTF considers, however, that '*a number of the skills and competencies detailed in the PPP Guidelines are also relevant and applicable to non-PPP projects*'.<sup>79</sup>

The Committee found constructing agencies varied in their opinions about the relevance and adequacy of the above documentation's description of requisite competencies and skills. A number of agencies indicated that they found it to be adequate. Others, however, only discussed the documentation's usefulness in terms of procedures. Others again noted their preference to rely on their own internal documentation. Some agencies indicated to the Committee that central agency policy and guidelines do not provide specific information regarding required competencies for project delivery personnel.

In a presentation to the Committee about the extent to which competencies and skills for significant infrastructure projects in Victoria are specified in government documents, the General Manager of Baulderstone Ltd claimed: '*I think that we would say that currently they are implied, but a bit generic and not explicit*'.<sup>80</sup>

Additional advice later provided to the Committee by DTF included that its published policies and guidelines:<sup>81</sup>

*generally outlines the roles and tasks expected of participants rather than focussing on specific competencies or qualifications required to perform those roles.*

**FINDING:** While the Commonwealth Government and the Department of Treasury and Finance provide a range of guidance material, constructing agencies differed in their opinions as to its coverage of competency and skill requirements. Some agencies preferred to rely on their own documentation.

To better understand the extent to which the competencies identified in relation to term of reference (a) were specifically and explicitly articulated in documentation, the Committee examined key documents.

76 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.9

77 *ibid.*

78 *ibid.*

79 *ibid.*

80 Mr P. Cashin, Baulderstone Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.4

81 Department of Treasury and Finance, response to the Committee's questionnaire, received 22 May 2012, p.7

### 4.3.2 The Committee's assessment of current guidance materials

The Committee examined the National and DTF documents identified above in Sections 4.2.1 and 4.2.2, and the State Service Authority's *Victorian Public Sector Employment Capability Framework* (see Section 4.3.3). For each set of documents, the Committee assessed:

- how many of the competencies and skills listed in relation to term of reference (a) are identified in the documents; and
- how much detail about the identified competencies and skills is provided.

The Committee's review of infrastructure management policies and guidelines included examination of 94 individual documents authored by the Australian Government (as national documents), DTF and other Victorian agencies. Of these, 19 documents were found to have specific references to competency requirements. The 119 instances of competency requirements across these documents are reproduced in Appendix A1.1.

The Committee used the competency model<sup>82</sup> employed by the Australian Qualifications Framework (AQF) Council as a benchmark to assess the level of detail in the examined documents.

The AQF is the national policy for regulated qualifications in Australian education and training. It provides a classification scheme for different areas and levels of competency, with standardised expectations of knowledge and skills, and their application. These classifications are consistent across the different national jurisdictions. As an example, Appendix A1.2 shows the AQF's specification for 'business case development'.

The Committee has recommended the AQF as a model of the appropriate level of detail for future improvements to descriptions of competencies and skills in Victorian guidance (see Section 2.2.2).

#### Comprehensiveness of competencies identified in documentation

The Committee examined the different sets of documentation to find the proportion of competencies identified in term of reference (a) that were mentioned. Some interpretation was required concerning how closely the documentation matched the identified competencies. This means that proportions should be taken only as a guide to the extent of correlation. The proportion of identified competencies that were mentioned in any documentation was also calculated.

The inclusion of particular competencies within the various documents are shown in Appendix A1.3. This appendix shows the full range of competencies identified in term of reference (a) and listed in Table 3.2 of Chapter 3, adjusted for duplicated and similar competencies over more than one activity. In addition, the appendix shows whether these competencies were assessed to have been identified in the relevant documentation.

It should be noted that skills required for creating and operating governance structures for infrastructure provision projects have not been included in this analysis. These skills are discussed separately in Section 3.3.2 of this Report.

82 Australian Qualifications Framework Council, 'History of the AQF', <[www.aqf.edu.au/AbouttheAQF/TheAQF/HistoryoftheAQF/tabid/95/Default.aspx](http://www.aqf.edu.au/AbouttheAQF/TheAQF/HistoryoftheAQF/tabid/95/Default.aspx)>, accessed 19 October 2012

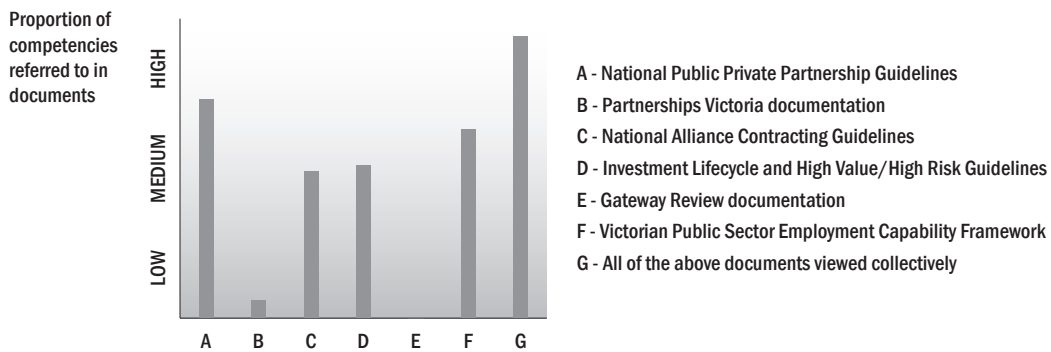
Figure 4.1 shows that the number of competencies identified in different central agency document sets is highly varied. The *National Public Private Partnership Policy and Guidelines*, the *National Alliance Contracting Guidelines*, the *Investment Cycle and High Value/High Risk Guidelines* and the *Victorian Public Sector Employment Capability Framework* all have a medium level of comprehensiveness in their coverage of the competencies identified in term of reference (a). However, the *Partnerships Victoria Requirements* and *Gateway Review Process* documents were less comprehensive.

The Committee also notes that where the *Gateway Review Process* documentation refers to skills required, it specifies the skills for the review team and not the project delivery staff.

Further, the Committee has identified that nearly all the competencies identified in term of reference (a) were mentioned in the documentation taken as a whole. This means that a professional who had become familiar with the whole range of documents would have seen around 95 per cent of the competencies identified in term of reference (a).

4

**Figure 4.1 Comprehensiveness of competency identification in central agency documentation**



Source: Public Accounts and Estimates Committee Secretariat

**Level of detail provided for competencies included in documentation**

For competencies referred to in the central agency documentation, the Committee also assessed the level of detail that is included in the documentation. The level of detail was assessed in terms of a score, which is set out in Figure 4.2.

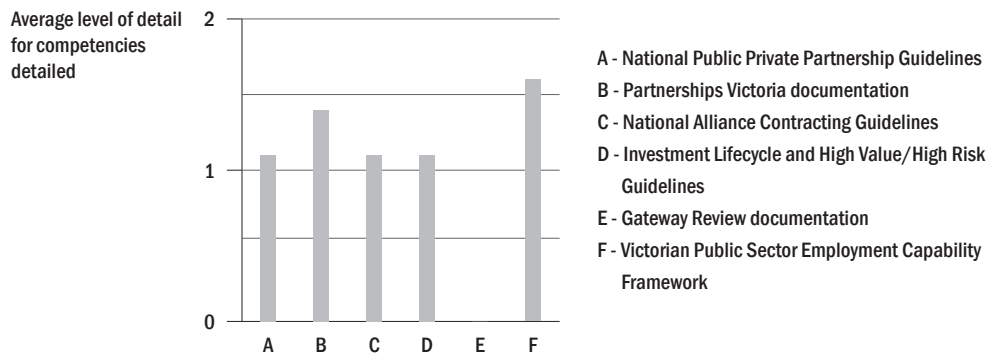
As a benchmark, the Committee assessed the Australian Qualifications Framework to be an example of the highest level (4) of detail. An example of the Australian Qualifications Framework, showing business case development competency requirements, is given in Appendix A1.2.

Figure 4.2 shows that where requisite competencies are identified in central agency documentation, little detail has been given in comparison to the Australian Qualifications Framework. No set of documentation was assessed to be a higher average level of detail than 2.

The data in Figures 4.1 and 4.2, when taken together, show that the comprehensiveness of the documentation (taken as a whole) is satisfactory. However, no single set of guidances provides a comprehensive identification of the competencies that are identified in term of reference (a). However, even a familiarity with the entire set of guidances (such as gained by a professional who had seen the whole range of documents) will not provide the user with a detailed understanding of the competencies required.

That is, there is room for improvement in terms of detail that the various documents provide, but the coverage of the whole set of documents is satisfactory.

**Figure 4.2 The extent of central agency policy and guidance coverage of competencies identified in term of reference (a)**



**Level Extent of detailed competencies in central agency policy and guidance**

0	- No discussion of the competency.
1	- Expresses that the role or task requires competent staff; or - identifies a requisite competency, skill or attribute.
2	- Provides minimal commentary about what competencies, skills or attributes the role requires; or - nominates a specific qualification, certification or professional membership requirement.
3	- Provides extended commentary about what competencies, skill or attributes the role requires; and - nominates a specific qualification, certification or professional membership requirement.
4	- Specifically and explicitly sets a standard that defines the elements of the competency, skill or attribute and associated performance expectations (i.e. performance criteria) and level of experience; or - maps competencies/skills against recognised competency standards (such as the Aust. Qualifications Framework).

Notes: Averages are calculated only for term of reference (a) competencies that are identified in central agency documentation.

Source: Public Accounts and Estimates Committee Secretariat

**FINDING:** Familiarity with any single set of central agency guidances will not provide the reader with a comprehensive exposure to the competencies that are identified in term of reference (a). In contrast, familiarity with the entire suite of documents will provide a more comprehensive exposure. However, even across the entire suite of documents, the level of detail provided about competencies is low.

***National Public Private Partnership Policy and Guidelines, Partnerships Victoria Requirements documentation and National Alliance Contracting Guidelines***

The Committee identified that the National PPP Guidelines identify around three quarters of the competencies identified in term of reference (a). The *National Alliance Contracting Guidelines* identifies around half of the competences identified. By contrast, the *Partnerships Victoria Requirements* documentation identified a small proportion of the competencies identified in term of reference (a).

The National PPP Guidelines identify competency requirements at a high level and lack the details required to understand the specific requirements as they relate to infrastructure management. Examples include:

- ‘[For PPP projects,] *the specialist expertise required for the project includes commercial, financial, technical, operational and legal skills*’;<sup>83</sup>
- ‘*The [project director] skills needed include project management, well-developed commercial skills applicable to developing and negotiating contractual arrangements and knowledge of government processes*’;<sup>84</sup> and
- ‘*The resources required for good contract management include ... personnel with the knowledge and experience to manage relationships with the private party and other stakeholders*’.<sup>85</sup>

The *National Alliance Contracting Guidelines* contain some references to requisite competencies and skills, but generally focus on the duties and accountabilities of the different roles associated with alliance projects. However, they include the following specific requirements for risk advisors:<sup>86</sup>

- *The risk advisor selected should be a person or organisation familiar with the risks encountered in project alliancing and, where appropriate, should be a member of a relevant professional association such as the:*
  - *Risk Management Institution of Australasia Limited;*
  - *Australian and New Zealand Institute of Insurance and Finance; and/or*
  - *Institute of Chartered Accountants, Australia.*

The Committee also notes that some of the requirements in the *National Alliance Contracting Guidelines* are vague with respect to skills specifically needed. For example:<sup>87</sup>

- *The Owner’s APT [Alliance Project Team] members should be appointed on a ‘best person for the job’ basis.*

*Partnerships Victoria Requirements* documentation is focussed specifically on contract management. Because of this, in comparison to both the National PPP guidelines and the *National Alliance Contracting Guidelines*, a smaller proportion of identified competencies is identified, but greater detail is provided. Examples include:

- ‘*As part of establishing an effective contract management culture, Contract Directors and their teams should have undertaken training that provides skills and competencies in the contract management of Partnerships Victoria projects, including any Contract Director’s participation in whole-of-government contract management forums*’;<sup>88</sup> and
- ‘*The Contract Director should ensure that they have thorough knowledge of the regulatory and policy frameworks that apply to delegation of legal power and financial capacity in the government party*’.<sup>89</sup>

83 Infrastructure Australia, *National Public Private Partnerships — Volume 2: Practitioners’ Guide*, March 2011, p.36

84 *ibid*, p.38

85 *ibid*, p.138

86 Commonwealth Department of Infrastructure and Transport, *National Alliance Contracting Guidelines — Guidance Note 2: Insurance in Alliance Contracting: Selling Insurable Risks*, July 2011, p.49

87 Commonwealth Department of Infrastructure and Transport, *National Alliance Contracting Guidelines: Guide to Alliance Contracting*, July 2011, p.77

88 Partnerships Victoria, *Guidance Material — Contract Management Guide*, June 2003, p.27

89 *ibid*, p.73

The Committee acknowledges that the primary purpose of these guidelines is to provide a consistent set of principles and practices for the different procurement models. To that extent, requisite competencies and skills may have been beyond the original scope of these documents. The Committee considers that the articulation of competencies and skills to enhance better procurement practices should be an objective of future updates of these documents. The Committee therefore also considers that the proposed Victorian Infrastructure and Skills Authority should work towards that occurring (see Section 2.2.2 of this Report).

As stated earlier, in the context of procurement principles and practices, these documents are recognised as leading in the project delivery sphere. The Committee also found common agreement among agencies that they are valuable resources and have been instrumental in establishing consistency on project principles, processes and practices for public sector agencies.

**FINDING:** There is little coverage of competency and skill requirements in the *National Public Private Partnership Policy and Guidelines*, *Partnerships Victoria Requirements* and *National Alliance Contracting Guidelines*. While the purpose of these documents is to provide consistent principles and practices for those procurement models, the articulation of competencies and skills to enhance better procurement practices should be an objective of future updates of those documents.

4

### The Investment Lifecycle and High Value/High Risk Guidelines

The *Investment Lifecycle and High Value/High Risk Guidelines* aim to:<sup>90</sup>

*provide clear, integrated guidance and useful tools that promote better practice and help ... shape, plan and deliver well-considered infrastructure investments.*

The Committee notes that the Guidelines are currently being reviewed. The Guidelines state recent changes ‘*place a larger focus on skills and capabilities required throughout the investment cycle*’<sup>91</sup>, which is consistent with DTF’s advice to the Committee that the updated version will include an increased focus on skills.<sup>92</sup> At the time of this Inquiry, many of the component documents remain in draft form or were yet to be issued. The Committee’s assessment must be understood in this context.

The *Overview* document notes that ‘*organisations should ensure staff are appropriately skilled at each step of the investment lifecycle process*’.<sup>93</sup> Many of the documents within the Guidelines also emphasise the importance of appropriately skilled and experienced staff, such as:

- ‘*Appropriately skilled resources are necessary in both COTS [customised, off the shelf] implementation and bespoke [custom-built] development projects. An evaluation of the skills for implementation and ongoing support teams should be budgeted for and included in the business case*’;<sup>94</sup> and

90 Department of Treasury and Finance, ‘Investment Lifecycle and High Value/High Risk Guidelines’, <[www.lifecycleguidance.dtf.vic.gov.au/section.php?section\\_ID=1](http://www.lifecycleguidance.dtf.vic.gov.au/section.php?section_ID=1)>, accessed 1 October 2012

91 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Overview*, July 2012, p.7

92 Department of Treasury and Finance, response to the Committee’s questionnaire, received 22 May 2012, p.7

93 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Overview*, July 2012, p.38

94 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Conceptualise — ICT projects technical guidance — Business case development (draft for comment)*, August 2012, p.12

- *‘At each stage in the project lifecycle, it is important to ensure scoping and requirements specification is done by appropriately skilled and experienced people.’*<sup>95</sup>

The *Overview* document also classifies the various competency requirements into three broad areas of capability:<sup>96</sup>

- *high-level roles such as public policy development, long-term planning (e.g. transport and urban design) and governance;*
- *broaf-based areas surrounding commercial and legal acumen, service delivery and stakeholder management, and the integration of these aspects in the policy context; and*
- *more specific application of technical skills in areas such as contract development and management, engineering and design, financial analysis, project costing, project and risk management and communications.*

It also provides a useful listing of ‘*skills required for each step of the lifecycle guideline*’,<sup>97</sup> shown in Table 4.1.

**Table 4.1 Skills required for each step of the life-cycle guideline**

Skills required	Conceptualise	Prove	Procure	Implement	Realise
Strategic thinking and planning	✓	✓	✓	✓	✓
Policy advice	✓	✓	✓	✓	✓
Governance	✓	✓	✓	✓	✓
Research/interpretation	✓	✓			✓
Project management		✓	✓	✓	✓
Business writing	✓	✓			
Communication/engagement		✓	✓	✓	✓
Governance design	✓	✓		✓	
Analysis	✓	✓			✓
Modelling	✓	✓		✓	
Operational/technical	✓	✓	✓	✓	✓
Risk management	✓	✓	✓	✓	✓
Demand management	✓	✓			✓
Social, environmental and economic evaluation		✓			
Financial analysis	✓	✓	✓		
Procurement		✓	✓		
Legal		✓	✓	✓	
Benefit evaluation	✓				✓

Source: Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines – Overview*, July 2012, pp.38-9

95 *ibid.*, p.21

96 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines – Overview*, July 2012, p.38

97 *ibid.*, pp.38-9



The Committee considers the identification of these skills to be a positive step. They help to provide a common understanding of competency and skill requirements for investment projects and infrastructure management.

However, with the exception of project management skills/expertise and financial modelling (as identified in Appendix A1.3), the Guidelines do little to expand on a basic listing of each competency. They are well below the standard of the Australian Qualifications Framework.

As mentioned above, many of the documents in the *Investment Lifecycle and High Value/High Risk Guidelines* were in draft form or yet to be released at the time of this Inquiry. The Committee notes that future iterations of drafts or documents still to be released may expand on the initial competency listings in the existing documentation.

The Committee considers that there is a need for a more detailed articulation of the different competencies necessary during each phase of an investment's life-cycle.

The review of the *Investment Lifecycle and High Value/High Risk Guidelines* provides an opportunity to incorporate more detailed descriptions of the required competencies and skills. The Committee sees potential for the Guidelines to include a series of stand-alone and easily accessible documents providing detailed information about competencies relevant to each life-cycle phase and the activities carried out within it.

The Committee has recommended that the Victorian Infrastructure and Skills Authority work towards increasing the level of detail in these guidelines (see Section 2.2.2 of this Report).

**FINDING:** The Department of Treasury and Finance's current review of the *Investment Lifecycle and High Value/High Risk Guidelines* is a positive step in providing a common understanding of competency and skill requirements for infrastructure management. However, with the exception of project management skills/expertise and financial modelling, they currently provide only a basic listing of each competency.

## The Gateway Review Process documentation

The *Gateway Review Process* is 'an independent assurance mechanism to review the progress of projects throughout the investment lifecycle.'<sup>98</sup> Gateway Reviews consist of independent reviews of a project's status at various key milestones (referred to as 'gates'). Since 2011, Gateway Reviews have become compulsory for projects designated as High-Value and High-Risk (see Section 2.3.2 of this Report) and may be requested for other projects.<sup>99</sup>

A program review:<sup>100</sup>

*...investigates the direction and planned outcomes of a policy initiative, organisational change or program. The review and the progress of its constituent projects is repeated throughout the life of the program from start-up to closure.*

The documentation recommends the following questions as part of a program review.

98 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.16

99 Department of Treasury and Finance, 'High Value High Risk and investment guidance material', <[www.dtf.vic.gov.au/CA25713E0002EF43/pages/high-value-high-risk-and-investment-guidance-material](http://www.dtf.vic.gov.au/CA25713E0002EF43/pages/high-value-high-risk-and-investment-guidance-material)>, accessed 19 October 2012

100 Department of Treasury and Finance, *Gateway Review Process: Program Review*, October 2009, p.1

- ‘Are the required skills and capabilities for this program available, taking account of the organisation’s current commitments and capacity to deliver?’;<sup>101</sup>
- ‘Are the required internal or external individuals and organisations suitably skilled, available and committed to carrying out the work?’;<sup>102</sup> and
- ‘Where procurement is a part of the program, how is capability and capacity for acquisition to be managed?’.<sup>103</sup>

For each question, the document also sets out evidence that the review team could expect as demonstration that the project team had adequately addressed these questions.

Likewise, Gateway Review Booklets<sup>104</sup> also provide a series of suggested questions. These are intended to ensure that evidence has been provided that sufficient competencies and skills have been embedded in the project team.

However, the documentation does not specify the required skills. The Committee is aware that the associated guides and other documents are not designed to establish competency standards. As such, the Committee considers it reasonable that they do not identify requisite competencies for infrastructure project delivery. The Committee believes this is more appropriately done elsewhere.

**FINDING:** The Gateway Review Process requires that evidence be provided that required competencies and skills are present at the different stages of a project. However, it does not specify what these competencies and skills are.

### 4.3.3 State Services Authority

#### The Victorian Public Sector Employment Capability Framework (VPSECF)

The State Services Authority provides a number of resources addressing capabilities required for working in the public sector. Of particular relevance is the Authority’s *Victorian Public Sector Employment Capability Framework*.<sup>105</sup> While not exclusive to infrastructure management, SSA advised the Committee that it ‘establishes a common language across the Victorian public sector for describing common capability requirements at different role levels’.<sup>106</sup>

Each capability is described using one or two key words and a list of measurable, indicative behaviours that demonstrate the capability. According to the framework, ‘It is these behavioural descriptions that make the VPSECF an effective tool because they are observable and measurable’.<sup>107</sup> Further, these are accompanied by descriptions of performance expectations according to seniority level.

101 *ibid*, p.9

102 *ibid*, p.18

103 *ibid*, p.19

104 Department of Treasury and Finance, ‘Gateway Guidance Booklets’, <[www.gatewayreview.dtf.vic.gov.au/CA256EF40083ACBF/0/8F53861594987016CA2579180000B85F?OpenDocument](http://www.gatewayreview.dtf.vic.gov.au/CA256EF40083ACBF/0/8F53861594987016CA2579180000B85F?OpenDocument)>, accessed 3 December 2012

105 State Services Authority, *The VPS Employment Capability Framework: Strengthening the Professionalism and Adaptability of the Victorian Public Service*, 2006

106 State Services Authority, response to the Committee’s questionnaire, received 29 May 2012, p.2

107 State Services Authority, *The VPS Employment Capability Framework: Strengthening the Professionalism and Adaptability of the Victorian Public Service*, 2006, p.6

The Committee found that the VPSECF documentation identified the second highest proportion of competencies identified in term of reference (a) (see Figure 4.1). Further, where relevant competencies were identified in the VPSECF, they provided more detail than any of the other sources (see Figure 4.2).

The Committee considers that while no single source of documentation is comprehensive, and while the VPSECF is a very general source, its relatively wide coverage and higher level of detail makes it the most useful of the documents.

This usefulness is also demonstrated in the adoption of the Framework by the Department of Sustainability and Environment as a basis for its competency standards. The Department confirmed that:<sup>108</sup>

*Using the Victorian Public [Sector] Employment Capability Framework, skills and attributes were used to develop a training and competency standard for each position.*

SSA informed the Committee that it considers that there may be value in maintaining up-to-date knowledge of the range of competencies required for effective infrastructure project management.<sup>109</sup> However, it did not identify which agency should be responsible for this.

**FINDING:** A larger proportion of the competencies and skills required for effective infrastructure delivery are identified in the State Services Authority's *Victorian Public Sector Employment Capability Framework* than in other documentation. The Framework has also been used as a basis for competency standards in one constructing agency.

#### 4.3.4 Department of Planning and Community Development

In terms of whole-of-government policies, the role of the Department of Planning and Community Development has, to 21 August 2012, encompassed the setting of standards and directions applying to public construction. It includes work undertaken by any department or public body and work undertaken on behalf of any department or public body.<sup>110</sup> This role now resides in DTF.

DPCD has issued directions, guidance and tools as part of this role. The topics covered by these are restricted to tendering procedures and contractual provisions. DPCD has released:

- Ministerial Direction No.1: *Tendering Provisions for Public Construction*;
- Guide to Ministerial Direction No.1 – *Tendering Provisions for Public Construction*;
- Ministerial Direction No.2: *Contractual Provisions for Public Construction*; and
- Guide to Ministerial Direction No. 2 – *Contractual Provisions for Public Construction*.

These documents do not address competency and skill requirements. DPCD advised that:<sup>111</sup>

108 Department of Sustainability and Environment, response to the Committee's questionnaire, received 6 June 2012, p.8

109 State Services Authority, response to the Committee's questionnaire, received 29 May 2012, p.1

110 Department of Planning and Community Development, response to questionnaire, received 6 March 2012, p.1

111 *ibid.*, pp.6-7

*The Directions and Guides specify procedures and provide guidance to Victorian Government departments and public bodies on public construction tendering and forms of contract.*

*Ministerial Directions are intended to apply following a decision by a department to invest in a public construction. Decisions leading up to the point of tendering and entering into a contract for construction are outside the ambit of the Ministerial Directions issued under Part 4 of the PDCMA [Project Development and Construction Management Act 1994].*

Further advice from the Department included that:<sup>112</sup>

*DPCD does not provide policy or guidance material to department or public bodies in relation the planning, oversight, governance or investment decisions in relation to significant infrastructure projects.*

*DPCD does not specify the competencies or skills required of public sector managers or others involved in the procurement of significant infrastructure projects. Since the mid-1990s departments have been responsible for their own public construction works and services. It is the responsibility of each department to ensure they have adequate competent resources to deliver their public construction.*

**FINDING:** In discharging its past policy functions for public construction procurement, the Department of Planning and Community Development has issued directions, guidance and tools related to tendering procedures and contractual provisions. However, these do not address competency and skill requirements for infrastructure management.

The Department's website has, in the past, included the Victorian *Code of Practice for the Building and Construction Industry*. Responsibility for this Code also now resides in DTF. This includes general requirements that staff have appropriate levels of competence and authority, but does not specify what specific competencies are required.

The Code also makes reference to the criteria for pre-qualification<sup>113</sup> of consultants and contractors on whole-of-government registers of construction service providers. These criteria include only very high-level descriptions of competencies and skills (such as 'innovative ability' and 'performance capability').<sup>114</sup> Competency requirements for pre-qualification are discussed further in Section 4.6 of this Report.

In 2012, the Department of Treasury and Finance released Implementation Guidelines to the Code, which also updated the Code's industrial relations and occupational health and safety and rehabilitation aspects. DPCD has advised that the Department of Treasury and Finance is now responsible for monitoring compliance with the new guidelines.<sup>115</sup>

**FINDING:** The Victorian *Code of Practice for the Building and Construction Industry* only discusses skills and competencies at a very high level.

112 *ibid.*, p.7

113 With pre-qualification, selected consultants and contractors are identified as suitable for specific kinds of work prior to any particular projects.

114 Department of Infrastructure, *Code of Practice for the Building and Construction Industry*, March 1999, pp.15, 19

115 Department of Planning and Community Development, response to the Committee's questionnaire, received 6 July 2012, p.3

## 4.4 Major Projects Victoria

Major Projects Victoria (MPV) does not issue publicly available documentation specifying competency and skill requirements.

MPV has a Project Management Framework that is available for internal and other authorised use. The framework's focus is on the processes for project delivery. However, in addition, it identifies a number of broad skill sets that MPV considers necessary. These include project, risk and contract management, as well as administrative capacity and the ability to interpret and understand design and contract documentation.

With regard to specific requisite competencies, the Department of Business and Innovation noted that:<sup>116</sup>

*MPV identifies the particular skills required for each role on a project by project basis. These skills are detailed in the position descriptions that are advertised on the Victorian Government careers website, or in tenders that are advertised on the tenders website and in the Herald Sun.*

**FINDING:** The Department of Business and Innovation noted that Major Projects Victoria identifies skills for each role on a project-by-project basis.

## 4.5 Constructing agency documentation

Although guidance is provided centrally, the Government's devolved model of responsibility means that individual agencies are ultimately responsible for ensuring they are adequately and appropriately resourced to successfully deliver infrastructure projects.

As stated by one constructing agency:<sup>117</sup>

*Given the diverse scale and nature of infrastructure projects across the Victorian Government, it is left to each agency to identify how these guidelines [DTF's Investment Lifecycle and Gateway Review guidances] are incorporated into internal processes.*

The Committee sought information on how these expectations were reflected in formal documentation. This was to determine the extent to which Victoria's main constructing agencies specifically and explicitly articulate competency expectations for infrastructure management.

In most cases, it appeared to the Committee that constructing agencies sought to incorporate and further supplement central agency information into their documentation, rather than duplicate what already existed.

There appeared to be common agreement on the requirement for staff responsible for the more 'technical' aspects (such as engineering or architecture) to have relevant and current qualifications or certifications. However, discussions with the Committee revealed differing opinions on whether other staff (such as project or contract managers) needed qualifications or certification. As discussed in Section 4.3.2, some agencies mandate that staff be qualified in

116 Department of Business and Innovation, response to the Committee's questionnaire, received 31 May 2012, p.1

117 Department of Transport, response to the Committee's questionnaire, received 25 May 2012, p.7

project management and others consider this to be unnecessary. In some cases, agencies provide their own training.

The Committee also found that different agencies set out required competencies and skills in different ways. Some agencies detail them in policy and guidance material. Others set out competency and skill requirements within position descriptions. Still other agencies include such detail in tender documents and contractor briefs.

There was also a lot of variation in the evidence provided to the Committee to demonstrate the extent to which competencies and skills were specified in agency documentation. A small number of agencies provided detailed evidence of extensively scoped requirements for different roles. Some agencies had also established competency frameworks that enable them to build 'competency profiles' according to the specific requirements of each project.

Other agencies, however, appeared to have a lesser focus on defining the required competencies and skills. The only evidence provided by one agency of where skills and competencies are defined was advice that it exists in position descriptions used to engage staff and private providers. In another example, a constructing agency advised the Committee that it considered its role to be that of 'oversight' of third party delivery and as such, it had not specified the minimum key competencies and skills for infrastructure project governance and management.

**FINDING:** Constructing agency documentation addressing competency requirements for infrastructure management varied widely in both nature and content, giving rise to inconsistent practices of articulation of competency and skill requirements. Some agencies appear to have comprehensive frameworks detailing requisite competencies. Others seem only to list competency requirements within position descriptions used to advertise for new staff.

In many cases, it was not possible for the Committee to view the full extent of documentation from constructing agencies. As such, it cannot draw any definitive conclusions as to the comprehensiveness with which competency requirements are articulated. However, the Committee's attention was drawn to a number of instances where it observed what it considers to be better practice in developing competency 'statements', 'profiles' or 'frameworks'. These are discussed briefly below.

#### 4.5.1 Better-practice articulation of competencies and skills for infrastructure management

##### Department of Justice

The Department of Justice has developed a *Project Management Excellence* Framework. The Department advised that the Framework is drawn from central agency guidance material, PMBOK [Project Management Body of Knowledge] and PRINCE2 [PRojects IN Controlled Environments 2], and has been constructed to reflect DTF's Investment Lifecycle Guidelines.<sup>118</sup> The Department of Treasury and *Finance's Investment Lifecycle and High Value/High Risk*

<sup>118</sup> Ms G. Moody, Department of Justice, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.4

*Guidelines—Project Governance guide (draft)*, acknowledges that this framework provided useful input into the Guide’s development.<sup>119</sup>

The Department identified that it is currently mapping the framework to Australian project competency standards and working to meet Registered Training Organisation (RTO) accreditation requirements.<sup>120</sup> The Committee anticipates that the outcome of this initiative will result in the Framework evolving into a set of competency requirements in accordance with the Australian Qualifications Framework.

**FINDING:** The Department of Justice is currently mapping its *Project Management Excellence* Framework to Australian project competency standards and working to meet Registered Training Organisation (RTO) accreditation requirements. The likely outcome of this initiative is that the framework will evolve into a set of competency requirements in accordance with the Australian Qualifications Framework.

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## Department of Transport

The Department of Transport uses a Career Pathways and Development Planning Toolkit. This documents experience, personal attributes and behavioural competencies needed for a number of key roles, including project management. The Toolkit divides requisite competencies for project management positions into ‘experience’, ‘knowledge’ and ‘capabilities’. Descriptors of expectations are provided for the different levels of seniority in each type of role.

**FINDING:** The Department of Transport identifies requisite experience, knowledge and capabilities for different seniority levels of project management positions in its Career Pathways and Development Planning Toolkit.

## VicRoads

The Committee made special note of the system employed by VicRoads to articulate competencies and skills across the organisation. VicRoads’ Technical Competency Assessment Program (TeCaP) system is a workforce capability management system that identifies a suite of capability requirements and the discrete competency elements of each.

For each competency element, TeCaP includes a set of performance criteria detailing the expected abilities.

Many of the capabilities identified in TeCaP are specific to the nature of the work undertaken by VicRoads (e.g. transport safety services technical capability). However, a number are more generally applicable to infrastructure management.

119 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Project Governance (Draft)*, July 2012, p.iv

120 Department of Justice, response to the Committee’s questionnaire, received 1 June 2012, p.11

For example, the capability ‘business relationship and consulting capabilities’ identifies six elements, including skills such as ‘customer sensitivity’ and ‘managing external relationships’. Likewise, the ‘communications’ capability is made of ten elements including ‘strategic communications’, ‘online communication’ and ‘writing skills’.

The TeCaP system does not identify required personal attributes. However, VicRoads supplements the system with voluntary psychometric assessment tools to assess personality traits and preferences.<sup>121</sup>

The Committee considers this model to be one of the more advanced approaches to competency identification in constructing agencies. The Committee also notes that its structure aligns closely with competency models applied by the Australian Qualifications Framework.

The Committee sees value in the TeCaP system being examined to determine to what extent it may be applied elsewhere.

**FINDING:** VicRoads’ TeCaP workforce capability management system is one of the more advanced approaches to identifying infrastructure management competencies across Victoria’s constructing agencies. Its structure also aligns closely with Australian Qualifications Framework competency models.

#### 4.5.2 Sharing information about competency and skill requirements

The Committee was interested to know what mechanisms are used to share knowledge about infrastructure management competency and skill requirements across the public sector. The Committee has seen no evidence of a dedicated forum for this type of activity.

The Committee notes a high degree of variation in agencies’ approaches to articulating competency and skill requirements. This may lead to poor identification of skills requirements in some cases.

The Committee was advised that a number of forums are in existence that might be used to discuss better practice for agencies’ approaches. These include the Victorian Infrastructure Policy Reference Group, the Project Management Leadership Forum and the Construction Contracts Advisory Panel.<sup>122</sup>

The Committee considers that use of a relevant forum to compare and discuss agencies’ approaches to setting out competency and skill requirements could lead to improvements in work already done. This could also contribute to the development of an overarching capability framework for competencies.

### 4.6 Private sector service provider competencies and skills

A number of constructing agencies indicated that they regularly engage personnel from the private sector to supplement areas where they may not have particular expertise. Most of the agencies that indicated that they do this also indicated that it is commonly done using

121 Department of Transport, response to the Committee’s questionnaire, received 25 May 2012, p.2

122 Department of Health, response to the Committee’s questionnaire, received 10 April 2012, p.6



whole-of-government panels or registers maintained by the Victorian Government Purchasing Board (VGPB).

Discussions with the Committee suggested that engaging providers through whole-of-government panels and registers provided a sense of assurance about the competencies of those engaged. This is most likely because providers have been ‘pre-assessed’ or ‘pre-qualified’ to deliver the services in the category for which they are registered. Such services include, but are not limited to, project management, contract management, communications and business case development.

The Committee perceives that there is a high level of dependence on both the engagement of providers using panels and registers and the capabilities of those providers.

The Department of Treasury and Finance considers that the panels ‘*identify critical skills and facilitate engagement with private sector companies with the required capabilities to assist with infrastructure delivery.*’<sup>123</sup>

Panel arrangements directly related to major infrastructure include the:

- Commercial Projects (legal services) panel;
- Tax Advisor Services panel;
- Probity Services panel;
- Financial Assessment Services panel;
- eServices panel; and
- Commercial and Financial Advisory Services panel.

According to the Victorian Government Purchasing Board, use of a ‘panel provider’ is mandatory in all cases except for the Commercial and Financial Advisory Services.

**FINDING:** The government has established panels of ‘pre-approved’ private sector service providers to assist agencies in delivering infrastructure projects. Use of a ‘panel provider’ is mandatory except in the case of the Commercial and Advisory Services panel.

Examination of the extent to which panel and register documentation includes required competencies and skills is not within the scope of this term of reference. However, the Committee has made some broad observations about competency information in related documentation such as heads of agreement documents and panel user guides.

For some panels, there is publicly available documentation that sets out the specific qualifications and experience that the provider is required to have for inclusion on the panel.

Of particular note is the guide for the Probity Service panel, established in May 2012. The Guide, *Rules of Engagement*, sets out the capability expectations of panel members for both probity advice and probity auditing services.<sup>124</sup> This includes both general requirements

123 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.13

124 Department of Treasury and Finance, *State Purchase Contract Panel for Probity Practitioner Services — Rules of Engagement*, May 2012, pp.3-6

such as necessary skills to review project processes, through to specific requirements such a demonstrated understanding of probity case law.

Conversely, information about other panels, such as the eServices<sup>125</sup> and the Commercial and Financial and Advisory Services<sup>126</sup> panels appeared to be less explicit in terms of the specific competencies against which panel members are assessed. The Committee notes, however, that additional documentation may exist that provides greater detail than what is publicly available.

The Commercial and Financial Advisory Services panel was established specifically for engaging providers to work on significant projects and asset investments linked to Government priorities.<sup>127</sup>

The Committee considers that it is important that agencies using the panel have access to accurate, complete and verified information about the specific competencies that providers have been assessed as having. Without such information, an agency may experience difficulty in making informed choices in procuring particular competencies for delivering its infrastructure projects.

The Committee therefore also considers that the specific competencies required for membership of registers and panels should be made publicly available.

**FINDING:** Publicly available information on the qualifications and experience required for inclusion on a Victorian Government Purchasing Board provider panel varies across panels. Without access to accurate, complete and verified information about the specific competencies of providers, agencies may not be making a fully informed choice when procuring competencies.

**RECOMMENDATION 12:** Specific criteria for inclusion on Victorian Government Purchasing Board provider panels should be made publicly available.

## 4.7 Future directions

Establishment of competent infrastructure teams requires an understanding of what the relevant competencies entail and the related performance expectations.

The Committee considers that a central framework is needed to achieve this. At a minimum, this framework should clearly define the competency requirements identified in term of reference (a). This framework should serve as a set of minimum indicators against which agencies may identify what competencies are required to successfully deliver and manage major infrastructure projects.

125 Such as Department of Treasury and Finance, *eServices Panel: Operation Handbook*, February 2007.

126 Such as Department of Treasury and Finance, *Commercial and Financial Advisory Services Panel for Infrastructure and Capital Asset Projects, and Commercial Transactions: User Guide*, October 2008.

127 Victorian Government Purchasing Board, 'Commercial and Financial Advisory Services Panel', <[www.procurement.vic.gov.au/CA2575BA0001417C/pages/state-purchase-contracts-professional-services-commercial-and-financial-advisory-services-panel-how-to-use-this-contract](http://www.procurement.vic.gov.au/CA2575BA0001417C/pages/state-purchase-contracts-professional-services-commercial-and-financial-advisory-services-panel-how-to-use-this-contract)>, accessed 19 October 2012

Such a framework will not provide the specificity needed by agencies for the delivery of specialised types of infrastructure (such as hospitals or prisons). However, agencies would be able to extend the framework as required to include competencies that cover their unique requirements.

The framework should be developed in collaboration with all relevant stakeholders, including universities and relevant professional industry associations. The Committee considers that the Victorian Infrastructure and Skills Authority, proposed by the Committee in Chapter 2 of this Report, would be the ideal body for this task.

The framework should be based on a recognised competency model such as the AQF, which defines, for different competencies at different capability levels:

- the elements of the competency (tasks common to the competency);
- the performance criteria for each element (expectations that may be placed on someone certified as competent); and
- the skills and knowledge required for the competency certification.

While the framework should be based on a recognised model such as the AQF, it should be tailored to meet the contextual requirements of infrastructure management in the Victorian public sector.

This framework should also extend to the required competencies of infrastructure management service providers.

The Committee has also recommended in Chapter 2 that the Victorian Infrastructure and Skills Authority work towards better definition of competencies and skills in Victorian infrastructure guidance more generally (see Section 2.2.2 of this Report).

**FINDING:** To achieve a common understanding of the competencies required for effective infrastructure provision and management, a central framework that provides detailed definitions of the competencies identified in term of reference (a) is needed.

**RECOMMENDATION 13:** The proposed Victorian Infrastructure and Skills Authority, develop a central framework that provides detailed definitions of competencies required for effective infrastructure provision and management.



## CHAPTER 5 TERM OF REFERENCE (C) – DEVELOPMENT, REFINEMENT AND ENHANCEMENT OF SKILLS

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### 5.1 The assessed scope of term of reference (c)

Term of reference (c) requires the Committee to consider and report on:

*strategies in place within the public sector for the development of such requisite competencies and skills and for their ongoing refinement and enhancement through knowledge-building from the sharing of best practice examples and guidance in the public sector.*

Like terms of reference (a) and (b), this term of reference relates to the competencies and skills of public servants. Term of reference (c) is about the practical aspect of making sure public servants have the competencies and skills they need to deliver infrastructure projects effectively.

Having the right competencies and skills is a key component of successful project delivery. A number of sources informed the Committee that problems have occurred in Victorian projects due to staff not having the required competencies and skills. As discussed in Chapter 4, the importance of competencies and skills has been recognised in central guidance documents.

The Committee has also been informed that a lack of expertise can increase costs and reduce the Government's ability to achieve its intended outcomes (see Section 8.4).

It is therefore important that effective strategies are in place to identify skills gaps and to develop and refine the competencies and skills of staff. This chapter examines what strategies are currently in place and what improvements could be made.

While the Committee was informed about a number of good processes happening in Victoria, the Committee also identified scope for improvement in a number of aspects as detailed below. Addressing these areas has the potential to increase the skills of the Victorian public sector in delivering infrastructure and lead to better outcomes.

### 5.2 Identifying competencies and skills gaps

Victoria's devolved model of responsibility in the public sector means that individual agencies are responsible for ensuring their staff have the appropriate competencies and skills.<sup>128</sup> To fulfil this role, each agency must have a system for identifying skills gaps and ways to address them.

As discussed in relation to term of reference (b), guidance produced by central agencies provides some information about the required competencies and skills, but generally only at a high level. Each agency must supplement this guidance with its own understanding of the required competencies and skills. Each agency must also identify any competencies and skills that are specific to its portfolio or to the particular projects it is delivering.

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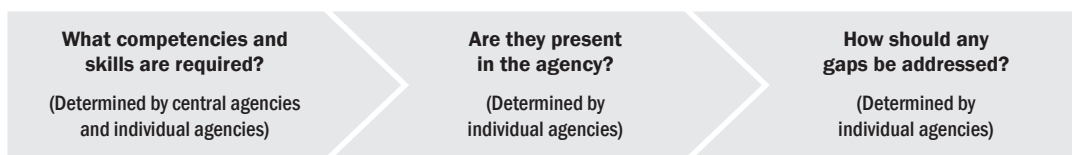
128 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.11; State Services Authority, response to the Committee's questionnaire, received 14 March 2012, p.3

The agency must then develop an effective means to identify whether or not the required competencies and skills are present within the agency. Agencies currently use a variety of approaches, as described in Section 5.2.2 of this Report.

Finally, agencies must determine appropriate ways to address any gaps between what is required and what exists. Agencies’ approaches to developing and enhancing the skills of their staff are discussed in Sections 5.3 and 5.4 below. Chapter 8 considers some issues associated with using staff from the private sector.

The process of identifying and addressing gaps in competencies and skills is summarised in Figure 5.1.

**Figure 5.1 Identifying and addressing competencies and skills gaps**



Source: Adapted from State Services Authority, response to the Committee’s questionnaire, received 14 March 2012, p.4

All three of these questions must be answered effectively in order to ensure that projects are delivered successfully. Failure in any part increases the risks to a project.

Agencies that deliver infrastructure projects regularly are likely to be more adept at strategies to identify and address skills gaps. The Committee considers it would be valuable for these agencies to share their experience with other agencies. This is especially important for agencies who do not regularly undertake significant infrastructure projects. It would also be valuable for agencies using a procurement method (such as a PPP or Alliancing) for the first time. Central co-ordination would facilitate this sharing.

**FINDING:** Constructing agencies are currently responsible for identifying what competencies and skills they need in their workforce. Agencies with more regular delivery of infrastructure projects may be better able to do this. Centrally facilitated knowledge sharing among agencies would be helpful.

### 5.2.1 Unaddressed skills gaps

Evidence received by the Committee suggests that teams on a number of Victorian infrastructure projects have not had the required competencies and skills. This suggests that agencies have been unable to either identify or address skills gaps.

The State Services Authority (SSA) informed the Committee that:<sup>129</sup>

*Earlier work undertaken by the SSA revealed that a significant challenge facing the Victorian public sector is the capacity to attract and retain skilled infrastructure project management staff in the face of increased competition for similar skills around the world and the capacity for skilled individuals to earn considerably more income elsewhere.*

129 State Services Authority, response to the Committee’s questionnaire, received 14 March 2012, p.5

SSA also noted the Ombudsman's recent findings with respect to major Information and Communication Technology (ICT) projects. The Ombudsman identified that there has been '*a shortage of skilled senior project managers with relevant ICT experience in government*'.<sup>130</sup> In some cases, agencies responded to this by giving the management of projects to relatively inexperienced staff.<sup>131</sup> The Ombudsman also identified cases where steering committees did not have appropriately experienced staff.<sup>132</sup>

The Committee also heard evidence that, during the *Building the Education Revolution* (BER) program, in Victoria there were '*shortcomings in the skill sets of project managers, shortcomings in the superintendence of the contracts and the enforcement of the works to be built in accordance with the contract*'.<sup>133</sup> The Victorian public sector's performance was contrasted with Western Australia, where the Government was able to act as an informed buyer, and the private sector, where schools often already had a master plan and a standing relationship with architects.<sup>134</sup> The issue of the Government as an informed buyer is further discussed in Section 8.4.3.

The project management for these projects was outsourced to the private sector.<sup>135</sup> The Committee was informed by the Department of Education and Early Childhood Development that:<sup>136</sup>

*We contracted four project management firms through the BER. Without talking about any particular firm it is fair to say that there was variable performance from those project management firms; and it is fair to say that within each firm there was variable performance ... Some were excellent and some were less than excellent ...*

In 2007, based on the Gateway Reviews conducted to that time (see Section 5.4.1 below), DTF identified a lack of skills in relation to risk management, project management and project planning as factors '*limiting project success*'.<sup>137</sup>

The evidence suggests to the Committee that agencies are not always putting together teams with the requisite competencies and skills when delivering infrastructure projects. With respect to term of reference (c), the Committee was interested to understand to what extent this was a result of:

- inadequate systems for identifying skills gaps; or
- inadequate systems for addressing skills gaps.

The Committee therefore sought information about agencies' systems for identifying skills gaps (see Section 5.2.2) and about their systems for developing, enhancing and refining skills and competencies (Sections 5.3-5.4).

**FINDING:** Evidence received by the Committee suggests that there have been unaddressed skills gaps in infrastructure teams in the Victorian public sector.

130 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.40

131 *ibid.*, p.41

132 *ibid.*, pp.18-19

133 Mr D. Chandler, formerly of the Building the Education Revolution Implementation Taskforce, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.3

134 *ibid.*, pp.3-4

135 Department of Education and Early Childhood Development, response to the Committee's questionnaire, received 31 May 2012, p.2

136 Mr J. Miles, Department of Education and Early Childhood Development, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.5

137 Gateway Unit, *Gateway Lessons Learned: Commonly Identified Practices that Limit Success*, August 2007

In addition to deficiencies in agencies' systems, a shortage of appropriately skilled people in the workforce generally may also contribute to skills gaps. SSA advised the Committee that:<sup>138</sup>

*The areas of greatest skill shortages are those which share the existing labour pool with the private sector, such as engineering, infrastructure, ICT, health and aged care professions, science and economics. In general, these shortages continue to be more acute in rural and regional areas.*

Peak engineering bodies also told the Committee that there was an engineering skills shortage in Victoria and Australia. They further explained that the problem was particularly acute with respect to engineers in the middle of their careers, as opposed to new graduates or people in the later stages of their careers.<sup>139</sup>

Recent data from the Commonwealth Department of Education, Employment and Workplace Relations show shortages of engineering professionals and engineering associates in Victoria.<sup>140</sup> The data also indicate that there are difficulties recruiting quantity surveyors in Victoria.<sup>141</sup>

However, the Secretary of DTF informed the Committee that he was not aware of any serious shortage of engineering expertise in the Victorian public sector.<sup>142</sup> Some agencies also informed the Committee that they had not experienced any significant shortages.

Evans & Peck's advice to the Committee on this issue was:<sup>143</sup>

*Skills and competencies are below a level that is desirable to achieve good outcomes on major public infrastructure projects in Victoria. This is caused by a **deterioration of commercial and technical expertise in the public and private sectors**, evidenced by a shortage of skilled and experienced people in project development and delivery in both the public and private sectors. Initial research suggests that the deterioration of expertise has occurred more rapidly in the government sector compared to the private sector. Technical expertise is not being maintained in government, with a gradual reduction of its role in training and developing technical staff. This has contributed to poor outcomes on projects generally, but has been particularly apparent on ICT projects, where this is an insufficient volume of projects to retain such staff within government. This leads to a reduced ability to develop, retain and transfer knowledge.*

Overall, the evidence presented to the Committee indicates that there are shortages in certain key industries. Any work to reduce skills gaps in the Victorian public sector needs to be mindful of that.

**FINDING:** A number of sources suggest that there are shortages of some skills in Victoria, especially in engineering and ICT. This may be a factor contributing to skills gaps in agencies.

138 State Services Authority, response to the Committee's questionnaire, received 14 March 2012, p.5

139 Ms G. Graham, Engineers Australia Victoria Division, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, pp.4, 8; Mr C. Walton, Association of Professional Engineers, Scientists and Managers Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

140 Commonwealth Department of Education, Employment and Workplace Relations, *Skills Shortages: Victoria*, June 2012, pp.12-13

141 *ibid.*, p.14

142 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.6

143 Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, p.2 (emphasis from the original)



## 5.2.2 Current processes for identifying skills gaps

To understand how the unaddressed skills gaps have occurred, the Committee examined what central processes are in place to identify skills gaps, what guidance is presented to agencies and what practices are adopted by agencies.

### Central processes

The Secretary of DTF advised the Committee that DTF maintains an overview of projects. The Secretary explained that, where DTF considers there may be a skills gap, it informs agencies and assists them to fill the gap. The Secretary indicated that this is an informal process and that he did not consider a formal process to be necessary.<sup>144</sup>

The Committee sought details from DTF about whether or not any sector-wide skills audits had been undertaken in the Victorian public sector. The only audit noted by DTF was a study by SSA from ‘a few years ago’ looking at Victoria’s capacity to attract and retain infrastructure project management staff.<sup>145</sup>

When questioned about sector-wide audits, SSA informed the Committee:<sup>146</sup>

*A public sector-wide skills audit would be difficult to undertake. This is because the people who work on public sector infrastructure projects are engaged in a variety of different ways – ongoing employment, fixed term contracts and by private sector organisations – and there is likely to be considerable movement of staff over time, especially in the area of large once-off infrastructure projects.*

*Moreover, the results would have limited value. This is because there is a wide variety of skill requirements for different infrastructure projects and at different stages of any given infrastructure project.*

*There may be, however, value in maintaining up-to-date knowledge of the range of competencies required for effective infrastructure project management, and the extent to which these competencies are available, in general terms, to the public sector.*

*There would certainly be value in identifying and monitoring the factors that influence the availability of skilled staff to public sector infrastructure projects, and build a capacity to predict these factors.*

However, SSA has produced a *Workforce Planning Toolkit* to assist agencies which includes a focus on identifying required competencies and skills and addressing any gaps.<sup>147</sup>

Ultimately, in Victoria’s current framework, individual agencies are responsible for ensuring they have adequate systems to identify skills gaps.

144 Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.11

145 Department of Treasury and Finance, response to the Committee’s questionnaire, received 22 May 2012, p.1

146 State Services Authority, response to the Committee’s questionnaire, received 29 May 2012, p.1

147 State Services Authority, *Workforce Planning Toolkit: A guide for workforce planning in small to medium sized Victorian public sector organisations*, 2006

**FINDING:** The Department of Treasury and Finance takes an informal approach to identifying skills gaps in agencies and has not conducted sector-wide audits of the public service. The State Services Authority indicated that skills audits may be difficult and of limited value but that some research in this area may be beneficial. However, the State Services Authority has produced guidance to assist agencies in identifying and addressing skills gaps.

## VicRoads

As part of the Inquiry, some agencies provided details of the processes that they use for workforce planning. The Committee was particularly interested in VicRoads' TeCaP system (see also Section 4.5.1 of this Report). VicRoads uses this system to identify skills gaps and to develop a training program each year.<sup>148</sup>

TeCaP includes details of individual staff members' competencies and skills according to certain pre-defined categories. For each category, individuals' 'capability level' is assessed on a six-point scale from 'no capability' to 'expert'.<sup>149</sup> The Committee heard that:<sup>150</sup>

*Each staff member is issued with their current profile and can assess their relative performance with the standard and peers. Management reviews capture staff that require improvement in particular areas and appropriate development and training is then provided.*

VicRoads informed the Committee that the data in TeCaP are also aggregated by organisational unit. VicRoads uses this information to conduct skills audits at a unit-level to identify skills gaps in teams. The system also provides the capacity to monitor change within units from one audit to the next.<sup>151</sup>

VicRoads develops a training program based on the skills gaps identified from individuals and units. VicRoads explained its process to the Committee:<sup>152</sup>

- *Determine internal need by mapping training needs with managers in consultation with regions and projects. The TeCaP program informs skills audit reviews and gap analysis and summary reports are available to each business area in July each year.*
- *VicRoads develops a consolidated technical training program taking into account providers within VicRoads which reduces overlap.*
- *New training courses are developed or existing training courses adapted to fill the needs identified. A review is undertaken each year with respect to course offerings, client feedback and evaluations of each particular course.*
- *The design of existing training courses are reviewed to accommodate a variety of learning methodologies rather than the historical teacher centred design, and improve the learning outcomes of each course.*

148 Department of Transport, response to the Committee's questionnaire, received 23 March 2012, pp.1, 5-6; Department of Transport, response to the Committee's questionnaire received 25 May 2012, pp.2, 12

149 Department of Transport, response to the Committee's questionnaire, received 25 May 2012, Attachment B

150 *ibid.*, p.12

151 *ibid.*, p.2, Attachments A-B

152 *ibid.*, pp.11-12

VicRoads also noted that it supplements this process with internal and external auditing. The Committee was told that:<sup>153</sup>

*... VicRoads Major Projects Division continuously monitors its performance against set objectives and measures such as time, cost and physical progress. In doing so, trends can be identified and skills and capabilities can be analysed to determine whether further training is required in any particular area such as scope and time management or cost estimating.*

Based on the information presented to the Committee, TeCaP appears to be a useful system for identifying skills gaps within an organisation and monitoring change over time. VicRoads indicated that it has shared information about TeCaP with a number of other agencies.<sup>154</sup> The Committee considers that SSA should have a more detailed look at the system to assess whether it should be used more widely in the public sector.

**FINDING:** VicRoads uses an electronic system called TeCaP to measure staff members' skills and competencies. The information gathered can be used to identify skills gaps at an individual and a unit level. VicRoads can then develop a training program meeting the identified needs and can monitor change over time. Other agencies may find adopting this system useful for workforce planning.

**RECOMMENDATION 14:** The State Services Authority examine VicRoads' TeCaP system to assess whether it should be recommended for use more widely in the public sector for workforce planning.

## Other agencies

Other agencies identified a range of practices adopted to identify and monitor skills gaps.

The Department of Sustainability and Environment indicated that its skills gaps were identified through its performance planning and development process which, each year:<sup>155</sup>

*... starts with the requirements of the department, then the requirements of the department on individual divisions or regions, down to the requirements of individuals who will have to meet the outcomes that are required of the department. We go through that process, which then identifies skill gaps, development needs and so on.*

The Committee also heard that the Northern Victoria Irrigation Renewal Project commenced a process for identifying skills gaps but did not complete it. This process included developing skills templates for each position, assessing the incumbent against the template and developing training plans to address any gaps. This project ceased when work began on integrating the Northern Victoria Irrigation Renewal Project with Goulburn-Murray Water in 2012.<sup>156</sup>

153 *ibid.*, p.12

154 Department of Transport, response to the Committee's questionnaire, received 23 March 2012, p.5

155 Mr G. Wilson, Department of Sustainability and Environment, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.3

156 Department of Sustainability and Environment, response to the Committee's questionnaire, received 5 March 2012, p.6; Department of Sustainability and Environment, response to the Committee's questionnaire, received 6 June 2012, pp.8-9

The Department of Transport informed the Committee in March 2012 that it was about to launch a central register of people's qualifications linked to its human resource information system.<sup>157</sup> However, by May 2012, the Department determined that the system being investigated was not going to achieve the Department's objectives. The Department indicated that it was exploring new options.<sup>158</sup>

Some agencies also provided details of skills audits that have been conducted of specific units. For example, the Committee was informed that the Department of Planning and Community Development conducted a skills audit of its Urban Development Division in 2009, which identified skills gaps that were rectified through hiring new staff.<sup>159</sup>

A number of agencies also noted that they have informal processes for auditing skills.

Different agencies have adopted a variety of approaches to identifying skills gaps. These vary from the formal and systematic approach of VicRoads to informal approaches and skills audits on an as-needed basis. The Committee considers that some of the less formal approaches may have contributed to some infrastructure project teams having unaddressed skills gaps.

The Committee has therefore recommended that the new Victorian Infrastructure and Skills Authority monitor agencies' processes for identifying and addressing skills gaps to ensure that they accord with best practice (see Section 2.2.3 of this Report).

**FINDING:** Agencies have a variety of methods for identifying skills gaps, ranging from regular, formal process to informal processes and as-needed skills audits on particular units.

### 5.3 Developing the required competencies and skills

When skills gaps are identified, agencies may address this through developing their existing staff. Alternatively, new staff may be hired or experts seconded from central agencies. However, even these staff may require some level of training to help them understand the particular processes used in the agency or to understand government processes more generally. Staff training and development is therefore a critical function which constructing agencies need to fulfil.

DTF provides or facilitates some training for public sector staff. However, most training is organised and determined by line agencies.

Agencies informed the Committee that they use varying methods to develop the competencies and skills of their staff. This includes formal training, which may be delivered in-house or by external suppliers. It also includes less formal development opportunities such as mentoring and communities of practice. Several agencies also emphasised the importance of experiential or 'on the job' training.

157 Department of Transport, response to the Committee's questionnaire, received 23 March 2012, p.3

158 Department of Transport, response to questions on notice, received 25 May 2012, p.9

159 Department of Planning and Community Development, response to the Committee's questionnaire, received 6 March 2012, p.4; Mr A. Tongue, Department of Planning and Community Development, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, pp.3-4

It is essential that these methods of developing staff are effective. Inadequate methods may result in projects being run by staff without the competencies and skills required to make effective decisions.

### 5.3.1 Centrally facilitated training

DTF facilitates a number of training programs for staff across the public sector, including:<sup>160</sup>

- business case training;
- Gateway Review training;
- a PPP leadership course;
- Partnerships Victoria (PPP) contract management training;
- training for projects delivered using alliancing contracting; and
- investment management training.

Some of these courses are run by DTF directly, some by DTF through private providers and some through the University of Melbourne.<sup>161</sup> Some of the units run by the University of Melbourne can also be counted towards qualifications.

All contract managers with PPP projects are required to take the Partnerships Victoria (PV) contract management training or be granted an exemption within six months.<sup>162</sup> Information supplied to the Committee indicates that high proportions of PPP contract managers undertake this course.<sup>163</sup> The other courses are not compulsory.

The Department of Justice told the Committee that:<sup>164</sup>

*For PPP projects, the DTF-led activities ... have evolved over time to provide good opportunities for experiential learning from real-life examples. However, the training remains focussed on providing participants with a grounding in the commercial and legal dimensions of PPP contract management. There may now be a sufficient critical mass of operational PPP projects across the Victorian Government to justify a course more focussed on the detail of specific contract administration activities, such as management of payment and performance, dealing with requests for approval of refinancings and changes in control, and preparation for the end of the contract term.*

DTF informed the Committee that it is seeking:<sup>165</sup>

*... to expand some of the training we provide with respect to the skill bases necessary for effective project delivery. That is expanding over time, and we have tried to leverage not just in-house delivery but working with the university sector et cetera to build up our capabilities, but there is clearly more we can do there.*

160 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, pp.11-12

161 *ibid.*

162 *ibid.*, p.12

163 Departmental responses to the Committee's 2009-10 and 2010-11 Financial and Performance Outcomes Questionnaire — Part One

164 Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.18

165 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, pp.2-3

The Committee supports an expanded set of training programs being facilitated by a central agency. The Committee notes the Department of Justice's suggestion and considers that a formal survey of all constructing agencies should be conducted to identify other training that these agencies consider would be usefully facilitated by a central agency. The Committee suggests that this should be part of the Victorian Infrastructure and Skills Authority's roles (see Section 2.2.2 of this Report).

**FINDING:** The Department of Treasury and Finance currently facilitates a number of training programs focused on specific areas of infrastructure project delivery. The Department has told the Committee that it is currently looking at expanding its programs. Constructing agencies may have valuable suggestions as to what additional training it would be useful for the Department to focus on.

### The United Kingdom's Major Projects Leadership Academy

In its submission to the Inquiry, DTF drew attention to initiatives in the UK, which include a program to build public sector skills.<sup>166</sup> One component of this is the creation of the Major Projects Leadership Academy to train senior staff involved with delivering major projects.

During its evidence-gathering trip to the UK, the Committee met with several bodies connected with the Academy. The Committee was advised that the Academy has been established in the Saïd Business School of the University of Oxford. The Saïd Business School in conjunction with Deloitte have developed a course focused on developing skills in:

- the leadership of major projects;
- leadership of self;
- technical understanding; and
- commercial capability.

As the Academy was only launched in 2012, it is too early to assess its effectiveness. However, the Committee believes that this approach is in line with better practice and has recommended that Victoria consider a similar program (see Section 2.2.2 of this Report).

DTF suggested that:<sup>167</sup>

*Victoria could consider a similar approach to skill development, but this would need to be adjusted to recognise Victoria's capital program is about one tenth the size of the UK government's. A more feasible option may be to pursue a similar program to the UK through a cross-jurisdictional approach.*

The Committee has no objection to a cross-jurisdictional approach being taken.

<sup>166</sup> Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.14

<sup>167</sup> *ibid.*

**FINDING:** The Major Projects Leadership Academy has been established in the United Kingdom to increase the skills of senior responsible owners and program directors in leadership, technical understanding and commercial capability. A similar program for Victorians may be of benefit. The Department of Treasury and Finance has suggested a cross-jurisdictional approach, given the scale of infrastructure programs in Victoria.

### 5.3.2 Training organised by agencies

The Committee received evidence from a number of agencies about different sorts of training that they offer their staff. Much training was outsourced and determined on a case-by-case basis. A number of agencies have also developed internal training programs. These include project management programs which are run regularly and fixed-term programs aimed at transforming processes and/or people.

The evidence presented to the Committee indicated a variety of approaches. The Committee has identified three areas of better practice which could be adopted more widely across the public sector:

- developing and using project management frameworks;
- connecting project management training with accreditation; and
- facilitating ‘experiential’ or ‘on the job’ training.

#### The advantages of project management frameworks

In some cases, agencies tie their training into set project management frameworks.<sup>168</sup>

These frameworks set out best practice techniques and provide guidance to project managers and other staff. The production and distribution of these frameworks is an important technique for developing people’s project management competencies and skills. In some cases, agencies also provide training related to the framework. In the Department of Justice, for example, all project managers are required to complete introductory training to the Project Management Excellence Framework and senior projects managers are required to complete advanced training.<sup>169</sup>

The Committee was informed that a number of benefits come from such frameworks, including:

- adoption of better practice across an agency;
- consistency across different areas of an agency, so that different areas working together on a project use the same processes;

168 Such as the Department of Justice’s ‘Project Management Excellence Framework’ and ‘Asset Investment Framework’ (Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, pp.9, 14; Ms P. Armytage, Department of Justice, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3); the Department of Transport’s ‘Project Management Framework’ and ‘End to End Business Process’ (Department of Transport, response to the Committee’s questionnaire, received 23 March 2012, pp.1, 4); and Major Projects Victoria’s ‘Project Management Framework’ (Department of Business and Innovation, response to the Committee’s questionnaire, received 29 February 2012, p.4).

169 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, p.9; Ms P. Armytage, Department of Justice, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

- informing contractors and consultants about agencies' preferred techniques, to ensure that their services are delivered in a consistent way with agency staff; and
- assisting governance by ensuring that all projects are delivered according to the same principles.

The Auditor-General also supports such frameworks, recently stating:<sup>170</sup>

*There are significant risks in not having a documented [project management] framework, including the failure to adequately develop key project management documents. Adequate planning is likely to have a positive impact on the effectiveness of project management.*

The Committee recognises that it may be onerous and inefficient for each government agency to develop its own framework. However, the Committee notes the Country Fire Authority, which informed the Committee that it was developing a framework based on the Department of Justice's framework (and DTF's guidelines).<sup>171</sup> The Committee considers that other agencies may similarly leverage off work already done by larger agencies and adapt the project management frameworks developed by those agencies.

Agencies may be aided in this by a central agency examining the various frameworks that have been developed and identifying ones which would serve as particularly appropriate models. This would be an appropriate task for the Victorian Infrastructure and Skills Authority, a new agency recommended by the Committee (see Section 2.2.2 of this Report).

However, the Committee notes the Auditor-General's finding that Major Projects Victoria has not adhered to its framework for all projects.<sup>172</sup> This emphasises that establishing a project management framework in itself is not sufficient for realising the potential benefits. A framework must be accompanied by training and oversight to be successful in implementation. The Committee has recommended that responsibility for overseeing that such processes are in place should rest with the Victorian Infrastructure and Skills Authority (see Section 2.2.3 of this Report).

**FINDING:** A number of agencies have developed project management frameworks as a basis for developing their staff. The Committee was informed that these have encouraged consistency and best practice across the agency, and have facilitated governance and working with consultants and contractors. The Committee considers that such frameworks would benefit all constructing agencies.

**FINDING:** Some agencies have adapted the frameworks of other agencies. This task could be assisted by a central agency identifying frameworks best suited to being used as models.

170 Victorian Auditor-General's Office, *Managing Major Projects*, October 2012, p.27

171 Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.11

172 Victorian Auditor-General's Office, *Managing Major Projects*, October 2012, pp.26-9



## The value of accreditation

It was suggested to the Committee that accreditation is a way of ensuring that staff or contractors have particular competencies, or that they have a certain level of competency in an area. The Committee encountered mixed views about the value of accreditation for project management.

Overall, DTF explained to the Committee that:<sup>173</sup>

*Due to the diverse nature of projects and associated requirements DTF has not prescribed a methodology or competency certification: there is not a “one size fits all” approach.*

For some Victorian agencies, project management accreditation is mandatory for certain staff and/or contractors. For most agencies, however, project management accreditation is not mandatory. Nonetheless, almost all agencies informed the Committee that they valued it highly.

A less enthusiastic attitude was expressed by the Department of Justice. The Department indicated that it supports accreditation where relevant, but that ‘*Accreditation or membership of professional bodies is not always necessary and is certainly not sufficient on its own to equip public sector managers for project roles.*’<sup>174</sup> The Department further explained that:<sup>175</sup>

*The Department undertook an informal strategic level portfolio-wide skills review in 2010 as part of the business case for the Project Management Excellence (PME) project.*

*This informal review showed that offering the PRINCE2 [PProjects IN Controlled Environments 2] foundation courses did not, of itself, improve project management capability across the Department, nor did it represent value for money for the Department.*

The Department’s solution was to develop its own training framework, based on its Project Management Excellence Framework (see above).

However, this Framework has been designed so that completion of some modules will lead to a nationally recognised qualification in project management.<sup>176</sup> Two other agencies indicated that they have partnered with educational institutions to provide training which contributes to recognised qualifications.<sup>177</sup>

In addition to improving the competencies and skills of staff, it was put to the Committee that the ability for staff to earn a formal qualification was useful for attracting and retaining staff.<sup>178</sup> Issues connected with attracting and retaining staff are discussed further in Section 8.5 of this Report.

173 Department of Treasury and Finance, response to the Committee’s questionnaire, received 22 May 2012, p.1

174 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, p.12

175 Department of Justice, response to the Committee’s questionnaire, received 1 June 2012, p.2

176 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, p.12; Ms G. Moody, Department of Justice, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.9

177 Department of Transport (Department of Transport, response to the Committee’s questionnaire, received 23 March 2012, p.3; Mr J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, pp.10-11); and South East Water (Department of Sustainability and Environment, response to the Committee’s questionnaire, received 5 March 2012, p.4)

178 Mr J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.11

A number of other agencies, however, use a variety of in-house and out-sourced training that is not connected to recognised qualifications.

The Committee understands the value of project management training being customised to particular agencies. The different contexts in which agencies work can impact on the aspects of project management that need emphasis. Agencies' internal systems and environments also vary and customised training can account for that.

However, when agencies develop their own training programs, there is a risk that these may not be as effective as programs which contribute to recognised qualifications. To contribute to a recognised qualification, training must meet certain mandated standards. In contrast, training that does not contribute to qualifications is not required to meet any standards other than those set by the agency.

The Committee acknowledges the Department of Justice's view that a qualification in itself does not guarantee better performance and notes its assessment of PRINCE2 foundation courses. The Committee also notes that some forms of accreditation are 'competency-based' rather than 'knowledge-based' or 'credential-based.' With this type of accreditation, people are required to demonstrate evidence of actually having applied the competencies of project management in practice and not just to have learnt the theory.<sup>179</sup>

Overall, the Committee considers that agencies partnering with educational institutes to provide project management training to supplement the practical, on-the-job experience of current project managers represents better practice.

This training is best when it is customised to the agency and contributes to recognised qualifications. However, this is not practicable for all agencies, especially smaller ones. Consequently, the Committee considers that there would be benefit in a central agency partnering with an educational institute to develop a project management course which is customised to the needs of the public sector and also contributes towards a recognised qualification. Agencies could then make use of this course as required. A number of tertiary institutions around Australia provide project management training. The Committee has recommended that the Victorian Infrastructure and Skills Authority consider doing this (refer Section 2.2.2 of this Report).

The Committee believes that any new central project management program should be optional rather than mandatory as the Committee accepts DTF's view that there is no 'one size fits all' approach, especially given the various project management frameworks established by some agencies.

However, when an agency chooses not to use the program, the Committee believes that the Victorian Infrastructure and Skills Authority should monitor agencies' programs to make certain that the programs are regularly evaluated to ensure they are effective and appropriate (see Section 2.2.3 of this Report).

The Committee has also recommended in Chapter 2 of this Report that ensuring the public sector has appropriate skills and competencies should be part of the Victorian Infrastructure and Skills Authority's responsibilities.

179 Mr M. Ratcliffe and Mr L. Simonelli, Australian Institute of Project Management, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, pp.2, 4-5

**FINDING:** Several witnesses suggested to the Committee that there have been deficiencies in the project management of some infrastructure projects. Agencies expressed a variety of views regarding project management accreditation. Some agencies mandate it but others do not. Some agencies have partnered with educational institutes to provide training which leads to recognised project management qualifications. The Committee considers that this, supplemented with on-the-job practical experience ('experiential learning'), represents better practice.

**FINDING:** It is not practicable for all agencies to partner with educational institutes to provide training which leads to recognised project management qualifications. However, a central agency would be well placed to do this on behalf of other agencies.

**FINDING:** The variation of projects and contexts across agencies means that, for some agencies, developing their own programs may be more appropriate. It is important that any such programs be centrally monitored to ensure that they are effective and appropriate.

5

### Creating opportunities for experiential learning

A number of agencies emphasised the importance of learning 'on the job' as well as formal training. The Secretary of DTF, for example, explained that, '*Getting some training is important, but to have high-quality skills to deliver projects you need people who have experience and have worked on the job and delivered those skills.*'<sup>180</sup>

The Committee was informed that some agencies have programs to provide people with experience on increasingly complex projects as a way of developing their skills. The Department of Justice and the Emergency Services Telecommunications Authority both informed the Committee that they provide opportunities for staff to gain experience on smaller projects before moving on to larger projects. The Department of Justice also indicated that its staff gain experience on design and construct projects before being involved in the more complex contractual arrangements of public private partnerships.<sup>181</sup>

To get the most out of experiential learning, some agencies also noted the importance of more experienced staff to assist these developing of skills. These more experienced staff can coach, mentor or be 'shadowed' by less experienced staff. Given this, retaining staff who have experience is particularly important in an agency that aims to develop people's skills through experiential learning.

180 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.3

181 Department of Justice, response to the Committee's questionnaire, received 7 March 2012, pp.10, 16; Ms G. Moody, Department of Justice, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.9

This is one reason to formalise an infrastructure pipeline. This also has implications for whether skilled staff need to be employed directly within the public sector or outsourced. Both of these issues are discussed further in response to term of reference (f).

In contrast to these approaches, the Secretary, Department of Business and Innovation, explained that he expects staff to already have this experience before working in the Department, stating, ‘*We do not recruit first timers. We recruit people who have actually been there, done analogous or like things before and have a track record of delivery – end of story.*’<sup>182</sup>

The Committee received evidence that, for engineers, difficulties have come from the fact that a number of public and private sector agencies were adopting a similar approach. The Committee was informed that, in the past, public works areas would often provide graduates’ first experience and the private sector would then hire the graduates after five to 10 years of experience. However, the Committee was informed, the public sector now does less of this and the private sector has not filled that gap by providing opportunities for new graduates.<sup>183</sup>

As Evans & Peck explained:<sup>184</sup>

- *There has been a significant reduction in the government’s role in training and developing younger engineers via large-scale cadetship or traineeship programs. There is often a lack of culture or framework to train and nurture graduates in technical disciplines, resulting in project managers being ill-equipped to deal adequately with major technical issues, and the focus falling to financial and legal issues. This issue is discussed in detail in the submissions to and report arising from the Federal Government’s Senate Committee Inquiry into “The shortage of engineering and related employment skills”. In some cases, programs have recommenced in recent years (e.g. DTMR, Ausgrid); however, there still remains a significant gap.*
- ...
- *The private sector is also struggling to meet the increasing demands of larger, more complex and greater number of public projects because training and professional development, particularly in engineering, is also not being undertaken in the private sector to the extent that it was, and engineers are being attracted to other industries.*

Chapter 2 has identified that a new body, the Victorian Infrastructure and Skills Authority, could be used to address these issues.

**FINDING:** A number of agencies emphasised the importance of experiential or ‘on the job’ learning to supplement formal training. Some agencies provide opportunities for staff to gain experience on increasingly complex projects, but other agencies expect staff to have gained experience in previous employment before joining the agency.

182 Mr H. Ronaldson, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

183 Mr C. Walton, Association of Professional Engineers, Scientists and Managers Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, pp.3, 6

184 Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, p.29

## 5.4 Ongoing enhancement and refinement of competencies and skills

It is important to ensure that people's competencies and skills are kept up-to-date and that people have the opportunity to improve their skills over time.

The term of reference notes that an important way to do these things is through sharing knowledge about best practice examples. The Committee is therefore looking at what processes are in place to identify and share information about successful experiences. Identifying and sharing information about unsuccessful experiences and the lessons learnt can also be important for understanding best practice.

The Committee considers that, for full learning opportunities, information needs to be shared within agencies and between agencies in the Victorian public sector. Valuable learning opportunities can also come from the private sector and from the public sector in other jurisdictions.

A failure to adequately identify and communicate lessons learnt could lead to preventable difficulties occurring and lost improvement opportunities.

### 5.4.1 Identifying lessons learnt and best practice

For lessons to be learnt from past projects, it is important for an agency to understand what was successful and what was not successful in a project. A key method of doing this is to conduct reviews at the end of a project. Such reviews are generally recommended, including by DTF in its *Investment Lifecycle and High Value/High Risk Guidelines*.<sup>185</sup>

Several agencies indicated that they regularly conduct post-project reviews. Some agencies have introduced policies to require significant projects to undertake post-project reviews. The Committee was informed that Melbourne Water, for example, requires all alliancing projects and projects with a capital value over \$5 million to have post-project reviews within three months of completion.<sup>186</sup> The Department of Transport 'encourages' post implementation reviews of all projects 'regardless of their size or complexity' as part of its Project Management Framework.<sup>187</sup>

However, the Committee does not have data to determine how many agencies regularly conduct post-project reviews to identify lessons learnt.

### The use and non-use of the Gateway Review Process

The Gateway Review Process is a centrally facilitated process that includes identifying lessons learnt. The process was introduced in Victoria in 2003, based on the UK's Gateway Program. Under this process, a team of independent experts assembled by DTF examines a project at key milestones to identify any issues. A report containing findings and recommendations is provided to the senior responsible owner of the project, with a copy also provided to DTF's Gateway Unit.<sup>188</sup>

DTF told the Committee that around 70 Gateway Reviews take place every year.<sup>189</sup>

185 Department of Treasury and Finance, *Investment Lifecycle and High Value/High Risk Guidelines — Overview*, July 2012, p.34

186 Department of Sustainability and Environment, response to the Committee's questionnaire, received 5 March 2012, p.7

187 Department of Transport, *Project Management Framework*, February 2012, p.14.2

188 Department of Treasury and Finance, 'Welcome to the Gateway Unit', <[www.gatewayreview.dtf.vic.gov.au](http://www.gatewayreview.dtf.vic.gov.au)>, accessed 24 October 2012; Department of Treasury and Finance, *Gateway Review Process — Overview*, October 2009, pp.2-7

189 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.12

Gateway Reviews are a key way for agencies to learn lessons about their projects. In fact, the final gate includes an examination of whether or not lessons learnt are being captured and whether or not reviews of project management have taken place.<sup>190</sup>

The Committee considers that the Gateway Review Process has the potential to provide significant benefits in terms of identifying lessons learnt. A particularly valuable part of the process is that the reviews are conducted by independent peers. This outside perspective may be helpful for agencies in identifying lessons learnt.

However, the Committee received evidence from the Victorian Auditor-General's Office that few projects that it has examined go through Gateway Reviews. The Office noted that there were particularly few reviews at the final gate (which is especially relevant to identifying lessons learnt).<sup>191</sup> DTF provided similar advice to the Committee, explaining that '*The use of the final Gateway review ... is lower than for the other Gates.*'<sup>192</sup>

In some cases, the Auditor-General indicated, '*sponsors of large projects have actively avoided the [Gateway] process with no real sanction from DTF.*'<sup>193</sup> The Ombudsman's office similarly informed the Committee that the process '*really was not followed by anyone particularly well.*'<sup>194</sup> For several of the projects examined by the Committee under term of reference (d), the Committee identified key Gateway Reviews that were not undertaken (see Chapter 6 of this Report).

The Auditor-General intends to conduct a performance audit of Gateway Reviews and major infrastructure projects during 2012-13.<sup>195</sup> The Committee hopes that this audit will identify ways to increase the usage of the Gateway Review Process.

Following the change of government in 2010, Gateway Reviews at all gates were made compulsory for high-value and high-risk projects<sup>196</sup> (see further discussion in Section 2.3.2 of this Report). This may increase the number of Gateway Reviews conducted. However, the Committee notes that this greater level of scrutiny does not apply to projects that do not meet the high-value or high-risk criteria.

The Committee has recommended in Section 2.2.3 of this Report that the High-Value and High-Risk Framework be supplemented with oversight by a proposed new body, the Victorian Infrastructure and Skills Authority. This oversight should include ensuring that processes for identifying lessons learnt are in place.

**FINDING:** The Gateway Review Process provides a mechanism for ensuring that lessons learnt are identified. However, many projects are not being comprehensively put through that process. The High-Value and High-Risk Framework requires projects that meet the high-value and high-risk criteria to go through all recommended Gateway Reviews. However, there is no such requirement for other projects.

190 Department of Treasury and Finance, *Gateway Review Process — Gate 6: Benefits Realisation*, October 2009, p.15

191 Mr P. O'Connor, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, pp.8-9; Victorian Auditor-General's Office, response to questions on notice, received 8 May 2012, p.6

192 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.16

193 Victorian Auditor-General's Office, submission to the Committee, received 9 November 2011, p.2

194 Mr J. Taylor, Acting Victorian Ombudsman, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.8

195 Victorian Auditor-General's Office, *Annual Plan 2012-13*, pp.15, 29

196 Department of Treasury and Finance, *Reporting Gateway Red Flags — A Guide for Departments and Agencies*, n.d., p.1

**FINDING:** The Committee believes that the responsibilities of the Victorian Infrastructure and Skills Authority should include ensuring that lessons learnt are identified at the end of projects.

The sharing of lessons identified through the Gateway Review Process is discussed in Section 5.4.3 below.

## 5.4.2 Sharing knowledge within agencies

A number of agencies provided the Committee with details of processes that they use to share lessons learnt with other people within the agency. Processes include:

- repositories of past experience (including project reviews) on intranet sites;
- internal social networking software;
- presentations and workshops;
- awards to recognise best practice in design;
- communities of practice;
- mentoring, coaching and shadowing programs; and
- rotating staff through different parts of the agency.

The Committee notes that at least three mechanisms rely on agencies retaining experienced staff. This issue is discussed further in Section 8.5 of this Report.

The Committee was particularly interested in the use of electronic systems to store information and make it available to others within agencies. The Department of Transport (DOT) provided the Committee with details of its lessons repository:<sup>197</sup>

*The lessons repository was created in mid 2011. It is gradually being populated as learnings and observations are collected from various reviews of DOT projects, primarily Post Implementation Reviews. It is envisaged that the platform will evolve and mature over time.*

*Brief summaries of learnings and observations are extracted from Post Implementation Review (PIR) reports, which are a new practice established under the PMF [Project Management Framework].*

*PIRs are posted in the lessons repository. Where information is sensitive or confidential for ongoing commercial or other project related reasons, the information is aggregated in [a] manner which will not compromise ongoing works.*

*People access the lesson summaries through the DOT intranet. The site contains individual pages for different project activities (for example, 'stakeholder and community engagement'). Each activity page contains links to the summaries of learnings that have been collected that relate to that activity, and contact details for further information.*

197 Department of Transport, response to questions on notice, received 25 May 2012, p.10

The Committee was also interested to hear about a social tool called Yammer which is currently being trialled in VicRoads as a way of storing and communicating lessons learnt. VicRoads listed the features of this system as:<sup>198</sup>

- *Creation of a group within Yammer that allows inclusion of all staff involved in delivery of infrastructure projects.*
- *'Posting' of current issues and learnings, which includes the ability to categorise a learning/issue; attach relevant documents or links to other information; and include a recommendation/proposed further action.*
- *Users can view recent entries by date or by categories.*
- *Users can interact with the originator of the learning/issue by posting replies that may answer a question or seek further information; these 'conversations' are visible to all members of the group.*

The Committee was informed that one of the advantages of this system is that information is passed on instantly. There is no delay while formal documentation is updated.<sup>199</sup>

At present, Yammer is being trialled and evaluated by a group within VicRoads.<sup>200</sup> VicRoads informed the Committee that, within the group, *'Initial evaluation has shown that Yammer has been effective at sharing opinions and encouraging conversations on technical matters.'*<sup>201</sup> The Committee was informed that:<sup>202</sup>

*When a full assessment of the initiative is completed, and if it meets VicRoads' objective of sharing learnings across the organisation in a timely and efficient manner, then it will be more widely disseminated across Government departments and other constructing entities in the public sector.*

Not all agencies, however, have set up detailed processes to store and share lessons learnt. While the Department of Business and Innovation indicated to the Committee that *'Major Projects Victoria's Project Management Framework is also used as a repository for practical experiences and lessons learned'*<sup>203</sup>, the Auditor-General found that the agency does not have systems or processes in place to routinely capture lessons learnt.<sup>204</sup>

Given the significant role of Major Projects Victoria, the Committee considers this to be particularly concerning.

The Committee considers it essential that all constructing agencies have effective mechanisms for storing and sharing lessons learnt. As noted above, the Committee considers that the Victorian Infrastructure and Skills Authority's responsibilities should include ensuring that this is the case (see Section 2.2.3 of this Report).

198 *ibid.*, p.9

199 Mr G. Liddle, VicRoads, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.4

200 Department of Transport, response to the Committee's questionnaire, received 25 May 2012, p.9

201 *ibid.*, p.10

202 *ibid.*, p.9

203 Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, p.5

204 Victorian Auditor-General's Office, *Managing Major Projects*, October 2012, p.30



**FINDING:** The Committee was informed that some agencies have established electronic tools to store and share lessons learnt from past projects. Other agencies have not established formal mechanisms. The Committee considers that best practice includes establishing formal systems to identify, record and share lessons learnt from infrastructure projects.

### 5.4.3 Sharing knowledge across the Victorian public sector

A number of mechanisms are in place for agencies within the Victorian public sector to share experiences with each other.

Cross-agency groups have been established for agencies to share knowledge and experiences directly with one another.

Central agencies often have expertise which other agencies might not have. They also have access to information about projects across the public sector. The Committee was interested to know how effectively central agencies' expertise and knowledge are shared.

The Inquiry acknowledges that there are a number of useful mechanisms for knowledge sharing in place or under development. The Committee has also identified several areas for improvement.

#### Cross-agency groups

DTF advised the Committee that there were two types of cross-agency group for sharing knowledge and experiences:<sup>205</sup>

- reference groups at a senior level '*to identify, develop and promote widespread adoption of better practices*'; and
- 'communities of practice' at a more operational level to share knowledge and provide support.

Groups identified to the Committee included:

- the Victorian Infrastructure Policy Reference Group;
- the Partnerships Victoria Contract Managers' Forum;
- the Evaluation Community of Interest;
- the Project Management Community of Interest;
- the Project Management Leadership Forum;
- the Construction Contracts Advisory Panel; and
- more general forums for human resources directors and deputy secretaries.

205 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, pp.12-13

A number of agencies informed the Committee that they participate in these groups and a number indicated that they were useful. The Department of Primary Industries previously explained to the Committee:<sup>206</sup>

*The Partnerships Victoria Contract Managers' Forum provides a formal opportunity for Partnerships Victoria contract directors and contract managers to network with their peers, share information and experiences, and hear experienced public and private sector practitioners talk on contract management issues.*

However, when asked about whether or not an evaluation of this forum had been made, DTF explained:<sup>207</sup>

*No formal assessment of the Forums has been completed by DTF. However, informal feedback has been provided via participant questionnaires and discussions with Contract Managers. This has provided specific feedback on presentations and generally indicates that there is value in holding periodical Forums that offer Partnerships Victoria Contract Managers the opportunity to share their learnings from their project experiences and build/develop networks with other PV Contract Managers.*

The Committee considers that cross-agency groups can be a valuable way to share information. It is important, though, for there to be periodic assessments of these groups to ensure that the full potential benefits are being realised.

**FINDING:** A variety of cross-agency reference groups and communities of practice has been established in Victoria to facilitate sharing of experiences between agencies. These groups should be assessed periodically as to their effectiveness.

### Staff from central agencies and potential role conflict

In addition to providing guidelines and advice, DTF has also been able to guide agencies and share its knowledge with constructing agencies through 'embedding' its staff within constructing agencies to work on specific projects. The Department of Justice (DOJ) explained:<sup>208</sup>

*In recent PPP projects undertaken by DOJ, staff from DTF's Partnerships Victoria unit have been 'embedded' in DOJ's project team. This strategy has been effective in delivering the following knowledge-dissemination benefits:*

- *DOJ has had good access to DTF's knowledge and skills, and to current project developments in other departments. Consequently, DOJ is able to adopt consistent commercial principles to other recent PPPs, and DOJ's negotiating position is strengthened by a broader understanding of the PPP market and recent transactions.*

206 Department of Primary Industries, response to the Committee's Questionnaire on the 2009-10 and 2010-11 Financial and Performance Outcomes, received 12 December 2011, p.15

207 Department of Treasury and Finance, response to the Committee's Questionnaire on the 2009-10 and 2010-11 Financial and Performance Outcomes, received 20 January 2012, p.11

208 Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.17

- *DTF has developed a strong understanding of DOJ's project and service delivery perspectives. This enables DTF team members to work more effectively, both in advising DOJ and in briefing upwards within DTF and to the Treasurer in relation to DOJ's PPP projects.*

The Committee was also informed that DTF staff were embedded in the Victorian Desalination Plant and Melbourne Convention Centre projects.<sup>209</sup>

In addition, the Committee heard evidence that staff from DTF, the Department of Premier and Cabinet and other agencies are sometimes present on steering committees or similar oversight groups for projects. DTF indicated that it was represented on steering committees or other oversight groups for at least some stages of all six of the projects examined by the Committee in relation to term of reference (d).<sup>210</sup> The involvement of DTF in each project is discussed in Chapter 6 of this Report. The High-Value and High-Risk Framework also requires DTF staff to be on steering committees for high-value and high-risk projects.<sup>211</sup>

The Department of Justice informed the Committee that '*DTF representatives on such governance bodies play an important role in sharing knowledge and best practices from other departments.*'<sup>212</sup>

However, the Ombudsman's office indicated that there was scope for improvement in this area. The Committee was informed that the role of DTF officers in governance bodies has not always been clearly defined and that information was not always fed back to DTF.<sup>213</sup> DTF has indicated to the Committee that efforts have been made to rectify this problem.<sup>214</sup>

The Committee considers that there can be both benefits and disadvantages to embedding DTF staff on projects. Benefits can come from synergies and sharing of information. However, disadvantages can come in terms of governance. Embedding arrangements may lead to DTF having conflicting roles where it is both part of project delivery and also responsible for monitoring project delivery. This is further discussed in Section 2.3.5 of this Report.

Evidence presented to the Committee suggests that governance would be enhanced by DTF restricting its activities to an oversight role that is separate and distinct from project delivery.

However, the Committee also considers that there would be benefits to the new Victorian Infrastructure and Skills Authority embedding staff and being present on steering committees of major projects.

**FINDING:** In some cases, staff from the Department of Treasury and Finance have been embedded in constructing agencies' project teams. Central agencies, especially the Department of Treasury and Finance, have been represented on the steering committees of other agencies' projects. The Committee heard evidence that these arrangements can be useful for sharing knowledge of best practice. However, the Committee has concerns about this giving the Department of Treasury and Finance conflicting roles.

209 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, pp.18-19; Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, p.26

210 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, pp.6-14

211 Department of Treasury and Finance, response to questions on notice, received 9 November 2012, pp.1-3; Department of Treasury and Finance, *Reporting Gateway Red Flags — A Guide for Departments and Agencies*, n.d., p.7

212 Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.17

213 Ms E. Barlow, Victorian Ombudsman, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, transcript of evidence, 22 August 2012, p.8

214 Department of Treasury and Finance, response to questions from the Committee, received 9 November 2012, pp.1-3

## Scope for improved feedback from the Department of Treasury and Finance

Agencies are required to submit a number of documents to DTF. Most notably for infrastructure projects, these include business cases and post-project reports. DTF has the potential to help agencies refine and enhance their skills by providing feedback on these documents. As DTF produces much of the guidance for agencies, it is well placed to help agencies understand whether or not their application of this guidance is appropriate and best-practice.

Regarding post-project reporting, the Auditor-General informed the Committee that, '*Agencies are charged with accumulating or assembling a central report. We are finding in recurring findings that they [DTF] are not providing guidance to the agencies about the quality of data that they receive.*'<sup>215</sup>

Similar problems have been identified for business cases. The Victorian Auditor-General's Office informed the Committee that:<sup>216</sup>

*... from our audits we found gaps, inconsistencies and sometimes errors in business cases that had not been discovered through the review, either by the sponsoring department or the Department of Treasury and Finance...*

The Auditor-General further explained:<sup>217</sup>

*... we do have recurring findings where, as I typify it, you have a business case, it has a cover, it is headed up, you open it and the index looks all right, but once you start reading the paragraphs it is too much towards a cut and paste or a filling in of a form rather than substantiveness. Mr Winn has mentioned examples where even the base data has not been there.*

The Committee also heard evidence from the Ombudsman's office that unrealistic assumptions were made in some business cases which were not identified by central oversight mechanisms.<sup>218</sup>

The Committee considers that these oversight and feedback functions are crucial for a number of reasons and that it is concerning that this has not taken place in some cases.

The new High-Value and High-Risk (HVHR) Framework (see Section 2.3.2 of this Report) now requires increased scrutiny from DTF on projects classified as high-value or high-risk. DTF and the Treasurer are now required to sign-off on business cases for HVHR projects. DTF explained that, though DTF has been involved with major projects previously, the new process puts '*more accountability into Treasury than existed under previous processes for ensuring that we share with the departments more of the responsibility of the quality of business cases.*'<sup>219</sup>

These changes may help DTF to work with constructing agencies to give them a better understanding of best practice in preparing business cases and reporting. However, the Committee notes that these changes only relate to HVHR projects and not others.

215 Mr D. Pearson, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.4

216 Mr R. Winn, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.4

217 Mr D. Pearson, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.4

218 Ms E. Barlow, Office of the Victorian Ombudsman, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.4

219 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.10 (cf. pp.5-6, 9-10)

These concerns are further addressed in Chapter 2 of this Report, which identifies a new system for oversight and advice. This includes the Victorian Infrastructure and Skills Authority being responsible for assisting agencies to prepare realistic and thorough business cases. The Victorian Infrastructure Council would assess all business cases for major projects submitted to the Budget and Expenditure Review Committee. The Committee would expect the Victorian Infrastructure Council to provide feedback to agencies when the business cases are below standard.

The Victorian Infrastructure and Skills Authority would also be responsible for monitoring post-project reviews, to ensure that they take place and are at an appropriate standard.

**FINDING:** The Auditor-General has found that agencies have not always produced business cases and post-project reports at appropriate standards. The Department of Treasury and Finance has not provided feedback about these shortcomings to agencies. The new High-Value and High-Risk Framework requires the Department to be more responsible for the quality of business cases of projects that meet the high-value or high-risk criteria, but not other projects. The Committee has recommended increased oversight as part of its changes in Chapter 2.

**RECOMMENDATION 15:** Central agencies that receive copies of key documents (such as business cases and post-project reports) provide feedback to the departments and agencies that submit them about any aspects of these documents that are below standard.

## Sharing lessons learnt through Gateway Reviews

As discussed above, the Gateway Review Process is a valuable way of identifying lessons learnt. At the conclusion of a Gateway Review, a copy of the review report is provided to DTF's Gateway Unit.<sup>220</sup> The Gateway Unit thus has access to a large and valuable source of information about what has worked well and what has worked poorly on projects across the public sector.

DTF informed the Committee that:<sup>221</sup>

*The Department of Treasury and Finance has a lessons learnt database. The database contains all of the recommendations that have been made in Gateway reviews conducted in the Victorian Government. The purpose of the database is to identify trends occurring in projects at different stages of the project lifecycle. Where there are clear trends emerging these issues can be looked at in a more systemic manner and the appropriate mitigating action undertaken. Examples of mitigation may include redesigning processes, developing or refining guidance or specific training. While the database is currently only accessible to DTF, lessons learned through Gateway Reviews have been shared regularly with departments. A new Lessons Learnt Website is under development which will provide direct access*

220 Department of Treasury and Finance, *Gateway Review Process — Overview*, October 2009, p.7

221 Department of Treasury and Finance, response to the Committee's questionnaire, received 22 May 2012, p.4

*to participating departments and agencies. It is anticipated the website will be available in late 2012.*

The Committee considers that, if done effectively, the Lessons Learnt Website may be a very useful resource for agencies to understand best practice.

The Committee notes that the Commonwealth Government has produced a series of short reports that summarise the key lessons learnt through gateway reviews.<sup>222</sup> The New Zealand Government has produced a similar, more detailed report.<sup>223</sup> DTF has produced a small brochure of lessons learnt, though this has not been updated since 2007.<sup>224</sup>

**FINDING:** The Department of Treasury and Finance collects large amounts of information about successes and problems on projects across the public sector through the Gateway Review Process. The Department has stated that it intends to produce a 'Lessons Learnt Website' which will make lessons learnt from these projects available to other agencies.

## Improving post-project reporting

One issue raised in the context of lessons learnt was that of post-project reporting. Infrastructure Partnerships Australia informed the Committee that:<sup>225</sup>

*In terms of ex-post analysis and transparency, one of the problems we found in the major study we undertook with Melbourne University in 2007 was that the details and outcomes of public-private partnership projects are quite transparent and were readily available. What we did not find was that the publicly managed or traditionally procured projects had the same level of transparency. If you are not making the actual outcomes of procurements transparent, it means you are unable to improve the processes, the frameworks and the approaches the public sector agencies are having.*

Currently in Victoria there are very few requirements for public reporting about completed infrastructure projects. It was suggested to the Committee that the cost and time performance of all infrastructure projects over \$20 million should be routinely published.<sup>226</sup> The Committee has made similar recommendations previously.<sup>227</sup> The Government recently rejected the Committee's recommendation for reporting actual results for all asset projects in a single source, which would have improved public transparency. However, the Government has indicated that it will consider modifying the requirements for departmental annual reports to report on the actual results of completed projects.<sup>228</sup>

222 Commonwealth Department of Finance and Deregulation, *Gateway Review Process — Lessons Learned* (3 editions, 2007-2011)

223 New Zealand State Services Commission, *Gateway Reviews — Lessons Learned Report*, July 2011

224 Gateway Unit, *Gateway Lessons Learned: Commonly Identified Practices that Limit Success*, August 2007

225 Mr B. Lyon, Infrastructure Partnerships Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.3

226 *ibid.*, p.4

227 Public Accounts and Estimates Committee, *Report on the 2009-10 and 2010-11 Financial and Performance Outcomes*, April 2012, Recommendations 45 and 52, pp.222, 236

228 Victorian Government, Government Responses to the Recommendations of Public Accounts and Estimates Committee's 109<sup>th</sup> Report to the Parliament — Report on the 2009-10 and 2010-11 Financial and Performance Outcomes, tabled 19 October 2012, pp.17, 20

The Committee considers that the inclusion of data in annual reports would provide some help with understanding public sector performance and identifying problem areas. It would also provide a repository of information about actual project costs and timelines which would benefit other agencies in determining realistic estimates for themselves.

The Committee notes that any requirements established for annual reporting will have to be carefully constructed, as departments are unlikely to volunteer information about unsuccessful components of projects unless unambiguously required to. As noted above, knowledge of the unsuccessful elements of projects can often be particularly useful for understanding best practice.

Issues connected to transparency are further discussed in relation to term of reference (d) (refer Chapter 6 of this Report).

**FINDING:** There are currently few requirements for post-project reporting in Victoria. This reduces the public sector's capacity to learn from past projects, especially projects where problems have been encountered.

#### 5.4.4 Learning from other jurisdictions

Projects that have taken place in other jurisdictions can also be an important source of information for lessons learnt.

Some agencies informed the Committee that they try to stay aware of best practice identified in other jurisdictions. Recent work by the Council of Australian Governments has provided a useful resource for agencies. However, it was suggested that more could be done in this area, especially when preparing business cases.

##### Best-practice case studies from across Australia and their limitations

In recent years, the Council of Australian Governments Infrastructure Working Group has commissioned two volumes of best-practice case studies.<sup>229</sup> These volumes provide details of selected infrastructure projects across Australia, together with commentary drawing out the best practice lessons from the case studies. Victoria's Channel Deepening Project and Melbourne Convention and Exhibition Centre were included in the 2010 and 2012 studies respectively.

These case studies may help enhance the skills of personnel within the Victorian public sector through learning from experiences in other jurisdictions. However, the Committee notes that the case studies are restricted to projects deemed to have been successful. The lessons learnt from projects with serious problems have therefore not been included. For this reason, such descriptions of best practice examples do not replace the need for the discussion of lessons learnt through Gateway Reviews or other post-project analyses.

The two volumes of studies completed to date have focussed on the key procedural and managerial elements of infrastructure best practice. They do not directly address the associated competencies and skills of participating project personnel that have influenced the outcomes.

<sup>229</sup> Commonwealth Department of Infrastructure and Transport, *Infrastructure Planning and Delivery: Best Practice Case Studies*, December 2010; *Infrastructure Planning and Delivery: Best Practice Case Studies Volume 2*, February 2012

It would seem beneficial for Victoria, through its membership of the Infrastructure Working Group, to advocate for discussion of competencies and skills in future volumes.

Victoria may also wish to consider producing an equivalent version focused on Victorian projects. The case studies in a Victorian equivalent could specifically address the core competencies and skills that have helped to drive best practice in selected projects.

**FINDING:** The Commonwealth Government has produced two volumes of best practice case studies for infrastructure projects. These bring together best practice examples from around Australia. However, they do not discuss the competencies and skills that made the selected projects successful.

### Increased consideration of other jurisdictions' experience in planning

Although some mechanisms are in place for learning from other jurisdictions, the Committee received evidence from the Auditor-General and the Ombudsman suggesting that an increased consideration of the experience of other jurisdictions could be beneficial. The Victorian Auditor-General's Office explained:<sup>230</sup>

*I think though there is a fair degree of delusion [in planning projects]. The delusion is driven by a lack of knowledge and a lack of research. If we look at what his [Flyvberg's] article proposes, we see he says you can clean up most of this delusion through a very simple process called 'reference [class] forecasting', where you basically look at your projects and say, 'What am I doing? Where has it been done before? How long did it take them? How much did it cost? What are my estimates saying?' I would say that hardly ever occurs in major projects in Victoria. If it does occur, it is buried away in briefings that are never given any ventilation.*

*But to publicly put these reference [class] forecasts up — or reference projects, I think — that actually start to say, 'Well, we have been saying it is a billion dollars, but everywhere else in the world it has cost 3' or, 'We are saying it is \$3 billion but in Spain they can do it for 1 — why is it 3 billion in Victoria and 1 billion in Madrid?'. They are the sort of questions that perhaps central agencies could take a stronger role in actually putting a lot more of that work on the public record.*

Representatives of the Victorian Ombudsman informed the Committee that they considered a failure to do such comparisons had occurred with the myki project:<sup>231</sup>

*... there was the assumption that this project could be completed in two years, and yet the evidence was that no similar system had been implemented in less than five.*

*... looking at similar jurisdictions or similar projects across the world is likely to have identified that this project would not be implemented in two years and is likely to take four to five, and those sorts of things could be taken into account.*

230 Mr P. O'Connor, Victorian Auditor-General's Office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, pp.8-9

231 Ms E. Barlow, Victorian Ombudsman, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, transcript of evidence, 22 August 2012, p.4



This view was also expressed to the Committee by the Department of Transport and Transport Ticketing Authority.<sup>232</sup> The Secretary of the Department of Transport also noted that the first CEO of the Transport Ticketing Authority had been hired specifically because of his experience in other jurisdictions (see further in Section 6.7.7).<sup>233</sup>

The Ombudsman's office informed the Committee that it would expect a business case to include details of similar projects in other jurisdictions to support the assumptions.<sup>234</sup> Reflecting on myki, the Secretary of the Department of Transport also suggested that an examination of projects in other jurisdictions should be part of developing future ICT projects.<sup>235</sup>

The technique of 'reference class forecasting' referred to by the Victorian Auditor-General's Office was developed by Daniel Kahneman and has had some use by governments and private companies in a number of countries around the world.<sup>236</sup> Professor Flyvbjerg of the University of Oxford explains the process:<sup>237</sup>

*Reference class forecasting consists in taking a so-called 'outside view' on the particular project being forecasted. The outside view is established on the basis of information from a class of similar projects. The outside view does not try to forecast the specific uncertain events that will affect the particular project, but instead places the project in a statistical distribution of outcomes from this class of reference projects. Reference class forecasting requires the following three steps for the individual project:*

- (i) *identification of a relevant reference class of past projects. The class must be broad enough to be statistically meaningful but narrow enough to be truly comparable with the specific project;*
- (ii) *establishing a probability distribution for the selected reference class. This requires access to credible, empirical data for a sufficient number of projects within the reference class to make statistically meaningful conclusions; and*
- (iii) *comparing the specific project with the reference class distribution, in order to establish the most likely outcome for the specific project.*

The Committee considers that mandating this or a similar formal technique could assist agencies to learn from the experience of other jurisdictions when preparing business cases.

**FINDING:** The Committee has been informed that there is scope for increased consideration of experiences in other jurisdictions when planning infrastructure projects. 'Reference class forecasting' has been identified as a potential way of doing this. It has been suggested that this or a similar technique should be a part of all business cases.

232 Department of Transport, response to the Committee's questionnaire, received 18 July 2012, p.25

233 Mr J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, transcript of evidence, 8 October 2012, p.7

234 Ms E. Barlow, Victorian Ombudsman, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, transcript of evidence, 22 August 2012, p.4

235 Mr J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, transcript of evidence, 8 October 2012, p.7

236 Prof. B. Flyvbjerg, 'Survival of the Unfittest: Why the Worst Infrastructure Gets Built – and What We Can Do About It', *Oxford Review of Economic Policy*, vol. 25:3, 2009, pp.353-4

237 *ibid.*, p.354

**RECOMMENDATION 16:** The requirements for business cases be modified so that all future business cases have regard to similar projects in other jurisdictions. A formal technique such as ‘reference class forecasting’ should be adopted for making appropriate comparisons.

## **CHAPTER 6 TERM OF REFERENCE (D) – ALIGNMENT OF PROJECTS WITH THE PUBLIC INTEREST AND MAXIMISATION OF TRANSPARENCY ACCOUNTABILITY OVER THE PROJECT LIFE**

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### **6.1 The assessed scope of term of reference (d)**

Term of reference (d) of the Inquiry requires the Committee to consider and report on:

*whether significant infrastructure projects have been developed and implemented in a manner which aligns with the public interest and maximises transparency and accountability for the life-cycle of the project.*

This term of reference represents a significant open-ended component of the Committee's Inquiry. It requires widening the Committee's deliberations beyond infrastructure competencies and skills to best practice strategies for planning, managing and delivering public sector infrastructure projects over their life-cycle. It introduces the key evaluative yardsticks of alignment with the public interest and maximising transparency and accountability.

The objective of the Committee in responding to term of reference (d) is to identify avenues for benefiting future directions for Victoria's infrastructure sector by gaining insight into the processes and behaviours deployed on projects. The focus of the Committee is on capturing lessons learnt to enhance the management of future major infrastructure projects in Victoria by identifying ground-breaking or better-practice features of projects undertaken as well as pitfalls or less desirable aspects.

Mindful of the main focus of the Inquiry on competencies and skills, the Committee also sought information, through its examination of projects, of any particular competencies and skills that have underpinned examples of better practice. The Committee also assessed whether competencies and skills were lacking or under-developed which have had a negative impact on project outcomes.

The Committee's work program for term of reference (d) involves examination of six major infrastructure projects against the above evaluative yardsticks. The selected projects comprise three Public Private Partnerships, two major Information and Communication Technology (ICT)-enabled projects, and one traditionally-procured 'Design and Construct' project.

Detailed questionnaires were forwarded to the Department of Treasury (DTF), as the responsible central agency, and to the relevant constructing departments and agencies.

In August and October 2012, the Committee completed public hearings associated with this term of reference. These hearings included representatives from the Auditor-General's Office, the Victorian Ombudsman, the Department of Treasury and Finance, constructing agencies, and some of the contractors engaged to deliver each of the selected projects.

### **6.2 Alignment with the 'public interest' for the life-cycle of the project**

Defining exactly what is meant by the 'public interest' is more difficult than it might first appear. In fact, what is deemed to represent the 'public interest' will vary depending upon its context.

In the context of term of reference (d), the ‘public interest’ is taken to mean that the project for which the public has invested funds has been developed and implemented in a way which protects the taxpayer (i.e. is cost efficient and effective) and results in a public or community benefit considered commensurate with the investment.

Term of reference (d) also requires the assessment of public infrastructure projects alignment with the public interest ‘*over the life-cycle of the project*’. That implies that not only the initial investment but the ongoing operating costs remain commensurate with the public benefit and effectiveness of the asset over its life. This can be difficult to assess, as it encompasses an element of future projection and forecasting. Many large public infrastructure projects involve long life spans and also long-term partnerships with the private sector of up to 25 to 30 years.

The Department of Treasury and Finance has developed ‘*Public interest guidelines for major infrastructure projects*’. The Guidelines cover the following eight elements, each of which has a public interest question attached.<sup>238</sup>

- Effectiveness – is the project effective in meeting government objectives?
- Accountability and transparency – is the community well informed about the obligations of government? Does the Auditor-General have oversight of these?
- Affected individuals and community – have affected parties been able to contribute?
- Equity – are disadvantaged groups able to access the infrastructure and/or related service?
- Consumer rights – are sufficient safeguards in place to protect consumers?
- Public access – is ongoing public access to essential infrastructure safeguarded?
- Security – is community health and safety secured?
- Privacy – is users’ right to privacy adequately protected?

Public Private Partnership (PPP) projects are required to complete a full Public Interest Test statement as part of the business case. This includes explaining how any potential areas of concern have been addressed in the proposed contractual or regulatory framework.

### 6.3 Maximising transparency and accountability for the life-cycle of the project

The principles of transparency and accountability are fundamental to Government and the public sector. The Government and the public service have a stewardship role to play in relation to the prudent and effective application and management of public assets and monies. In this respect it is important that mechanisms and processes are in place to maximise the transparency and accountability of decision-making associated with the use of public resources.

To make an informed assessment about the prudent and effective management of public resources, an evaluation is required of the quality of advice provided to decision-makers and the extent of research and evidence to support decisions taken by public sector managers and responsible ministers.

At the highest level of accountability in the State, the Westminster system provides a number of formal mechanisms for the scrutiny and evaluation of the use of public assets and funds and the quality of the management of those resources. These mechanisms are provided through

238 Department of Treasury and Finance, *Investment Lifecycle Guidelines — Business Case*, July 2008, p.44

the Parliament, Parliamentary Committees, and the Auditor-General and Ombudsman as independent officers of the Parliament.

### 6.3.1 Access powers of the Committee and the Ombudsman

Work undertaken to date by the Committee on this Inquiry has revealed certain ‘limits’ to the access of both the Committee and the Ombudsman in relation to documentation deemed to be of a commercially sensitive nature or which has been classified as ‘Cabinet-in-confidence’. This has limited the ability of the Committee to carry out the current Inquiry by preventing access to certain evidence from DTF and other sources.

These restrictions have affected the ability of the Ombudsman to conduct a number of investigations, most recently his *Own Motion Investigation into ICT-enabled Projects*, tabled in November 2011.

The access powers of the Public Accounts and Estimates Committee reside in Section 28 of the *Parliamentary Committees Act 2003*. This section provides that, in obtaining evidence, all joint Parliamentary Committees have the ‘*power to send for persons, documents and other things.*’

However, the powers of the Ombudsman are set out in the *Ombudsman Act 1973*. Section 19 of that Act provides that information, documents or answers to questions which relate to the deliberations of ministers or any committee consisting of Members of Parliament do not have to be provided to the Ombudsman. Further, the Act provides that the Attorney-General can certify that certain information or questions relate to ‘such deliberations’, thereby preventing review by the Ombudsman.

The Ombudsman has requested on a number of occasions through his reports that Section 19 be repealed and that the Ombudsman be afforded the same statutory access powers as the Auditor-General.

### 6.3.2 Power of the Auditor-General to access private sector documentation

Evidence was received during the Inquiry in relation to the limited power of the Auditor-General to ‘follow the dollar’ in relation to outsourced or privately provided public sector services.

In relation to the delivery of large public sector infrastructure projects, particularly those implemented via a PPP procurement method, the Auditor-General can only review documentation and evidence held by the public sector and has no right of access to records held by the private sector partner in relation to the delivery of the project and the use of public funds for that purpose.

The powers of the Australian Auditor-General have recently been widened to enable the review of contractor performance in delivering projects or services funded by the Australian Government. The powers also extend to enabling the Australian Auditor-General, at the request of the Joint Committee of Public Accounts and Audit, to review the performance of states and territories in implementing Australian Government funded programs and projects. These powers were extended following questions raised over the effective and economic implementation of the Australian Government funded *Building the Education Revolution* program and the limitations on access which the Australian Auditor-General had in relation to that program.

### 6.3.3 Committee’s examination of Gateway Review documentation

As part of the Inquiry, the Committee sought copies of reports made as part of the Gateway Review Process (see Section 5.4.1 of this Report).

The Committee received little response in its initial attempt to secure copies of the Gateway Review documentation for the example projects. In some cases, agencies confirmed that Gateway Reviews had been carried out, but did not supply the documentation. In other cases, agencies stated that the reviews were not to be released to the Committee.

The Committee then contacted responsible agencies specifically to locate copies of Gateway Reviews.

**Table 6.1 Gateway Review documentation sought by the Committee**

Project	Authorities contacted	Status
myki	Department of Transport (DOT), Transport Ticketing Authority (TTA)	Location unknown. <ul style="list-style-type: none"> <li>• TTA advises that the reports are owned by DOT.</li> <li>• DOT reports that the Senior Responsible Officer for the project is the CEO of TTA.</li> </ul>
Melbourne Wholesale Markets Relocation	Department of Business and Innovation (DBI), Department of Primary Industries (DPI)	Received Gateway Reviews for: <ul style="list-style-type: none"> <li>• Gate 2 – Business Case (August 2004);</li> <li>• Gate 3 – Readiness for Market (February 2009); and</li> <li>• Gate 4 – Tender Decision (October 2009).</li> </ul> DBI reports that Gate 1 – Strategic Assessment (January 2003) is only in paper form and will take significant time to locate.
Victorian Desalination Plant	Department of Sustainability and Environment (DSE)	Location unknown. <ul style="list-style-type: none"> <li>• DSE confirms that it is the responsible authority, however the Department states that it does not have a copy of any Gateway Reviews for the project.</li> </ul>
HealthSMART and Royal Children’s Hospital Development	Department of Health (DOH)	Gateway Reviews not received. <ul style="list-style-type: none"> <li>• DOH contacted 19 Nov 2012. (Director, Capital Projects and Service Planning would discuss the matter with the DOH Secretary.)</li> <li>• Reminder email sent 21 Nov 2012. DOH response that documents are waiting Secretarial authorisation.</li> <li>• Reminder email sent 29 Nov 2012.</li> <li>• As at the date of tabling of this Report, no response has been received from DOH.</li> </ul>
Melbourne Convention Centre Development	DBI	Received Gateway Reviews for: <ul style="list-style-type: none"> <li>• Gate 2 – Business Case (May 2003)</li> </ul> No other Gateway Reviews have been carried out.

Source: Public Accounts and Estimates Committee Secretariat

The Committee considers that Gateway Reviews contain important information about significant infrastructure projects. Retention of these documents for later examination is important for transparency and accountability. It is therefore of concern to the Committee that a number of these documents were unable to be found.

## 6.4 Capturing lessons learnt for application to future infrastructure projects

Each of the six projects examined by the Committee is discussed separately in the following sections. Each section includes an examination of aspects of the projects' alignment with the public interest, transparency, accountability, the extent of DTF's involvement in the projects, and the skills and competencies applied to the development and implementation of the projects.

As noted earlier, the main outcome which the Committee is seeking in responding to term of reference (d) is to identify lessons learnt which can be applied to the development and implementation of future public infrastructure projects in Victoria.

## 6.5 Projects selected for this Inquiry

The Committee selected six major infrastructure projects for review under term of reference (d). These projects were selected based on a number of criteria. These criteria are diverse which prevented the Committee from selecting a smaller number of projects.

Projects which were selected were those which displayed one or more of the following characteristics:

- has been designated as High-Value and High Risk;
- is a PPP project;
- is regarded as an example of successful infrastructure provision;
- is identified as having departed from best practice or having cost pressures;
- has attracted a high level of public interest;
- has attracted criticism from sources such as the Auditor-General or the Ombudsman; and
- required the consideration of costs over the life of the project rather than simply those of construction.

The projects selected by the Committee are the following:

- Health*SMART* Program;
- myki ticketing system;
- Melbourne Convention and Exhibition Centre;
- the new Royal Children's Hospital project;
- Victorian Desalination Plant; and
- Melbourne Markets Relocation project.

Two of the projects selected by the Committee for examination are ICT-enabled projects which have experienced major time and cost overruns and have been the subject of public controversy.

The Committee has received and heard an extensive amount of evidence which suggests that information technology projects, undertaken in both the private and public sectors, are infamously high-risk in terms of cost overruns and time delays. The Committee notes that project overruns for this type of project are not only a national, but a global problem.

The Committee also considers that pioneering or innovative projects add an additional degree of risk to what are already risky projects.

In the case of the two projects examined by the Committee, the problems experienced have stemmed from a variety of reasons but appear to be rooted in the initial planning phases. Both projects could be generalised as having adopted overly optimistic or unrealistic project timelines and overly aspirational objectives in relation to the initial funding approvals.

In November 2011, the Ombudsman (in conjunction with the Auditor-General) completed an investigation into ten high-risk, high-dollar and complex public sector ICT-enabled projects. According to the Ombudsman:<sup>239</sup>

*The original budgets for these projects totalled \$1.3 billion. The latest estimated cost is \$2.74 billion – an additional \$1.44 billion cost to government.*

As a result of his investigation, the Ombudsman prepared a *Framework to better manage ICT-enabled projects* comprising 42 recommendations directed at addressing the issues highlighted through his investigation.<sup>240</sup>

In responding to these recommendations, DTF has advised the Committee that, of the 42 recommendations, DTF has accepted 19, ‘accepted-in-principle’ or ‘in-part’ 11 recommendations, rejected four and had not provided comment on eight recommendations.<sup>241</sup>

DTF advised that it considers that most of the Ombudsman’s recommendations are addressed by the implementation of the High-Value and High-Risk (HVHR) Framework which will apply to high risk ICT-enabled projects (see Section 2.3.2 of this Report). In addition, the Committee was advised that:<sup>242</sup>

- the Government is currently developing ‘a more rigorous process’ for the development and management of ICT-enabled projects with the ‘Victorian Information and Communication Technology Advisory Committee’ recently established by the Assistant Treasurer; and
- DTF is in the process of developing additional guidance for ICT projects.

The Committee notes that, in July 2008, the Auditor-General published a guidance paper entitled, *Investing Smarter in Public Sector ICT: Turning Principles into Practice*. The guidance was based on the experiences of audits undertaken by the Auditor-General and data from DTF’s Gateway Unit which have indicated that public sector agencies sometimes begin large and expensive IT projects without a clear understanding of goals, resources required or the associated risks.

The Committee considers that both this guidance paper and the framework for the management of ICT-enabled projects developed by the Ombudsman provide resources for public sector managers involved in the development and implementation of public sector ICT projects.

239 Victorian Ombudsman, *Own Motion Investigation Into ICT-Enabled Projects*, November 2011, pp.4, 12

240 *ibid.*, pp.44-60

241 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.25

242 *ibid.*



## 6.6 The HealthSMART Program

### 6.6.1 Committee's approach

The Committee sent a list of questions focussed on the details of term of reference (d) to the Department of Health (DOH), the Department of Treasury and Finance (DTF), the Victorian Auditor-General's Office (VAGO), the Victorian Ombudsman, Austin Health, the Royal Victorian Eye and Ear Hospital (RVEEH) and two vendor companies in relation to the development and implementation the HealthSMART Program.

Public hearings with representatives from these agencies were held in mid-August 2012. One of the vendor companies provided a written response to questions from the Committee.

These responses and transcripts from the hearings have been used to prepare the information presented in this section of the report.

### Observations on the project by Committee's consultant

Evans & Peck provided the Committee with a series of observations about the HealthSMART Program linked to its various stages of procurement. These are shown in Table 6.2 below.

**Table 6.2 Observations on performance of the HealthSMART Program by stage**

Stage	Observations
Conceptualise	<ul style="list-style-type: none"> <li>• Lack of appreciation of the complexity of IT projects of the scale and scope envisaged for HealthSMART.</li> <li>• Insufficient engagement with end-users. Better engagement may have led to a greater understanding of the diversity of clinical requirements for each of the health services, which may have influenced how HealthSMART was conceptualised (e.g. basic platform with the ability to tailor to local needs).</li> <li>• Seemed to be lack of recognition or awareness that different health services were at different levels of IT maturity and capability, which added another layer of complexity to the project.</li> <li>• Only two options presented to government – do nothing or do HealthSMART.</li> </ul>
Prove	<ul style="list-style-type: none"> <li>• Appears that there was an absence of a business case that set out objectives for the project, and benefits realisation subsequent to the project.</li> <li>• Failure to appreciate the extent to which HealthSMART would require health services to undergo change to their clinical models, IT infrastructure and general operations to realise benefits.</li> </ul>
Procure	<ul style="list-style-type: none"> <li>• The probity process disabled vendors from being able to engage with the client to gain a better understanding of requirements.</li> <li>• Requirements were more task-driven than outcome-driven.</li> <li>• The idea to simultaneously implement the system across all health services at once amplified the technical, people and operational challenges. The project may have benefited from building, testing and proving the technology around one health service, then implementing it across other services over time.</li> <li>• Contract for HealthSMART was tripartite, which created difficulty for delivery and governance.</li> </ul>

Stage	Observations
Implement	<ul style="list-style-type: none"> <li>• Focus during implementation was not on the highest value aspects of the system, but rather those that could be delivered early as “quick wins”. The promise of the new technology was lost in its implementation.</li> <li>• No single organisation was given accountability to deliver the programme.</li> <li>• HealthSMART was required to operate as a systems integrator and IT outsourcer, but had neither the capacity nor the expertise to perform this function.</li> <li>• Centralised control meant that HealthSMART was removed from the clinical environment. Implementation appeared to go well when it was devolved so that individual health services could build things locally to their needs.</li> <li>• Inability of health services to cover the costs of change management, technology upgrades, data migration and point-of-service devices, which made it more difficult (if not impossible) to implement.</li> <li>• Inability for hospitals to meet the ongoing cost of HealthSMART providing support and other ICT services.</li> <li>• A lot of the information was not designed to be made meaningful to clinicians, yet HealthSMART was being built as a system clinicians would use.</li> <li>• HealthSMART had high turnover of staff due to combined pressure of cross-training by vendor on the new system and services that needed to be delivered to customers during the roll-out.</li> <li>• The active involvement of the departmental secretary alleviated some of the more critical problems that the project was facing.</li> </ul>
Realise	<ul style="list-style-type: none"> <li>• The system is not fully operational and has been deemed by most services as being overly complex and difficult to use with an unfriendly user interface. The critical component – the clinical system – has been found to be lacking.<sup>(a)</sup></li> <li>• Austin Health, however, claims to now have one of the best IT infrastructures in the health system, partly because of HealthSMART and partly because it prioritised investment in clinical IT systems. Requirements were developed from the ground up with the vendor, rather than top down through HealthSMART.</li> <li>• The recurrent cost savings realised through the implementation of the technology at the Austin do not outweigh the increased costs of operating the system; however, if the positive impact on patient safety may well justify the investment.</li> </ul>

Note: The Committee notes that, in providing evidence to the Committee at the project hearings, Austin Health stated that a lot of the information was not designed to be made meaningful to clinicians, yet HealthSMART was being built as a system that clinicians would use. The Royal Victorian Eye and Ear Hospital (RVEEH) stated that at the commencement of the HealthSMART Program, individual health services were at different stages of IT maturity in terms of infrastructure and applications in use. RVEEH, in particular, had complex and bespoke IT systems. All of this added more complexity to the project than was originally anticipated in the business case. The Department of Health stated that the majority of systems under the HealthSMART Program have met their objectives, however, the clinical system has not been fully implemented.

Source: Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, pp.42-3

## 6.6.2 Project synopsis

The HealthSMART Program was developed by DOH (formerly the Department of Human Services) to implement Victoria’s *Whole-of-Health Information and Communications Strategy 2003-2007*. This Strategy aimed to modernise and replace management systems throughout the Victorian public healthcare sector. It is one of the biggest IT projects ever undertaken in Australia, requiring enormous logistical planning and development.

According to advice provided by DOH, the purpose of the HealthSMART Program was to:<sup>243</sup>

243 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.1

- reduce risk through replacement of a number of obsolete core systems with ‘off-the-shelf’ products;
- reduce risk through the establishment of a robust shared ICT service for hospitals and community health centres with appropriate disaster recovery; and
- improve patient care, in particular reducing medication errors, through the introduction of electronic medical records management.

The HealthSMART Program comprised a number of project components/applications and also the establishment of HealthSMART Services within the DOH to plan, build, run and support the infrastructure on which the applications were delivered.

The three main ICT systems included in the Program are as follows:

- the Finance and Supply Management System which supports core health agency financial management, including general ledger, assets and materials management. Another component of the system related to an integrated human resource and payroll management system which was delivered by a separate vendor;
- the Clinical system which includes health records, electronic scheduling, diagnostic services, results reporting and e-prescribing capabilities; and
- the Patient and Client Management System which comprises an integrated patient and client management system which stores patient records throughout their care in hospitals and/or community health settings.

DOH provided a list of the tenders received for each component of the HealthSMART Program. The information, summarised in Table 6.3 below, provides some indication of the size of the Program in terms of the number of applications being implemented and the number of tenderers which were evaluated for each of those applications.

**Table 6.3 HealthSMART Program tenders**

Program application	No. of tenderers	No. of tenderers shortlisted	Awarded contract
Clinical System	9	2	Cerner Corporation Pty Ltd
Finance and Supply Management Information System	18	3	Oracle Corporation Pty Ltd
Rostering	7	4	Kronos Australia Pty Ltd
Human Resource Management System (including Payroll)	8	3	Frontier Software Pty Ltd
Managed Services	5	3	Fujitsu
Patient and Client Management System (Integrated)	5	-	CSC Corporation Australia (formerly iSOFT Australia Pty Ltd)
Client Management System (Community Health)	4	2	Trakhealth Australia Pty Ltd
Storage Solution	5	2	Hitachi Data Systems
Middleware Solution	11	2	SeeBeyond Technology Corporation
Picture Archiving & Communication System (Digital x-rays)	8	3	FUJIFILM Australia Pty Ltd

Source: Department of Health, response to the Committee’s questionnaire, received 20 July 2012, pp.4-5

## Project budget and costs

The original budget approved for the HealthSMART Program in 2003 was \$323.4 million. Table 6.4 below shows the details provided to the Committee by DOH in relation to approved budget and variations for the total Program. The information provided is limited in its detail as it has not been broken up into project phases.

**Table 6.4 HealthSMART Program – approved budget and variations**

Project phase	Initial approved budget (\$ million)	Approved budget variations (\$ million)	Approval date	Reason for variation	Revised approved budget (\$ million)	Actual costs to date (\$ million)
Business case	323.4 <sup>(a)</sup>					323.4
Project service delivery	<sup>(b)</sup>	9.8	June 2011	Adjustment required to meet the cost of delivering four clinical systems.		333.2
<b>Total</b>	<b>323.4</b>	<b>9.8</b>			<b>333.2</b>	<b>333.2</b>

(a) The information provided by the DOH was not broken down into specific project phases.

(b) Not provided.

Source: Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.8

The Auditor-General's 2008 report presented details of the 2003 budget allocation for each of the project components.<sup>244</sup> At the request of the Committee for more information, DOH provided a breakdown of the project costs for each component as at project end, 30 June 2012.<sup>245</sup> These two sources have been used to prepare Table 6.5 below.

**Table 6.5 HealthSMART Program – budget and costs by component/application**

Project component	2003 Budget (\$ million)	Project cost 30 June 2012 (\$ million)
Financial Management Information Systems	26.3	25.9
Human Resources Management Systems	4.0	6.5
Patient and Client Management System	50.0	38.1
Client Management System	13.5	14.7
Clinical System	79.0	134.8
<b>Sub-total</b>	<b>172.8</b>	<b>220.0</b>
ICT Support	57.9	79.4 <sup>(a)</sup>
ICT infrastructure	66.7	
Program management	7.2	
Related health applications	18.8	30.3 <sup>(b)</sup>
<b>Total HealthSMART Program</b>	<b>323.4</b>	<b>329.7</b>

(a) Amount for 'Technical Services' was not broken down.

(b) Amount for 'Other Projects (Minor & Support)' was not broken down.

Source: Victorian Auditor-General's Office, (based on DOH data) and Department of Health, response to questions on notice, received 1 November 2012, p.2

244 Victorian Auditor-General's Office, *Delivering HealthSMART – Victoria's Whole-of-Health Strategy*, April 2008, p.16

245 Department of Health, response to the Committee's questionnaire, received 1 November 2012, p.2

In his report of November 2011, the Ombudsman reported that:<sup>246</sup>

*DOH estimates that total spend on the project by the end of 2011-12 will actually be \$437 million. However, it also advised that a further \$34 million to support HealthSMART Services was not recorded against the project.*

In relation to questions about the variation between the cost of \$333.2 million for the HealthSMART Program advised by DOH in its July 2012 response to the Committee and the amount of \$471 million reported by the Ombudsman in November 2011, the Secretary, DOH advised at the hearing:<sup>247</sup>

*I think the main difference is whether you include the operational elements or not. I think the project cost for HealthSMART was in the order of \$333 million. Separate to that, once it was up and running – and it has been acknowledged earlier on that there would be operational costs, I think, to be funded – I think it was in 2008-09 that the government provided the operational funding for the running of the system.*

The Secretary, DOH, also acknowledged that health services may have had to supply additional funding for the implementation of the HealthSMART Program from their own sources. This particularly includes funds for the upgrade of their IT infrastructure.<sup>248</sup>

The Committee wrote to DOH in October 2012 seeking further clarification of the costs of the project and the variations in the figures quoted. The Department advised that:<sup>249</sup>

*The figure provided in the Department of Health response (20 July 2012) was \$333.2. This figure was the cost (projected to June 2012) to design, build and implement the project scope. The \$471 million was inclusive of certain operating costs, over a number of years. Operating costs continue into perpetuity for these or new systems when replaced in the future.*

*The expenditure for the HealthSMART project at close was \$329.7m.*

Also in relation to the ongoing operating costs associated with the new applications, DOH advised that the operating expenses of the shared services are around \$42 million per annum. This includes all applications, help desk, data centre, storage and network.<sup>250</sup>

The Committee also requested information from DTF as to its analysis of project costs incurred to date against originally approved capital and operating budgets. Whilst DTF pointed out that project costs incurred are the responsibility of DOH, DTF provided the following information in relation to funding approvals for the project:<sup>251</sup>

- a total of \$351.5 million was approved by government in annual budgets to facilitate the delivery of the HealthSMART program; and
- this amount includes \$165 million in contributions from various health agencies endorsed by government as part of the 2003-04 Budget.

The \$351.5 million comprises:

- \$138.5 million for a Health ICT Strategy (in 2003-04 Budget);

246 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.72

247 Dr P. Philip, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.9

248 *ibid.*

249 Department of Health, response to the Committee's questionnaire, received 1 November 2012, p.1

250 *ibid.*, p.2

251 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.23

- \$21 million for Electronic Prescribing in key Victorian Hospitals (in 2003-04 Budget);
- \$165 million contributed by DOH and health agencies (in 2003-04 Budget); and
- \$27 million for the HealthSMART Shared ICT Operations (in the 2008-09 Budget).

DTF advised that government had not approved any additional funding for the project and any shortfalls have been met through DOH internally reprioritising funds to deliver the project.<sup>252</sup>

Accounting for the full cost of the program is discussed in Section 6.6.6 in the section on transparency and accountability.

## Project delivery

DOH advised that the scope of works under the HealthSMART Program was to replace approximately half of the existing ICT systems across hospitals and almost all metropolitan community health centres with standardised systems.

The Finance and Materials Management System was originally implemented in acute metropolitan health agencies and Bendigo Health. As a result of its success, rural health alliances requested that it be implemented at all five Victorian rural health alliances. In total, the financial management system was implemented at 12 sites at a cost of \$25.9 million.

The Clinical System had the potential to deliver the most benefit in terms of the way health agencies record patient treatment. The system offered end-to-end ordering of pathology and radiology tests, reporting of results, inpatient medication management, discharge prescribing and discharge summaries with support for clinical decision-making and clinical alerts designed to enhance patient management and safety. Prior to this all these processes were hand written and paper-based.<sup>253</sup>

The system has only been able to be implemented at four of the originally planned 10 health services. Funding was ceased and the project halted at the end of June 2012 by the Victorian Government. The original contract was signed with the vendor in March 2006 for \$79 million. The contract amount rose to \$96 million later that year. DOH has indicated that the cost at project close was \$134.8 million.<sup>254</sup>

DOH has estimated that a further \$95 million would be needed to implement the application at the remaining six sites.<sup>255</sup>

The original contract for the Patient and Client Management System was for \$50 million with a local software company in 2003. This company ran into some difficulties overseas and was subsequently acquired by another group. The system had been implemented at 10 health service agencies by the June 2010 deadline.

Although the initial budget has only marginally been exceeded, the Program has not been implemented fully across all the sites as originally intended.

DOH provided the information presented in Table 6.6 below showing the number of sites at which the various applications have been implemented.

252 *ibid.*

253 Austin Health, response to the Committee's questionnaire, received 1 August 2012, p.1

254 Department of Health, response to the Committee's questionnaire, received 1 November 2012, p.2

255 Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.8

**Table 6.6 HealthSMART Program – delivery**

HealthSMART application	No. of Sites - planned implementation	No. of Sites - actually implemented
Finance and Supply Management Info System (FMIS)	10	12
Human Resource Management System (HRMS) (including Payroll)	0	8
Rostering (part of the HRMS)	2	3
Patient and Client Management System (PCMS)	10	10
Client Management System (CMS) <sup>(a)</sup>	23	22
Clinical System	10	4
Picture Archive and Communication System (PACS)	0	8

(a) 'Stand-alone' system for Community Health Centres.

Source: Department of Health, response to the Committee's questionnaire, received 20 July 2011, p.3

While DOH advised the Committee in its response that the Department did not seek any additional project funds from Government and the project was only marginally over budget (\$9.8 million of reprioritised departmental funds), it does concede that the originally planned implementation of the Clinical application to all 10 health services was unable to be achieved within that budget.

Further, the original HealthSMART Program was expected to be fully implemented in four years. At its halt in June 2012, the project had been running for eight years. Most of this time extension was due to the complexities associated with the Clinical System and the tripartite contractual and governance arrangements including DOH, contractors and the individual health agencies. This is discussed later in the Section 6.6.5.

The benefits and outcomes which have been realised from the HealthSMART project are also discussed in Section 6.6.5.

### 6.6.3 The Department of Treasury and Finance's involvement in the project

DTF advised that its *'role and formal involvement in projects varies depending on the nature of the project and the relevant framework applied to monitor and deliver projects.'*<sup>256</sup> Further, DTF advised that it adopts a risk-based approach to its involvement in projects and historically, the Department's involvement in projects which are considered complex or higher risk has been more extensive than for projects with lower risk profiles.<sup>257</sup> It is not clear from DTF's response how the risk for the HealthSMART Program was originally assessed.

In relation specifically to the HealthSMART Program, DTF advised the Committee that:<sup>258</sup>

*DTF evaluated and provided advice to inform cabinet deliberations on the original business case as part of the 2003-04 Budget process and on subsequent funding decisions taken by government as part of the 2008-09 Budget.*

256 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, Attachment A, p.1

257 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.1

258 *ibid.*, p.9

This stands in contrast to the Ombudsman's statement that:<sup>259</sup>

*HealthSMART had no business case, despite seeking over \$300 million in funding. Instead the funding submission was based on a high-level strategy document and a 14 page implementation plan.*

Also evidence taken by the Committee throughout the Inquiry from DOH indicates very limited detail in relation to the development of any business case for the project. The lack of a detailed business case is discussed in further detail in Section 6.6.5.

DTF advised the Committee that DTF officers were represented on the Board of Health Information Systems, a DOH committee with oversight of the HealthSMART Program. DTF also provided advice to Cabinet on the project as part of its quarterly reporting process on major projects.<sup>260</sup>

#### 6.6.4 Project reviews

There have been two independent external reviews provided to the Parliament on the HealthSMART Program, one undertaken by the Auditor-General in April 2008 (five years into the Project) and one by the Ombudsman in November 2011 (eight years into the Program).

##### Auditor-General's review

Overall, the Auditor-General concluded that:<sup>261</sup>

- DOH (formerly the Department of Human Services (DHS)) needed to focus on outcomes and benefits to ensure that the State's investment was realised;
- the original budget for the Program was unrealistic;
- uncertainty across health agencies about costs and funding sources had led to delays in implementation; and
- targets for implementation were also considered to be overly ambitious in terms of the capability of the health sector to implement significant technological change and the poor state of IT infrastructure within individual health agencies.

The Auditor-General noted, however, that:<sup>262</sup>

*Despite these issues, HealthSMART still has the potential to fulfil the original vision of a patient-centric model of healthcare, supporting public sector clinicians with knowledge and technology.*

##### Ombudsman's review

In 2011, the Ombudsman conducted an investigation of ten ICT-enabled projects of which HealthSMART was one of the projects selected. The Ombudsman's main finding in relation to the delivery of the HealthSMART Program is that it was poorly planned. As a result, the Program's costing and timelines were seriously underestimated.

259 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.23

260 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.9

261 Victorian Auditor-General's Office, *Delivering HealthSMART — Victoria's Whole-of-Health Strategy*, April 2008, p.v

262 *ibid.*



The Ombudsman's investigation of the HealthSMART Program focussed on the delivery of the Clinical System component of the Program as this was the one which had experienced the greatest delays and cost overrun. A summary of the main findings and issues identified by the Ombudsman is as follows:<sup>263</sup>

- HealthSMART had no business case. The funding submission was based on a high-level strategy document containing a 14 page implementation plan;
- the project costing and timelines were ambitious and the Department of Health seriously underestimated the size of the task;
- in terms of accounting for project costs, the DOH did not attempt to accurately predict or account for the costs to be borne by health services;
- the HealthSMART clinical application contract contained limited penalty clauses;
- DOH experienced significant problems with the expertise and quantity of staff provided by the vendor of the clinical system. The Secretary of the Department became actively involved in the project after ongoing poor vendor performance and problems with the quality of project staff used by the vendor;
- delivery of the HealthSMART clinical application was made difficult by a complex three-way relationship with a vendor who was developing a system to DOH specifications but delivering it to health service providers. Individual health services had little autonomy to deal directly with the vendor and had to process change requests through DOH. This process was described as bureaucratic and slow;
- the implementation of the clinical application was also impacted by delays relating to the need to translate the system for Australian terminology and medications content for electronic prescribing and that these problems have persisted;
- the implementation of the clinical application in a limited number of hospitals has presented challenges for participating health services to meet the on-going training requirements associated with the application;
- DOH had difficulties recruiting skilled staff to the project team which delayed the project; and
- costs associated with HealthSMART technology upgrades will produce financial pressures on health services.

## Gateway Reviews

The aim of the Gateway Review Process is to help government departments and agencies ensure that their investment is well spent, meets business and the Government's strategic objectives, and achieves value-for-money outcomes.

In his 2008 report, the Auditor-General was critical of the lack of required Gateway Reviews and internal audit scrutiny which had been applied to the HealthSMART Program, noting:<sup>264</sup>

*Although the endorsement of the HealthSMART funding was conditional on the program undergoing a series of Gateway reviews at key decision points, only one of the five reviews required in the funding approval has been conducted to date.*

263 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, pp.17, 23, 32, 38, 42-3, 69, 71-3

264 Victorian Auditor-General's Office, *Delivering HealthSMART — Victoria's Whole-of-Health ICT Strategy*, April 2008, p.8

The Auditor-General was of the view that oversight of the program could be strengthened through regular independent assurance on the Program's progress and recommended that DTF and the former Department of Human Services ensure that the HealthSMART Program is subject to timely Gateway Reviews.<sup>265</sup>

At the time of the audit, DHS (now DOH) supported the recommendation. DTF responded that:<sup>266</sup>

*The current status of the HealthSMART program would dictate whether the conduct of Gateway program reviews could contribute to a successful completion of the program or derive lessons learned for future undertakings. DTF will liaise with DHS to assess the opportunities for future reviews of this program.*

The Committee is of the view that this is an unsatisfactory response on the part of DTF as it is clearly stated in the Auditor-General's report that these reviews were a condition of the funding endorsement for the Project.

In response to a request for information from DTF regarding external reviews of the Project, DTF advised that the HealthSMART Project had completed 'confidential and independent' Gateway Reviews for each of the following stages:<sup>267</sup>

- Gate 3: Readiness for Market – July 2004;
- Gate 5: Readiness for Service – July 2009; and
- Gate 6: Benefits Evaluation – May 2010.

DTF also indicated that a 'Program Review' had been undertaken in December 2008.

No details of the contents or scope of the reviews have been provided to the Committee. (See Section 6.3.3 of this Report for further discussion of the Gateway Review Process).

The response provided by DOH to the Committee's questionnaire gives no indication of any Gateway Reviews or other internal reviews having been undertaken.<sup>268</sup>

### 6.6.5 Alignment with the public interest and value-for-money

One aspect of term of reference (d) of the Inquiry requires the Committee to report on the extent to which the project has been developed and implemented in a manner which aligns with the public interest over the life-cycle of the project.

As mentioned earlier in Section 6.2, the public interest encompasses many aspects: effectiveness (i.e. the achievement of benefits and outcomes); value-for-money (i.e. the combination of economy, efficiency and effectiveness in the use of public resources); community consultation and stakeholder engagement; consumer rights; equity; privacy; and, security. Also as noted, transparency and accountability are important to ensuring that the public interest is well served.

265 *ibid.*, pp.8-9

266 *ibid.*, p.9

267 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.9

268 Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.13

A distinction has been drawn in term of reference (d) between public interest and transparency and accountability. However, it should be noted that the two are closely related and intertwined. In this report, the Committee will focus on issues associated with value-for-money and the achievement of objectives and outcomes, and transparency and accountability.

### Value-for-money and the achievement of benefits and specified outcomes

The Committee requested that DOH provide information about how the public interest has been served through the development and implementation of the HealthSMART Program and how value-for-money has been optimised.

DOH's response was limited indicating:<sup>269</sup>

- a statement that '*whole-of-life costs and benefits were not defined in the original funding submission and would have been difficult to clearly define*';
- the best value-for-money option would have been determined as part of the tender evaluation process based on price and qualitative criteria. No further elaboration is provided; and
- in terms of risk management, standard ICT contract protections were adopted to manage risks associated with the quality and timeliness of vendors.

The limited information available in relation to the identification of benefits and value-for-money, for a project that was approved to spend an original capital budget allocation of \$323.4 million, is considered unsatisfactory.

In October 2012, the Committee requested further details from DOH about the objectives and outcomes of the project, value-for-money and public benefit. In response, DOH provided the following comments:<sup>270</sup>

- with the exception of the clinical application, the HealthSMART program objective was to replace obsolete products in a specific agency subset of the Victorian health sector. This was achieved;
- the objective of the clinical system deployment was to establish a foundation for an electronic medical record and improve medications management. This was partly achieved; and
- products were selected in accordance with Government Purchasing Policy and were reviewed and endorsed by health agency chaired steering committees, Departmental Accredited Purchasing Unit, Victorian Government Purchasing Board and finally either the responsible Minister or the Secretary of DOH as specified in the *Financial Management Act*.

A simple assessment of what was planned against what was delivered within the approved budget would suggest that value-for-money has not been fully realised. However, it could also be argued that the original budget was over-optimistic due to poor initial planning and scoping. As noted, the Ombudsman reported that there was no business case for the HealthSMART Program and that the funding submission was based on a 'high-level strategy document containing a 14 page implementation plan'.

269 *ibid.*, p.6

270 *ibid.*, p.2

The Committee has not been able to assess what was in the original funding submission as the information has been deemed to be ‘Cabinet-in-confidence’. Discussion follows as to the importance of a business case to the achievement of objectives and specified outcomes and to optimising value-for-money.

### Absence of a detailed business case for the HealthSMART Program

The lack of detail provided by DOH in relation to whole-of-life costs and benefits, expected outcomes and value-for-money considerations reflects the absence of a detailed business case for the Program.

Evidence received from two of the vendor companies contracted to deliver the Client and Patient Management System and the Clinical System applications, indicated the following in relation to the measurement of benefits and outcomes:<sup>271</sup>

*Typically a business plan would set out the objectives of the project. I am not aware that there has been any of that or any benefits realisation subsequent to the project...what we are talking about here in HealthSMART is a standardisation project that has potential IT benefits if it is done well...one of the benefits of standardisation is that you have a core platform so that when you have an innovation you can do it once and apply it to many.*

Also:<sup>272</sup>

*...I do not think the customer is getting as much out of the software as they can, I truly believe the client cannot point to why they did it or what benefit they are getting from it.*

In relation to the Clinical System, the vendor advised the Committee that the implementation could have been improved by the government committing to the establishment of ‘baseline measurements of required metrics’ to ensure that benefits and outcomes could be measured.<sup>273</sup>

Despite the lack of a detailed business case for the HealthSMART Program, it would be unfair to say that the implementation of various systems had not resulted in some benefits and outcomes. However, these have not been formally evaluated by DOH.

As already noted, the main difficulties encountered in terms of delays and cost overruns related to the implementation of the Clinical System component of the HealthSMART Program.

The Clinical System application was intended to be implemented across ten health service providers at an original budget of \$50 million but, at the end of the Program in June 2012, the System had only been implemented in four health services at a reported cost of \$134.8 million.

Both the Auditor-General and the Ombudsman noted that the Clinical System component of the HealthSMART Program had the potential to deliver the most benefit to health agencies and patients. In his 2008 report the Auditor-General noted that medication error was a leading cause of adverse events in the healthcare sector in Australia ‘with 10-20 per cent of adverse events being drug related, and up to half of these preventable.’ In 2000, DOH estimated the annual cost of these adverse events in Victoria to total \$378 million. Other research in 2003-04 estimated the cost to be \$460 million.<sup>274</sup>

271 Mr J. Rice, CSC Corporation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects, transcript of evidence, 22 August 2012, p.7

272 *ibid.*, p.9

273 Cerner Corporation Pty Ltd, response to the Committee’s questionnaire, received 29 October 2012, p.5

274 Victorian Auditor-General’s Office, *Delivering HealthSMART — Victoria’s Whole-of-Health ICT Strategy*, April 2008, p.40

In evidence provided to the Committee in relation to the implementation of the Clinical System component of HealthSMART, the Chief Executive Officer, Austin Health, stated:<sup>275</sup>

*This project will deliver long term economic and environmental benefits for the Victorian community. Patient safety will be improved through timely access to electronic information, appropriate alerts and decision support. Medical error related to illegible orders and missed test results will be reduced. This will be to the benefit of patients treated in hospitals using this system.*

...

*Despite the delays and problems encountered it is the view of Austin Health that this project is a success and will deliver the predicated benefits and more.*

In assessing alignment with the public interest and value-for-money achieved through the HealthSMART Program, the Committee sought input from two of the health service agencies (Austin Health and the Royal Victorian Eye and Ear Hospital) in which the Clinical System application had been implemented. Austin Health participated as a lead health agency in the implementation and the Royal Victorian Eye and Ear Hospital is one of the specialist health services which participated in the initial roll-out.

### **Perspective of Austin Health on implementation of the Clinical System**

Austin Health provided a detailed and comprehensive response to the Committee about the agency's experiences in implementing the Clinical system and the benefits which have resulted to date.

Austin Health is of the view that the solution offered an integrated platform for the agency which will enable the delivery of a full electronic health record. The hospital is committed to continuing its relationship with the vendor and purchasing additional modules to support its activities. Austin Health advised that it is now one of the leaders of clinical systems implementation in Australia, hosting visitors from interstate and from other Victorian hospitals. Austin Health also stated that it is working towards a fully paperless environment and hopes to achieve a rating as an 'Electronic Medical Record Adoption Model, Level 6-7' hospital within the next two to four years.<sup>276</sup>

The engagement commenced in early 2009 with an Implementation Planning Study. The project formally commenced in November 2009 and was expected to be completed over 22 months. Austin Health advised the Committee that:<sup>277</sup>

*These timelines were heavily influenced by Government imperatives and funding cycles and were seen by AH as ambitious.*

Austin Health advised that the total project duration will be 44 months compared to the originally intended 22 months and the cost will total \$17.47 million compared with an initial budget of \$11.83 million. Most of the cost overrun related to salaries and wages associated with staff contract extensions and additional pharmacy resources associated with the medication build.<sup>278</sup>

275 Austin Health, response to the Committee's questionnaire, received 1 August 2012, pp.12-13

276 *ibid.*, pp.13-14

277 *ibid.*, p.1

278 *ibid.*, pp.5-6

The following observations were made in relation to the System implementation:<sup>279</sup>

- An internal audit of the Clinical System Implementation Project at Austin Health provided an overall rating of ‘Good’. The audit covered governance structures; project controls; stakeholder management and communication; implementation plans; quality checkpoints and criteria for each phase of the product implementation.
- Austin Health strongly disagrees with a comment made in the Ombudsman’s report that the system has a negative impact on patient safety stating that the issue was more to do with the steepness of the learning curve for certain staff using the new system. Austin Health noted that junior doctors were more comfortable with information technology and using the new system than the more senior medical staff.
- As the project implementation progressed, Austin Health developed the required knowledge, skills and experience to manage the system locally and therefore provide quicker response to user requests for changes.

Austin Health provided the following observations to the Committee on the functionality and benefits associated with the use of the Clinical application of HealthSMART:<sup>280</sup>

- The System manages more than 4,000 orders for pathology and radiology each day.
- The system is very flexible and can support various configurations and workflows.
- A Benefits Realisation Plan has been developed and a program is in place to collect data on benefits post-implementation. Preliminary observations of junior doctors’ efficiency in both surgical and medical units indicate:
  - reduction in time spent ordering pathology;
  - reduction in time spent ordering radiology; and
  - increase in time spent on discharge prescribing.
- A Pharmacy-led evaluation to measure the impact of electronic prescribing for discharge indicated:
  - a decrease in the use of error prone abbreviations;
  - improved consistency between the discharge medication regimen and the discharge summary sent to the GP;
  - significant reduction in corrections and additions to prescriptions to ensure reimbursement by Medicare Australia;
  - an increase in ward pharmacist time spent on discharge process; and
  - an increase in the rate of lower level interventions by pharmacists to correct discharge prescriptions. Changes have been made to address this issue and an audit is planned to assess the impact of the changes.
- An evaluation of the impact of electronic orders on workflows within the pathology Department showed:
  - the complexity of the workflow has reduced by 17 activities;
  - time taken to process a specimen is three times faster;
  - the average number of episodes that can be processed per hour has increased by 39; and

<sup>279</sup> *ibid.*, pp.7-10

<sup>280</sup> *ibid.*

- the staff required to process electronic requests has reduced by two FTE (full-time equivalent) staff.
- Other benefits which have been observed are:
  - staff processing radiology orders has been also reduced by two FTE staff;
  - scheduling of radiology exams has improved;
  - legibility of radiology orders has improved; and
  - the number of phone calls to radiology to enquire about the status of orders has reduced.
- In relation to inpatient medication and fluid balance functionality:
  - improved legibility of orders;
  - improved clinical accountability over the administration of medication;
  - reduction in time for pharmacists reviewing new orders;
  - improved supply of medications to wards;
  - reduced time spent locating drug charts;
  - elimination of fluid balance calculations tasks;
  - improved access to drugs information at the point-of-care;
  - ability to order from anywhere; and
  - elimination of drug charts re-writes for medical staff.

Austin Health stated to the Committee that the nursing staff at the hospital have reported that the implementation of the new system has been a positive experience and that it assists them in managing the wards more efficiently and will lead to increased patient safety.

Further, Austin Health advised the Committee that the implementation of the system has indicated that some clinical practices may not have been ideal previously, or may not have been consistent across the health service.

In relation to the performance of the vendor and satisfaction with the product, Austin Health advised the Committee that:

- the vendor has committed to working to develop solutions in response to a number of changes requested by Australian clients;
- some other useful support modules are available in the system but were not purchased in the State licence. Austin Health is developing a business case for the chemotherapy module but as yet, funding has not been identified; and
- Austin Health has independently purchased the Cerner Advanced Clinical Documentation module for progressive implementation commencing in 2012. The Cerner Emergency Department system will also be implemented in 2013 and the Cerner Surgical system is a high priority for the future.

## Perspective of the Royal Victorian Eye and Ear Hospital on implementation of the Clinical System

The RVEEH had responsibility for local delivery of the clinical application of HealthSMART as well as coordinating its activities with other health services, DOH and the vendor.<sup>281</sup>

The Chief Executive, the RVEEH advised the Committee that the original project timeline was quite ambitious. DOH intended the system to provide a ‘Statewide footprint’ (to be implemented across other health agencies) and as such the system was broadly based on the requirements of a general tertiary hospital and there was limited flexibility to adapt to local hospital requirements. This was especially an issue for the RVEEH which is a smaller scale specialist hospital.<sup>282</sup>

In December 2010, the RVEEH evaluated its initial implementation of the system through a Post-Implementation Review to assess performance against the original objectives. The Hospital also commissioned a review from a chartered accounting firm in April 2011 which provided a Remediation Plan which has been implemented. The Hospital advised that it has developed an ICT Strategy that is aligned with HealthSMART and the state-wide strategy. The Hospital has also committed to the progressive development and implementation of an electronic medical record using the standard International Healthcare Information and Management Systems Society (HIMSS) model of adoption.<sup>283</sup>

The RVEEH has identified the following impacts and outcomes from the implementation of the Clinical application.<sup>284</sup>

- in the initial post-implementation review, ‘improved prescription legibility’ was the only benefit fully delivered;
- there was an initial loss of 13.5 per cent in outpatients’ medical productivity which has since fallen to 8 per cent which is considered a typical impact following the implementation of an electronic medical record. Additional staff had to be employed to maintain the same throughput of patients; and
- main dissatisfaction with the system mostly comes from senior medical staff who find the system difficult to use. However, with familiarity, there has been some reduction in the level of dissatisfaction with the system.

The RVEEH identified the following challenges which presented during the implementation of the system:<sup>285</sup>

- the underlying ICT infrastructure required to support a sophisticated electronic Clinical system was underestimated and required substantial upgrade;
- governance and autonomy of separate health services impacted the state-wide approach to project development and delivery;
- Medicare currently requires a paper prescription to enable reimbursement. A significant factor in outpatient productivity at the RVEEH is related to issues associated with printing of prescriptions. Electronic hospital prescribing of outpatients will not become fully efficient until this matter is resolved;

281 The Royal Victorian Eye and Ear Hospital, response to the Committee’s questionnaire, received 3 August 2012, p.1

282 *ibid.*, pp.1-2

283 *ibid.*, p.4

284 *ibid.*, p.3

285 *ibid.*, pp.4-5



- the large number of visiting medical officers at the RVEEH who may only be in the hospital a few hours each week, has led to increased complexity in relation to training and skilling of those officers in the use of the system; and
- ongoing maintenance and support of electronic medical records are substantial and create funding challenges for health agencies.

### Comment from the vendor of the Clinical System

The Committee wrote to the vendor of the Clinical System, Cerner Corporation, seeking perspectives about the implementation of the project. The General Manager, Victoria, made an overall comment about what the project has achieved:<sup>286</sup>

*...there appears to be little recognition of the significant asset that has been created from this project. This project has effectively been the commencement of pharmaceutical informatics in this country in implementation of medications management across hospital inpatient and outpatient settings. The assets created and knowledge gained from this project has the potential to significantly and positively impact patient safety and experience across our nation and the resultant solution can be leveraged both further in Victoria and across the rest of Australia. The alignment with NeHTA standards will ensure interoperability of critical patient data between health care venues regardless of jurisdiction.*

It is noted that the NeHTA is the National E-Health Transition Authority, which has been established by the Australian, State and Territory governments to develop better ways of electronically collecting and securely exchanging information between health agencies.<sup>287</sup>

### 6.6.6 Maximising transparency and accountability

Term of reference (d) also requires the Committee to report on the extent to which the project has maximised transparency and accountability over the life-cycle of the project.

Issues associated with transparency and accountability are relevant over the entire life-cycle of the project from its inception and the decision-making which supported that process through the implementation and on-going operation of the infrastructure asset. The rationale and basis for decisions taken, public disclosure of contractual arrangements and the accuracy and completeness of accounting for investment expenditure are important components of public accountability and transparency. The adequacy of governance arrangements in place for the development and implementation of projects forms the basis of due and proper accountability.

#### Funding proposal and business case

*HealthSMART had no business case, despite seeking over \$300 million in funding. Instead the submission was based on a high-level strategy document and a 14-page implementation plan.*<sup>288</sup>

286 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, p.8

287 National E-Health Transition Authority, 'About Us', <[www.nehta.gov.au/about-us](http://www.nehta.gov.au/about-us)>, accessed 5 November 2012

288 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.23

The Victorian Ombudsman reports that only two options were presented to Government – do nothing or do HealthSMART.<sup>289</sup> However, this begs the question, who approved the Program to go forward on that basis? The Ombudsman states that the funding submission indicated that the, ‘do nothing’ option was not really an option. The only other option presented ‘*was to build a consistent ICT foundation across half of the Victorian public health service*’ and that the only risk identified with this option was cost.<sup>290</sup>

It seems that the Program was approved on this basis although the Ombudsman was unable to access material explaining how or why the approval was given. Also, this Committee has been denied access to the documentation supporting the original HealthSMART project proposal and so any conclusions are reliant upon the notions and presumptions of public servants about what was likely to be in the original proposal. Many of the witnesses questioned during public hearings pointed out that they were not associated with the project at that time. This included both representatives of public sector agencies and private vendors.

The Committee raised a number of questions with the Secretary, DOH about the contents of the original funding proposal. Unfortunately the current Secretary of DOH was not in the Department in 2003 when the original proposal was approved by Government.

In response to questioning about how a project proposal of this magnitude could be put to Cabinet without a detailed business case, the Secretary, DOH stated:<sup>291</sup>

*I am not definitive in saying that the work was not done. What I am saying is that a formal business case, as we understand business cases today, having gone through the project, was a failure in where this project has ended up when you look at it in hindsight. Was some financial modelling done? I am sure there was some financial modelling done because a costing was arrived at for a budget allocation of funds and, as has been gone through with the Ombudsman and the Auditor-General, the Auditor-General, I think, has made comment that the objectives of HealthSMART were actually very good and it was about taking the system forward.*

### Transparency of the decision-making process

The Ombudsman stated in his report on ICT-enabled projects that his investigation has been hampered by a lack of access to funding submissions to the cabinet budget committee. Investigators from his office were unable to assess the adequacy of the advice provided to Government by line agencies and the central agencies.<sup>292</sup>

At the public hearing a representative of the Ombudsman’s office stated:<sup>293</sup>

*One of the difficulties we had is that we were unable to access BERC (Budget and Expenditure Review Committee) submissions...so that made it difficult to see the advice that was provided to government... We would expect a business case to set out similar projects that have been implemented in either other national jurisdictions or internationally that have been completed in that sort of time frame so that there is evidence to support those assumptions, because without that I guess that puts BERC*

289 *ibid.*, p.25

290 *ibid.*

291 Dr P. Philip, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.4

292 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.13

293 Ms E. Barlow, Victorian Ombudsman’s office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.4

*in a very difficult position when you have public officers saying, 'Yes, we can do this in two years', and it seems largely based on hope and optimism rather than any evidence to support those assumptions.*

Questions asked of the Secretary, DOH, at the August hearing were also inconclusive as to the extent of the information originally provided to Government in support of the HealthSMART project. The Secretary stated:<sup>294</sup>

*I think it would be erroneous to interpret my comments as that there was no work done, that there was a government decision that the department just retrofitted and implemented. I do not think that was the case. The government had a strategy and a funding discussion and a decision made and there would have been analysis provided as part of that for the government to make the decision.*

### Governance arrangements

DOH advised that the Secretary of the Department was the Chair of the Board of Health Information Systems, DTF and the Department of Premier and Cabinet (DPC) were members of this Board and also system users were strongly represented.<sup>295</sup>

As noted, HealthSMART applications were delivered through a tripartite contract arrangement between vendor companies, DOH and the health service agencies. There was a central heads agreement between DOH and vendors in addition to implementation contracts between hospitals/community health services and vendors.<sup>296</sup>

This led to a complex governance structure with DOH sitting between the vendor and health agencies that were accountable to their own boards of management and to DOH. Health services were required to prepare their own individual business cases for the system components and seek approval from their own boards. This also delayed the implementation of systems.<sup>297</sup>

The findings of the Ombudsman, the Auditor-General and evidence received by the Committee indicated that the governance arrangements in place to deliver the HealthSMART Program were thorough but sometimes overly bureaucratic. For example, the Committee heard evidence that the complex 'tripartite' contractual arrangements between DOH, vendor and health services added a certain level of bureaucracy to the process which slowed implementation.

Three parties involved in the implementation process was cumbersome in that requests for changes were protracted through DOH and then to the vendor. The Chief Executive Officer, Austin Health, advised the Committee that *'the change request process established by the DOH was initially onerous, overly bureaucratic and slow and was hampered by the fact that all implementing health services had to agree to every change.'*<sup>298</sup>

Austin Health advised that a number of initiatives were implemented in 2011 to streamline the process and enable changes to be made locally.

294 Dr P. Philip, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.7

295 Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.14

296 *ibid.*

297 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, p.4

298 Austin Health, response to the Committee's questionnaire, received 1 August 2012, p.4

The vendor of the Clinical System advised that the eventual adoption of a more agile change request process for changes required by health services to the design of the System, in the latter part of the project, dramatically improved turnaround times.<sup>299</sup>

### Accuracy and completeness of accounting for Program expenditures

Comments questioning the adequacy of the accounting for the expenditures related to the Program were originally raised by the Auditor-General in his April 2008 report where he assessed accounting as poor within DOH and health service agencies. The report states:<sup>300</sup>

*OHIS (Office of Health Information Services) does not fully account for agency costs in its budget for the program, nor does it monitor agency expenses. Therefore, OHIS is not able to robustly estimate budgets or understand the program's true cost.*

In addition the Auditor-General's report provides details of the approved project budget and the source of funds for the project. It shows an originally approved budget in 2003 of \$323.4 million (Treasury \$138.5 million; DOH \$112 million; and health agencies \$72.9 million) and a revised budget in June 2006 of \$310.7 million (with an additional \$34.8 million from DOH and a revised contribution from health agencies of \$25.4 million).<sup>301</sup>

The report states that the revised budget in June 2006 reflected scope changes and the forecast total costs expected at the time.<sup>302</sup>

The Ombudsman's report in November 2011 puts the original capital budget for the project at \$323 million with a further \$104 million provided for operating costs. The Ombudsman also states that DOH advised that a further \$34 million should be included in the total cost of the project as this expenditure related to the support of HealthSMART services but had not been specifically recorded against the project. The report states that DOH estimates the total spend by the end of 2011-12 to be around \$427 million.<sup>303</sup>

Interestingly figures provided in DOH's response to the Committee requesting details of the approved aggregate capital and operating budgets indicate a total capital budget of \$333.2 million and a contribution to operating costs for shared services of \$18.5 million in 2008-09 increasing to \$20 million ongoing in out years.<sup>304</sup> This indicates that there is some difficulty in obtaining a total cost for the project particularly as some figures relate to the capital cost of the project and some relate to the ongoing operating costs associated with the project.

There are also additional costs associated with the implementation of the HealthSMART Program applications which have been borne by individual health service agencies where the funding provided for the upgrades of IT equipment was inadequate.

## 6.6.7 Competencies and skills on the project

The Committee notes two observations made in reports by the Auditor-General and the Ombudsman in relation to relevant skills and expertise on the HealthSMART Program.

299 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, p.4

300 Victorian Auditor-General's Office, *Delivering HealthSMART — Victoria's Whole-of-Health ICT Strategy*, April 2008, p.19

301 *ibid.*, p.18

302 *ibid.*, p.16

303 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.72

304 Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.2

The Auditor-General's 2008 report included some comment on a number of human resource issues which the Program was experiencing. The Report noted:<sup>305</sup>

*OHIS (Office of Health Information Systems) has found it difficult to recruit people with sufficient experience and skill for several of the ICT technical specialist and senior project management positions, due to salary band and headcount restrictions within the Department branch and division structure. To address this, OHIS has had to rely heavily on contract staff and secondments from health agencies to fill key positions.*

*Not having access to technical expertise and project managers experienced in large ICT projects has caused delays in the procurement and implementation of HealthSMART applications and HealthSMART shared services.*

*Key positions, such as the portfolio manager and account manager for clinical systems, are currently vacant. This capability gap exposes the program to further risks of delay to the implementation and delivery of its largest and most significant application.*

No recommendation was made by the Auditor-General in relation to this issue.

The Ombudsman stated in his November 2011 report that the DOH experienced significant problems with the expertise and quantity of staff provided by the vendor of the clinical system. As a result, the former Secretary of DOH became actively involved in the project after ongoing poor vendor performance and demanded that better resources be provided to the project.<sup>306</sup>

The Committee sought the perspectives of DOH, Austin Health, the RVEEH, and two vendor companies in relation to the competencies and skills available throughout the development and implementation of the HealthSMART Program.

DOH offered the following comments and observations in relation to questions from the Committee on skills and competencies applied to the Program:<sup>307</sup>

- in accordance with government policy, specific probity support was engaged for the overarching program as well as procurement specific advice. Legal support was also engaged to provide advice in this area;
- the Program demonstrated strong technical skills in managing the infrastructure part of the project. The project has developed a shared service environment that is operating effectively with good response time and other user performance;
- the Program required better skills, competencies and procedures in relation to the development of a business case;
- a variety of IT specialists were engaged on the Program including: a project manager; applications specialists; systems architect; integration specialists; security specialists; and storage specialists;
- input to the project from representatives from hospitals included: application users such as finance and supply managers; clinicians; doctors; health information managers; local IT support staff;

305 Victorian Auditor-General's Office, *Delivering HealthSMART — Victoria's Whole-of-Health ICT Strategy*, April 2008, p.50

306 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.17, 71

307 Department of Health, response to the Committee's questionnaire, received 20 July 2012, pp.7, 10-11

- the tender selection panel and evaluation teams included technical and functional experts; probity support; legal advisors; contract negotiators; subject matter experts; and representation from hospitals and community health centres; and
- implementation teams comprised vendor subject matter experts; health centre project leaders and support staff and HealthSMART portfolio representatives.

Representatives of two vendor companies were asked to provide their perspectives in relation to the relevant skills and capacity of the government on this project. CSC Australia, the vendor company delivering the Client and Patient Management System, stated at the August 2012 hearing:<sup>308</sup>

*... a lot of my interaction was obviously with the project directors and project managers of HealthSMART. In terms of their capabilities then, I did not perceive that there was any weakness or lack of strength in that area.*

...

*... in terms of the capability and skill sets of the government, and HealthSMART in particular, ... I thought the people I worked with were competent people.*

The Victorian General Manager, Cerner Corporation, the vendor company for the Clinical System, stated:<sup>309</sup>

*Generally speaking, Cerner believes that the public sector personnel involved in the project were competent. Given this was a ground breaking project ... expertise in implementing the aggressive scope and competency certainly increased during the lifecycle of the programme. The programme was also challenged with relatively high staff turnover of public sector personnel which created a need to re-build competency and expertise.*

The Committee also heard evidence from CSC Australia that staff turnover had been an issue on the project, stating at the public hearing that:<sup>310</sup>

*It was evident that there was a high turnover of staff in the HealthSMART services, and I think there are probably a couple of reasons for that. One was that it was a high-pressure environment in HealthSMART services, because the time lines were aggressive ... So generally those guys were working very long hours, because when you are trying to upgrade in a production environment you can only do it after hours, so there was a lot of night work and some weekend work...*

...

*Obviously those guys were coming under increasing pressure, because they were getting their brains filled with us trying to train them on the product as well, plus all the internal pressures.*

308 Mr G. White, CSC Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.3

309 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, p.3

310 Mr G. White, CSC Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.8

The Chief Executive Officer, the RVEEH, had noted that the Hospital's relationship with staff in DOH had been very collaborative and the project team in the Department had displayed a 'robust project management framework' throughout the Program implementation.<sup>311</sup>

### 6.6.8 Better practice

There are a number of difficulties and complications which arose during the implementation of the HealthSMART Program. Many of these are inter-related and have impacted detrimentally on project timelines and the ability of the HealthSMART Program to achieve all the potential benefits, in particular, full implementation of the Clinical System across all ten health services.

These issues are covered in the following paragraphs and indicate areas to address in the development and implementation of future similar projects.

#### Poor initial planning and risk implications

Most of the criticisms directed at the HealthSMART Program by the Auditor-General and the Ombudsman stem from what they describe as inadequate initial planning. There are a number of things which were identified as the project proceeded through implementation which if they had been identified up-front during the development and planning stage could have been better managed and mitigated as the Program was implemented. This particularly applies to the Clinical System which experienced the most problems during implementation.

Both the Auditor-General (in 2008) and the Ombudsman (in 2011) highlighted the issue of poor planning and lack of a realistic budget .

*The original HealthSMART budget, involving health agency co-funding capacity, was not realistic. Lack of certainty across health agencies about costs and funding sources have inevitably led to delays in implementation.*<sup>312</sup>

*Poor planning has handicapped the HealthSMART program. The project costing and timelines were ambitious and the Department of Health (DOH) seriously underestimated the size of the task.*<sup>313</sup>

The lack of detailed initial planning meant that a number of factors and risks were not adequately considered prior to implementation. These were:

- the size and complexity of the program;
- the variation in business processes between health agencies and the impact this would have on the decision to adopt a state-wide build approach to the build of systems;
- the extent of change required to the behaviour and attitude of clinicians to IT systems;
- the condition and capability of the existing IT infrastructure in health agencies; and
- the lack of an Australian medical and pharmaceutical taxonomy reference for the Clinical System component of the project.

These are discussed in the following sections.

311 Ms A. Clark, The Royal Victorian Eye and Ear Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.9

312 Victorian Auditor-General's Office, 'Delivering HealthSMART – Victoria's Whole-of-Health Strategy', media release, April 2008

313 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.69

## Size and complexity of the total HealthSMART Program

The point was raised by the Ombudsman in his report that the funding process encourages departments to promote large projects in order to attract scarce capital funds from Government.<sup>314</sup>

Implementing the system all at once increased the difficulties associated with managing the project. There has been some evidence received by the Committee to suggest that it may have been more manageable in hindsight to pilot the project in one hospital and to then test it thoroughly before rolling it out to other health services.

## State build approach

The HealthSMART Program was to be delivered as a ‘State-wide footprint’. This means that systems would be developed as a common build which could then be implemented many times. This approach was aimed at standardising systems across the health sector.

The experience from the program implementation indicates that while the theory was good, the reality was different and probably not fully appreciated during the planning phase of the project.

The vendor delivering the Client and Patient Management System stated at the hearing:<sup>315</sup>

*I think the reality is while we all like to think that hospitals and agencies do processes the same way, they do not.*

...

*... therefore when we started to implement it in agencies, we started to come across issues that they do not admit patients that way, they do not discharge patients that way, they do not transfer patients that way.*

The vendor advised that if the decision is to develop a common system which will be implemented across a number of separate agencies then there should be common business processes and practices across those agencies. Variations add complexity, time and cost.

Evidence provided by the RVEEH indicated that while this approach was aimed at achieving ‘economies of scale’ it perhaps would have been better to standardise information and reporting processes and ensure that systems were able to interface and share information rather than standardising IT systems within the hospitals.<sup>316</sup>

The Chief Executive, Austin Health, informed the Committee that the decision to adopt a State build approach to the HealthSMART clinical system was good because it was aimed at ensure some degree of consistency and commonality across health services which would provide benefits for staff and patients moving between health services. However, the view was that the development should have been undertaken by a lead hospital rather than DOH and based on an existing build from elsewhere in Australia.<sup>317</sup>

314 *ibid.*, p.28

315 Mr G. White, CSC Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.5

316 Ms A. Clark, The Royal Victorian Eye and Ear Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.7 and Cerner Corporation Pty Ltd, response to the Committee’s questionnaire, received 29 October 2012, p.3

317 Austin Health, response to the Committee’s questionnaire, received 1 August 2012, p.13



This comment was supported by the vendor of the Clinical System, who advised that there would have been less usability issues and delays if the State-wide footprint had been designed and built within a lead health service rather than in a ‘lab’ type environment.<sup>318</sup>

At the August hearing, the Secretary, DOH, stated:<sup>319</sup>

*If we were doing the project today, given the sophistication now of understanding trials and pilots, we would recommend pilots. In 2003 generally in the policy debate – policy formulation and policy design – pilots were still coming up and were just starting to be utilised. In hindsight, yes, we should have implemented a pilot, but I cannot speak for the people back in 2003 in terms of their stock of knowledge of the understanding of pilots. Certainly if a project or something like this was being delivered today, yes, we would pilot it.*

### The Program was really a ‘change management’ project

The health sector is historically the last sector to fully embrace technology as part of its business and support systems. This has mainly been due to the limited resources available to health services and the competing needs for those dollars.

*IT on its own is relatively easy these days... what we are actually talking about here is a change management program. In my opinion IT only exists to automate business processes that have been around for years anyway ... Healthcare is one of the last industries to really embrace IT, and it is really because of the competition for scarce funding. IT is still viewed as a cost by many organisations.<sup>320</sup>*

However, as mentioned by DOH and noted by the Auditor-General many administrative systems in health services were becoming steadily obsolete and inefficient. However, the Committee heard that the HealthSMART Program was not just about new machines it was about new methods which required attitudinal changes and changes in behaviour of staff within health agencies. The learning curve associated with clinicians’ use of the new system was underestimated. The evidence received by the Committee indicated that this was often more difficult for senior clinicians than for junior medical practitioners who were more comfortable using modern IT applications.

In addition, Austin Health informed the Committee that the training and support requirements for staff implementing this system were identified by the Hospital in its business case for the system but ‘were not fully appreciated by the DOH.’<sup>321</sup>

Evidence received from two of the vendor companies was also critical of the extent to which end users had been consulted in the development of the Program.

The Patient and Client Management System vendor stated there had not been a wide-enough community of stakeholders engaged up-front in defining functional specifications and needs.<sup>322</sup> Cerner Corporation who provided the Clinical system was also critical of the level of

318 Cerner Corporation Pty Ltd, response to the Committee’s questionnaire, received 29 October 2012, p.5

319 Dr P. Philip, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.7

320 Mr J. Rice, CSC Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.11

321 Austin Health, response to the Committee’s questionnaire, received 1 August 2012, p.3

322 Mr G. White, CSC Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.6

engagement with clinical staff (i.e. ultimate end users) in the design from the beginning of the project.<sup>323</sup>

### Previous poor investment/under investment in IT infrastructure in hospitals

Many hospitals have had a long way to go to bring their IT platforms/infrastructure up to speed.

The Chief Executive Officer, Austin Health, informed the Committee that the initial planning by DOH failed to give recognition to the poor state of existing IT infrastructure at the Hospital. This was not realised until after the Implementation Planning Study had been undertaken within the agency. Significant investment was required to bring the infrastructure up to a standard capable of supporting the system.<sup>324</sup>

The vendor of the Clinical System commented that the original program budgeted for the Clinical Systems implementation but did not adequately consider local ICT infrastructure requirements, which then had to be added to the scope of the project adding to both time and cost.<sup>325</sup>

### Adapting an overseas product to suit local conditions - Australian medical taxonomy

The Clinical System of the vendor was originally developed in the United States. The Committee has been advised that an extensive amount of work was required to embed Australian Medical Terminology into the system and to ensure that the system would comply with the Pharmaceutical Benefits Scheme rules. The complexity of this process was seriously underestimated.<sup>326</sup> Also it was advised that the 'Australian Medicines Terminology' being delivered by the National E-Health Transition Authority was later than expected and also needed substantial revision which contributed to project delays.<sup>327</sup>

The vendor of the Clinical System stated that the decision to source the medications catalogue for the System from the Australian Medicines Terminology (AMT) was the right decision. However, a significant amount of work was required by pharmacists in the lead hospitals to *'convert it from a product based taxonomy to a form that was clinically appropriate in an Acute care setting.'*<sup>328</sup>

### Structure of the contractual relationship was complex

The vendor company delivering the Client and Patient Management System was critical of the way the contract was established, stating that usually contracts involve a direct relationship between the vendor and the client, however, with HealthSMART applications, the contract was a three-way arrangement between the vendor, DOH and individual health agencies. The

323 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, pp.2, 5

324 Austin Health, response to the Committee's questionnaire, received 1 August 2012, p.3

325 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, pp.2, 5

326 Austin Health, response to the Committee's questionnaire, received 1 August 2012, p.3

327 Ms A. Clark, The Royal Victorian Eye and Ear Hospital, response to the Committee's questionnaire, received 3 August 2012, p.2

328 Cerner Corporation Pty Ltd, response to the Committee's questionnaire, received 29 October 2012, p.5

vendor had a contract to deliver the ‘state-wide footprint’ to HealthSMART and also a contract to implement the system in individual health agencies.<sup>329</sup>

This ‘tripartite’ contractual arrangement reflected the governance arrangements within the health sector and the decision of DOH to adopt a state-build approach to the Program but added another layer of complexity to the arrangements which also slowed project implementation.

### **Uncertainty about funding impacts the effectiveness of IT systems**

The Auditor-General and the Ombudsman both noted that the uncertainty about funding for the implementation of systems and funding to support ongoing operations and maintenance led to delays.

The vendor of the Patient and Client Management System has also indicated that concerns about the adequacy and certainty of future operating budgets, funding for training requirements and system enhancements have all impacted the effectiveness of the System implementation and resulted in trade-offs.

## **6.7 The myki ticketing system project**

### **6.7.1 Committee’s approach**

The Committee sent a list of questions focussed on the details of term of reference (d) to the Department of Transport (DOT), the Transport Ticketing Authority (TTA), the Department of Treasury and Finance (DTF), the Victorian Auditor-General’s Office (VAGO) and the Victorian Ombudsman about the development and implementation of the myki ticketing Project. Public hearings with representatives from these agencies and also with representatives of the vendor contractor Keane Australia Micropayment Consortium (Kamco) were held in mid-August 2012 and also on 8 October 2012.

These responses and transcripts from the hearings have been used to prepare the information presented in this section of the report.

### **Observations on the project by Committee’s consultant**

Evans & Peck provided the Committee with a series of observations about the myki project linked to the various stages of the project. These are shown in Table 6.7 below.



<sup>329</sup> Mr G. White, CSC Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.3

**Table 6.7 Observations on performance of myki by stage**

Stage	Observations
Conceptualise	<ul style="list-style-type: none"> <li>• Public announcement of major project funding prior to business case development. Government didn't fully understand what it was committing to.</li> <li>• Insufficient rigour applied to exploration of alternatives to the fully open-system architecture approach.</li> <li>• There needed to be a better understanding about the lock-in risks associated with vendor proprietary solutions versus open-architecture and the consequences of adopting architecture (in terms time, cost and complexity).</li> <li>• The project was conceived, managed, procured and delivered as if it were a physical asset, not a software engineering exercise. Given the high level of complexity and uncertainty, the project may have benefited from a staged commitment to the vendor, with appropriate exit conditions (similar to Early Contractor Involvement model).</li> <li>• ICT capability and capacity did not reside within the commissioning agency.</li> </ul>
Prove	<ul style="list-style-type: none"> <li>• Failure to predict time and cost accurately (optimism bias) indicates that insufficient investment or skill (or both) was invested at the front end business case stage.</li> <li>• The two year timeframe established by the TTA and agreed by Kamco had not been tested. The underestimation in complexity and time may have been avoided had there been rigorous benchmarking of similar projects implemented in other national or international jurisdictions (the much simpler Oyster system in the UK took seven years to implement).</li> <li>• Reluctance to move away from the existing ticketing framework created unnecessary system complexity with questionable benefits to the public and the government. There did not seem to be an understanding within government around the immense complexities involved for system to capture multiple fare types, multiple zones and multiple concessions. If it had been simplified earlier, it may have been delivered more quickly and for less.</li> <li>• The decision to pursue outcome-based requirements rather than functional requirements meant that the risks and consequences were not fully explored or understood.</li> </ul>
Procure	<ul style="list-style-type: none"> <li>• The specification was very poor, and the contract was an outcomes-based contract rather than a requirements-based contract. Given the system complexity that was being undertaken, it would have better served both government and the contractor if more time had been invested in the beginning to give substance to the requirements before commencing system development.</li> <li>• Vendor had no track record on a proven operating system of this kind in operation (all other unsuccessful bidders did). Failed the public interest test as a result.</li> <li>• Insufficient understanding of the risks associated with ICT project led to an inappropriately procurement approach. Fixed tender approach is not suitable for risky projects that are difficult to manage on a transaction basis.</li> <li>• Interaction with tenderers during tender phase was insufficient to allow tenderers to appreciate the scale, complexity and requirements of the project, and provide the government with an adequate understanding of what the tenderers were offering.</li> </ul>
Implement	<ul style="list-style-type: none"> <li>• The government was not sufficiently skilled in system integration and did not adequately understand requirements for management to be able to fulfil their role on the project.</li> <li>• Significant changes to key personnel exposed the project to greater risks than if it had had a consistent, high quality team running it.</li> <li>• The majority of cost over-run resulted from the need to operate Metcard for an extended period due to an under-estimate of delivery timeframes.</li> </ul>

Stage	Observations
Realise	<ul style="list-style-type: none"> <li>• There are more than 26,000 devices system-wide and more than 800 retail outlets. The system copes with 68 passenger types and 78 zones and executes 150 business rules each time a card is scanned, which constitutes around 1.07 million fare transaction-type permutations, making it one of the most complex smart card ticketing solutions in the world.</li> <li>• The state owns the architecture and is not beholden to the owner of a proprietary system, which provides flexibility for future upgrades and development.</li> <li>• The myki system is used by more than 90 per cent of the public transport patrons in metropolitan Melbourne as well as regional buses and processing more than three million transactions per day, equivalent to more than a million touch-ons per day.</li> <li>• Given alternatives to the largely bespoke, open-architecture systems were not fully explored, it is difficult to ascertain whether an off-the-shelf system may have led to better value-for-money outcomes for the state.</li> </ul>

Source: Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, pp.39-40

## 6.7.2 Project synopsis

In 2002 the former Government's *Linking Victoria* policy committed to developing a smartcard public transport ticketing system to replace the Metcard system, due to expire in 2007. The TTA was established in 2003 with the prime purpose of procuring the new public transport ticketing system.

The Committee was advised that the overriding objective of the ticketing system project was:<sup>330</sup>

*... to deliver an effective and reliable ticketing solution that meets or exceeds the needs of public transport customers, operators, Government and other stakeholders.*

To achieve this overall objective, the TTA established a number of project objectives as follows:<sup>331</sup>

- high levels of performance and reliability;
- smooth customer transition from Metcard;
- timely delivery;
- flexibility for future extension; and
- value-for-money through:
  - appropriate risk allocation;
  - a procurement approach which creates competitive tension;
  - scope for commercial and technical innovation; and
  - the opportunity to develop future commercial and Government applications following full implementation of the transit application.

330 Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, p.5

331 *ibid.*, pp.5-6

## Project costs

In 2005, an initial budget of \$998.9 million was approved for the myki project. Since that time, the project has faced '*various technical challenges and delays*' which has resulted in additional funding being allocated to the project in 2008 and 2011.<sup>332</sup>

Information on the approved budget and budget variations for the myki project as provided by DTF are presented in Table 6.8 below.

**Table 6.8 myki project – approved budget and variations**

Project phase	Initial approved budget (\$ million)	Approved variation (\$ million)	Approval date	Revised approved budget (\$ million)	Actual costs at 30 April 2012 (\$ million)
Project/Service delivery <sup>(a)</sup>	998.9				911.1
		352.8	2008	1351.7	
Business case	(a)				
Tender process	(a)				
Contract development and management	(a)				
Project service delivery	(a)				

(a) Figures provided were not broken into individual project phases.

Source: Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.20

The TTA provided the following explanations for the increases in the project budget:<sup>333</sup>

- an additional budget allocation of \$352.8 million was approved in 2008 for costs associated with scope changes (e.g. changes to the myki card specification; additional equipment requirements due to increased number of trams and buses; project delays (including costs of keeping the Metcard system operating for an additional period); and greater than estimated costs for equipment installation on trains, trams and buses; and
- in 2011 a further increase in budget of \$166.5 million was approved, again due to scope changes (including the installation of additional machines) and another \$60 million to extend the operation of Metcard until the end of 2012.

Table 6.9 shows the original and revised budget expenditure for the myki project as set out in the Auditor-General's *Report on the Annual Financial Report of the State of Victoria, 2011-12*.

The Committee notes that delays in the implementation of the project have increased the budgeted cost for the operation of Metcard from an initial budget of \$41 million (for the period 2005 to 2007) to an expected \$311 million for the period 2005 through to 2013 (i.e. a 658 per cent increase).<sup>334</sup>

332 *ibid.*, pp.13-14

333 *ibid.*, p.14

334 Transport Ticketing Authority, response to the Committee's questionnaire, received 2 November 2012, p.2

**Table 6.9 myki project – budget, actual and committed expenditure to 30 June 2012**

Category	Original budget 2003 (\$ million)	Revised budget 2008 <sup>(a)</sup> (\$ million)	Revised budget 2012 <sup>(a)</sup> (\$ million)	Actual expenditure (\$ million)	Committed expenditure (\$ million)
Capital expenditure	283.3	460.4	610.6	402.3	99.0
Operating expenditure <sup>(b)</sup>	715.6	891.3	907.6	556.4	209.7
<b>Total</b>	<b>998.9</b>	<b>1,351.7</b>	<b>1,518.2</b>	<b>958.7</b>	<b>308.7</b>

(a) For the period to 2017.

(b) Includes operating costs of myki and Metcard.

Source: Victorian Auditor-General, *Auditor-General's Report on the Annual Financial Report of the State of Victoria, 2011-12*, November 2012, p.21

Also the cost of civil works (capital cost of the installation of equipment at stations and on an increased number of trams and buses) has increased from an initial budget in 2008 of \$22 million to \$145 million in 2012-13 (i.e. a 559 per cent increase).<sup>335</sup>

DOT and the TTA have advised the Committee that the current approved budget for the project is \$1.52 billion, which includes costs associated with:<sup>336</sup>

- operating the Metcard system from 2005 until the end of 2012;
- developing and installing the myki ticketing system;
- operating the myki ticketing system until 2017; and
- the TTA's costs.

The Committee considers that there may have been a view held by the public that the total expected cost was lower than what was originally expected by DOT. This was a result of the separation of total cost into capital expenditure and operating expenditure, which was not discussed, for example, in the media release of July 2005:<sup>337</sup>

*Premier, Steve Bracks, today announced that Kamco had been awarded a \$494 million contract to implement the smartcard ticketing system...*

During the Committee's 2006-07 Budget Estimates hearing in June 2006, the then Minister for Transport had referred to the same contract, stating that:<sup>338</sup>

*You will recall that last year the government announced that it had awarded a \$494 million, 12-year contract to a company called Kamco. Its responsibility was to design, build and operate the new public transport system.*

The figures in Table 6.9 above show that the capital cost was in fact less than half of the total costs of the system. In addition, the operating costs in the Auditor-General's report include recurrent costs of operating the Metcard system and other government expenditure. This contributes to a higher overall identification of total costs associated with the myki project.

335 *ibid.*, pp.1-2

336 Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, pp.6-7

337 Mr S. Bracks MP, Premier, *Smartcard Ticketing Takes Major Step Forward*, media release, 12 July 2005

338 Hon. P. Batchelor, MP, Minister for Transport, 2006-07 budget estimates hearing, transcript of evidence, 9 June 2006, p.11

## Project timelines

Table 6.10 below shows the project timelines provided by DOT, and the TTA timelines:

**Table 6.10 myki project – approved timelines and variations**

Project phase	Initial approved timelines	Approved extensions	Reason for extension	Expected/Actual timelines
Business Case	(a)	(a)	(a)	Approved by TTA Board April 2004.
Tender	Commenced July 2004. Target completion January 2005.	(a)	(a)	Contract awarded June 2005.
Contract development	(a)	(a)	(a)	Contract authorised July 2005.
Project delivery/ Build Phase	Full system operation to commence March 2007. System to operate for 10 years to 2017.	2008 – Timeline extended to 2009. 2011 – Timeline extended to 2013. Operating timeline extended to 2019.	In 2011, Government negotiated a revised contract for the build phase.	Roll-out to be completed in Melbourne by the end of 2012. V/Line inter-urban roll-out completed first half of 2013. Contract to operate till 2019 with two-year option.

(a) Not provided.

Source: Department of Transport and the Transport Ticketing Authority, response to the Committee’s questionnaire, received 18 July 2012, p.15

The original timeline for the delivery of the myki project was two years. The project has now been running for eight years.

### 6.7.3 The Department of Treasury and Finance’s involvement in the project

DTF advised the Committee that its role and formal involvement in projects varies depending on the nature of the project but historically higher risk projects have garnered more involvement from the Department. DTF advised that it provides advice to inform Government deliberations and assist decision-making processes at key stages of the projects. The nature of this advice is commercially sensitive and subject to Cabinet-in-confidence provisions and therefore unavailable to the Committee for review.<sup>339</sup>

In relation to the myki project, DTF advised that while the project was not a PPP project and the Public Interest Test was not required to be formally prepared, the Department had considered the public interest in providing its advice to Cabinet Sub-committees.<sup>340</sup>

DTF states that it has ‘*monitored the TTA and the implementation of the myki project since the project was first scoped as a major project during 2003.*’ Advice was provided to Government through a quarterly reporting process. DTF made the following additional points in relation to its involvement in the Project:<sup>341</sup>

339 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.1

340 *ibid.*, p.10

341 *ibid.*, pp.10-12



- DTF has worked collaboratively first with the former Department of Infrastructure and subsequently DOT and the TTA to address strategic options, review the business case, analyse procurement options, support commercial negotiations and monitor the implementation of contractual arrangements;
- DTF's involvement has varied to suit the stage of the project life-cycle, including: observer membership of the TTA Board; participation in project steering committees; reviewing progress reports;
- DTF has engaged commercial advisors at times to support its advice to Government on technical, contractual, financial and negotiation matters;
- DTF has maintained oversight of the TTA on behalf of the Treasurer as a shareholder of the entity;
- DTF has facilitated Gateway Reviews of the myki Project;
- after 2010, DTF expanded its project monitoring and review functions in relation to the myki Project. The Project is now monitored under the High-Value and High-Risk Framework; and
- DTF led negotiations with the vendor following the Government's review of the Project in 2010-11.

#### 6.7.4 Project reviews

The Committee asked the TTA, DOT and DTF to provide copies of any reviews which had been undertaken in respect of the Project or contractual arrangements for the Project such as peer reviews, Gateway Reviews or any other external reviews. The following information was provided to the Committee.

##### Internal reviews

The joint response provided by DOT and the TTA indicated that the first 'project reviews' were undertaken by the Project Review Committee, within the former Department of Infrastructure. This involved an internal review of the 'strategic fit' of the project in December 2003 and another review in June 2004 of options relating to the proposed procurement strategy and project issues and costings.<sup>342</sup> It is noted that these are the only internal (departmental) reviews undertaken of the Project over its lifetime to date.

##### Auditor-General's review

In 2007, the Auditor-General conducted an audit of the tender process for the new ticketing system to confirm that it was properly conducted and to identify lessons learnt and areas of good practice for the future management of major tenders.<sup>343</sup>

The Auditor-General concluded that the TTA established an '*innovative tender process and largely achieved its objectives for the procurement phase of the project*', noting that:<sup>344</sup>

- the tender was timely compared to other ticketing tenders;

<sup>342</sup> Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, p.24

<sup>343</sup> Victorian Auditor-General's Office, *New Ticketing System Tender*, October 2007, p.16

<sup>344</sup> *ibid.*, p.53

- the TTA was successful in attracting more tenderers than other ticketing tenders have received; and
- the tender prices were reduced by around 35 to 45 per cent during the tender process.

The audit did identify some areas of probity management capable of improvement in particular ensuring that the probity protocols work to minimise the risk of actual or perceived conflicts of interest. The Auditor-General found no evidence of unfair or biased treatment of tenderers but did note that the TTA had not managed perceived conflicts very effectively.<sup>345</sup>

## Gateway Reviews

The Auditor-General's audit of the ticketing system tender found that two Gateway Reviews had been undertaken in relation to the project. The first, in June 2004, reviewed the procurement strategy and the second review, in May 2005, covered the tender decision.<sup>346</sup>

The Auditor-General found that both Gateway Reviews identified examples of good practice and around 50 recommendations were put forward by the Gateway Review Team for action by the TTA prior to proceeding to the next stage.<sup>347</sup>

The joint response from DOT and the TTA indicated that the new ticketing system project had undergone four Gateway Reviews:<sup>348</sup>

- in 2004, Gateways 2 and 3 – Business Case and Readiness for Market (Procurement strategy) – the first review rated the project as 'Amber'. The final Gateway 2/3 review rated the project 'Green';
- in 2005, Gateway 4 – Tender Decision – this review rated the overall status of the project as 'Amber' i.e. the project should proceed, with recommended actions to be carried out prior to the next Gateway Review; and
- in October 2009, Gateway 5 – Readiness for Service – this review rated the overall project as 'Amber'.

The TTA advised that action had been taken in response to the findings and recommendations of each of the reviews. The reports have not been provided to the Committee (see Section 6.3.3 of this Report).<sup>349</sup>

The TTA did not provide any details about the issues which were required to be addressed at each Gateway. The project proceeded as 'Amber' through both Gates 4 and 5.

## 2010-11 Government review

DTF has informed the Committee that:<sup>350</sup>

*In 2010, the Government instigated a comprehensive review of the New Ticketing System project. DTF commissioned Deloitte Australia to provide independent consulting input to the review. Alco Consulting, a specialist ticketing system advisor,*

345 *ibid.*, p.v

346 *ibid.*, p.48

347 *ibid.*

348 Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, p.23

349 *ibid.*

350 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 July 2012, p.22

*was also engaged by DTF to provide specialist ticketing system advice as part of the Deloitte Review.*

DTF has advised the Committee that Alco Consulting has been engaged to ‘provide specific review and assurance advice to DTF on issues arising from implementation of the revised project scope and contract renegotiations.’ The work of Alco Consulting is continuing through to the end of 2012 under a contract valued at \$1.5 million.<sup>351</sup>

### Ombudsman’s investigation

The Ombudsman’s investigation of ten ICT-enabled projects in 2011, included the myki project. The main findings of his investigation were that: the original timeframes were overly optimistic; the ‘open-architecture’ approach to a solution increased the risk associated with the project; and the ‘outcomes-based’ contract was difficult to manage.<sup>352</sup>

The Ombudsman reported a number of findings in his November 2011 report in relation to the myki Project;<sup>353</sup>

- by any measure the system is a complex one with over 20,000 physical devices deployed over a wide area and covering various modes of public transport. The vendor included 17 sub-contractors in its consortium. The Request for Tender (RFT) comprised four volumes of information;
- the system being delivered is highly complex; the vendor included 17 sub-contractors in its consortium. The Contractual Agreement comprises some 13,000 pages, over 40 schedules, 370 separate documents and 3,000 ‘outcomes’;
- there was a lack of continuity at a leadership level with three Ministers for Transport and five Chief Executive Officers;
- the TTA Board was ineffectual and unaccountable. The TTA Board had a lack of experienced Board members;
- a representative of DTF had observer status only on the TTA Board and there was no reporting back to DTF;
- the contract was awarded to an unproven vendor in an unproven operating environment (that is, an open architecture solution). The successful bidder was unable to provide evidence of a proven solution, whilst all other tenderers nominated sites where their solutions were in place. The requirement of an ‘open architecture’ solution had not been applied to a project of this kind before and increased project risk;
- the tender involved a process of ‘competitive dialogue’ or ‘interactive vendor engagement’ which the evidence suggested had benefits in terms of competitive tension between tenderers and seeking the most cost-effective result. This process has been used in the UK as the preferred method for complex and high-value projects;
- the estimated delivery time for the system was unrealistic. The *myki* business case indicated the project would be delivered in two years but no other project of this type had been completed in fewer than five years;
- the vendor claimed that the TTA required in excess of 350 specification changes during the development process;

351 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.22

352 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.76

353 *ibid.*, pp.18-19, 23, 30, 37, 42, and 76-82

- the outcomes-based contract was problematic and its lack of specificity resulted in misunderstandings and ambiguities about which contractual document took precedence over other contractual documents;
- problems were experienced with the quality of project staff provided by overseas-based vendors requiring regular intervention from the TTA senior executive. Also the TTA were highly critical of the project managers employed by the vendor;
- the TTA-vendor relationship was a fractured one, impacting the project's success;
- the vendor blamed cost and delivery overruns on:
  - unrealistic original timeframe with no reality-based evidence;
  - operational focus and interference by the TTA; and
  - constant changes to the original specifications;
- there have been significant costs associated with the decision to run parallel systems (that is, continuing the operation of Metcard in tandem with myki for a set period); and
- the cost of consultants engaged by the TTA to assist with the project to date has totalled more than \$37 million (of which more than \$8 million has been spent on legal advice and services).

The Ombudsman recommended that a post-implementation review be undertaken of the Project to assess the extent to which benefits identified in the business case have been achieved, to determine what other benefits are possible, and to assess whether further development of the system is justified.<sup>354</sup> The TTA advised that it has agreed that an independent post-implementation review should be conducted once the implementation of the myki system is complete.<sup>355</sup>

The Committee notes evidence from Canada that suggests that 'outcomes-based' contracting, which describes desired aspects of the product, is not necessarily the best approach for every project. Specifying an excessive number of aspects in the contract can have the effect of stifling innovation in a PPP partner. Specifying less may allow the private sector to be more innovative in its solution which may lead to the development of a better outcome.

### 6.7.5 Alignment with the public interest and value-for-money

One aspect of term of reference (d) of the Inquiry requires the Committee to report on the extent to which the project has been developed and implemented in a manner which aligns with the public interest over the life-cycle of the project.

As mentioned earlier in Section 6.2.2, the public interest encompasses many aspects: effectiveness (i.e. the achievement of benefits and outcomes); value-for-money (i.e. the combination of economy, efficiency and effectiveness in the use of public resources); community consultation and stakeholder engagement; consumer rights; equity; privacy; and, security. Also as noted, transparency and accountability are important to ensuring that the public interest is well-served.

<sup>354</sup> *ibid.*, p.83

<sup>355</sup> Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, pp.24-25

A distinction has been drawn in term of reference (d) between public interest and transparency and accountability. However, it should be noted that the two are closely related and intertwined. In this report, the Committee will focus on issues associated with value-for-money and the achievement of objectives and outcomes, and transparency and accountability.

### Value-for-money and the achievement of benefits and specified outcomes

The TTA was asked by the Committee to identify how the Project has sought to maximise value-for-money. In particular:

- the extent to which the Project has achieved the scope, objectives, outcomes and benefits identified in the business case;
- whether whole-of-life benefits exceed whole-of-life costs;
- the value-for-money associated with the procurement method chosen;
- the extent to which qualitative factors were evaluated in the investment decision and tender selection; and
- whether the allocation of risks associated with the Project sought to protect the public interest.

The joint response from DOT and the TTA advised that whilst the original project timelines were not achieved, the new system will be '*delivered at a rate comparable to other major smart card ticketing projects internationally*'.<sup>356</sup>

Another project objective was to achieve a smooth transition from Metcard to myki. The response indicated that customer transition is currently in progress and that the TTA continues to work towards ensuring that final transition is smooth.<sup>357</sup>

In terms of system performance, the TTA advised the Committee that:<sup>358</sup>

*TTA expects that the objectives of high levels of performance and reliability, flexibility for future extension and value for money, will be achieved when the rollout of myki is complete.*

Some decisions were taken following the 2010-11 review by the Government which have changed the project scope and therefore expected outcomes. The vendor was instructed to look at the removal of the 'short-life' smartcard from the project scope. This change has impacted on the original plan to install ticket vending machines on trams, which will now not be proceeding. The vendor also advised that the change means that the short-life smartcard which is currently being sold on buses in regional Victoria (approximately 20,000 per day) will have to be removed from sale and patrons will have to purchase a long-life card.<sup>359</sup>

Another change which has impacted on expected outcomes is an earlier change in government policy which removed the implementation of myki on the V/Line network as was originally intended as part of the project scope.<sup>360</sup>

356 *ibid.*, p.8

357 *ibid.*

358 *ibid.*

359 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.10

360 *ibid.*

The original business case specified a number of key benefits expected to follow the implementation of the new ticketing system. These were:<sup>361</sup>

- improved customer convenience;
- better data for transport planning;
- increased flexibility to introduce new fare products; and
- simpler system for transport operator staff.

DOT and the TTA have advised the Committee that a review to evaluate the extent to which these benefits have been realised will be undertaken following completion of the Project implementation.<sup>362</sup>

The response provided by DOT and the TTA indicated that the myki system has been able to deliver a number of immediate benefits to commuters which have taken other systems a number of years to introduce.<sup>363</sup>

- ‘pay-as-you-go’ debit (‘myki money’) has been available to commuters from day one. This feature was introduced to the ‘Oyster’ system in the UK following a number of years of operation;
- myki passengers have been able to view their travel and fare charges on-line immediately. This feature became available in the ‘Oyster’ system in 2012, almost a decade after it commenced operation; and
- passengers are able to top-up their myki money on-line. This is a feature not available in other systems in Hong Kong (‘Octopus’ system) and Perth (‘SmartRider’ system).

### **Comparison of whole-of-life costs with whole-of-life benefits**

DOT and the TTA estimate that the myki ticketing system will collect fare revenue of more than \$7 billion over the life of the current contract with the vendor and as such the revenue will more than exceed the cost of delivering and operating the new ticketing system over the same period.<sup>364</sup>

### **Selection of ticketing system option and value-for-money**

The business case considered three options for the delivery of a smartcard ticketing option following the expiry of the Metcard ticketing contract:

- extending the existing magnetic stripe system;
- enhancing the existing magnetic stripe system; or
- adopting a new smartcard system.

361 Department of Transport and Transport Ticketing Authority, response to the Committee’s questionnaire, received 18 July 2012, p.9

362 *ibid.*

363 *ibid.*, p.27

364 *ibid.*, p.9

It was considered that the ‘smartcard option’ would offer the best value-for-money as it was estimated to have lower whole-of-life risk-adjusted costs and greater benefits to customers, transport operators and governments. DOT and the TTA advised the Committee that it will be possible to assess the actual value-for-money delivered once the project is fully implemented.<sup>365</sup>

Apart from this statement, no details were provided to the Committee showing the quantification of whole-of-life risk-adjusted costs compared with a quantification of the benefits accruing to customers, transport operators and governments and there was no indication as to how actual value-for-money would be assessed following implementation.

### Evaluation of factors to inform decision-making

In terms of the methods applied to inform the investment decision, procurement strategy and tender selection, DOT and the TTA advised the Committee that both quantitative and qualitative analysis was undertaken to determine the best options in each instance.

The decision to move to a smartcard-based ticketing option was informed by a quantitative assessment of whole-of-life risk-adjusted costs for each option and also a qualitative assessment of the operational suitability and benefits of each of the options.

The procurement strategy involved a number of components:<sup>366</sup>

- the procurement option – sole negotiation with the incumbent service provider or open market competitive tender process;
- the tender structure – one consolidated tender, separate tenders for different components, a staged procurement or a severable procurement approach; and
- financing – whether to use a PPP procurement model.

DOT and the TTA advised the Committee that decisions taken in relation to each of the above components were based on qualitative assessments of value-for-money, expected performance, and the characteristics of projects suitable for delivery as PPPs.<sup>367</sup> As part of this process, the TTA commissioned PricewaterhouseCoopers to undertake an assessment of the project against the key characteristics under the *Partnerships Victoria* policy, the constraints in delivering the project as a PPP, and whether the Project would deliver value-for-money under a PPP model of procurement.<sup>368</sup>

### Risk management and allocation of risks

In relation to the allocation of risks between the State and the successful tender, DOT and the TTA advised that the contract sought to transfer design, implementation and performance risk to the contractor while the State retained risk in relation to:<sup>369</sup>

- the cost of civil works and site preparation required for installation of equipment. These costs were highly dependent on the layout of stations and operational requirements and could not be accurately determined at tender stage;
- equipment volumes beyond a minimum purchase quantity;

365 *ibid.*

366 *ibid.*, pp.9-10

367 *ibid.*, p.10

368 *ibid.*, p.23

369 *ibid.*, p.11

- customer call centre support volumes, beyond a minimum estimated level; and
- smartcard volumes, beyond a minimum level.

The risk of vandalism was shared between the State and the contractor.<sup>370</sup> The Committee was also advised that under the 2009 Partnership Agreements for the operation of the Melbourne metropolitan train and tram systems, the State is responsible for all risks associated with the impact of the implementation of myki on 'farebox' revenue until 12 months after Metcard ceases.<sup>371</sup> In a 2012 audit of public transport fare evasion, the Auditor-General reported that between December 2009 and June 2011, transport operators have been paid \$98.5 million by the State for a shortfall in fare revenue between the predicted fare take and what has actually been collected.<sup>372</sup>

In that report, the Auditor-General concluded that DOT had been effective in controlling fare evasion between 2005 and 2008, but had failed to cope with the transition to myki and the new transport operator contracts which commenced in November 2009.<sup>373</sup>

The joint response provided to the Committee by DOT and the TTA does not include any detailed information as to the effective management of these risks or the impact to date of any realised risks.

## Management of community and stakeholder interests

DOT and the TTA have advised that extensive engagement was undertaken with special interest groups to ensure that the development and introduction of myki meets privacy laws and complies with the requirements of the *Disability Discrimination Act 1992*.<sup>374</sup>

Engagement with special needs groups has led to the development of the Scooter and Wheelchair Pass and Access Travel Pass for those commuters with severe and permanent disability that can travel independently but are unable to use a ticketing system.<sup>375</sup>

Transport operator rights and interests have been managed through a New Ticketing System (NTS) Reference Group and through a number of contractual agreements.<sup>376</sup>

### 6.7.6 Maximising transparency and accountability

Term of reference (d) also requires the Committee to report on the extent to which the project has maximised transparency and accountability over the life-cycle of the project.

Issues associated with transparency and accountability are relevant over the entire life-cycle of the project from its inception and the decision-making which supported that process through the implementation and ongoing operation of the infrastructure asset. The rationale and basis for decisions taken, public disclosure of contractual arrangements and the accuracy and completeness of accounting for investment expenditure are important components of public

370 *ibid.*

371 *ibid.*, p.12

372 Victorian Auditor-General's Office, *Fare Evasion on Public Transport*, August 2012, p.x

373 *ibid.*, p.vii

374 Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, p.11

375 *ibid.*, p.12

376 *ibid.*



accountability and transparency. The adequacy of governance arrangements in place for the development and implementation of projects forms the basis of due and proper accountability.

### Governance arrangements

As a State body formed under the *State Owned Enterprises Act 1992*, the TTA Board reports to the Minister for Public Transport and the Treasurer.

The TTA provided the Committee with details of the governance framework established to procure and manage the new ticketing system. A brief summary of the framework is provided as follows:<sup>377</sup>

- the Minister for Public Transport is accountable to the Parliament for the exercise of the TTA's functions and for the Ministerial exercise of power in relation to the TTA;
- the TTA Board reports to the Minister for Public Transport for matters relating to transport policy and the Treasurer for matters relating to the *State Owned Enterprises Act 1992*. The TTA advised also that details of meetings held are provided in the TTA's Annual Reports;<sup>378</sup>
- The TTA Board has sub-committees comprising the Audit Committee and the Remuneration Committee;
- the Project Control Group was established under the ticketing system project agreement between the TTA and Kamco to act as a forum for communication between the two parties. Contractual disputes between the parties could also be referred to the Group for resolution for disputes valued under \$500,000;
- the NTS Reference Committee was established to provide a forum for liaison with the public transport operators on system-wide policy and operational issues; and
- other committees, which consist of:<sup>379</sup>
  - Communications Committee;
  - Customer Information Committee;
  - Customer Feedback Industry Roundtable;
  - On-line Public Transport Information Committee;
  - Revenue Protection Working Committee;
  - Sales and Revenue Committee;
  - Revenue Audit Steering Forum; and
  - Patronage Working Committee.

### Effectiveness of the Transport Ticketing Authority Board

The Auditor-General's audit of the new ticketing system tender in 2007 found that governance arrangements established were consistent with relevant legislative and procurement guidelines.<sup>380</sup>

377 *ibid.*, p.21

378 *ibid.*, p.23

379 *ibid.*, p.22

380 Victorian Auditor-General's Office, *New Ticketing System Tender*, October 2007, p.31

The Auditor-General reported that for most of the ticketing tender period, the TTA Board comprised two members (the statutory limit is five members). The TTA Board was expanded late in the tender process. The Auditor-General stated that, '*Given the size and complexity of the tender, a larger Board was warranted.*'<sup>381</sup>

Also, the Auditor-General noted that the TTA had established an Audit Committee comprising two members to assist the Board. However, the members of the Audit Committee were also members of the Board. The Auditor-General stated that a larger membership comprising at least one external member '*would have provided a higher degree of assurance about the TTA's governance, compliance and performance.*'<sup>382</sup>

The Ombudsman did not comment on the adequacy of the governance framework in place for the development and implementation of the new ticketing system except to comment that the TTA Board initially lacked expertise. The Ombudsman noted that:<sup>383</sup>

*I have been provided with no evidence that the board was held accountable for the failure of the TTA to meet the system deliverables.*

In response to this, the CEO of the TTA remarked:<sup>384</sup>

*... you would have to ask them what they mean by that statement. I cannot interpret that beyond that. If they think a board member should have been sacked or a chairman should have been moved on, some of those things have occurred. The TTA does not have the same chairman now that it had back then.*

The Committee notes that there is considerable difficulty in holding individuals accountable for poor performance in an environment where people change positions and departments in short periods of time. This is especially the case in projects that take a number of years to complete, because poor performance may not be fully revealed until the final stages of a project's delivery.

The Ombudsman was critical of the leadership, accountability and governance with respect to the TTA Board. The Ombudsman's report notes that it was not until the project failed to meet its two-year delivery deadline that the TTA Board appointed a member with strong ICT experience. Further, the Ombudsman was critical that the TTA Board did not include a representative from the Department of Transport, which had policy responsibility for public transport ticketing. In addition, while the Board did include a representative from DTF, the membership was 'observer status' only with no responsibilities in relation to the project or requirement to report back to DTF on the project.<sup>385</sup>

## Communication during the tender process

In his 2008 report on the myki tender process, the Auditor-General was critical of the way in which the TTA managed communications with the community in relation to the integrity of processes surrounding major tenders and how they are being managed to achieve value-for-money. He stated in the Foreword to his report:<sup>386</sup>

381 *ibid.*, p.2

382 *ibid.*

383 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.77

384 Mr B. Carolan, Transport Ticketing Authority, Inquiry into Effective Decision Making for the Successful Delivery of Infrastructure Projects hearing, transcript of evidence, 21 August, 2012, p.10

385 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, pp.77-8

386 Victorian Auditor-General's Office, *New Ticketing System Tender*, October 2007, p.vi

*Communicating to the community clearly and regularly about the process integrity of major tenders and how they are being managed to achieve value for money is key to maintaining community trust and confidence.*

The Auditor-General suggested that, for major tenders, the tendering agency consider publishing a statement setting out how the procurement process has been designed and how it will be managed in order to achieve value-for-money for the community.<sup>387</sup>

In relation to documentation of the tender process, including the evaluation plans and probity framework, the Auditor-General's review found that, in general, the TTA's documentation was adequate.<sup>388</sup> Although the audit noted that some improvement was needed in relation to the documentation and record keeping associated with meetings and discussions with tenderers.<sup>389</sup>

## Public disclosure and information

The Committee asked the TTA to provide details in relation to the quality, clarity and timing of information publicly available concerning the Project's development and implementation.

The joint response from DOT and the TTA provided the following information in relation to the public accountability and transparency of the myki Project:<sup>390</sup>

- the New Ticketing Solution Project Agreement was published on the Victorian Government website soon after the contract was signed;
- information about the TTA's role in the procurement and management of the new ticketing system and information about the vendor, Kamco, has been available on the TTA corporate website since 2005;
- the TTA has received over 120 requests for information about the Project under the *Freedom of Information Act 1982*. the TTA did not advise how many of these requests had been met;
- awareness within the general public of the TTA's accountability for the delivery of the project is assumed to have been achieved through media attention about the project over a number of years;
- VAGO investigated probity issues associated with the tender of the new ticketing system and found no evidence to support any concerns about the tender process;
- the project has been subject to reviews by VAGO and the Victorian Ombudsman;
- the project has been subject to sustained, high-level media attention since its inception;
- the TTA and the Government of the day have always responded to media enquiries as required; and
- since 2003-04, the TTA has tabled an Annual Report includes information about the progress of the myki Project.

387 *ibid.*, p.56

388 *ibid.*, p.51

389 *ibid.*, p.64

390 Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, pp.12-13

## Transparency of project reviews

The report of the independent review of the myki project in 2011 by Deloitte consultants was commissioned to provide the Government with a range of options in relation to the myki project and the implications associated with each of those options. Following the review, the Government decided to continue with the *myki* contract but without smartcard vending machines on trams and without provision within the system to purchase short-term tickets .

The report has not been made public and was not able to be accessed by either the Ombudsman as part of his investigation or by this Committee as part of its Inquiry. The Ombudsman was also denied access to a number of other documents which he requested as part of his investigation, noting that these restrictions had hampered his investigation. The Ombudsman has requested that amendments be made to the provisions of the *Ombudsman Act 1973* to provide the same statutory access powers as the Auditor-General has in relation to Cabinet documents.<sup>391</sup> This issue has been raised previously by the Ombudsman during his investigation into the '*Foodbowl Modernisation Project*'.<sup>392</sup>

The Committee asked both the Chief Executive Officer of the TTA and the Senior Vice-President and Chief Executive Officer of Kamco whether they had seen the Deloitte report. The Chief Executive Officer of the TTA stated:<sup>393</sup>

*The reports as such were not made available to the TTA Board. Certainly some of the conclusions and the working through of what needed to occur as a result of the government decisions have been canvassed with the TTA Board, but the reports themselves remain the reports for DTF and government.*

When asked by the Committee, the Senior Vice-President of Kamco stated: '*we had no input into that report*', and '*we have not seen that report*'.<sup>394</sup>

A motion requesting that the consultant's report be tabled in the Legislative Council was passed by that House on 31 August 2011. However, in October 2011, the Treasurer wrote to the Clerk of the Legislative Council advising that, as the report had been prepared for consideration by a committee of Cabinet, the Council did not have the power to require the document to be produced.

The Committee has discussed the limited access to documentation in Section 6.3 of this Report.

## Transparency of the High-Value, High-Risk review process

The Ombudsman reported in November 2011 that the myki project has now come under the auspices of the new HVHR Framework within DTF.<sup>395</sup>

It is not exactly clear what this means in terms of the future management of the Project implementation. The DTF has engaged an external consultant to oversee the Project until the end of 2012 but the Committee has no details about what this oversight entails.

391 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, pp.13-14

392 Victorian Ombudsman, *Investigation into the Foodbowl Modernisation Project and Related Matters*, November 2011, p.17

393 Mr B. Carolan, Transport Ticketing Authority, Inquiry into Effective Decision Making for the Successful Delivery of Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.8

394 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.6

395 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.82

According to DTF guidance, as a HVHR project, a ‘Gateway Review-Gate 6’ will be compulsory following completion of the project implementation (see Section 2.3.2 of this Report).

### Transparency of the Department of Treasury and Finance’s work on the project

Following the Deloitte review commissioned by DTF, on behalf of the Government, DTF has engaged independent expertise to provide advice on due diligence in support of the contractual re-negotiation with the myki vendor company. In addition, DTF has been leading the negotiations with the vendor to make changes to the Project’s scope and deliverables and has engaged Alco Consulting since mid-2011 to provide specific review and assurance advice to DTF on the issues arising through the contractual amendments. The work of Alco Consulting is continuing through to the end of 2012 under a contract valued at \$1.5 million.<sup>396</sup>

The Committee requested details from DTF in relation to any forward recommendations and actions it had made in relation to the myki Project. The Secretary, DTF, advised that the recommendations ‘are considered by government and used to inform its cabinet deliberations and other decision-making processes and is cabinet-in-confidence’ and therefore not available to the Committee.<sup>397</sup>

Further, the Secretary, DTF, referred to the outcomes of independent Gateway Reviews that had been undertaken throughout the Project, which have been provided to the ‘Senior Responsible Owner’ of the Project.<sup>398</sup> Again the details of these Reviews are not available to the public or the Committee.

### Transparency of the Independent consultancy oversight and assurance

Details of the advice, oversight and assurance being provided by the independent consulting firm, Alco Consultancy, over the remaining implementation of the myki Project has not been disclosed. Nor has advice and analysis provided to DTF on the myki contract by other independent external experts. Following a request for information from the Committee about reports relating to the review of the myki contractual arrangements by external consultants and experts, the Secretary, DTF, responded:<sup>399</sup>

*The outcomes of the Deloitte and Alco Consulting reviews were provided to inform cabinet deliberations. In addition, the advice provided by external reviews and technical experts to inform DTF’s advice to cabinet or commercial negotiations is not available for release as commercial negotiations with KAMCO are still underway in relation to the operating phase of the myki contract.*

#### 6.7.7 Competencies and skills on the project

The Committee asked the TTA to provide details of aspects of the Project that were well managed and which could be considered to be better practice. The agency was also asked to identify the special competencies and skills which have underpinned examples of better practice.

396 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.22

397 ibid.

398 ibid.

399 ibid.

The response from DOT and the TTA stated that the Gateway Reviews of the project and the Auditor-General had identified a number of areas which were considered to be well managed:<sup>400</sup>

- good initial consultation with stakeholders at a number of levels including: customer focus groups to identify needs; discussion with transport operators to understand operational success factors; and discussion with Government to identify the key policy objectives;
- conduct of market analysis and consultation (market sounding) to identify the commercial factors driving private sector involvement in ticketing projects;
- the adoption of an innovative tender process which was timely and which resulted in tender prices being reduced by 35 to 40 per cent<sup>401</sup>;
- establishment and maintenance of a good strategic relationship at senior management level with transport operators and Public Transport Victoria (formerly Metlink);
- a strong focus on communication and needs of commuters during the transition to myki through ‘myki mates’ and operator on-the-ground support teams;
- the TTA identified two special areas of competency and skill which underpinned the examples provided above: stakeholder management and communication skills; and commercial procurement and management expertise.<sup>402</sup> No additional detail in relation to these broad skill sets was provided;
- in relation to skill deficit, the TTA noted the Ombudsman’s observation that transport and ICT project experience at the TTA Board level had been deficient in terms of relevant experience. the TTA advised that this had been addressed in 2008 by the appointment of additional Board members and again in 2010 and 2011<sup>403</sup>;
- in addition, the TTA advised that public sector project managers with expertise and knowledge of smartcard ticketing had been limited until the TTA recruited a CEO from industry with this expertise. the TTA also relied on external recruitment of second tier technical staff<sup>404</sup>; and
- the Committee requested details about the extent of involvement of personnel with subject matter expertise in the development of the business case and the project implementation. The TTA advised the Committee that:<sup>405</sup>

*At the time the TTA was formed, there was no pool of experienced public service managers with the depth of ticketing subject matter expertise required to manage the procurement of the new smartcard system. Therefore the CEO was recruited externally following an international search.*

- the TTA advised that the CEO had extensive international experience in the delivery of complex technology projects and one of his prior leadership roles included the delivery of the smartcard ticketing system in Hong Kong ‘which was generally regarded as the world’s best practice system.’ the TTA stated that his employment ended in May 2009<sup>406</sup>;

400 Department of Transport and Transport Ticketing Authority, response to the Committee’s questionnaire, received 18 July 2012, p.16

401 *ibid.*, p.27

402 *ibid.*, p.16

403 *ibid.*, p.17

404 *ibid.*

405 *ibid.*

406 *ibid.*

- the Committee was advised that the details of the engagement of consultants used by the TTA and their scope of works are presented in the Authority's Annual Reports.<sup>407</sup> The TTA sourced financial, commercial and legal expertise from external consultants<sup>408</sup>; and
- in terms of Treasury advice and expertise on the Project, the TTA advised that DTF had been both directly and indirectly involved with the Project since its inception, receiving regular reports on the Project status and having been directly consulted on the development of the Project's Business Case and providing advice for Government.<sup>409</sup>

The Auditor-General's review of the tendering phase of the Project found that the TTA had engaged sufficient staff with ticketing and tendering experience and that the tender team had adequate access to specialist skills and expertise.

### Views of the contractor in relation to skills and competencies

In terms of project delivery, as mentioned earlier in this section, the Chief Executive Officer, Kamco, advised the Committee at the public hearing that it was his view that the government client did not have a thorough and clear understanding of what exactly it wanted from the Project. This goes to the issue of the role of the customer/client in the development and delivery of a successful project. The client input is critical in specifying up-front the requirements of the product or service it is seeking and the constructing agency must have sufficient knowledge and understanding of the specific requirements to perform that role effectively.

Expanding on his perspectives about the skills needed to successfully deliver large IT projects, the Chief Executive Officer, Kamco, commented that a common recipe for disaster in large-scale software and system integration projects is the philosophy that the team who starts the project finishes the project. The skill sets vary throughout the different phases of the project. The Chief Executive Officer stated that it was important that people who are 'innovators' start the project and that, as the project life-cycle progresses, people with 'contract-and-build' skills take over on the project team. Finally, depending on the length and complexity of the project, there are different team members appointed to 'finish' the project delivery.<sup>410</sup> This includes a focus on the end users /customers and their experiences and satisfaction with the product/service.<sup>411</sup>

407 *ibid.*

408 *ibid.*, p.19

409 *ibid.*, pp.17-18

410 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.9

411 Mr A. Lake, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.9

### 6.7.8 Better practice

The Committee asked the TTA to indicate how the Project could have been better implemented. The joint response from DOT and the TTA states that in large, complex projects, analysis of the root causes is not a simple task as:<sup>412</sup>

*There may not be a simple intuitive cause-and-effect relationship between things that impacted on the project and the project outcomes – instead, there is a complicated web of inter-related matters.*

*Few people within a project team have a good overview of all of the circumstances of the project at any one time, and changes in project team personnel over time mean the history of events is often also unclear.*

Based on these limitations, DOT and the TTA highlighted the following three main factors which have affected project outcomes:

- the original delivery timelines were unrealistic;
- lack of relevant expertise on the TTA Board; and
- use of an outcomes-based approach to requirements.

#### The original delivery timelines were unrealistic

The TTA advised that the over-ambitious timeframe for the implementation of the system ‘has been the biggest single cause of project difficulties’ and has impacted on project planning and decision-making during the Project’s development and delivery. The TTA states that, ‘It affected the budget, the premature staging of civil works and tested the relations with rail, tram and bus operators.’<sup>413</sup>

The Committee was advised that, whilst the TTA conducted market soundings and consulted with potential suppliers during the planning of the tender:<sup>414</sup>

*...there was no thorough independent assessment or examination of experiences with smartcard ticketing implementation on public transport systems around the world. Had such an investigation of experience around the world been undertaken, more realistic budgets and timeframes for the project might have been established from the outset.*

Further, the TTA has advised that the vendor’s agreement with the initially proposed timeline and the pressures that followed created a hostile contractual environment between the TTA and Kamco and low morale for people working on the project.<sup>415</sup>

The TTA advised the Committee that the contract was signed before the vendor had engaged the major subcontractors required to provide operation software, ticketing equipment and card supply. Delays in meeting the initial project timelines meant that the vendor lost contractual leverage over ‘time’ and ‘performance’ and the subcontractors were able to avoid responsibility for contractual penalties.<sup>416</sup>

412 Department of Transport and Transport Ticketing Authority, response to the Committee’s questionnaire, received 18 July 2012, p.25

413 ibid.

414 ibid.

415 ibid.

416 ibid., pp.25-26



Finally, failure to meet what were unrealistic timelines resulted in media and political criticisms of the project and damaged public perception and confidence in the new system. This was noted in the Ombudsman's report.<sup>417</sup>

### Lack of relevant expertise on the Transport Ticketing Authority Board

As was noted in the Ombudsman's report, the TTA Board lacked members with experience in the development and implementation of a significant ICT-enabled system and any detailed knowledge of the transport ticketing environment. The TTA noted that additional members were appointed in 2008, 2010 and 2011. However, the agency also pointed out that:<sup>418</sup>

*Other Victorian public entities undertaking large tenders and major project development activities have typically had much larger Boards with a deeper range of perspectives and skills.*

### Use of an 'outcomes-based' approach to requirements

The TTA advised that the use of an 'outcomes-based' approach to specifying requirements for the tender of the new ticketing system rather than a more traditional approach of specifying 'function' and 'performance' requirements meant that there was a lack of understanding about what was required in terms of software specifications and system functions which contributed to delays.<sup>419</sup>

The TTA advised that an 'outcomes-based' approach was originally viewed as enabling tenderers flexibility in developing a solution to meet the TTA's objectives and this was aimed at encouraging innovation and increased value-for-money.<sup>420</sup>

The Committee has not received evidence that the decision to take this approach was appraised or referenced against other projects or examples from other jurisdictions to test its worth and evaluate its risks.

The Ombudsman was critical of this approach stating that '*the outcomes based agreement proved problematic to manage and led to ambiguities and specifications 'creep'*'<sup>421</sup>

The Ombudsman's investigation noted the complexity of the original Request for Tender documentation and of the contract which included:<sup>422</sup>

- over 13,000 pages;
- over 40 schedules;
- four exhibits comprising more than 370 separate documents; and
- over 3,000 outcomes.

417 *ibid.*, p.26

418 *ibid.*

419 *ibid.*

420 Mr J. Betts, Department of Transport and Transport Ticketing Authority, response to the Committee's questionnaire, received 18 July 2012, p.26

421 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.76

422 *ibid.*

The Ombudsman also notes that the vendor had advised that the TTA required in excess of 350 changes in specifications during the development process and that all these changes had *'added complexity, cost and time to the project.'*<sup>423</sup>

An additional budget allocation totalling \$519.3 million (i.e. an increase of over half of the originally approved budget) has been made to the myki Project mainly due to 'scope changes' which suggests a lack of adequate detail in the original scoping of the project.

At the public hearing with representatives of the vendor company, the Committee heard that it was the opinion of the vendor that the government client did not have a good understanding of the requirements of the system and requirements management generally. The Senior Vice-President and Chief Executive Officer, Kamco, advised:<sup>424</sup>

*If the government had understood the requirements and requirements management, it would not have thrown open an outcomes-based contract. It would have invested in the beginning to clearly articulated specifications and then driven the program from their point of view, to ensure the contractor met the requirements.*

Kamco also noted that, given the complexity of the system, it would have been in the vendor's interests also for these requirements to be properly 'fleshed out' at the beginning of the project *'before the system had started to be developed.'*<sup>425</sup>

The Committee heard that it was two years into the system development before the Government tabled the fares and ticketing manual which underpinned how the Government wanted the system to operate and then those requirements had to be specified in writing and agreed by the parties. It was stated that a lot of time has been taken up defining and redefining system and requirements and specifications.<sup>426</sup>

It is likely that the lack of specificity in the original contract which caused the need for various iterations of specific requirements during implementation was likely to have had a detrimental impact on the relationship between the government client and the vendor.

It is the view of the Ombudsman that:<sup>427</sup>

*The relationship between the TTA and the vendor was a fractured one, based on mistrust and misgivings. In such an environment, the prospects of success are not great.*

However, the Committee has heard evidence which suggests that problems with contractors can lead to a significant deterioration in relationships between the Government and vendors. According to the Secretary, DBI:<sup>428</sup>

*Contractors fail; they really fail, and when they do it is reported in a particular way ... there have been some famous cases that have been all over the papers, and still are, about the general incompetence of government and how they cannot run projects. But that is rubbish. What has happened in a lot of these cases is that the contractor has failed. In myki the contractor failed — catastrophically failed.*

423 *ibid.*

424 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.9

425 *ibid.*, p.3

426 *ibid.*

427 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.80

428 Mr H Ronaldson, Secretary, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects, transcript of evidence, 22 March 2012, p.5

## Other lessons from issues identified

Other issues which have been identified through the Committee's review of the available evidence which should be avoided or better managed in future ICT projects are presented in the following paragraphs.

### Avoid trying to maintain existing structures in a new solution

At the public hearing, the Committee heard evidence from the vendor about the complexity added to the system solution as a result of the decision to maintain the existing fare structure. The aim of that decision was to minimise the impact on commuters of a new ticketing system. These requirements added to the delays in delivery.

The Chief Executive Officer, Kamco, stated:<sup>429</sup>

*Maybe at the time, rather than trying to rewrite a requirement around the existing Metcard magnetic stripe system, it would have been better to break out of that paradigm and look to the new future... A lot of the complexity that we see in the system today is in transcribing the past of a magnetic stripe system that relies on a passenger knowing what type of fare to buy, where they are going to travel and the multiple zones and multiple concession types ... In summary, if we had simplified earlier and maybe taken it in chunks, it may have gone quicker.*

And, the Executive Vice-President, Kamco, Mr Lake stated:<sup>430</sup>

*As a general statement: embrace the technology. Do not drag your baggage from the past with you, and then design this to take advantage of what is in the future.*

In contrast, the Secretary, DOT, expressed an opposite view: that the new system should not be a reason to alter the existing fare structure.<sup>431</sup>

*... it would be wrong to suggest that the myki tail should wag the ticketing dog — in other words, that ticketing policy should simply be flexed to make the implementation of an ICT project easier.*

### Complexity of the system

It should be noted that the myki ticketing system is an extremely complicated IT system. The vendor gave the following description of the system as it is currently operating to the Committee at a public hearing on 22 August 2012:<sup>432</sup>

*... The system itself right now is working extremely well. We are carrying over 85 per cent of the public transport patrons in metropolitan Melbourne as well as the regional bus. The system is processing over three million transactions per day, which constitutes over a million touch-ons per day.*

429 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.3

430 Mr A. Lake, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.11

431 Mr. J Betts, Secretary, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 8 October 2012, p.16

432 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.2

*There are lots of complexities in the system. There are over 26 000 devices system wide. We have 49 transit operators, and currently we have over 800 retail outlets. The system copes with 68 passenger types and 78 zones within the NTS system, and we have over 150 business rules that have to be executed each time a card is scanned, and around 1.07 million fare transaction-type permutations.*

At the hearing, representatives of the vendor company advised that there were many complexities in the system which was presented which could have been reworked and simplified earlier in the project's implementation. The Committee heard that the philosophy was to have one card which was able to transit through changes in a commuter's status depending on whether it was a full fare or concession. Also the system has 78 fare zones. The initial premise was to have a single card stock. This was then changed to having personalised cards, which added further systems programming work. The vendor stated that there was a lot of complexity embedded into the development which could have been rethought back in 2005 during the project's development.<sup>433</sup>

### The impact of optimism bias on project timelines

The terms of the original contract for the myki project specified that the system would be fully operational by July 2007 two years after the contract was authorised.

The Ombudsman received evidence from representatives of both the vendor and the TTA that the original timeframes were unrealistic, especially when compared to other smart card projects around the world. The Ombudsman was critical of the overly optimistic timeframes originally set by the TTA Board and contracted and agreed to by the vendor company.<sup>434</sup>

At the public hearing on 21 August 2012, the Committee questioned representatives of the vendor company about the company's acceptance of these original timelines.

The Committee heard evidence that whilst the representatives appearing at the public hearing had not been in the company at the time of the contract negotiation and signing, they would assume that the company considered the timelines to be achievable based on their understanding of the requirements at the time. The Committee heard that this has impacted financially on the profitability of the contract to the company.<sup>435</sup>

The Committee also notes that the TTA acknowledged in its 2007-08 Annual Report that the timelines for the myki project had been optimistic. In the Annual Report, the Chairman stated that:<sup>436</sup>

*... the delivery of the project will take much longer than was originally planned. The contractor and the Authority underestimated the time that would be required for the development and full testing of the new software to operate the system.*

The Chief Executive Officer of the vendor company Kamco agreed that the company had been equally overoptimistic of the project timelines, stating:<sup>437</sup>

433 *ibid.* p.4

434 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, pp.81-2

435 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.8

436 Transport Ticketing Authority, *Annual Report 2007-08*, September 2008, p.2

437 Mr G. Purdy, Keane Australia Micropayment Consortium Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.9

*At the time this contract was signed the quickest and even simpler implementation of an automatic fare collection smart card system had been implemented – like Oyster, which is a very simple system in comparison to this – was seven years. There was a lot of overoptimism by the government at the time and by the contractor that they could fill this immense specification within two years.*

Extensive material has been produced in the United Kingdom (UK) in relation to awareness of ‘optimism bias’. The UK Department for Transport Analysis Guidance documentation includes a section on ‘Risk and Optimism Bias’ which notes:<sup>438</sup>

*Transport projects are inherently risky and subject to uncertainties due to the long planning horizon and complex interfaces. Often the project scope or ambition level will change during the project development and implementation due to uncertainty at the earlier project stages. Hence a certain degree of budget uncertainty exists which will typically be reduced through the project cycle.*

*Theories on cost overrun suggest that optimism bias could be caused by a combination of how the decision-making process is organised and strategic behaviour of stakeholders involved in the planning and decision-making processes.*

Also a UK study undertaken in 2002 shows that ICT investments are at greater risk of optimism bias and associated cost overrun than other types of infrastructure investment.<sup>439</sup>

The Auditor-General’s Guidance Paper, *Investing Smarter in Public Sector ICT, Turning Principles into Practice*, released in July 2008, refers to the need for investors to ensure that estimates of time, cost and benefits are adjusted for potential optimism bias. The guidance specifically mentions practical steps to take such as:<sup>440</sup>

*Make explicit adjustments to cater for potential optimism bias, such as:*

- *Increasing the estimated costs by allowing sufficient contingency*
- *Decreasing the impact of the estimated benefits*
- *Delaying the predicted date of delivery.*

And:

*Seek expert assurance and validation from subject matter experts early in the project life cycle. Significant investments might also require a formal Gateway Review-Gate 1 Strategic Assessment.*

In terms of guidance available through DTF, a definition of ‘optimism bias’ is provided in the glossaries of the *Investment Lifecycle Guidelines: Business Case*; the *Investment Lifecycle Guidelines: Options Analysis*; and the *Investment Lifecycle Guidelines: Post-Implementation Review*. The definition provided in the glossary reads as follows:<sup>441</sup>

*Optimism bias – The demonstrated systematic tendency for appraisers to be over-optimistic about key project parameters, including capital costs, operating costs, works duration and benefits delivery.*

438 UK Department of Transport, *The Estimation and Treatment of Scheme Costs – TAG Unit 3.5.9*, August 2012, <[www.dft.gov.uk/webtag/documents/expert/unit3.5.9.php](http://www.dft.gov.uk/webtag/documents/expert/unit3.5.9.php)>, accessed 17 May 2012, p.17

439 Mott MacDonald, *Review of Large Public Procurement in the UK*, July 2002, p.32

440 Victorian Auditor-General’s Office, *Investing Smarter in Public Sector ICT, Turning Principles into Practice*, 30 July 2008, p.11

441 Department of Treasury and Finance, *Investment Lifecycle Guidelines – Business Case*, July 2008, <[www.lifecycleguidance.dtf.vic.gov.au/admin/library/attachments/ILG%20Business%20Case%20v1.0%20web.pdf](http://www.lifecycleguidance.dtf.vic.gov.au/admin/library/attachments/ILG%20Business%20Case%20v1.0%20web.pdf)>, accessed 25 October 2012, p.17

The *Investment Lifecycle Guidelines: Business Case* provides a list of items to be considered in the preparation of the Business case and mentions *Optimism bias addressed (risk-based cost)* as part of the economic/ financial assessment of High Risk/High Expenditure projects.<sup>442</sup>

There is no detailed guidance available on how optimism bias should be accounted for or managed as part of developing a cost and time budgets for major projects.

The Committee has recommended in Section 5.4.4 of this Report that similar projects in other jurisdictions be considered as part of preparing business cases. This may help to mitigate optimism bias.

### Open architecture solution versus ‘off-the-shelf’ adaptation

Many witnesses provided statements at the public hearings about the high failure rate attributed to ICT projects. ICT-enabled projects are renowned for being high risk in terms of cost and time overruns. Pioneering or innovative projects add another degree of risk to already risky projects.

The Ombudsman’s report was critical of the open architecture solution adopted by the TTA in the development of a new ticketing system suggesting it would have been more economic and efficient to purchase a proprietary system (i.e. one off the shelf such as the ‘Oyster’ system). The Ombudsman noted that an open architecture solution had not been employed in other ticketing system procurements in the world which were generally proprietary systems.<sup>443</sup>

As part of his *Framework to better manage ICT-enabled projects*, the Ombudsman recommended that:<sup>444</sup>

*Agencies should be conservative in relation to ICT products, rather than exploratory. They should look to relevant examples nationally and overseas. Wherever possible, commercial off-the-shelf (COTS) should be selected and used rather than bespoke systems ...*

The adoption of an open architecture solution enables the client to have some choice rather than being locked into a proprietary system with one supplier and one product. Based on the evidence reviewed, the combination of an open architecture solution with an outcomes-based contract rather than a requirements-based contract contributed to the problems.

Also the open architecture approach to the development of the new system was overlaid by government policy which wanted a system which could be applied across all five modes of public transport and which maintained the existing Metcard fare structure as part of the solution. The Committee considers that these specific ‘requirements’ may have been better achieved using a more specific contract rather than an ‘outcomes-based’ contract.

442 *ibid.*, p.33

443 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, pp.78-9

444 *ibid.*, p.57

## 6.8 The Melbourne Convention Centre Development project



### 6.8.1 Committee's approach

The Committee sent a list of questions focussed on the details of term of reference (d) to the Department of Business and Innovation (DBI), the Department of Treasury and Finance (DTF) and the Victorian Auditor-General's Office (VAGO) about the development and implementation of the Melbourne Convention Centre Development (MCCD) project. Public hearings with representatives from these agencies and also with representatives of the private partner, the Plenary Group, were held in mid-August 2012.

DBI provided a detailed response in relation to the questions tendered by the Committee including a copy of the relevant section of the Auditor-General's report of November 2007.

These responses and transcripts from the hearings have been used to prepare the information presented in this section of the report.

#### Observations on the project by Committee's consultant

Evans & Peck provided the Committee with a series of observations about the Melbourne Convention Centre Development project linked to its various stages of procurement. These are shown in Table 6.11 below.

**Table 6.11 Observations on performance of the Melbourne Convention Centre Development project by stage**

Stage	Observations
Conceptualise	<ul style="list-style-type: none"> <li>• Project benefited from leveraging long-standing and well understood government business operation.</li> <li>• Melbourne Convention and Exhibition Trust (MCET) represented end-users well.</li> </ul>
Prove	<ul style="list-style-type: none"> <li>• Scope was clear, requirements clear, cost recovery from conventions well-understood, resulting in strong private sector interest.</li> <li>• Ambitious and somewhat risky project (in that the riskier ancillary property development side, apart from the hotel, could have impacted upon on the success of the central part of the project), however this made it suitable for a PPP in that government was protected from risks.</li> </ul>
Procure	<ul style="list-style-type: none"> <li>• Interactive tendering processes commended and contributed to success.</li> <li>• Commercial development risks delinked from government.</li> <li>• Project was well managed by an experienced and capable team drawn from Major Projects Victoria (MPV), commercial advisors and DTF. The team collaborated effectively and demonstrated how to develop a sound evaluation, financial and risk model and manage interdependencies between functional brief, risk and commercial aspects.</li> <li>• Strong property market contributed to the attractiveness of the project to the market.</li> </ul>
Implement	<ul style="list-style-type: none"> <li>• Project team was made up of key people with the necessary capacity and competencies that allowed for robust debate, negotiation and management of advisors and the private sector so that the risks were interrogated deeply, well-understood and managed.</li> <li>• Project was well-managed with the benefit of good timing in respect of property development.</li> <li>• Cost budgets were maintained throughout project which reflects a well-scoped and thoroughly negotiated deal.</li> <li>• Time extensions were minimal and timelines were achieved.</li> <li>• Steering committee involved only major government stakeholders including MCET representing end users, kept things simple.</li> </ul>
Realise	<ul style="list-style-type: none"> <li>• Thorough application of governance and continual review of public interest test conformance – Value-for-Money (VfM) was apparent and was delivered in accordance with VfM objectives.</li> <li>• Given the sound commercial arrangements, the PPP withstood the failure of the Direct Factory Outlet included in the ancillary property development of the project.</li> <li>• Could not ascertain that government got VfM on the land for the ancillary property development.</li> </ul>

Source: Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, pp.44

### 6.8.2 Project synopsis

Convention centres are facilities which are aimed at attracting events, such as exhibitions and conventions, to a city or region. As these events have the potential to attract large numbers of delegates for periods of days, apart from their own commercial activities, a significant indirect benefit of their existence is that they provide markets for businesses in the area, such as hotels, restaurants and other service industries.

It was considered that the existing Melbourne Exhibition Centre was inadequate for large conventions (its largest plenary hall having a capacity of 1,500 delegates), and there was a concern that other cities (both in Australia and nearby countries) would begin to draw major conventions away from Melbourne.



A need was recognised for a new convention centre, and an initial feasibility study was referred by the former Government for a Gateway Review (Gate 2 - Business Case). This Review highlighted a number of issues and resulted in the development of a business case in August 2003.<sup>445</sup>

The business case identified that a PPP was the appropriate delivery model. DBI have discussed three reasons for making this decision. The Partnerships Victoria approach encouraged:<sup>446</sup>

- an innovative design, exploiting whole-of-life costing methods to optimise overall costs;
- maximising the commercial opportunities for the precinct as a whole through the use of additional development on the site; and
- incentives to deliver the project on time and to provide facilities at specified standards across the whole of the project life.

In accordance with Partnerships Victoria guidelines, however, the benchmark option, or public sector comparator, would be a conceptual design and construct project (see Section 6.8.6 below on transparency).

In April 2004, the former Government committed to develop the new Convention Centre on the South bank of the Yarra adjacent to the then-existing facilities. The scope of the project was expressed in six statements,<sup>447</sup> which effectively enunciated the problem that was to be solved, and how options would be evaluated.

Following expressions of interest, three consortia were sent Requests for Proposal in March 2005. These included disclosure of scope requirements for the project. Following a period of ‘interactive bidding’,<sup>448</sup> two consortia were selected in October and November 2005 as ‘simultaneous preferred respondents’.

The options that these consortia proposed were very different, one being close to the project description and the other taking the opportunity to include additional private sector funded developments on the site. Both options were considered to have satisfied the project scope.<sup>449</sup>

The procurement team then used a ‘structured negotiation process’ to evaluate the two options. Under this process, the project manager negotiated with both parties as though they were the preferred tenderer. This process caused a three-month delay in procurement,<sup>450</sup> after which the losing tenderer was compensated for the additional time spent.<sup>451</sup>

A number of post-tendering variations were negotiated with the successful bidder, such as the addition of the South Wharf docks and sheds in order to protect the heritage area around the *Polly Woodside*.

In February 2006, the public announcement of the Plenary Consortium as the successful bidder was made, and construction began in May 2006. The project was completed in March 2009.

445 Victorian Auditor General’s Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.17

446 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.5

447 *ibid.*, pp.2-3

448 Victorian Auditor General’s Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.24

449 *ibid.*, p.6

450 *ibid.*, p.23

451 *ibid.*, p.25

## Project timelines

**Table 6.12 Melbourne Convention Centre Development project - approved timelines and variations**

Project phase	Initial approved timelines	Approved extension/s to timelines	Reasons for time extension/s	Expected/ Actual timelines
Business case	2003	No extension required	No extension required	Initial Timeline Achieved
Tender process	EOI Released Oct 2004 RFP Released March 2005	No extension required	No extension required	Initial Timeline Achieved
Contract development and management	Preferred Proponent Selection Oct/Nov 2005 Contractual Close Nov/Dec 2005	Preferred Proponent Selection February 2006 Contractual Close March 2006	Schedule extended by 3 months due to dual bidder negotiation phase.	Extended Timeline Achieve
Project/service delivery	31 Dec 2008	31 March 2009	Commercial Acceptance extended due to the delays caused by the impact of M1 expansion works by VicRoads and the goods sheds being incorporated in to the commercial development.	Extended Timeline Achieve

Source: Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Redevelopment project, p.23

In the initial business case in October 2004, commercial acceptance was expected to be on 31 December 2008. Completion was eventually achieved on 31 March 2009 after a three-month delay resulting from the additional 'structured negotiation' phase, and two minor delays (due to acoustic works and works on the nearby freeway). The centre was opened in July 2009.

## Project costs

**Table 6.13 Melbourne Convention Centre Development project - approved budget and variations**

Project phase	Initial approved budget (\$ million)	Approved budget variation/s (\$ million)	Date of approval	Reasons for variation/s	Revised approved budget (\$ million)	Actual costs to date (\$ million)
Business case	367	n/a	n/a	n/a	n/a	n/a
Tender process	374.9	(a)	2005	n/a	n/a	n/a
Contract development and management	374.9	n/a	n/a	n/a	n/a	n/a
Project/Service Delivery	374.9	n/a	n/a	n/a	n/a	n/a
<b>Total TEI</b>	<b>374.9</b>	n/a	n/a	n/a	n/a	n/a

(a) not a variation but reallocation of output (recurrent) funding to input (capital) funding from the overall budget

Source: Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Redevelopment project, p.22

### 6.8.3 The Department of Treasury and Finance’s involvement in the project

In its submission to the Committee, the Department of Business and Innovation advised that DTF maintained a permanent ‘*embedded*’ presence on the project procurement, negotiations and delivery team.<sup>452</sup>

DTF also informed the Committee that its involvement with this project has been advisory, and consistent with the *Partnerships Victoria* Framework.<sup>453</sup> The Committee considers that describing the involvement as ‘advisory’ defines the role as providing non-binding advice, and cannot therefore be regarded as an ‘oversight’ role.

Communication from DBI suggests a similar non-technical role:<sup>454</sup>

*As the MPV project team had substantial PPP and commercial expertise, there was little requirement for DTF to provide expert guidance on technical matters – rather there was agreement of most issues as the ‘skill and mindsets’ were compatible to a large extent.*

In its submission, DTF also advised the Committee that they provided advice to the Government on issues relating to a range of issues.<sup>455</sup> However, the Secretary, DTF, advised the Committee in a hearing in August 2012 that ‘*our advice to government in this space is almost entirely cabinet advice*’,<sup>456</sup> and as such is unavailable to the Committee.

DTF also states that it has worked with the former Department of Innovation, Industry and Regional Development (DIIRD) and DBI with planning and developing various business cases and procuring and delivering the project as a PPP.<sup>457</sup> Since the ‘financial close’ of the project, DTF has provided advice through membership of the project steering committee and the project delivery team.<sup>458</sup>

**FINDING:** The role of the Department of Treasury and Finance in the Melbourne Convention Centre Development project has been poorly defined. Advice given by Department of Treasury and Finance to the Department of Business and Innovation has not been binding and the Department of Treasury and Finance has not had an oversight role.

### 6.8.4 Project reviews

The Committee asked the Department of Business and Innovation to provide copies of any reviews which had been undertaken in respect of the Project or contractual arrangements for the Project such as peer reviews, Gateway Reviews or any other external reviews. The following information in relation to reviews undertaken to date has been provided to the Committee.

452 *ibid.*, p.26

453 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.8

454 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.26

455 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.8

456 Mr G. Hehir, Secretary, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.4

457 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.8

458 *ibid.*

The project has been the subject of a report by the Victorian Auditor-General, being one of the two projects examined in *Audits of 2 Major Partnerships Victoria Projects*, published in November 2007. This audit assessed the State's investment planning, procurement and management processes for the project.

The project was also reviewed as part of the Commonwealth Department of Infrastructure and Transport's publication: *Infrastructure Planning and Delivery: Best Practice Case Studies Volume 2* of February 2012. The Department identified four 'best practice outcomes' in the project, as follows:<sup>459</sup>

- Drawing on the knowledge of a key operational stakeholder throughout the project can result in better outcomes and potentially increased useability of the delivered infrastructure.
- If the structure of the project allows for flexibility in innovation, this should be provided as a method for delivering enhanced strategic outcomes from the project and/or the delivered infrastructure.
- The commitment of public funds to a project and the potential for public private partnerships can attract private investment. Early engagement with industry to discuss this form of procurement is critical to maximising opportunity for innovation.
- An integrated project team provides additional redundancy, and in a multi-organisational project can provide opportunities for mutual support when the project structure will support it.

## Gateway Reviews

The Committee received the Gateway Review for Gate 2 – Business Case for the Melbourne Convention Centre Development project. The Committee notes that the review was given a 'red' status that requires that the issues raised in the review be addressed. A number of recommendations were included in the Review report. The action taken by the project team was to be reviewed by the Gateway Review team at the time of the next Gateway Review. However, no further Gateway Reviews were required for the project, with the Auditor-General noting that:<sup>460</sup>

*...the MCCD project has been exempted from further Gateway Reviews.*

### 6.8.5 Alignment with the public interest and value-for-money

One aspect of term of reference (d) of the Inquiry requires the Committee to report on the extent to which the project has been developed and implemented in a manner which aligns with the public interest over the life-cycle of the project.

The public interest encompasses many aspects: value-for-money (the economic, efficient and effective management of public resources); the achievement of benefits and outcomes; community consultation and stakeholder engagement; consumer rights; equity; privacy; and security. Transparency and accountability are also important to ensuring that the public interest is well-served.

459 Commonwealth Department of Infrastructure and Transport, *Infrastructure Planning and Delivery: Best Practice Case Studies Volume 2*, February 2012, p.11.

460 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.18

A distinction has been drawn in term of reference (d) between public interest and transparency and accountability and so issues associated with the latter two are discussed separately. However, it should be noted that the two are closely related and intertwined.

### Value-for-money

According to DBI, ‘value-for-money’ has been achieved, as the risk-adjusted Public Sector Comparator (PSC) is greater than the contracted cost of the project (in present value terms).<sup>461</sup> However, the risk-adjusted PSC has not been disclosed and hence the value-for-money has not been demonstrated to the Committee.

**FINDING:** The risk-adjusted Public Sector Comparator for the Melbourne Convention Centre Development project has not been revealed. This has prevented a clear demonstration of value-for-money.

In addition to the quantitative benefits of the project, DBI has discussed a range of qualitative benefits, including: precinct activation; complementary development; single stage development; and external economic benefits.<sup>462</sup>

DBI has listed a comprehensive range of objectives that were set out at the start of the project. The Department states that these have been either fully or satisfactorily achieved.<sup>463</sup>

A ‘Gateway 2 – Business Case’ review was carried out in April 2003.<sup>464</sup> This independent review is intended to confirm that the business case is sound and robust. However, no further Gateway reviews were conducted.<sup>465</sup> This includes a post-project evaluation (Gate 6 - Benefits Evaluation). The Committee considers that this independent evaluation is an informative review that enables a more authoritative demonstration that the project was in the public interest and achieved value-for-money.

**FINDING:** No post-project evaluation (Gate 6 – Benefits Evaluation) has been carried out for the Melbourne Convention Centre Development project. This also prevents the demonstration of value-for-money.

### The solution as a response to an articulated need

The need for the new centre was a result of facilities in other areas of Australia drawing business events away from the existing facilities (hotel, retail, car parking and residential). In particular, large events with more than 1500 delegates were viewed as bringing additional flow-on benefits from visitors to the State.

461 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.17

462 *ibid.*, p.18

463 *ibid.*, pp.10-16

464 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.8

465 *ibid.*

The objectives are well presented, in terms of desired outcomes for the state (through the existence and operation of the centre), desired construction and project delivery objectives (in terms of the procurement phase), and desired commercial development objectives (in terms of what the additional facilities would mean for the project and the State).<sup>466</sup> These formed the project brief in the Expressions of Interest documentation.<sup>467</sup>

This detailed scoping facilitated the assessment of each of the options against the criteria specified in the Public Interest test, to evaluate the extent to which each option met the articulated need.

Throughout the project (2004 to 2009), the scope did not change materially. There were small scope changes after tendering (South Wharf sheds, etc.) but these have not had a significant effect.<sup>468</sup>

**FINDING:** The scoping for the Melbourne Convention Centre Development project as detailed did not change significantly throughout the procurement phase.

The Committee notes that the complex as completed in 2009 is reported to be already too small, and hence may not be fulfilling the public interest test over the 25-year life-cycle of the project (in that other, larger inter-state facilities are attracting larger exhibitions away from Melbourne). According to the DBI submission:<sup>469</sup>

*... a number of exhibition lead events and conventions have been turned away as the existing exhibition space is insufficient as the planned expansion is yet to occur.*

The Committee has seen no evidence that the Convention Centre Development project underwent a Gateway 1 (strategic assessment) review. The Auditor-General's report<sup>470</sup> and evidence from DTF<sup>471</sup> refer only to Gateway 2 reviews.

## Benefits of the project

DBI reported to the Committee that project benefits, as set out in the business case were varied, and were grouped as follows:<sup>472</sup>

- economic benefits from operations, in terms of expenditure by delegates and flow-on benefits including job creation;
- economic impacts from construction, in terms of job creation;
- tourism benefits, creating an attraction, raising the profile of the area and raising accommodation rates;
- business benefits, enhancing Melbourne's perception as a 'place to do business'; and

466 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.3

467 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.20

468 *ibid.*, pp.14, 23-4

469 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.12

470 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.17

471 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.8

472 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, pp.14-16

- social and community benefits, in terms of community and cultural enhancement.

The Committee notes that DBI have also provided evidence in the same submission that these benefits have been achieved, or (in some cases) ‘*estimated to have been achieved*’.<sup>473</sup>

With regard to accuracy of numbers in the business case, according to VAGO, ‘*DTF and a major advisory firm were directly involved in researching data used to prepare the business case*’.<sup>474</sup>

The Committee notes that the general equilibrium model used by DTF was the Monash Multi-Regional Forecasting (MMRF)-Green model constructed by the Monash University Centre for Policy Studies.<sup>475</sup> Documentation received by the Committee from DBI is not clear as to whether present values or nominal values are presented.

**FINDING:** A range of benefits has been identified for the Convention Centre Development project. However, while there is evidence that these benefits have been achieved, the realisation of some items noted as benefits has only been estimated.

## Stakeholder management

The Committee noted evidence received during the Inquiry that rules and protocols around probity and confidentiality can inadvertently become a barrier to effective engagement with industry.<sup>476</sup> In this project, however, effective stakeholder dialogue occurred within the probity constraints as part of the ‘interactive tendering’ and ‘structured negotiation’ processes.

DBI also advised the Committee that stakeholders were identified and consulted throughout the business case process,<sup>477</sup> using a defined communications strategy.<sup>478</sup> A steering committee was set up for more general community communications which consisted of representatives of DPC, DTF, DIIRD (now DBI), MPV, and the MCET.<sup>479</sup>

In this project the number of stakeholders was manageable, not being complicated by a large number of individuals. In addition, DBI have advised the Committee that that all the stakeholders supported the proposal.<sup>480</sup>

**FINDING:** There was a manageable number of stakeholders for the Melbourne Convention Centre Development project. All stakeholders supported the preferred option.

473 *ibid.*

474 Victorian Auditor General’s Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.19

475 Department of Treasury and Finance, response to request for additional information, letter received 8 November 2012, p.3

476 Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects: Final Report*, December 2012, p.47.

477 Victorian Auditor General’s Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.14

478 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.10

479 *ibid.*, p.20

480 *ibid.*, p.19

## Investigation of options

The Committee was informed that procurement options, that is, the public sector comparator (as a ‘design and construct’ project) against two PPP options, were analysed in detail.<sup>481</sup>

The Committee notes that there were four options considered for the procurement method. Two of these were options provided by the State, and two were public private partnerships.<sup>482</sup> This process resulted in the decision to procure as a PPP, with the Melbourne Convention and Exhibition Trust as operator, rather than a private operator. In reporting the outcome of this decision, DBI advised the Committee that:<sup>483</sup>

*It was determined that the Partnerships Victoria procurement option had the potential to deliver the Project objectives in a more effective manner than a traditional State procurement model.*

The Committee notes that DBI has not identified who made the decision on the procurement option. This is not aligned with either maximum transparency or accountability.

The Committee notes that results of the ‘risk-adjusted PSC’ calculations are not disclosed as they are considered ‘commercial-in-confidence’.<sup>484</sup> The Committee also notes that conceptual costs of the two PPP options have not been disclosed. The Committee considers that without disclosure of these figures, the appropriateness of the decision to procure as a PPP is not comprehensively transparent.

DBI then provided three areas of discussion where the PPP model was superior to a State procurement model. These are:<sup>485</sup>

- innovation in design, involving efficient management of up-front costs;
- maximising the commercial opportunities for additional private sector development; and
- incentives to complete the project by the scheduled completion date and to deliver service to a specified standard over the life of the project.

The Committee notes that while there may be empirical support for these reasons, DBI has not made this clear. The Committee notes also, that a range of views exist around the ability of the private sector to provide infrastructure in a manner superior to that of the public sector.

**FINDING:** A Public Private Partnership was chosen over a Design and Construct procurement model, although figures supporting this decision have not been revealed.

The Committee subsequently asked DTF whether the risk-adjusted PSC was available and was informed.<sup>486</sup>

481 Victorian Auditor General’s Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.18

482 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.4

483 *ibid.*, p.5

484 *ibid.*, p.17

485 *ibid.*, p.5

486 Mr. J. Loos, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.20



*Not publicly. The Melbourne Convention Centre Project reached financial close prior to the current policy requirement for PPP project summaries to be prepared and published on the DTF website within 3 months of financial close.*

The Committee considers that releasing the risk-adjusted PSC would enhance transparency for the project.

Two proposals were presented in tenders, one that addressed the core scope, and one with significant extra private sector development. In a hearing the Committee heard that *'neither one nor the other met the PSC requirements wholly'*.<sup>487</sup> However, the Committee notes that the DBI stated in its written response that both options *'were capable of meeting the requirement of delivering a convention centre'*.<sup>488</sup>

These two proposals both then went through the 'structured negotiation' process. This type of negotiation is not entirely new, but is considered to be 'best practice'. The response by the then Secretary, Department of Innovation, Industry and Regional Development (now DBI), to the highlighting of this issue by VAGO included:<sup>489</sup>

*I am also pleased to note your findings with respect to the overall procurement process, and in particular the structured negotiations process, which I understand this project has now become the benchmark for Partnerships Victoria projects.*

The audit report by VAGO also noted that risks had been extensively identified and presented to the project steering committee. The risks were identified and analysed as part of the structured negotiation process.<sup>490</sup>

**FINDING:** The structured negotiation process allowed an analysis of two very different proposed options for the project.

As noted in Section 6.8.2, the losing tenderer was compensated for the additional bid costs involved. The existence of this type of compensation may have the effect of encouraging private sector bidders to continue to refine their bids, in turn encouraging a greater level of innovation in options.

In a public hearing with Mr Crowe of the Plenary Group in March 2012, the Committee raised the issue of bid costs, and was told that:<sup>491</sup>

*...we see bid costs in Australia for bidders to participate — and I would assume that governments face similar costs on their side of procuring — of around 1.5 to 2 per cent of the capital costs here. We see bid costs in the Canadian market of about 0.5 to 0.75 per cent.*

Mr Crowe indicated that this leads to a greater number of participants in the market in Canada.<sup>492</sup>

487 Mr. P. Noble, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.6

488 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.6

489 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.15

490 *ibid.*, pp.24-5

491 Mr P. Crowe, Executive Director, Head of Origination, Plenary Group, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects, transcript of evidence, 22 March 2012, p.6

492 *ibid.*

The Committee considers that a more detailed investigation of the effects of changing private sector bid costs on project tendering and the cost of infrastructure provision would be warranted.

**FINDING:** Compensation for losing bidders in structure negotiation may have the effect of encouraging a greater level of innovation in options presented by the private sector.

The Committee notes that the Government is currently undertaking public consultation on options to reduce bidding costs on PPP projects.<sup>493</sup>

### 6.8.6 Maximising transparency and accountability

Term of reference (d) also requires the Committee to report on the extent to which the project has maximised transparency and accountability over the life-cycle of the project.

Issues associated with transparency and accountability are relevant over the entire life-cycle of the project from its inception and the decision-making which supported that process through the implementation and ongoing operation of the infrastructure asset. The rationale and basis for decisions taken, public disclosure of contractual arrangements and the accuracy and completeness of accounting for investment expenditure are important components of public accountability and transparency. The adequacy of governance arrangements in place for the development and implementation of projects forms the basis of due and proper accountability.

#### Probity

In its submission to the Committee, DBI have noted that:<sup>494</sup>

*There were a few probity issues - such as advisors acting or seeking to act for both the State and prospective bidders and/or subcontractors - which is not unusual for a project of this magnitude.*

The submission then continues to demonstrate how these issues were managed ‘*within the agreed probity regime*’.<sup>495</sup>

The Auditor-General has also noted in his report that probity was maintained throughout the process.<sup>496</sup>

#### Transparency

As noted above, the ‘risk-adjusted PSC’ for the project has not been disclosed for reasons of confidentiality, except to indicate that the risk adjusted cost is higher than the raw PSC.<sup>497</sup>

493 Department of Treasury and Finance, *Future Direction for Victorian Public Private Partnerships: Request for Public Comment*, November 2012, pp.18-22

494 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.21

495 *ibid.*

496 Victorian Auditor General’s Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.13

497 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.17

The Committee understands that prior to commercial acceptance there is the need for confidentiality. However, such non-disclosure prevents the clear demonstration that appropriate decisions have been made. The Committee acknowledges that requirements have since changed, and that PPP project summaries are now published within three months of financial close. The Committee also notes that DTF is considering options for PSC processes, including releasing where appropriate the total benchmark to bidders (that is, the risk adjusted PSC).<sup>498</sup>

## Governance structure

The Minister for Major Projects is the responsible minister for this project, with the Minister for Tourism being the project client.<sup>499</sup>

In its report on the project, the Auditor-General found that governance was complicated but well defined, and that *'the relationships and the associated roles and responsibilities across both project phases have been well defined and articulated across the project documents'*.<sup>500</sup>

In its submission to the Committee, the Department of Treasury and Finance explained that:<sup>501</sup>

*Major Projects Victoria (MPV) led the procurement process on behalf of the then Department of Industry, Innovation and Regional Development (DIIRD), now the Department of Business and Innovation (DBI). DBI is the responsible agency (project and assets owner) and is supported by MPV as the PPP delivery agency; and MCET is the operator of the MCCD facilities (operator of assets).*

The project's steering committee includes representatives from DIIRD (now DBI), MPV, the MCET, DTF and DPC.<sup>502</sup>

In its report, the Auditor-General's office noted that there was no Contracts Administration Manual for the design and construct phase,<sup>503</sup> despite this having been recommended in the PPP policy on contract management.<sup>504</sup> However, the Auditor-General considered that the design and construction phase was proceeding in a controlled manner and was on schedule.<sup>505</sup>

## Communications

In its response to the Committee's request for information, DBI have reported that:<sup>506</sup>

*The project had a dedicated communications division comprising representatives from DIIRD, MPV and MCET. Regular communication activities in accordance with probity guidelines were conducted throughout the project procurement and delivery phase.*

498 Department of Treasury and Finance, *Future Direction for Victorian Public Private Partnerships: Request for Public Comment*, November 2012, p.8

499 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, pp.28-9

500 *ibid.*, p.28

501 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.9

502 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.29

503 *ibid.*, p.27

504 Department of Treasury and Finance, *National PPP Guidelines: Partnerships Victoria Requirements*, January 2010, p.11

505 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.33

506 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.21

In addition to the communications division:<sup>507</sup>

*The complete suite of contract documentation was made available via the Treasury website.*

### Actual achievement of benefits planned

In its submission to the Committee, DBI has included several of the listed benefits as reported in the original business case documentation as ‘satisfactorily achieved’.<sup>508</sup> In some cases the reported outcome is significantly different from the desired outcome. For example, the scope included a ‘ballroom’ with a capacity of 2,000 people, but the delivered outcome was a ‘banquet hall’ with a capacity of 1,660 people. In its hearing with DBI, the Committee heard that in relation to the two proposals initially presented to the Department, ‘neither one nor the other met the PSC requirements wholly’.<sup>509</sup>

The Committee considers that the subsequent changes to requirements as initially articulated may have related to the original project scope not being feasible in terms of the funds available. The Committee notes that this suggests some minor skills deficiency in quantity surveying in the early planning stage of the project.

### 6.8.7 Competencies and skills on the project

Given the focus of the Committee’s Inquiry on skills and competencies of the public sector in the delivery of major infrastructure projects, DBI was asked to provide information about any special competencies and skills which have underpinned examples of good practice on the Project.

In its response, DBI indicated the following skills had been important:<sup>510</sup>

- in-depth understanding of operational and business aspects leading to a viable, output-based brief;
- the ability to manage the functional brief, risk positions, operational and commercial aspects within a complex legal and financial structure;
- the ability to debate, negotiate with and manage advisers and the private sector; and
- an understanding of the ‘intent’ of the contract in order to manage risk and commercial issues.

However, according to DBI:<sup>511</sup>

*The complex nature of the transaction (which would be the case for most PV [Partnerships Victoria] projects) makes it inherently difficult for new members of the project team to grasp the nature of the transaction.*

Because of the complexity of the project, the Committee considers that the skills required in MPV are of a higher order than may be found in the wider public service.

507 *ibid.*

508 *ibid.*, pp.14-16

509 Mr P. Noble, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.6

510 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, pp.24-5

511 *ibid.*, p.24

### 6.8.8 Better practice

The Committee asked DBI for information on how the Project could have been better implemented. The Department advised that there had been no dysfunctional aspects associated with this project.<sup>512</sup>

#### A well-known and understood environment reduces uncertainty

At the August hearing, the Committee asked the Secretary, DBI, what factor had made the project a success. He responded that:<sup>513</sup>

*We certainly had a good business case. Key to that is you had a government body in the middle that had been running the business a long time successfully, and they really knew the business; therefore they really knew what they wanted in a competitive market. That led to a good business case, which had the aspects that I am talking about. Ultimately it had a very good cash flow explanation of how things would go and very good quantification of risk. It was a nice competitive process, where good people bid, who had done this before. There was then an intense but good negotiation coming out of that that led to a good, successful party. Because the business was so well known, I guess the parties had a confidence that arrangements put in place would, in effect, be profitable for 25 years.*

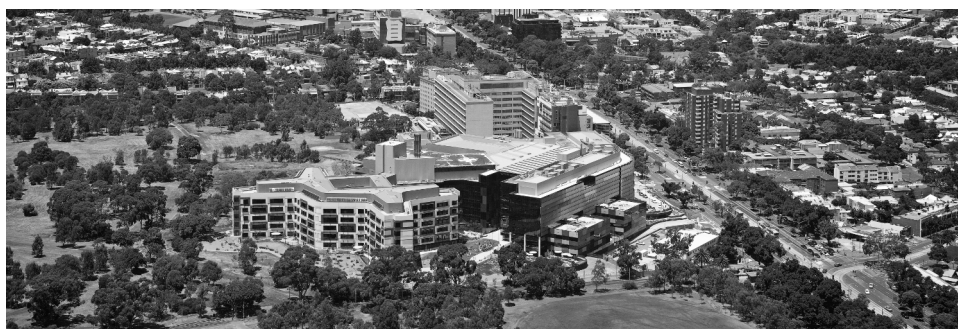
The business of operating convention centres was well known, and the stakeholders were familiar with the environment. The Committee considers this was the primary factor that determined the success of the Melbourne Convention Centre Redevelopment Project.

DBI has communicated to the Committee that a number of events that have had to be turned away during 2012. This indicates to the Committee that on the evidence presented to the Committee, the project has been in the public interest and satisfied a need that existed.

512 *ibid.*

513 Mr H. Ronaldson, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.18

## 6.9 The new Royal Children’s Hospital project



### 6.9.1 Committee’s Approach

The Committee sent a list of questions relating to the details of term of reference (d) to the Department of Health (DOH), the Royal Children’s Hospital (RCH), the Department of Treasury and Finance (DTF) and the Victorian Auditor-General’s Office (VAGO) about the new Royal Children’s Hospital project. Public hearings with representatives from these agencies were held in August 2012.

DOH and the RCH both provided comprehensive responses in relation to the questions tendered by the Committee. DOH included a copy of the *Partnerships Victoria Project Summary* from February 2008 as well as a copy of the Auditor-General’s report on the project from May 2009.

These responses and transcripts from the hearings have been used to prepare the information presented in this section of the report.

#### Observations on the project by Committee’s consultant

Evans & Peck provided the Committee with a series of observations about the new Royal Children’s Hospital Development Project linked to its various procurement stages. These are shown in Table 6.14 below.

**Table 6.14 Observations on performance of the new Royal Children’s Hospital project by stage**

Stage	Observations
Conceptualise	<ul style="list-style-type: none"> <li>Models of care were not adequately developed. Recommendation in Gateway 1 to address this deficit was not addressed.</li> </ul>
Prove	<ul style="list-style-type: none"> <li>Detailed analysis of redevelopment options carried out.</li> <li>Significant engagement across all stakeholder groups – including staff, the community and patients.</li> <li>Project objectives and goals were solid such that project partner had an understanding of what was wanted.</li> <li>Models of care were further developed and defined after the business case stage to inform the project brief that was released to the market.</li> </ul>
Procure	<ul style="list-style-type: none"> <li>PPP model compelled participants to find a solution that would last 25 years and beyond and consider whole-of-life costs.</li> <li>Single point of accountability separating RCH users from DoH PPP delivery structure.</li> <li>Capacity within the brief for innovation to occur during the bidding phase.</li> </ul>

Stage	Observations
Implement	<ul style="list-style-type: none"> <li>• RCH had a dedicated team of seconded clinical staff who had an interest and desire to be part of the project, They brought the benefit of their clinical knowledge to the project.</li> <li>• Responsibilities and lines of communication between all parties during development were open and transparent. Regular monthly meetings with the project director, steering committee meetings every quarter, the filtering of all issues through the steering committee, regular reporting on project status, formal management of variations through the steering committee all contributed to the outcome.</li> <li>• Strong communications component with a dedicated communications manager and significant involvement by the executive director, communications. In addition to formal lines of communication, the teams instigated much informal communication to ensure that the project maintained its pace.</li> <li>• RCH appointed KPMG to audit the work they needed to do to deliver their elements of the new facility. This audit added genuine quality to the process and outcome by keeping the project team focused.</li> <li>• The new facility was designed to enable new clinical models and new ways of doing things. The hospital played a significant role in managing change, both operationally and culturally.</li> <li>• Consistent team through all phases of the project. Department's agent and team were a constant throughout the process.</li> </ul>
Realise	<ul style="list-style-type: none"> <li>• The project agreement includes a robust performance monitoring and reporting regime for the operating phase of the arrangement.</li> </ul>

Source: Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, pp.45

## 6.9.2 Project Synopsis

The original Royal Children's Hospital is the State's only specialist paediatric medical institution, and was designed during the 1950s. At this time, the 'model of care' involved treatment being given at the bedside, often in large wards, with families only given access to admitted children during specified visiting hours. Since then, care styles have changed, with for example, staff behaviour changing and becoming more flexible, equipment becoming more mobile, and families welcomed at bedsides at any time, and often staying nearby. The existing buildings and floor layouts became a constraint to modern care. A new facility was required that helped to provide accessible, cost-effective and high quality medical services, allowing evolving care and work practices, and family and community expectations.

The construction of the new facility is the largest hospital development project carried out in Victoria. A number of similar development projects had been successfully carried out by DOH in prior years, and the Department retains a team of experts to manage such projects. Because of this, the Department's project managers were not in uncharted waters.

The new Royal Children's Hospital Service Plan was developed in 2004, and revised in 2005. The plan took into account '*future service profiles, trends and changing patterns of demand as well as new service development needs and models of care*'.<sup>514</sup> The final business case was submitted in November 2005.

514 Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, p.11

Three proposals were examined and assessed by the project steering committee, and two progressed to a 'structured negotiation' phase, which resulted in a preferred offer.<sup>515</sup>

The winning consortium, the Children's Health Partnership (CHP), was announced in November 2007. Under the agreement, the private sector's responsibility is to design, construct, finance and maintain the facility, including the maintenance of equipment. The responsibility of the public sector will be to continue to provide clinical services.

The consortium will operate and maintain the new buildings for 25 years, after which the ownership of the facility will revert to the State at no cost. At that time, the condition of the facility is to be at a set standard.<sup>516</sup>

In Stage 1 of the project, complete new facilities were constructed adjacent to the existing buildings, sharing only the entry and a research facility. The opening of the new hospital was scheduled for December 2011. The opening was one month ahead of schedule, in November 2011.

Stage 2 of the project commenced in early 2012 and includes the demolition of the majority of the old buildings (apart from those shared with the new development) and the construction of a car park and hotel. Stage 2 is expected to be completed at the end of 2014. Following this, the remaining land will be returned to parkland.<sup>517</sup>

The new Royal Children's Hospital project is widely regarded as having been successful. The project received the prestigious 'Project of the Year' award under the 2012 National Infrastructure Awards.

## Project timelines

Table 6.15 shows variations between actual and approved timelines for the project.

**Table 6.15 The new Royal Children's Hospital project – approved timelines and variations**

Project phase	Initial approved timelines	Approved extension/s to timelines	Reasons for time extension/s	Expected/Actual timelines
Business case	November 2005	n/a	n/a	November 2005
Tender process	October 2006 <sup>(a)</sup>	n/a	n/a	October 2006
Contract development and management	Late 2007 <sup>(b)</sup>	Note construction program bid by CHP	n/a	November 2007
Project/Service Delivery	December 2011 <sup>(c)</sup>	Nil	n/a	November 2011

(a) Release of Request for Tender.

(b) Contract Execution.

(c) Completion and handover of Stage 1 (RCH facility) as per CHP bid program.

Source: Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.8

The original completion date for the project was December 2011. The construction was completed one month early, with patients moving in on 30 November 2011.

515 *ibid.*, pp.50-1

516 Department of Human Services and Department of Treasury and Finance, *Partnerships Victoria Project Summary: The New Royal Children's Hospital Project*, February 2008, p.19

517 Department of Health, 'The New Royal Children's Hospital Project: Stage 2 Works', <[www.newrch.vic.gov.au/Stage2works](http://www.newrch.vic.gov.au/Stage2works)>, accessed 12 November 2012



## Project costs

Table 6.16 shows variations to cost budgets for the project.

**Table 6.16 The new Royal Children’s Hospital project – approved budget and variations**

Project phase	Initial approved budget (\$ million)	Approved budget variation/s (\$ million)	Date of approval	Reasons for variation/s	Revised approved budget (\$ million)	Actual costs to date (\$ million)
Business case	847	n/a	n/a	n/a	n/a	n/a
Tender process <sup>(a)</sup>	934	n/a	n/a	n/a	n/a	n/a
Contract development and management <sup>(b)</sup>	1,016	7.5 <sup>(c)</sup>	2008-2011 <sup>(c)</sup>	n/a	n/a	7.5 <sup>(d)</sup>
Project/Service Delivery	1,016	n/a	n/a	n/a	n/a	n/a

- (a) The difference between the \$847m approved in the Business Case and the \$934m approved during the tender process primarily relates to the decision by Government to allow Murdoch Children’s Research Institute (MCRI) to expand its research facilities in the new hospital. As this expansion was fully funded by MCRI, at no cost to the State, it is not shown as a ‘variation’.
- (b) The Committee notes the DOH assumption that this refers to the actual D&C costs relating to the successful tender. DOH has advised that these costs cannot be directly compared with the budgeted costs since they include elements which are funded by the private sector at nil cost to the State (e.g. hotel). In addition, as a PPP, the capital costs are often increased with an offset in whole-of-life costs which are not reflected in the above table.
- (c) There have been approx. 250 minor variations (or adjustments) during the design and construction phase of the project. These relate primarily to minor design and/or equipment changes which improve the design outcomes. These variations amount to well under 1% of the contract value.
- (d) As a PPP, the State pays nothing during the design and construction phase (other than for modifications). Instead, the cost of the building is progressively amortised during the 25 year operating phase.

Source: Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.8

### 6.9.3 The Department of Treasury and Finance’s involvement in the project

The Department of Treasury and Finance has stated in a submission to the Committee that its involvement with this project has been advisory, and in line with the *Partnerships Victoria* framework.<sup>518</sup>

DTF’s early involvement (prior to 2005) was informally assisting the Department of Human Services (now DOH) with planning and developing the business case for the project.

Recently, DTF have also advised DOH during the operational phase of the project through its involvement on the project steering committee.

DTF have advised the Committee that they provided advice to the Government on issues relating to the business case and procurement model, as well as more recent issues such as the voluntary administration and liquidation of a member of the delivering consortium, and a proposed \$35 million donation from the delivering consortium.<sup>519</sup> However, DTF also advise that the advice provided to the Government is covered by Cabinet confidentiality and is unavailable to the Committee.

518 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.8

519 *ibid.*, pp.6-7

## 6.9.4 Project reviews

The Committee asked DOH to provide copies of any reviews which had been undertaken in respect of the Project or contractual arrangements for the project such as, peer reviews, Gateway Reviews or any other external reviews. The following information in relation to reviews undertaken to date has been provided to the Committee.

The Victorian Auditor General published a report on this project, *The New Royal Children's Hospital – a Public Private Partnership*, in May 2009. Generally the conclusions were positive, with the exception of an identified lack (at the time of the report) of an ongoing contract management system for the operating phase of the project.

As part of the review of the project, the Auditor-General recommended that DTF require procuring agencies to conduct and document quality assurance on Public Sector Comparator (PSC) estimates and related financial models.<sup>520</sup> This was to reduce the risk of error or inaccuracy in complex PSC calculations. In response, the Department of Treasury and Finance has required that procuring agencies conduct quality assurance review workshops on the PSC. The Committee considers that while this process will improve the accuracy of the PSC calculations as intended, there appears to be little requirement to act upon issues raised in such workshops.

## 6.9.5 Alignment with the public interest and value-for-money

One aspect of term of reference (d) of the Inquiry requires the Committee to report on to what extent the project has been developed and implemented in a manner which aligns with the public interest over the life-cycle of the project.

The public interest encompasses many aspects: value-for-money (the economic, efficient and effective management of public resources); the achievement of benefits and outcomes; community consultation and stakeholder engagement; consumer rights; equity; privacy; and security. Transparency and accountability are also important to ensuring that the public interest is well-served.

A distinction has been drawn in term of reference (d) between public interest and transparency and accountability and so issues associated with the latter two are discussed separately. However, it should be noted that the two are closely related and intertwined.

### Public interest

As part of the business case, protection of the public interest is required to be assessed against eight elements.<sup>521</sup> In the February 2008 Project Summary, DOH and DTF stated that '*at all stages, it was considered that, on balance, the public interest was being protected*',<sup>522</sup> and detailed the rationale for all eight points.<sup>523</sup>

520 Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, p.22

521 Department of Treasury and Finance, *National PPP Guidelines – Partnership Victoria Requirements*, January 2010, Annexure 7

522 Department of Human Services and Department of Treasury and Finance, *Partnerships Victoria: Project Summary: The New Royal Children's Hospital Project*, February 2008, p.9

523 *ibid.*, Appendix 3, p.23

In addition, the project includes additional features, such as space for an additional 30 beds, a cinema, a hotel, retail facilities and other facilities for patients and their families. Revenues from these features which have been provided by the CHP at no cost to the State<sup>524</sup> will flow to the private sector partner.

Gateway Reviews 1, 2 and 5 have been completed for this project. The Strategic Investment Review was carried out in February 2005; the Business Case Review was carried out in October 2005; and the Readiness for Service Review was carried out in May 2011.<sup>525</sup> ‘*The project was exempt from Gates 3 and 4 due to rigour existing in PV processes, consistent with PV policy*’.<sup>526</sup>

### Value-for-money

Whole-of-life cost analysis is generally accepted to be necessary for overall (that is, capital and ongoing) cost minimisation. In the case of the new Royal Children’s Hospital, the Department of Health is responsible both for delivery and the operation of the project. The Committee heard from the Department of Health that:<sup>527</sup>

*... we tend to take in the entire capital program and looking at long-term asset management across the health sector as well.*

However, whole-of-life agreements can have the disadvantage of preventing or complicating significant alterations in service delivery. In the case of the new Royal Children’s Hospital, procurement and maintenance of specific equipment used to support clinical practice has been assigned to the private sector operator. It is the opinion of the RCH that:<sup>528</sup>

*The requirements and design specifications of these items of equipment change as medical technologies and hospital practices change, and paying to have them life cycled and maintained over 25 years, assumes a consistency of product over a long period of time.*

It is the opinion of hospital management that managing these items of equipment as a State risk would be a better approach.<sup>529</sup>

### Defining the need for the project

The Committee considers that the new Royal Children’s Hospital Project is an example of approaching a problem by analysing the overall need before proposing solutions. This prevented any narrowing of the focus on a predetermined solution. The problem facing the State was well articulated early in the project, allowing a wide range of potential technical solutions to be developed.

The existing RCH facilities were deemed inadequate in the 2004 and 2005 planning documents. The DOH commented that:<sup>530</sup>

524 Department of Health, response to Committee’s request for information on term of reference (d), received 20 July 2012, p.4

525 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.7

526 *ibid.*

527 Ms L. Price, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.6

528 Royal Children’s Hospital, response to the Committee’s questionnaire, received 13 July 2012, p.5

529 *ibid.*

530 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.1

*...the buildings had become unsuitable for the complex, high technology multidisciplinary care now provided for children. The facilities did not support families in the manner expected of a modern best practice children's facility and could not keep pace with the rapid expansion of sameday and ambulatory care services.*

Overall project objectives were set out in planning documents and 'have been refined over time'.<sup>531</sup> Objectives were gathered into seven categories.<sup>532</sup> Once the problem had been clearly articulated in this manner, potential solutions could be assessed as to whether they sufficiently solved this problem.

## Investigation of options

The original business case (2004) included a number of options, including one of doing nothing. The 'do-nothing' option and a 'no-asset' option were discarded as they were not considered to fit the project requirements, with the do-nothing option being restrictive and requiring constant capital upgrades. The 'no-asset' option was discarded as it would not be able to provide the required services. After this initial filtering, five options remained for master planning and feasibility studies.<sup>533</sup>

VAGO concluded that the financial costs for the options were assessed fairly, in accordance with DTF guidance.<sup>534</sup>

The Committee considers that this approach – clearly articulating the problem prior to considering possible solutions – is the appropriate way of going about the initial planning for the project.

As noted, five technical options remained for consideration in the business case.<sup>535</sup> This is a relatively large number in relation to other projects examined by the Committee. The options included different locations, with varying use of the existing facilities.

In order to assess options, a Public Sector Comparator was developed in accordance with Department of Treasury and Finance guidance.<sup>536</sup> The PSC represents the cost of a facility that would provide the required functionality if it was financed, owned constructed and operated by the Government for 25 years. The present value of the cost of the PSC was then be used as a benchmark against which bidder options were compared. This present value was \$1.016 billion. The present value of the winning bid was \$946 million (in December 2007), around 7 per cent lower over the 25 year project life.<sup>537</sup>

In addition, a range of other benefits are listed in the *Partnerships Victoria Project Summary: The New Royal Children's Hospital Project* of February 2008.

531 Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, p.12

532 *ibid.*, p.13

533 *ibid.*, p.35

534 *ibid.*, p.40

535 *ibid.*, p.37

536 Department of Treasury and Finance, *National PPP Guidelines: Partnerships Victoria Requirements*, January 2010, p.8

537 The Auditor-General's report gives the present value of the State's financial commitment for the project as \$1.016 billion as at 30 June 2008 (Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, p.16). The Committee is unsure as to what the difference is.

The Auditor-General was generally satisfied with the documentation supporting the preliminary PSC.<sup>538</sup> However, the report recommended that quality assurance reviews be carried out on PSC models, and that evidence for cost estimates and other calculations in the PSC should be documented.

In response, DTF altered its *Partnerships Victoria* requirements. Procuring Agencies are now required to conduct an internal quality assurance review workshop for the PSC calculations. This workshop is intended to ‘reduce the risk of error or inaccuracy by cross-checking the PSC outputs against the inputs and assumptions prior to release of the Request for Proposal.’<sup>539</sup>

## Stakeholder relations and management

The Committee notes that the area of stakeholder management had been given a high priority from early in the Project. In addition, the project team made efforts to demonstrate a two-way dialogue with stakeholders, engendering a collaborative approach to the project. According to the Royal Children’s Hospital:<sup>540</sup>

*The desirability of having a hotel on-site came out of the staff and community consultation process that was undertaken at the beginning of the project.*

To emphasise this two-way dialogue, as part of the process, ‘a follow up session took place to let stakeholders know how their ideas were incorporated.’<sup>541</sup> According to the CEO, Royal Children’s Hospital:<sup>542</sup>

*Stakeholder engagement in the process was very significant, particularly with the community, so we obviously had many stakeholders. Our own staff was huge; our families and patients was big, and our local community, very local community, was significant and our broad community. We engaged with children and asked their opinion about various things—artwork and various other things. We had a number of meetings with the local community or anyone who was interested to come and hear what we were doing and where it was at in the process, so stakeholder engagement was very significant.*

The RCH project team were part of a permanent unit in the Department of Health and had worked on past hospital projects, including dealing with stakeholders. The Committee considers that because of this prior experience, the project team understood the need for early stakeholder engagement and support.

## Models of care

Models of care relate to the techniques used in patient treatment, and therefore affect number of beds per room, the amount of equipment shared between rooms, the ability for families to remain on wards, staff activities, and similar features that affect design considerations. The RCH understood the need to change their model of care from the ‘medical specialty’ model to one that focused more on the needs of families as well as patients. However, the details of

538 Victorian Auditor General’s Office, *The New Royal Children’s Hospital – a Public Private Partnership*, May 2009, p.40

539 Department of Treasury and Finance, *National PPP Guidelines – Partnership Victoria Requirements*, January 2010, p.i

540 Department of Health, ‘The New Royal Children’s Hospital Project: Stage 2 Works’, <[www.newrch.vic.gov.au/Stage2works](http://www.newrch.vic.gov.au/Stage2works)>, accessed 12 November 2012

541 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.5

542 Prof. C. Kilpatrick, Chief Executive Officer, Royal Children’s Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.6

this had not been specified in the 2004 Service Plan,<sup>543</sup> and this was raised as an issue in the Gateway 1 (Strategic Assessment) review of February 2005.<sup>544</sup>

The second Gateway Review, which was carried out in October 2005, examined the preliminary business case. Part of that review also noted that models of care had still not been sufficiently specified. It was not until after the final business case had been developed that models of care had been fully developed, and defined. However, the Auditor-General concludes that:<sup>545</sup>

*Delays in developing models of care for the new RCH added to the complexity of the service planning process but did not invalidate the results.*

## Scope changes

The final RCH business case (including the preferred option) was approved by Government in November 2005.<sup>546</sup> This document set out the project scope, which is described mainly in terms of building dimensions and floor area devoted to specific activities, including activities the old facilities did not provide.

The specific scope of the project was clear from this point onwards and did not change substantially. The Committee considers that the well-defined and stable scope contributed significantly to the successful implementation phase of the project.

The Committee considers that a major cause of the stability in scope was the early consultation and continued support of the stakeholders, including the Royal Children's Hospital and the Murdoch Children's Research Institute. These groups had been consulted throughout the life of the project, including on the design of the buildings.<sup>547</sup> Any lack of support of a critical stakeholder later in the Project, particularly if it required a re-scoping of the building design, would have involved renegotiation and delays and would have caused additional expense. The Committee notes that this set back has been observed during phases of the Melbourne Wholesale Market Relocation project, discussed in the next section of this Chapter.

Planning in the 2004 and 2005 documentation was based on an assessment of future demand, in overall quantity as well as other aspects (medical treatment, demographic and geographic catchments, etc.). Stakeholders including patients and staff were involved from this early stage.<sup>548</sup> The planning was comprehensive at the conceptualisation stage, involving available technical data and stakeholder input. This shows a high level of project management (planning) skills.

The Auditor-General's report notes that birth rates and other demand variables have varied in ways not predicted at the time of the 2005 Service Plan Review. This may have had a minor impact on the number of beds required, but as the final option includes more beds and is more flexible than the existing facilities, the Auditor-General's report does not conclude that this is significant.<sup>549</sup>

543 Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, p.27

544 *ibid.*, p.28

545 *ibid.*

546 *ibid.*, p.41

547 Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.5

548 Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, pp.26-7

549 *ibid.*, pp.31-2

## 6.9.6 Maximising transparency and accountability

Term of reference (d) also requires the Committee to report on the extent to which the project has maximised transparency and accountability over the life-cycle of the project.

Transparency and accountability relates to: the transparency of decision-making; the transparency of the costs and benefits associated with the project over its life-cycle; accountability processes in place to govern the management and decision-making on the project; the level of public disclosure and reporting; the accuracy and completeness of documentation; and the accuracy and completeness of public reporting.

### Accountability and Governance

The Minister for Health is the sole responsible minister for this project.<sup>550</sup>

The new Royal Children’s Hospital project governance structure consisted of:

- a project board, reporting to the Minister for Health. The project board had oversight of the RCH Project; and included representatives from the (then) Department of Human Services, DPC, DTF and the (then) Department of Infrastructure;
- a steering committee that reports to the project board, with representatives from the RCH and the departments of: Health; Premier and Cabinet; Treasury and Finance; and the Murdoch Children’s Research Institute;<sup>551</sup> and
- a secretary’s liaison group, which was responsible for two-way communication between the RCH Board to the project board.

Governance for this project was clear and did not change apart from some minor alterations in the RCH side of the structure.<sup>552</sup> The Auditor-General commented that the governance structure is ‘appropriate’,<sup>553</sup> and that:<sup>554</sup>

*... the governance framework for the project provides for effective communication between relevant parties as well as the assessment, monitoring, reporting and actioning of emerging issues and risks.*

At officer level, the Committee has heard that staff in the Department of Health project team, in particular senior staff who are responsible for large projects, are held individually accountable for poor performance.<sup>555</sup>

*The reality is that if the senior contracted staff who build the major projects do not succeed, they are not continued.*

To provide assurance over the project management, the Board of the Royal Children’s Hospital requested their internal auditors to provide a continuous audit throughout the process.<sup>556</sup>

550 *ibid.*, p.18

551 *ibid.*

552 Prof. C. Kilpatrick, Royal Children’s Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, pp.2-3

553 Victorian Auditor General’s Office, *The New Royal Children’s Hospital – a Public Private Partnership*, May 2009, p.4

554 *ibid.*, p.62

555 Mr L. Wallace, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.6

556 The Royal Children’s Hospital Melbourne, response to the Committee’s questionnaire, received 13 July 2012, p.5

*As part of governance and risk management, the RCH Board requested our internal auditors (KPMG) to provide a continuous audit. This basically meant that the KPMG auditor would attend any RCH new hospital meetings, access reports, speak to RCH staff and report directly to the RCH Board on whether management was on track, emerging risks identified and mitigation plans put in place. This process was challenging for management, but overall very beneficial.*

The effect of these internal audits was to ensure that effective governance and accountability was maintained, and that communication between groups occurred. It was also an additional and independent way of assessing progress against plan and avoiding risks of failure. The Committee considers this to be a good practice.

According to the CEO:<sup>557</sup>

*There were in fact a total of six audits in the end that were undertaken and we agreed what should be achieved, and there were various phases. I can go through some of them, but they were about making sure that the change program was on track, that our staff training was on track. ... but there is no doubt it kept us absolutely focused. It is not that we were not before, and I think it helped us to work through what was an extraordinary amount of work and made sure we were not slipping with anything. So I would commend that.*

## Probity

The Committee notes that the Auditor-General reported that ‘standards of probity were maintained and enforced for this major public sector procurement’.<sup>558</sup>

## Transparency and Communications

DOH maximised transparency on this Project within the constraints of probity. In describing their approach as having ‘appropriate transparency’, the Department stated that:<sup>559</sup>

*...full transparency was not appropriate as it would have given rise to probity issues during the tender phase, and might also be disadvantageous to the extent it undermines matters that are commercial in confidence.*

The Committee notes that the new Royal Children’s Hospital project has displayed a high level of stakeholder and community communications. The RCH steering committee included a communications group,<sup>560</sup> and the RCH have advised that a contracted communications advisor provided the project team additional skills used during the project.<sup>561</sup> The Committee considers that this contributed to transparency during the project, and that this communication contributed to the significant stakeholder support gained.

557 Prof. C. Kilpatrick, Royal Children’s Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.7

558 Victorian Auditor General’s Office, *The New Royal Children’s Hospital – a Public Private Partnership*, May 2009, p.57

559 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.6

560 Prof. C. Kilpatrick, Royal Children’s Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.3

561 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.13



## 6.9.7 Competencies and skills on the project

Given the focus of the Committee's Inquiry on skills and competencies of the public sector in the delivery of major infrastructure projects, the DOH and the RCH were asked to provide information about any special competencies and skills which have underpinned examples of good practice on the Project.

In its submission to the Committee, the Department of Health reported that the specific skills that supported better practice in the project included:<sup>562</sup>

- commercial, legal and financial skills;
- technical skills - health planning, hospital design, engineering, information and communication technology and environmentally sustainable design (ESD);
- project management skills; and
- stakeholder management and relationship skills.

As well as these specific skills, the DOH provided the following factors that have contributed to the success of the Project:<sup>563</sup>

- a knowledge from prior experience with similar projects;
- a knowledge of all phases over the life of the projects; and
- an understanding of how PPPs can provide additional benefits over public sector provision.<sup>564</sup>

The Royal Children's Hospital submission to the Committee claimed that:<sup>565</sup>

- *'a tight management structure around the user group process [ensured that] requests for changes or alterations were dealt with quickly and decisively'*;

And:

- Engagement with stakeholders *'ensured that the end product met the expectation of a significant number of hospital staff'*.<sup>566</sup>

## 6.9.8 Better practice

The Committee asked how the project could have been better implemented. The RCH advised that there had not been any unplanned or dysfunctional aspects of project management on the Project.

The Committee also asked DOH for details of aspects of the project that were well managed and which could be viewed as better practice.

562 *ibid.*, p.10

563 *ibid.*, p.9

564 *ibid.*

565 The Royal Children's Hospital Melbourne, response to the Committee's questionnaire, received 13 July 2012, p.3

566 *ibid.*

## Use an internal project team for repeat projects

DOH claims that using a team of specialists who undertake regular similar projects leads to a permanent body of knowledge in the Department. Working over a series of projects enables staff to develop a ‘corporate knowledge’. According to the Acting Secretary, DOH:<sup>567</sup>

*If you regularly undertake similar projects ... you are leveraging off experience in doing similar projects. ... We have been able to leverage knowledge off each of those projects and ensure that each time we come into a new project development we are picking up the best of learnings from previous successes and some things that have gone wrong.*

DOH also indicated that:<sup>568</sup>

*We have reasonable experience in both traditional procurement and also public-private partnership arrangements, and over recent years we have delivered a number of major public-private partnerships. ... our view is you need a critical mass to actually be successful in delivery; because we have an ongoing program it allows us to maintain a critical mass of appropriately trained and skilled staff. Our general view would be that that is one of the major prerequisites for successful delivery.*

The Committee considers that given the existing body of knowledge inside DOH, there would have been little advantage in the Royal Children’s Hospital project being managed by a different agency.

## Retain staff expertise

DOH has advised the Committee that it has a ‘pipeline’ of future projects which are similar in form to past projects.<sup>569</sup> This means that as one project comes to an end, employees tend not to find employment in other areas, but have the opportunity to remain with the Department. The Department commented that ‘most of the team that was previously involved in delivering RCH are now involved in delivering the new Bendigo Hospital’.<sup>570</sup>

This ability to retain staff has also allowed DOH to capture and address lessons learnt on each project.<sup>571</sup>

## Use Interactive tendering

One technique used on the new Royal Children’s Hospital was that of ‘interactive tendering’ with private sector consortia. According to the Secretary, DOH:<sup>572</sup>

*This ‘interactive tender process’ (ITP) was developed by the Department to assist in improving tenderers’ understanding of the Department’s requirements and expectations, with a view to ultimately improving the quality of tender submissions.*

567 Mr L. Wallace, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.4

568 *ibid.*, p.3

569 Department of Health, response to the Committee’s questionnaire, received 2 November 2012, p.4

570 *ibid.*

571 *ibid.*, p.5

572 *ibid.*, p.4

The Committee notes that, since October 2005, the process has been incorporated in *Partnerships Victoria* documentation.<sup>573</sup>

Interactive bidding encourages communication, both at a formal and informal level, between the tendering department and the private sector. This occurs both before and after tendering, strictly within probity limits. The Secretary continues:<sup>574</sup>

*The process is successful when the dialogue is open and honest, and views are exchanged within a framework that both recognises the risks being borne by the private sector, but nevertheless tries to engender a partnership approach in terms of dealing with the issues that inevitably arise on complex infrastructure projects. It relies on avoiding an ‘us versus them’ approach to dealing with issues as between the State and private sectors, and trying to work as partners in delivering what is hopefully a shared vision for the project.*

This technique was also used as part of the Melbourne Convention Centre Redevelopment project. The technique received a favourable response (see Section 6.8.2 of this Chapter.)

### **Develop the operational plan together with the project owner**

DOH submission to the Committee stated that in future projects:<sup>575</sup>

*The operational plan (planning for the new operational models and costings to run the new or revised services) needs to be developed by the Operator in conjunction with the Department to ensure that new funding matches the new operational plan.*

The Department noted that this lesson was learned as a result of a recommendation in the Auditor-General’s report on the project. This recommendation was made in relation to the delay in the development of models of care in the early stages of the project.<sup>576</sup>

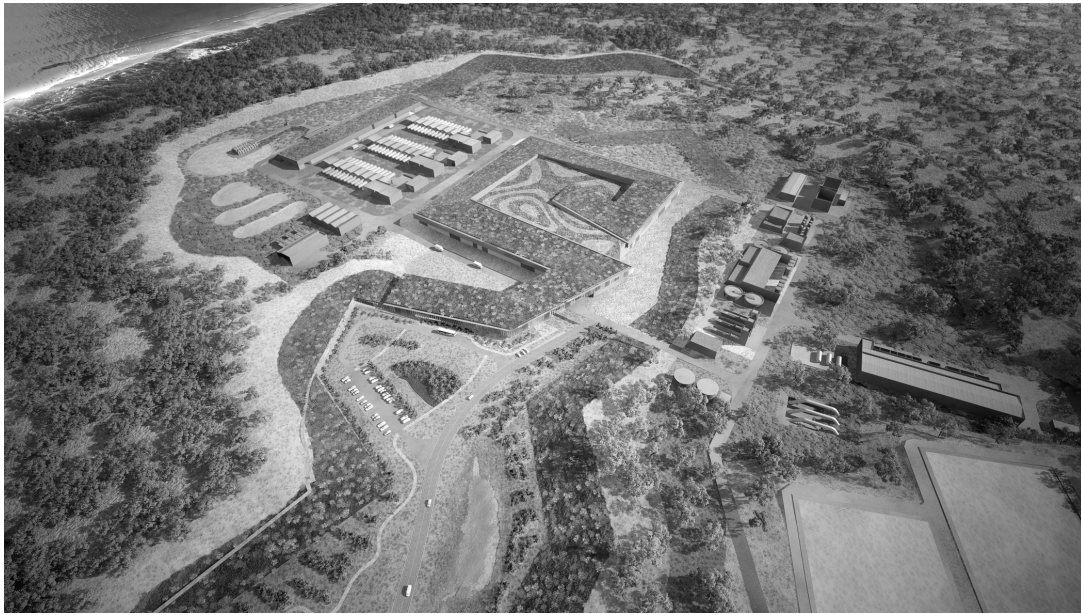
573 Department of Treasury and Finance, *Partnerships Victoria: Interactive Tender Process; Advisory Note*, October 2005

574 Department of Health, response to the Committee’s questionnaire, received 2 November 2012, p.4

575 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.15

576 Victorian Auditor General’s Office, *The New Royal Children’s Hospital – a Public Private Partnership*, May 2009, p.28

## 6.10 The Victorian Desalination Plant



### 6.10.1 Committee's approach

6

The Committee sent a list of questions focussed on the details of term of reference (d) to the Department of Sustainability and Environment (DSE), the Department of Treasury and Finance (DTF), and the Victorian Auditor-General's Office (VAGO) about the development and implementation of the Victorian Desalination Plant (VDP) project. Public hearings with representatives from these agencies and also with representatives of the private partner AquaSure were held in mid-August 2012.

DSE provided a very comprehensive response in relation to the questions tendered by the Committee including a copy of the *Partnerships Victoria* Project Summary on the Plant.

These responses and transcripts from the hearings have been used to prepare the information presented in this section of the report.

#### Observations on the project by Committee's consultant

Evans & Peck provided the Committee with a series of observations about the Victorian Desalination Plant project linked to the various stages of the project. These are shown in Table 6.17 below.

**Table 6.17 Observations on performance of the Victorian Desalination Plant project by stage**

Stage	Observations
Conceptualise	<ul style="list-style-type: none"> <li>Unclear what alternatives were considered for strategic water supply management.</li> <li>Committed early to a single option.</li> <li>Minimal engagement with community and lack of transparency around decision-making process created atmosphere of distrust and suspicion.</li> </ul>

Stage	Observations
Prove	<ul style="list-style-type: none"> <li>• The option was selected prior to the completion of the full business case (business case was run in parallel with tender process).</li> <li>• Case for PPP was proven by bid prices.</li> <li>• Ongoing costs to the consumers not transparent.</li> <li>• Decision process not transparent.</li> </ul>
Procure	<ul style="list-style-type: none"> <li>• Project is well set up for risk transfer to private sector and shared risks are acceptable.</li> <li>• Use of private sector commercial negotiation skills to bulk purchase power at a fixed rate over the life of the concession.</li> <li>• Going to market prior to finalisation of business case and approvals created uncertainty.</li> </ul>
Implement	<ul style="list-style-type: none"> <li>• Compressed timeframes made it difficult to establish a good industrial relations environment and competitive labour costs and led to poor decision-making and lack of focus on the technical / productivity aspects of the project.</li> <li>• Environmental management was performance-based rather than prescriptive, which avoided multiple approvals for the same thing (as occurred on the North-South pipeline). Should be carried forward to other projects.</li> </ul>
Realise	<ul style="list-style-type: none"> <li>• Delivering desalinated water as originally intended, though much later than planned.</li> <li>• The delayed completion has resulted in the state being able to defer payments. Overall VfM and basis for payments not transparent to public.</li> <li>• The State was protected through the PPP from many of the delivery risks, however this remains the subject of claims.</li> </ul>

Source: Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, p.38

### 6.10.2 Project synopsis

The Victorian Desalination Plant was approved as part of the former Government's Water Plan published in June 2007. In 2009, the Project was contracted as a Public Private Partnership under the *Partnerships Victoria* Framework.<sup>577</sup> The Project decision arose from a period of serious drought in Victoria with less predictable and fluctuating rainfall patterns and the impact of the drought on Melbourne's water storage levels. Pressure on the water supply system was also being applied through continued population growth, and also projections of future population growth in metropolitan Melbourne.

The VDP is the largest seawater desalination plant being currently constructed in Australia. The Plant is located at Wonthaggi on the Bass Coast of Victoria and will supply up to 150 gigalitres (GL) of water per annum to Melbourne, Geelong and via other connections to towns in South Gippsland and the Western Port area.<sup>578</sup>

The Plant will have the capacity to upgrade production to 200GL per annum. The marine intake tunnels, 84 kilometre transfer pipeline and the power supply will be all be built for 200GL capacity which means that if additional capacity is required by the State at a later time, only the Plant would require upgrading.<sup>579</sup>

<sup>577</sup> Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.3

<sup>578</sup> Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.2

<sup>579</sup> Department of Sustainability and Environment and Department of Treasury and Finance, *Partnerships Victoria Project Summary: Victorian Desalination Project*, November 2009, p.2

On 30 July 2009, the contract was awarded to a private sector consortium, AquaSure, to finance, construct, maintain and operate the Plant for a contract period of 30 years.

The State and AquaSure have also jointly contracted Davis Langdon Pty Ltd with MWH as the project's 'Independent Reviewer and Environmental Auditor (IREA)' for the design, construction, and operation, and maintenance of the Plant over the contract term.<sup>580</sup>

Payments by the State only commence after specified milestones are reached and certain performance and reliability tests are completed. DSE advised that assuming that the maximum amount of water is ordered annually over the 30 year contract period, the total net present cost of the Plant will be \$5.72 billion. This figure is sourced from the *Partnerships Victoria* project summary published in 2009.<sup>581</sup>

The Plant was originally planned to come on line at the end of June 2012, however construction delays have resulted in the project completion date being revised to the end of February 2013.

### Project timelines

DSE advised that during the two year period between the announcement of the project in June 2007 and the award of the contract in July 2009, multiple work streams were being undertaken by the Department to manage the tender process, complete the Business Case, Reference Design, prepare the Public Sector Comparator (PSC), develop the contract and tender documents in addition to preparing extensive terrestrial and marine investigations to support environmental assessments, the calculation of the PSC and to provide input to risk assessment calculations and pricing.<sup>582</sup>

Under the contract, payments do not commence until the first milestone is reached, which is 'preliminary commercial acceptance' (i.e. when the Plant is able to produce water at a rate of 50GL per annum for 7 consecutive days). The Committee was advised that this milestone is optional and a decision can be taken to go straight to 'commercial acceptance' (i.e. when the Plant is able to produce water at a rate of 150GL per annum). The payments then would not commence until this milestone is reached.<sup>583</sup>

Commercial acceptance is a mandatory milestone which was originally scheduled to occur on 19 December 2011. The project delivery dates were revised by AquaSure with commercial acceptance due 20 November 2012. The final completion milestone is called 'reliability testing finalisation' whereby the Plant runs for 30 consecutive days at maximum capacity of 150GL rate per annum. This is presently scheduled for 28 February 2013.<sup>584</sup>

Table 6.18 shows the main project milestones from the announcement and through to commissioning and operation.

580 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.1

581 *ibid.*, p.2

582 *ibid.*

583 Mr P. Sammut, Department of Sustainability and Environment, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 24 August 2012, p.7

584 *ibid.*

**Table 6.18 Victorian Desalination Plant – approved timelines and milestones**

Milestone	Planned /Achieved	Revised date
Completion of Feasibility Study & project announcement	19 June 2007	n/a
Expression of Interest released	4 May 2008 – responses received from 8 organisations	n/a
Environment Effects Statement released for public comment	20 August 2008	n/a
Request for proposals issued to two short-listed bidders	30 September 2008	n/a
Contract closed & successful bidder announced	30 July 2009	n/a
Financial close	2 September 2009	n/a
Construction starts	30 September 2009	n/a
Commercial acceptance	19 December 2011	20 November 2012
Reliability testing - Facility fully commissioned	30 June 2012	28 February 2013
Contract expires	30 September 2039	30 September 2039

Source: Department of Sustainability and Environment, response received 24 July 2012, pp.2-3 and Department of Sustainability and Environment, 'Project Timeline', <[www.water.vic.gov.au/initiatives/desalination/desalination/timeline](http://www.water.vic.gov.au/initiatives/desalination/desalination/timeline)>, accessed 30 October 2012

Material on the DSE website indicates that on 6 September 2012, the Plant began producing water and is currently in its commissioning phase. On 9 October 2012, AquaSure announced that the Plant had achieved its first contractual milestone of 'preliminary commercial acceptance'. The website indicates that while completion is scheduled for 28 February 2012, AquaSure is aiming for completion by the end of December 2012.<sup>585</sup>

Following commissioning, water production will cease as the Government has placed a nil water order for the 2012-13 year.<sup>586</sup>

### Project costs

The Committee asked DSE to provide details of the approved budget for each phase of the Project's development and implementation and to include any variations to budget and the reasons for those variations.

DSE advised that no variations had been sought to the overall cost and time for the delivery of the VDP.<sup>587</sup> Also, the payment arrangements under the contract mean that costs (net present and nominal) payable by the Government will be reduced as a result of completion being later than originally anticipated.<sup>588</sup> The Committee asked representatives of DSE if they were able to quantify the impact of the revised project completion date on the total anticipated payment cost of the VDP.

585 Department of Sustainability and Environment, 'Project Timeline', <[www.water.vic.gov.au/initiatives/desalination/desalination/timeline](http://www.water.vic.gov.au/initiatives/desalination/desalination/timeline)>, accessed 30 October 2012

586 *ibid.*

587 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.15

588 *ibid.*, p.3

DSE advised that it was difficult to quantify at this point in time due to some uncertainty as to the completion milestone dates. The payments to be made by the State, prior to finalisation of reliability testing, is based on a prescribed formula with two variables – the time between the milestones and the amount of water produced between each milestone. DSE advised that a rough estimate of the impact of project delays on the total commitments of the State would be a reduction of several hundred million dollars in the overall payments to be made over the life of the contract.<sup>589</sup>

The Auditor-General reports that the estimated cost to the state of the desalination plant over its operating term is \$17.6 billion, or \$5.7 billion in present value terms. This operating term has been reduced slightly as a result of construction delays. This reduced term has created savings to the state of \$441 million, being \$346 million in reduced interest payments and \$95 million in reduced operating, maintenance and capital expenditure.<sup>590</sup>

Table 6.19 shows the details of the budget and actual costs to date as provided by DSE.

**Table 6.19 Victorian Desalination Plant – budgeted and actual costs**

Project phase	Approved budget	Actual costs to 30 June 2012
DSE – Project development and management	\$319 million nominal (\$308 Net Present Cost)	\$231 million
Contract cost (payments to AquaSure)	\$19 billion to \$23.9 billion nominal over 28 years (a) (\$4.47 billion to \$5.72 billion Net Present Cost)	Nil

(a) Variable depending on the amount of water ordered each year over the life of the contract.

Source: Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.15

DSE was unable to provide a breakdown of the \$231 million incurred on the project to date but advised that it includes:<sup>591</sup>

*...all project development costs associated with environmental assessments, geotechnical and other investigations, contract documentation development, land acquisition and compensation, managing the tender process, business case development, and, after contract award, managing the contract with AquaSure, reviewing the design, managing the sale of the power supply assets, managing the Community Liaison Group and managing interactions with State and Commonwealth government agencies and stakeholders.*

At the hearing, the Chairman of the Committee confirmed with representatives of DSE that, based on the maximum amount of 150GL of water being supplied annually, the net present cost of the Project was approximately \$6.1 billion (i.e. \$5.72 billion plus \$308 million in DSE costs as shown in the above table).<sup>592</sup>

Some discussion is provided in Section 6.10.6 of this Chapter as to the various amounts which have been reported as being the cost of the Project.

589 Mr P. Sammut, Department of Sustainability and Environment, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 24 August 2012, p.7

590 Victorian Auditor-General's Office, *Auditor-General's Report on the Annual Financial Report of the State of Victoria, 2011-12*, November 2012, p.28

591 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.15

592 Mr P. Davis, Chairman, Public Accounts and Estimates Committee, transcript of evidence, 24 August 2012, p.4



In relation to questions asked about penalties available under the terms of the contract, the Committee was advised that there are no penalties for late completion of the Plant by the private contractor because payments under the contract do not commence until the Plant is operational.

In the *Auditor-General's Report on the Annual Financial Report of the State of Victoria, 2011-12*, the Auditor-General reports the cost of the VDP as \$17,639 million in nominal terms, or \$5,669 million in present value terms.<sup>593</sup>

### Other distinguishing features of the project

The response provided to the Committee by DSE also highlighted the following distinguishing features of the VDP Project:<sup>594</sup>

- a two-part payment mechanism – this arrangement ‘avoided the requirement to pre-commit to any water to be supplied by the plant, excluding avoidable costs, by building in an annual water ordering mechanism.’;
- a two-way pipe water transfer pipeline – the pipeline between the Plant and Cardinia Reservoir has been designed to operate as a ‘two-way’ pipe allowing water to flow from the Reservoir to supply ‘off-takes’ along the pipeline when the Plant is not operating. This provides an 84 kilometre extension to Melbourne’s water grid;
- water quality – The quality of the water produced by the VDP ‘will continue to match the high expectations of Melbourne water consumers’. Specifications for water quality have been set by water authorities in occultation with the Department of Health;
- a flexible water supply – Water is provided from the VDP only when requested and based on annual orders;
- plant architecture and landscaping – Visual amenity has been a critical concern of the local community. One of the project objectives was to ensure that the Plant integrated into the coastal landscape. Aquasure’s design includes a large-scale ecological restoration with a large number of new plantings and a ‘green roof’ on the building with native species;
- intake and outlet tunnels – tunnels under sand dunes, beach and marine sensitive areas have been constructed to protect the environment. The design and operation of these tunnels had to conform to performance requirements specified by the State and based on the completion of the Environment Effects Statement process, input from the public and other stakeholders and a range of other government regulatory requirements;
- power supply – is along a dedicated underground high voltage transmission line, co-located with the water transfer pipeline for most of its length in a single easement, which meets the visual amenity requirements of the local community and minimising disturbance to landowners;
- energy and renewable energy – all electricity usage during the operating phase of the Project will be fully off-set by the purchase of renewable energy certificates which will make the operation of the Plant carbon neutral. AGL has commissioned ne wind generation facilities to supply these certificates; and

593 Victorian Auditor-General’s Office, *Auditor-General’s Report on the Annual Financial Report of the State of Victoria, 2011-12*, November 2012, p.28. The Committee notes that no base year for the present value figure has been given.

594 Department of Sustainability and Environment, response to the Committee’s questionnaire, received 24 July 2012, pp.3-4

- Independent Reviewer and Environmental Auditor – required by the State to review the design, construction and environmental management of the Project as it progresses to assist in compliance with the requirements specified in the contract. The Environmental Auditor role will continue through the operation and maintenance phase of the Project through the life of the contract. DSE noted that this is the first project to have an Environmental Auditor role augmented into the more usual Independent Reviewer role.

### 6.10.3 The Department of Treasury and Finance’s involvement in the project

DSE advised the Committee that as the government department responsible for *Partnerships Victoria*, DTF has had, and continues to have, a significant role in the Project. DTF provided two senior staff to the DSE project team for the whole of the project development phase up to financial close. DTF were also part of the tender evaluations and part of the Executive Group panel.<sup>595</sup>

DSE also stated that DTF had a strong level of input in terms of scrutiny of the work prepared by the DSE project team in the development of the Public Sector Comparator, required under the *Partnerships Victoria* Framework to evaluate the value-for-money of private sector bids.<sup>596</sup>

DTF’s response to the Committee stated that DTF provided advice to inform Government deliberations and decision-making processes at key stages of the Project. The Committee has been advised that the nature of this advice is commercially sensitive and subject to Cabinet in confidence provisions and therefore unavailable to the Public Accounts and Estimates Committee for review. However, DTF advised that the following issues were considered in the advice it provided:<sup>597</sup>

- evaluation of value-for-money options;
- public interest tests required as part of the PV Framework; and
- financial, commercial, economic and social impacts.

Also, DTF advised that, as the Project was being developed at the time of the Global Financial Crisis, advice was prepared for Government on alternative financing options and other related issues.<sup>598</sup>

### 6.10.4 Project reviews

The Committee asked both DSE and DTF to provide copies of any reviews which had been undertaken in respect to the Project or the contractual arrangements for the Project such as, peer reviews, Gateway Reviews or any other external reviews. The following information in relation to reviews undertaken to date has been provided to the Committee.

595 *ibid.*, p.18

596 Mr P. Sammut, Department of Sustainability and Environment, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 24 August 2012, p.12

597 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.4

598 *ibid.*

## Internal reviews

In December 2010, DSE undertook a review of the contractual arrangements for the Project to examine alternative commercial and contractual structures. The report was provided to Cabinet sub-committees and is classified as Cabinet-in-confidence.

The Committee has discussed issues with Cabinet confidentiality in Section 6.3 above.

## Auditor-General's reviews

The Auditor-General has reviewed the costs and disclosure of information associated with the PPP arrangement for the Project in the annual financial report on the State. This is discussed in further detail in Section 6.10.6.

Also, DSE advised that the Auditor-General undertook a review in 2009-10 of the compliance of a sample of departments (one of which was DSE) with the disclosure requirements for private sector contracts. The VDP contract was one of those examined as part of this audit review. The audit found that the disclosure requirements in relation to the contract had been met and that excisions had been in accordance with the *Freedom of Information Act 1982*. The reasons for the excisions were reported in DSE's 2009-10 Annual Report following the execution of the contract in July 2009.<sup>599</sup>

## Gateway Reviews

DTF advised that the Project has completed independent Gateway Reviews at the following stages:<sup>600</sup>

- Gate 1: Strategic Assessment – completed in May 2008.
- Gate 2: Business Case – also completed in May 2008.
- Gates 3: Readiness for Market and Gate 4: Tender Decision – the Project was exempt from these Gates due to the rigour of the PV policy framework.

The findings and recommendations of these Gateway Reviews are 'owned' by the project's senior responsible officer.<sup>601</sup> The details of the reviews were not made available to the Committee.

Advice provided to DSE in its response to the Committee stated that the DSE project team does not currently hold copies of the Gateway Review reports but '*can advise that the gateway reviews undertaken to date reflected a full green overall status*' for the Project.<sup>602</sup>

599 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.14

600 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.18

601 *ibid.*

602 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.20

## Other reviews

DSE advised the Committee that the value, complexity and associated risk profile of the Project have led to a number of external inquiries into various issues related to the VDP as follows:<sup>603</sup>

- the Commissioner of Law Enforcement Data Security (8 December 2009) was requested by the Minister for Police and Emergency Services to review Victoria Police law enforcement data sharing arrangements for the VDP;
- the Privacy Commissioner (December 2009) instigated a review into the collection and sharing of personal information between Victoria Police, DSE and AquaSure which was extended to review the privacy practices of DSE, Melbourne Water and AquaSure. No adverse findings were made and DSE published an Explanatory memorandum on its website as part of the outcomes of the review; and
- the Victorian Parliament's Law Reform Committee (June 2010) announced an Inquiry into arrangements for security and information gathering on the Project but the Inquiry was cancelled following a meeting of the Committee in September 2010.

No adverse findings were made as a result of these reviews.

### 6.10.5 Alignment with the public interest and value-for-money

One aspect of term of reference (d) of the Inquiry requires the Committee to report on the extent to which the project has been developed and implemented in a manner which aligns with the public interest over the life-cycle of the project.

As mentioned earlier in this Chapter, the public interest encompasses many aspects: effectiveness (i.e. the achievement of benefits and outcomes); value-for-money (i.e. the combination of economy, efficiency and effectiveness in the use of public resources); community consultation and stakeholder engagement; consumer rights; equity; privacy; and, security. Also as noted, transparency and accountability are important to ensuring that the public interest is well-served.

A distinction has been drawn in term of reference (d) between public interest and transparency and accountability. However, it should be noted that the two are closely related and intertwined. In this report, the Committee will focus on issues associated with value-for-money and the achievement of objectives and outcomes, and transparency and accountability.

### Contractual arrangements and protection of the State's rights and the public interest

The Committee asked DTF to provide an assessment of the project's contractual arrangements including:

- the State's rights under the contract in relation to deadlines for completion of the Plant;
- the financial obligations of the State regarding the purchase of water following completion of construction;
- the adequacy of contractual provisions protecting the State against variations in climate and changes in the demand for water; and

603 *ibid.*, p.14

- the efficacy of decisions reached on the capacity of the Plant and alignment with the public interest.

DTF's responses in relation to each of these aspects, is provided in the following paragraphs.<sup>604</sup>

### **Protection of the State in relation to project delays**

Under the contract, risks associated with the design and construction of the Plant reside with the private sector consortium as such, the contractor and financiers bear the costs of delays in construction as the State is not affected in terms of having to extend the time for future payments. Payments for the facility do not commence until construction is completed.

### **Financial obligations of the State for the purchase of water**

The payment to the private sector consortium comprises two components: a 'Water Security Payment' to repay the capital cost of the facility and ensure that the Plant is maintained in a standard capable of producing water as required; and a 'Variable Water Usage Payment' to pay for water ordered by the State annually.

Both of these payments are subject to strict performance standards measured by defined key performance indicators (KPIs). Abatements or reductions to payments by the State are provided for in the contract where these KPIs are not met.

### **Variations in the demand for water and impact on payments by the State**

The contract provides a water ordering mechanism which allows the State to order between zero gigalitres and 150GL per annum, generally in increments (i.e. zero, 50, 75, 100, 125 and 150). There is scope for the State to restrict supply during wet winter months or to increase supply during any year. Annual orders must be provided by 1 April for the following year.

### **Protection of the State's rights and the public interest**

The State has rights to terminate the Project Deed subject to certain conditions including:

- default by AquaSure;
- if an 'event of default' is not remedied in a specified timeframe;
- if AquaSure is not actively seeking to address an 'event of default';
- if completion is not achieved by the date specified in the Project Deed;
- if there is a subsisting 'force majeure' event; or
- at any time on 60 Business days' notice to AquaSure, regardless of whether there has been a default or breach by AquaSure.

A public interest assessment was undertaken at contract execution. DTF and DSE continue to monitor the State's risk exposure under the contract. DTF advised that it is undertaking work to ensure that the public interest is fully protected under the contract.

<sup>604</sup> Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, pp.17-18

## The Public Interest test

The Committee has been advised that PPP projects have high levels of rigour to test for public interest.

The DTF *Investment Lifecycle Guidelines*, and now *National PPP Guidelines*, identify eight elements considered to encapsulate issues associated with the public interest: Effectiveness; Accountability and transparency; Affected individuals and communities; Equity; Public access; Consumer rights; Security; and Privacy. All Partnerships Victoria projects must complete a full Public Interest Test Statement as part of the case.<sup>605</sup>

The Public Interest test conclusions for the VDP are published as an appendix to the ‘*Partnerships Victoria Project Summary*’ for the plant.

DSE provided to the Committee the following conclusions from the Public Interest Test assessment for the VDP:<sup>606</sup>

- effectiveness - the project is in alignment with a number of State Government objectives and policies;
- accountability and transparency - contractual arrangements are transparent. Victorian Government Purchasing Board probity policy and Best Practice Probity Advice guidelines have been applied. A probity auditor and probity advisor were appointed during the procurement. The Auditor-General has access to information relating to the project;
- affected individuals and community - key stakeholders were consulted during the procurement phase and a communications strategy is in place for the implementation phase;
- equity - compliance with the relevant equity laws apply to parties involved in the project;
- public access - the project does not affect access to essential infrastructure;
- consumer rights - the project does not impact to diminish consumer right;
- security - the contractor must comply with Victorian legislation relating to occupational health and safety, environment protection and public health; and
- privacy - users’ rights to privacy (including commercially sensitive information) are protected.

## Comparison of whole-of-life costs with whole-of-life benefits

In responding to a question from the Committee about value-for-money and whole of life costs versus benefits, DSE provided information about:

- the Public Sector Comparator used to demonstrate value-for-money of a PPP approach to procurement; and
- other value-for-money benefits provided through the PPP arrangement.

These are discussed in the following sections.

605 Department of Treasury and Finance, *National PPP Guidelines — Partnerships Victoria Requirements— Annexure 7: Public Interest*, February 2009

606 Department of Sustainability and Environment, response to the Committee’s questionnaire, received 24 July 2012, p.9

## Value-for-money savings and the public sector comparator

DSE advised that the Public Sector Comparator is an estimate of the risk-adjusted, whole-of-life cost of the project if it was delivered by the State assuming the most likely and efficient form of conventional delivery. The PSC endeavours to take account of all the cost and risks associated with the procurement. The final figure is expressed as a net present cost to the State which is calculated using discounted cash flows.<sup>607</sup>

The PSC figure is compared to the net present cost of the service payments to be paid to AquaSure over the life of the contract. If the total sum of the discounted service payments is lower than the figure calculated through the PSC, then the PPP option is considered to represent value-for-money.<sup>608</sup>

The response provided by DTF stated that:<sup>609</sup>

*...the project achieved a value-for-money saving of \$936 million in Net Present Cost terms or 14 per cent against the Public Sector Comparator.*

Calculating value-for-money associated with a PPP is heavily dependent upon the assumptions used in the calculation of the Comparator. Of particular importance in the calculation are the discount rate used to determine net present values and the allocation and costing of risks. The discount rate is the rate used to discount future cash flows acknowledging that a dollar today is worth more than a dollar in the future.

This is discussed further in Section 6.12.3 in this Chapter.

The VDP Project Summary states that in calculating the PSC for the Project, a discount rate (real terms) of 7.3 per cent has been used ‘to reflect the nature of the Project.’<sup>610</sup> No other explanation is provided as to how the percentage was determined and how the ‘nature of the project’ has influenced that rate.

At the October 2012 hearing, the Committee heard evidence from the DTF about PPPs and the calculation of the PSC. A representative of DTF informed the Committee that the Comparator:<sup>611</sup>

*...is built up based on...an analysis of an estimated construction cost of a state build, the operational component of that offering that we are going out to market over the 25-year period, and then a detailed analysis around risks that we are anticipating transferring in the PPP contract. You then have to develop a discount rate which picks up the systematic risk associated with the transaction between the public and private sector. You then discount the PSC stream of flows at the 10-year TCV (Treasury Corporation Victoria) bond rate.*

The Committee notes that there are also other assumptions used in calculating the Net Present Cost of AquaSure’s winning bid for comparison against the PSC. The total cost of service payments are calculated at a cost of \$1.37 per kilolitre (June 2009 dollars) and is based on the assumption of the Plant operating at full capacity (150GL) for 27.75 years.<sup>612</sup>

607 *ibid.*

608 *ibid.*

609 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.5

610 Department of Sustainability and Environment and Department of Treasury and Finance, *Partnerships Victoria Project Summary: Victorian Desalination Project*, November 2009, p.9

611 Mr J. Loos, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 8 October 2012, p.12

612 Department of Sustainability and Environment and Department of Treasury and Finance, *Partnerships Victoria Project Summary: Victorian Desalination Project*, November 2009, p.10

The Committee notes that information published on the Victorian Premier's website puts the cost per kilolitre of water in 2012-13 at \$5.09 scaling up to \$6.72 in 2038-09 based on a 150GL production.<sup>613</sup>

The cost of inflation and variables associated with water orders each year over the life of the Project make it almost impossible to accurately quantify the total amount which will be paid by the State for the VDP over the next 30 years. The only figure which is able to be reliably stated is the capital cost of the Plant to build.

### Other value-for-money benefits provided in the contract

DTF advised of the other value-for-money elements which are included in the VDP contract as follows:<sup>614</sup>

- the project assets are returned to the State at the end of the contract in good working condition and with a residual life remaining;
- the certainty of long-term energy and renewable energy offsets;
- a high-speed communications cable along the Transfer Pipeline which will facilitate broadband access to the region; and
- the transfer of risks associated with financing, construction and delivery.

### Achievement of objectives and benefits

One of the key factors in assessing whether the public interest has been served is through the identification and measurement of desired objectives and outcomes or benefits.

The VDP was first referred to in the *2007 Water Plan* of the former Government where it was announced that a desalination plant would be delivered by 2011 to address the worsening drought. Due to the severity of the drought conditions at the time, the decision was made to '*expedite the PPP procurement process for the project*' and the Expression of Interest was released in June 2008 with a financial close achieved in September 2009.<sup>615</sup>

The Plant is aimed at providing more than a third of Melbourne's annual water usage from a source independent of rainfall and will provide water security for Melbourne and is designed to cater for Melbourne's expected growth.<sup>616</sup>

### Risk management and allocation of risks

Risk allocation is an essential feature of any infrastructure contract. The main benefit of transferring risk to the private sector is that it is supposed to generate incentives for the private sector to supply the product at the optimum cost and within the best timeframe.

However, it is also reasonable to expect the private sector to build into their bid, some financial allowance according to the nature and likelihood of the risks being accepted under the contract.

613 Premier of Victoria, 'The cost of water from the desalination plant', <[www.premier.vic.gov.au/wp-content/uploads/2011/02/110228-The-cost-of-water-from-the-desalination-plant-PDF-15-KB.pdf](http://www.premier.vic.gov.au/wp-content/uploads/2011/02/110228-The-cost-of-water-from-the-desalination-plant-PDF-15-KB.pdf)>, 31 January 2012, accessed 2 October 2012

614 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.5

615 *ibid.*, p.4

616 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.3



Under the terms of the contract, the State only commences making payments once the Plant is completed to the required standard. The private partner also bears the risks associated with design and construction ‘*in all but the most extreme circumstances.*’<sup>617</sup>

Further information provided by DSE in relation to risk pricing associated with the Project indicated that a good understanding of the risks that the private sector is being asked to bear is an important part of obtaining the lowest risk pricing or best value-for-money. DSE noted the following examples of risks that were totally transferred to the private partner as a result of the information obtained through investigations undertaken by the Department:<sup>618</sup>

- seawater quality variance;
- cultural heritage risks; and
- geotechnical and hydrodynamic risks under the ocean floor as a result of tunnelling.

### Management of community and stakeholder interests

Another important aspect associated with the public interest is community consultation and stakeholder management. DSE advised that community and stakeholder engagement throughout the Project has embraced a combination of ‘*proactive and voluntary programs and contractual and legislated requirements.*’<sup>619</sup>

DSE advised that stakeholders included the local community, the water industry, other government departments, environmental regulators, road authorities, landowners along the ‘ *easement route*’ and water users.<sup>620</sup>

A stakeholder engagement program was implemented following the project’s announcement to canvass key stakeholder and community interests as part of the Project’s development. This engagement helped to develop the project scope and performance requirements to be specified in the contract. Consultation was also required as part of the completion of an Environment Effects Statement under the *Environment Effects Act 1978*.<sup>621</sup>

#### 6.10.6 Maximising transparency and accountability

Term of reference (d) also requires the Committee to report on the extent to which the project has maximised transparency and accountability over the life-cycle of the project.

Issues associated with transparency and accountability are relevant over the entire life-cycle of the project from its inception and the decision-making which supported that process through the implementation and ongoing operation of the infrastructure asset. The rationale and basis for decisions taken, public disclosure of contractual arrangements and the accuracy and completeness of accounting for investment expenditure are important components of public accountability and transparency. The adequacy of governance arrangements in place for the development and implementation of projects, forms the basis of due and proper accountability.

617 *ibid.*

618 Department of Sustainability and Environment, response to the Committee’s questionnaire, received 1 November 2012, pp.4-5

619 Department of Sustainability and Environment, response to the Committee’s questionnaire, received 24 July 2012, p.11

620 *ibid.*, pp.12-13

621 *ibid.*, p.11

## Project accountability

Management of the project resides with DSE. However, DTF works closely with DSE, including through an Inner-Agency Advisory Group which receives updates on project issues. This Group comprises members from DPC, DTF, DSE, Melbourne Water and DPI and is chaired by the Project Director.<sup>622</sup>

The Committee was advised that while DSE is responsible for managing the project, Melbourne Water is responsible for paying all costs under the Project Deed. These costs are collected from the retail water authorities who in turn collect it from their customers through their water plans which are agreed to by the Essential Services Commission.<sup>623</sup>

To support the delivery of the project, in August 2009, Melbourne Water delegated certain powers under the *Water Act 1989*, to the DSE Secretary, including powers to acquire land, including easements in Melbourne Water's name. The Secretary also has land acquisition powers under the *Land Acquisition and Compensation Act 1986* and used these powers to acquire the site area for the Desalination Plant in 2007.<sup>624</sup>

## Project governance arrangements

The Committee was advised that *'the Project has operated under a clear and efficient governance structure since announcement, which has been pivotal to the development of the project to date.'*<sup>625</sup>

The response provided to the Committee by DSE described the following governance arrangements in place for the VDP:

- the former Government established a dedicated Committee of Cabinet as the ultimate decision-making body for the Plant;
- under the *Project Development and Construction Management Act (1994)*, the Minister for Water is the responsible minister and the DSE Secretary is the Facilitating Agency for the Project;
- the former Government established an inter-departmental committee to monitor the implementation of water projects. This Committee comprised the Secretaries of DPC (Chair), DTF, DPI and DSE;
- a General Manager was appointed by the Secretary, DSE to manage the project team to develop and deliver the Project;
- the Project team is supported by a suite of agency groups which it convenes with stakeholders;
- DTF project officers were embedded into the commercial and legal team during the development of the project and throughout the bidding phase; and
- a Water Interface Agreement was established in early 2012 between the Minister for Water, DSE and Melbourne Water which outlines the responsibilities of each of the parties, the water ordering process as well as the related reporting and governance arrangements.

622 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, pp.5-6

623 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.19

624 *ibid.*, p.20

625 *ibid.*, p.19

Also, in describing the governance arrangements in place for the development and implementation of the VDP, DSE states that a ‘*dedicated Committee of Cabinet*’ had been established by the former Government as the ultimate decision-making body for the VDP Project.<sup>626</sup>

The Committee asked DSE to provide details of the membership and mode of operation for the Project’s ‘steering committee’ or other similar body together with any reports relating to the governance of the project and governance issues which have been raised to date.

DSE advised the Committee that ‘*this information is Cabinet in Confidence*’.<sup>627</sup>

### Accountability and transparency of decision-making process

The Auditor-General noted in an April 2008 report on ‘*Planning for Water Infrastructure in Victoria*’, that DSE developed the Victorian Water Plan as an emergency response to less than projected water inflows. In the Water Plan, released in June 2007, the former Government committed to a number of water infrastructure projects aimed at securing Melbourne’s water supplies, one of which was ‘*a 150 billion litre desalination plant and an 85 km pipeline linking the plant to Melbourne (\$3.1 billion)*’.<sup>628</sup>

In commenting on the time constraints associated with the development of the 2007 water plan, the Auditor-General noted in his April 2008 report:<sup>629</sup>

*Water authorities, peak bodies and interest groups confirmed that there was little consultation over the selection of projects for inclusion in the plan. Some agencies, such as Melbourne Water were engaged in carrying out feasibility studies for components of the plan. However, their involvement was restricted to providing information without clear feedback on how the Department (DSE) used this information to determine the recommended plan.*

The Committee sought further information about the detailed analysis supporting the decision to set the operational capability of the Plant at 150 billion litres (GL) per annum.

At the public hearing on 24 August 2012, representatives from DSE were asked to clarify where the development of the business case sat in the decision-making process surrounding the Project.

The Committee was advised that the business case ‘*essentially built on the feasibility study that was conducted by Melbourne Water*’ and then looked at what form of procurement would be most suitable. DSE indicated that the Melbourne Water feasibility study had been undertaken prior to the announcement in the in the then Government’s 2007 Water Plan, of a 150GL Desalination Plant and that ‘*as the project developed, things like the size of the Plant were confirmed*’.<sup>630</sup>

626 *ibid.*

627 *ibid.*, p.20

628 Victorian Auditor-General’s Office, *Planning for Water Infrastructure in Victoria*, April 2008, p.28

629 *ibid.*, p.29

630 Mr P. Sammut, Department of Sustainability and Environment, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 24 August 2012, p.5

At the hearing, DSE advised that it had no input to the development of feasibility studies or demand-supply forecasting or modelling to determine the capacity requirements of the Plant. The responsibility of the Department centred on the procurement and implementation of the project. The Secretary, DSE stated at the hearing:<sup>631</sup>

*...More detailed analysis, I guess, would have been stuff that would have gone to cabinet throughout that year in settling that Cabinet decision on the expression of interest, so we will need to check what is available for the committee.*

In response to further questioning from the Committee about the size of the Plant, the Secretary, DSE stated:<sup>632</sup>

*From my point of view, the Cabinet made the decision after a year of deliberation following that 2007 water plan and decided on 150 gigalitres. We went through the process of managing the implementation of that in the best way in order to get the best value for money for Victoria. So asking us to comment on whether it was the right decision or not, I am not sure we could comment on that.*

Information available on the web and subsequently provided to the Committee by DSE indicated the following:

- a *Seawater Desalination Feasibility Study* prepared for Melbourne Water in June 2007 has been publicly released. The study examined a range of possible scheme sizes, plant locations and project timing. The report covers a range of different seawater desalination scheme sizes and plant locations up to a maximum capacity of 200GL per annum.<sup>633</sup>

The study report describes the project brief as:<sup>634</sup>

*To meet the need for a seawater desalination plant to supply 150 billion litres of water per annum to the Melbourne water supply system in the earliest practical time, and with the potential to expand the plant capacity of 200 billion litres per year...*

The Executive Summary of the study report also states that a range of different sizes can be constructed and notes for reference, plants sized at 45GL in Perth and on the Gold Coast and proposed for Sydney at 45GL expanding to 180GL per annum. Another plant referenced as proposed for Perth is noted to start at 50GL/per annum expandable to 100GL per annum.<sup>635</sup>

- In August 2008, a report entitled '*Augmentation of the Melbourne Water Supply System: Analysis of potential system behaviour*' was released by the DSE '*which made public the analysis that had been conducted and that had informed the former government's decision to confirm 150GL as the capacity required from the plant.*'<sup>636</sup>

DSE states that the latter report clearly outlines the assumptions and the analysis undertaken by Melbourne Water, in consultation with DSE to support the former Government's decision on the capacity of the Desalination Plant.<sup>637</sup>

631 Mr Greg Wilson, Secretary, Department of Sustainability and Environment, transcript of evidence, 24 August 2012, p.14

632 *ibid.*, p.17

633 GHD, *Melbourne Water Seawater Desalination Feasibility Study*, June 2007, p.i

634 *ibid.*, p.vi

635 *ibid.*, p.xii

636 Department of Sustainability and Environment, response to the Committee's questionnaire, received 1 November 2012, pp.8-9

637 *ibid.*, p.9

## Public disclosure and communication

Public disclosure of material relating to the VDP has been extensive. DSE advised that in response to a public perception that the project is not being delivered in a transparent manner more material has been publicly released than on comparable PPP projects.<sup>638</sup>

Over 18,000 pages of project documentation have been made available on the VDP including the full contract which was made available in November 2009 (with very limited commercial-in-confidence items redacted). The DSE state that the material redacted from the publicly available contract total around two pages within thousands of pages published. DSE also advised that efforts have been made to communicate information about the availability of the contract and other material related to the project. The project's web page contains a comprehensive list of all the material available with links to the documents released.<sup>639</sup>

The *Partnerships Victoria* Project Summary for the VDP was publicly released in November 2009. The Project Summary provides comprehensive information about the project including:<sup>640</sup>

- an overview of the project including the project objectives and intended outcomes;
- details of the advantages of a PPP model of procurement for the project;
- information about the tender process and the evaluation of bids;
- net present costs of components of the Public Sector Comparator together with the assumptions used to calculate the PSC;
- an assessment of public interest elements under the Public Interest test;
- project milestones;
- the key commercial features and contractual arrangements of the project;
- details of risk allocation between the State and the contractor;
- service payment arrangements;
- performance measures and abatement;
- default and termination regime; and
- State rights at expiry of the contract.

## Accounting for the Project

The Auditor-General advised the Committee that as part of the annual audits of the financial statements of DSE and of the Melbourne Water Corporation, the VDP project agreement had been examined to verify that the financial implications of the agreement have been correctly reported in the statements and disclosures associated with the project are fairly presented.<sup>641</sup>

638 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.21

639 *ibid.*

640 Department of Sustainability and Environment and Department of Treasury and Finance, *Partnerships Victoria Project Summary: Victorian Desalination Project*, November 2009

641 Victorian Auditor-General's Office, response to the Committee's questionnaire, received 13 July 2012, p.5

In relation to PPPs generally, the Auditor-General as noted as part of his 2010-11 *Auditor-General Report on the Annual Financial Report of the State* (AFR Report) that the full cost of PPPs is not reported in individual agency financial statements. The Auditor-General reported:<sup>642</sup>

*While the financial statements of agencies, departments and the state are prepared in accordance with accounting standards, the standards do not require all costs associated with a project or its development to be drawn together. Consequently, a reader of the financial statements may have difficulty in identifying and isolating the total costs associated with individual capital projects.*

*Australian Accounting Standards set the minimum requirements for accounting and disclosures, however, in the interests of better informing stakeholders, this should not preclude entities from making additional disclosures. For the public sector, a higher level of disclosure around PPP projects should be adopted to increase transparency and to minimise the opportunity for ambiguity and misunderstanding.*

In respect of the VDP, the 2010-11 financial statements of DSE report the nominal value of the finance lease liability under the contract at \$13.550 billion and the net present cost at \$4.112 billion. The Auditor-General puts the nominal total cost to the State at \$18.080 billion (a net present value of \$5.41 million).<sup>643</sup>

The Committee notes that the 'Notes accompanying the State's Annual Financial Report for 2010-11' prepared by the DTF present the 'Total Nominal Value' of the VDP as \$15.808 billion and the 'Present Value' at \$4.112 billion.<sup>644</sup> In the following year 2011-12, the State's Annual Financial Report presents the 2010-11 'Nominal value' of the Project as \$18.094 billion and the 2011-12 'Nominal Value' as \$17.678 billion.<sup>645</sup>

The lower nominal value reported between these two years is a result of the late delayed commissioning of the Plant and the fact that the State is not liable to make 'repayments' under the contract until the Plant is fully commissioned.

Further, at the public hearing on 24 August 2012, DSE tabled a schedule of Service Payments relating to the VDP. The schedule shows the total annual service payments in 'nominal dollars' from 2012-13 through to 2039-40 broken up into various water order increments (i.e. of zero, 50GL, 75GL, 100GL, 125GL and 150GL). The schedule is published on the Victorian Premier's website.

The schedule calculates the total nominal value of the payments at between \$19.371 billion (for zero GLs ordered) through to a maximum \$23.917 billion (if 150GLs are supplied every year).<sup>646</sup>

Other material presented on the web by AquaSure, refers to the capital cost of the project which is stated as \$3.5 billion.<sup>647</sup>

642 Victorian Auditor-General's Office, *Auditor-General's Report on the Annual Financial Report of the State of Victoria, 2010-11*, 9 November 2011, p.18

643 Victorian Auditor-General's Office, response to the Committee's questionnaire, received 13 July 2012, p.6

644 Department of Treasury and Finance, *Financial Report for the State of Victoria 2010-11 (incorporating Quarterly Financial Report No. 4)*, October 2011, pp.152-3

645 Department of Treasury and Finance, *Financial Report (incorporating Quarterly Financial Report No. 4) 2011-12*, October 2012, pp.148-9

646 PricewaterhouseCoopers, 'Victorian Desalination Project Service Payments – Full project term', <[www.premier.vic.gov.au/wp-content/uploads/2011/02/110228-Desalination-project-service-payments-PDF-191KB.pdf](http://www.premier.vic.gov.au/wp-content/uploads/2011/02/110228-Desalination-project-service-payments-PDF-191KB.pdf)>, 28 February 2011, accessed 2 October 2012

647 AquaSure, 'Victorian Desalination Project Frequently Asked Questions (FAQ)', <[www.aquasure.com.au/cms\\_files/100824\\_Victorian%20Desalination%20Project\\_FAQs.pdf](http://www.aquasure.com.au/cms_files/100824_Victorian%20Desalination%20Project_FAQs.pdf)>, accessed 29 October 2012

**FINDING:** Variations in the reported value and cost of the Victorian Desalination Plant can cause misunderstanding about the real cost of the investment.

DSE admits that members of the public can be confused about the costs associated with the project and may not necessarily appreciate that cost increases to the contractor do not necessarily translate to cost increases to the State (the public).<sup>648</sup>

Further, DSE notes that the confusing array of financials relating to the project (i.e. capital cost, net present cost, nominal cost, fair value assessment as per Accounting Standards) which are reported for a variety of purposes but which do not necessarily assist the general public's understanding about the project. These different 'valuation' also add to the confusion when trying to make comparisons between PPP projects and more traditional State delivered projects.<sup>649</sup>

### 6.10.7 Competencies and skills on the project

Given the focus of the Committee's Inquiry on skills and competencies of the public sector in the delivery of major infrastructure projects, the DSE was asked to provide information about any special competencies and skills which have underpinned examples of good practice on the project.

#### Managing Probity

The Committee was advised that the experience of DSE project team members in managing probity on major projects and the use of a Probity Auditor and a Probity Advisor on the VDP project helped to ensure that potential risks were mitigated and any probity issues arising were managed effectively.<sup>650</sup>

DSE advised the Committee that the coordination and management of each aspect of the project has required competencies and skill sets. The project team has been required to manage a complex project in a complex environment, run to tight schedules whilst also having the ability to concurrently develop innovative approaches which support the project objectives.<sup>651</sup>

The project team comprised an experienced core group of staff, supplemented with specialist expertise from a range of areas, including financial and tax advice and expertise. DSE advised that this approach is generally standard procedure for such large scale projects.<sup>652</sup>

The Committee was advised at the public hearing with representatives of DSE that the project team has experienced a relatively small turnover of staff involved in the project delivery, with approximately 75 per cent of the project team intact. DSE also advised that it was currently in the process of transitioning the project team into an operations team to manage the operations phase with the aim of maintaining some continuity.<sup>653</sup>

648 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, p.21

649 *ibid.*

650 *ibid.*, p.15

651 *ibid.*, p.18

652 *ibid.*, p.19

653 Mr P. Sammut, Department of Sustainability and Environment, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 24 August 2012, p.5

## Extensive technical investigations

DSE undertook a range of technical investigations to inform the reference design and tender process. These investigations included: A two-year seawater sampling program; geotechnical investigations, both land and marine; assistance with a 'pilot plant facility' for the two short-listed consortia.<sup>654</sup>

These investigations provided bidders with a better understanding of the risks associated with the Project which also helped in pricing those risks.<sup>655</sup>

## Quality and environmental management systems

DSE advised the Committee that it had been awarded ISO 90001:2008 certification in February 2011 for its project management systems. These systems cover all aspects of the project such as: the management of property; communications; environment; data security; risk and reporting; business administration; commercial and legal; and, technical and engineering.<sup>656</sup>

Also, assurance audits of DSE's compliance with processes and procedures are performed on a regular basis to track improvement and confirm certification standards.<sup>657</sup>

### 6.10.8 Better practice

The Committee asked DSE to provide details of aspects of the project that were well managed and which could be considered to be better practice. The Department was also asked to identify the special competencies and skills which have underpinned examples of better practice.

DSE identified the following as examples of better practice which have attracted some attention around Australia and internationally and which provide opportunities for reference in the delivery of future public sector infrastructure projects:<sup>658</sup>

#### A new approach to environmental assessment as part of the project requirements

In some PPPs, an environmental assessment has required changes to be made to the design which has led to additional work and delays in the procurement process and/ or changes to risk pricing in the project. The VDP project adopted a new 'performance-based' approach to environmental assessment and the Environmental Effects Statement (EES) process.

Under this new approach 221 project specific environmental performance requirements have been developed based on the project's objectives, environmental legislative requirements, EES research, assessment by the former Minister for Planning, and regulator's requirements.

Where possible, unacceptable environmental risks were designed out of the project and the requirements still provided the contractor with the opportunity to be innovative in meeting the prescribed environmental performance standards.

654 Department of Sustainability and Environment, response to the Committee's questionnaire, received 24 July 2012, pp.16-17

655 *ibid.*, p.17

656 *ibid.*

657 *ibid.*

658 *ibid.*, pp.16-17



## Appointment of an Independent Reviewer and Environmental Auditor

While PPP projects typically include an Independent Reviewer as part of the process, the VDP Project also included an Environmental Audit role to provide assurance on compliance with the environmental requirements of the Project. This role will continue to operate over the life of the contract.

## State syndication process

The State provided temporary support for a debt syndication process managed by AquaSure. Under the ‘support’ arrangement, the State would not have any on-going commitment unless AquaSure’s banks were unable to syndicate (i.e. sell down) a specific portion of the debt.

The syndication process was completed within three months of financial closure and was 50 per cent oversubscribed. The syndication amounts to \$1746 million and means that AquaSure has no refinancing obligations until 2016.

## Awards

It is noted that project timeline information provided on the government website indicates that the VDP Project has received recognition and a number of awards for financial excellence and ‘finance deal of the year’ in 2009-10.<sup>659</sup>

## Lessons learnt – public consultation and communication

DSE advised that there had not been any unplanned or dysfunctional aspects of project management as part of the implementation to date.

In terms of managing the project better, DSE made a number of observations in relation to public consultation and communications:<sup>660</sup>

- it could be argued that the consultation process prior to the announcement of the Project could have been better. The local community, Bass Shire Council and the six landowners of the Plant site ‘*had no opportunity to engage in the development process.*’ Landowners who would be subject to freehold title land acquisition ‘*were informed on the day the project was announced, at the former Government’s instruction.*’ The Project program was not able to accommodate a lengthy site selection public consultation process after the announcement in 2007. Consultation during the feasibility study to select the final site, commissioned by Melbourne Water, may have created broader community concern, as eight locations were being considered;<sup>661</sup>
- other arguments concern greater consultation with water users and the general public about the need for a desalination plant and about the size of the plant;<sup>662</sup>

659 Department of Sustainability and Environment, ‘Project Timeline’, <[www.water.vic.gov.au/initiatives/desalination/desalination/timeline](http://www.water.vic.gov.au/initiatives/desalination/desalination/timeline)>, accessed 30 October 2012

660 Department of Sustainability and Environment, response to the Committee’s questionnaire, received 24 July 2012, p.20

661 *ibid.*

662 *ibid.*

- with any major infrastructure project it is difficult to find the right balance of consultation and decision-making, and the circumstances and Government policy at the time of the announcement need to be taken into consideration;<sup>663</sup>
- there are some communication challenges associated with PPP procurement. In the case of the VDP, advising the community about the financing arrangements, the State’s payment responsibilities and the allocation of risks and how these impact payments and commitments over the life of the contract have been difficult to communicate effectively;<sup>664</sup> and
- there is potential in the *Partnerships Victoria* model to provide additional guidance aimed at improving the effectiveness of community engagement and communication about the financial information relating to projects.<sup>665</sup>

## 6.11 The Melbourne Wholesale Market Relocation project



6

### 6.11.1 Committee’s approach

The Committee sent a list of questions focussed on the details of term of reference (d) to the Department of Business and Innovation (DBI), the Department of Treasury and Finance (DTF) and the Victorian Auditor-General’s Office (VAGO) about the development and implementation of the Melbourne Wholesale Market Relocation project (MMRP). Public hearings with representatives from these agencies and also with representatives of the private partner, Lend Lease Project Management, were held in August 2012.

DBI provided a detailed response in relation to the questions tendered by the Committee including a copy of the relevant section of the Auditor-General’s report of March 2012.

Responses from agencies and transcripts from the hearings have been used to prepare the information presented in this section of the report.

663 *ibid.*

664 *ibid.*, p.18

665 *ibid.*

It should be noted that apart from some observations, submissions from DBI do not cover the period prior to April 2009. Early in its submission to the Committee, the Department sets out this restriction.<sup>666</sup>

*While the VAGO report covers the earlier history of the MMRP, our responses to the PAEC [Public Accounts and Estimates Committee] questions focus on the period for which DBI is responsible.*

The Auditor-General's report notes, however, that the Minister for Major Projects had responsibility for the project from its inception.<sup>667</sup>

Before April 2009, the project was the responsibility of the Department of Primary Industries (DPI). Due to the time elapsed since this date the Committee has not approached DPI for information about the Project.

### Observations on the project by Committee's consultant

Evans & Peck provided the Committee with a series of observations about the Melbourne Wholesale Market Relocation Project linked to its various procurement stages. These are shown in Table 6.20 below.

**Table 6.20 Observations on performance of the Melbourne Wholesale Market Relocation project by stage**

Stage	Observations
Conceptualise	<ul style="list-style-type: none"> <li>The need to relocate and solution concept were both sound.</li> <li>A good participatory process must be well embedded from the outset. Given that the livelihoods of many stakeholders were bound up with the redevelopment of the market, it should have been apparent that this would make for a long and protracted process of negotiation.</li> </ul>
Prove	<ul style="list-style-type: none"> <li>A fundamental flaw in the business case was that the strength of the opposition by traders was grossly underestimated and engagement was opaque and deficient, which meant that an otherwise sound project was significantly delayed.</li> <li>Options and risks were not clearly documented and assessed with stakeholders before delivering them.</li> <li>Business case did not have a practical and implementable business model. For example, the assumption that the private sector would deliver warehousing was wrong. Also trader opposition meant that the trading floor couldn't proceed as a PPP.</li> </ul>

<sup>666</sup> Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Markets Relocation Project, p.2

<sup>667</sup> Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.4

Stage	Observations
Procure	<ul style="list-style-type: none"> <li>• Gap in initial PPP scoping / feasibility where government would provide land for development of trading floor under a PPP arrangement and was assumed that warehousing would be provided by the private sector or market users. Why was warehousing left out? Was it to make the capital value/business case more attractive, by leaving out the possibly less attractive warehousing component? Rigour is not apparent.</li> <li>• Market stall holders did not support the project, meaning that private sector would not commit to a PPP.</li> <li>• Lack of engagement with stakeholders /end-users and payers and lack of ownership led to a fundamental change in scope and procurement method.</li> <li>• Memorandum of understanding with market community fell over, Thiess pulled out of new D&amp;C tender process, leaving a suboptimal competitive situation.</li> <li>• In an attempt to engage with the market community, the trading floor design process was very detailed and costly. The tender requirements were very onerous for bidders and significant changes were made to the design after the winning bidder was announced.</li> <li>• Significant issues around transparency and probity in relation to the procurement of the trading floor.</li> </ul>
Implement	<ul style="list-style-type: none"> <li>• Lack of engagement skills to enable and support transition/change management from Footscray to Epping. Unclear accountability in relation to responsibility for engagement.</li> <li>• Stark differentiation in delivery capability when the project was transferred from DPI to DBI (MPV), though MPV was involved in some capacity early.</li> <li>• Inconsistent levels of commitment by project sponsors and lack of management continuity, led to confusion around ownership and delivery.</li> <li>• \$30 million difference in price arose from key movements from the brief – warehousing, additional loading docks, centralised refrigeration plant and additional paving, most of which had previously been assumed would be provided by the private sector.</li> <li>• Significant changes made during the project created risks that were not well managed.</li> <li>• Construction is being delayed significantly by wet weather and resultant damage, with five extensions of time granted, totalling more than 300 days. This appears unusually high.</li> </ul>
Realise	<ul style="list-style-type: none"> <li>• Poor project implementation and stakeholder management has resulted in delays and cost overruns and reputational damage for the government.</li> <li>• The government taking responsibility for warehousing infrastructure has reduced the risk of failure, though increased the cost. Warehousing remains subject to business case approval.</li> <li>• The new market will cost more than double its original estimate and is expected to be open in 2014–15, six years after its initial planned opening date.</li> <li>• Lack of end-user engagement continues to contribute to uncertainty around take-up of the new facility by traders and relocation from the existing facility.</li> </ul>

Source: Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, pp.40-41

### 6.11.2 Project synopsis

The Melbourne Wholesale Fruit and Vegetable Market, incorporating the Melbourne Flower Centre, is currently located on the north side of Footscray Road in West Melbourne.

A Major Projects Victoria study published during 2002 analysed expected future demand for the wholesale market in Footscray Road, West Melbourne. This study concluded that demand for the site was increasing, and would grow beyond the capacity of the West Melbourne site

by 2008.<sup>668</sup> In addition, the site itself was deemed to be better used by other activities (port and rail). In addition, the site had a series of operational problems.<sup>669</sup> A feasibility study carried out by MPV in 2002 estimated the relocation of the market would cost \$313 million.<sup>670</sup>

The benefits of the move were expected to come in two forms. Victoria's Gross State Income would increase by an estimated \$410 million, which alone made the project attractive. In addition, \$459 million would be raised by transferring the existing site to port and transport uses.<sup>671</sup> An independent Gateway Review (Gate 1 – Strategic Assessment) was completed in January 2003. The second Gateway Review (Gate 2 – Business Case) was carried out in August 2004.<sup>672</sup> The Committee has not been provided with access to these reviews.

In 2004, the former Government announced that the market would be relocated to a new site in Epping. The project was to be managed by DPI, with the ministers for Major Projects and Agriculture being jointly responsible.<sup>673</sup> The project was to be delivered as a PPP with the Government providing the trading floor, and the private sector supplying warehousing to support the traders and a commercial precinct.<sup>674</sup>

In 2007, resistance from stallholders caused DPI to abandon the Public Private Partnership<sup>675</sup> and enter into an Memorandum of Understanding (MOU) arrangement with elements of the market community.<sup>676</sup> Under this arrangement, Victorian Fresh Markets Pty Ltd entered into an obligation to build and operate the warehousing and the commercial precinct, using a joint venture with a private sector construction company.<sup>677</sup> At the same time, DPI would procure the trading floor under a traditional 'design and construct' arrangement. Notably, under this arrangement, DPI reported to the Minister for Agriculture while Major Projects Victoria reported to the Minister for Major Projects.<sup>678</sup>

This arrangement failed in November 2008 after Victorian Fresh Markets failed to gain the support of the entire market community.<sup>679</sup> In addition, VAGO concluded that Victorian Fresh Markets did not have the skills, the experience, or the time available, to meet its obligations under the MOU.<sup>680</sup>

A third Gateway Review (Gate 3 - Readiness for Market) was completed in February 2009. As with other such reviews, the results have not been provided to the Committee by DBI.

In April 2009, responsibility for the project was transferred from the Minister of Agriculture, with the Minister for Major Projects taking on full responsibility. At the same time, administration was transferred to the Department of Business and Innovation.<sup>681</sup>

668 *ibid.*, p.6. This study has not been seen by the Committee.

669 *ibid.*

670 *ibid.*, p.7

671 *ibid.*

672 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.14

673 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.10

674 *ibid.*, p.1

675 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.12

676 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.13

677 *ibid.*, p.14

678 *ibid.*, p.10

679 *ibid.*, p.14

680 *ibid.*, pp.15-17

681 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.12

Also at this time, the scope of the project changed. In May 2009, the Government agreed in principle to State provision of warehouse facilities,<sup>682</sup> with the intention to sell the completed warehousing to Victorian Fresh Markets.

In August 2009, a Gateway Review (Gate 4 - Tender Decision) was undertaken.<sup>683</sup> This was for provision of the trading floor only and did not include any additional facilities.

In October 2009, the MOU was terminated. During 2010, DBI prepared a new business case for the Project, involving the public provision of both the trading floor and the warehousing facilities.

During 2011, DTF conducted a review of the project, reconsidering a number of alternative options. However, the relocation to the Epping site was confirmed in July 2011.<sup>684</sup>

In August 2011, the project was classified as a 'high-value, high-risk' project by DTF.<sup>685</sup>

## Project timelines

**Table 6.21 Melbourne Wholesale Markets Relocation project – approved timelines and variations**

Project phase	Initial approved timelines	Approved extension/s to timelines	Reasons for time extension/s	Expected /Actual timelines
Business case	January 2011	n/a	n/a	n/a
Tender process	June 2011 (as per MPV procurement paper dated 8 August 2008)	n/a	n/a	n/a
Contract development and management	Quarter 4 2011 (as per MPV RFT document dated May 2009)	n/a	n/a	n/a
Project/service delivery	17 March 2012	18 May 2013	Five Extensions of Time (EOT) have been granted under the contract due to water damage to the site. <ul style="list-style-type: none"> <li>• EOT # 1 dated 15/02/2011                             <ul style="list-style-type: none"> <li>– Revised Practical Completion (PC) date 25/5/2012</li> </ul> </li> <li>• EOT # 2 dated 27/5/2011                             <ul style="list-style-type: none"> <li>– Revised PC date 15/8/2012</li> </ul> </li> <li>• EOT # 3 dated 28/11/2012                             <ul style="list-style-type: none"> <li>– Revised PC date 15/11/2012</li> </ul> </li> <li>• EOT # 4 dated 15/2/2012                             <ul style="list-style-type: none"> <li>– Revised PC date 20/12/2012</li> </ul> </li> <li>• EOT # 5 dated 26/4/2012                             <ul style="list-style-type: none"> <li>– Revised PC date 18 May 2013</li> </ul> </li> </ul>	n/a

Source: Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Wholesale Markets Relocation project, pp.9-10

682 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.ix

683 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.14

684 *ibid.*, p.12

685 *ibid.*

The Committee notes that the information in table received as part of the submission from DBI only covers the period after April 2009 when the project was transferred from the Department of Primary Industries.

The Auditor-General's report notes that the original completion date was to be 2008.<sup>686</sup> This, however, was only for the trading floor, as the additional infrastructure was to be provided separately by the private sector partner.

The Auditor-General's assessment of the project has identified poor stakeholder management,<sup>687</sup> changes to scope and delivery methods<sup>688</sup> and administrative responsibility as being primary causes of delays in the project's implementation.<sup>689</sup>

As shown in Table 6.21 above, there has been a more recent series of delays (resulting in a current expected date of completion of 18 May 2013) as a result of storm damage. This has, however, not increased the cost of the project to the State. According to MPV:<sup>690</sup>

*The contractor is entitled to time relief for water damage as a result of storm events but not to costs, so there has been no increase in the contract value as a result of those events.*

While the current expected date of completion for the project is 2013, the Auditor-General has pointed out that the market cannot begin operations until the construction of the warehousing is complete. This is not expected prior to 2014-15.<sup>691</sup>

The Committee considers that the original completion date was optimistic given increasing difficulties with stakeholder opposition. Many of these factors may have been highlighted if a more thorough analysis of the project had have been carried out at the feasibility or first business case stage of the project's development.

686 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.1

687 *ibid.*, p.vii

688 *ibid.*, p.viii

689 *ibid.*, p.ix

690 Mr T. Bamford, Major Projects Victoria, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.14

691 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.x

## Project costs

**Table 6.22 Melbourne Wholesale Markets Relocation project – approved budget and variations**

Project phase	Initial approved budget (\$ million)	Approved budget variation/s (\$ million)	Date of approval	Reasons for variation/s	Revised approved budget (\$ million)	Actual costs to date (\$ million)
Business case	244.0 <sup>(a)</sup>	n/a	n/a	n/a	n/a	n/a
Tender process	301.7 <sup>(b)</sup>	n/a	n/a	n/a	n/a	n/a
Contract development and management	322.8 <sup>(c)</sup>	n/a	n/a	n/a	n/a	n/a
Project/Service Delivery	291.4 <sup>(d)</sup>	19.6	(e)	(f)	311.0	206.6 <sup>(g)</sup>
Total	n/a	n/a	n/a	n/a	n/a	n/a

(a) Capital cost in business case.

(b) Pre-tender estimate.

(c) Expenditure Review Committee submission, March 2009.

(d) Contract value of D&C contract with Bovis Lend Lease.

(e) The Project Control Group has approved ten variations from April 2011 to March 2012.

(f) Client Initiated scope changes approved by the Project Control Group.

(g) This amount has been paid to Bovis Lend Lease for works completed under the design and construct contract.

Source: Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Wholesale Markets Relocation project, p.8

### 6.11.3 The Department of Treasury and Finance's involvement in the project

DTF have informed the Committee that the Department has '*provided advice at various key stages of the project since its commencement as a PPP project through to its current phase*'.<sup>692</sup> However, due to the high level of commercial sensitivity, and because most of the advice was to inform the Cabinet and other Government decisions,<sup>693</sup> details of this advice has not been provided to the Committee. The Secretary, DTF has not revealed the Department's advice to the Government with respect to project developments, stating in an August hearing that '*I do not feel that I am in a position to advise you on what advice we give to government*'.<sup>694</sup>

The Committee has discussed this issue in Section 6.3 of this Chapter.

**FINDING:** The Department of Treasury and Finance has stated that it has provided advice to the Government about the Melbourne Wholesale Markets Relocation project. Unfortunately, the Committee has not been able to verify the nature of The Department of Treasury and Finance's advice and its involvement. Due to Cabinet confidentiality, The Department of Treasury and Finance has been unable to reveal what that advice was.

692 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.13

693 *ibid.*, p.13

694 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.8



During the early phase of the project (prior to 2007), DTF advised the Government on the original business case, including providing ‘*advice to DPI to assist the project in meeting the guidelines and requirements of the PV [Partnerships Victoria] policy*’.<sup>695</sup> This involved assessing the project as a PPP.<sup>696</sup> DTF advised the Committee that during this phase, ‘*the project was subject to the rigorous governance process of the PV framework*’.<sup>697</sup>

However, during the period 2007 to 2009, that is, the MOU phase of the project, DTF’s involvement is less clear to the Committee. DTF have advised the Committee that:<sup>698</sup>

*From 2007-2009, the project was delivered under a traditional approach to procurement as a Design and Construct contract for the main trading floor complex. ... DTF was not involved in the procurement process or required to attend the Project Steering Committee’s endorsement meetings (noting this was not formally required prior to the HVHR framework).*

However, according to advice provided by DBI:<sup>699</sup>

*DTF has been continuously involved on the Project Steering Committee since the commencement of the MMRP in 2004. DTF was closely involved in the development of the Business Case review in late 2009, managed the review of the MMRP for the Government in 2011 was closely involved in the financial and operational detail particularly since the commencement of the HVHR process in August 2011.*

**FINDING:** There is disagreement over the involvement of the Department of Treasury and Finance during the procurement phase of the Melbourne Wholesale Markets Relocation project.

In addition, a representative from DBI advised at the hearing in August:<sup>700</sup>

*In relation to more broad projects, such as the markets, there is a less defined role, so it does become ambiguous as to what role Treasury does have in those projects and to what effect in terms of some of the steering committee terms of reference.*

Since the classification of the project as ‘high-value, high-risk’, DTF’s involvement has been as required under the HVHR framework. In its submission to the Committee, DTF has advised that:<sup>701</sup>

*DTF expect the rigour of the HVHR framework to mitigate risks for the State by requiring the responsible Minister to seek the Treasurer’s approval prior to making decisions on key milestones and issues such as releasing tender documents and awarding of contracts.*

695 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.13

696 *ibid.*

697 *ibid.*

698 *ibid.*

699 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Markets Relocation Project, p.12

700 Mr. P. Noble, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.4

701 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.13

*DTF has communicated expressly to DBI that the Minister for Major Projects is required to come to the Treasurer formally under the HVHR framework for a number of milestone approvals including the warehousing approach and its procurement milestones as well as decisions on the overall debt/financial management framework and provision of certain key documentation.*

**FINDING:** The new high-value, high-risk process has altered the involvement of the Department of Treasury and Finance in capital projects.

#### 6.11.4 Project reviews

The Committee asked DBI to provide copies of any reviews which had been undertaken in respect of the Project or contractual arrangements for the Project such as, peer reviews, Gateway Reviews or any other external reviews. The following information in relation to reviews undertaken to date has been provided to the Committee.

The Project has been the subject of a VAGO report, *Melbourne Markets Redevelopment*, published in March 2012.

The Auditor-General has indicated to the Committee that issues raised in this report have received satisfactory responses from the relevant departments.<sup>702</sup>

#### Gateway Reviews

The Committee received Gateway Reviews for Gates 2, 3 and 4 for the Melbourne Wholesale Markets Relocation project. The Committee notes that all three reviews were given an 'amber' status.

The Gate 2 - Business Case Review made a number of recommendations. These dealt with a number of issues including: stakeholder management; project options; the project objective; the robustness of the PSC; and planning for the next phases.

The Gate 3 – Readiness for Market Review was carried out after the abandonment of the *Partnerships Victoria* phase but prior to the termination of the MOU, although the review noted the possibility of a fully State-funded warehousing facility. The review noted that there had been significant change since the Gate 2 Review and that findings and recommendations of that report were less relevant. A number of recommendations were made for action prior to the next review.

The Gate 4 – Tender Decision Review was carried out at the time of the discontinuation of the MOU. Findings and recommendations were made concerning the business case and stakeholders; assessment of the procurement approach; and risk management. Specifically, the review highlighted problems such as:

- ambiguity around the drivers, objectives and benefits of the project itself;
- problems with the business case report;
- ambiguity in governance and control;

702 Victorian Auditor General's Office, response to the Committee's questionnaire, received 13 July 2012, p.11

- stakeholder management, lease development, communication and change management (although it also noted that consultation and communications with the market owners had improved considerably); and
- a number of instances where some interviewees disagreed with others.

The review also concluded that the project had gained momentum, due to the recent change in responsible agency as well as the State's decision to proceed despite a number of issues remaining unresolved. and that a number of significant decisions for the project were pending.

Overall, the Committee considers that issues raised throughout the project were accurately reflected in the Gateway Reviews. The Committee is, however, unaware of the specific actions taken by responsible agencies following the recommendations of the Gateway Reviews.

### 6.11.5 Alignment with the public interest and value-for-money

One aspect of term of reference (d) of the Inquiry requires the Committee to report on the extent to which the project has been developed and implemented in a manner which aligns with the public interest over the life-cycle of the project.

The public interest encompasses many aspects: value-for-money (the economic, efficient and effective management of public resources); the achievement of benefits and outcomes; community consultation and stakeholder engagement; consumer rights; equity; privacy; and security. Transparency and accountability are also important to ensuring that the public interest is well-served. A distinction has been drawn in term of reference (d) between public interest and transparency and accountability and so issues associated with the latter two are discussed separately. However, it should be noted that the two are closely related and intertwined.

#### Defining the need for the Project

A fundamental understanding of what need is to be fulfilled is at the heart of project management. DTF guidance, in the form of the first Gateway Review documentation stresses the need for a clear articulation of the need or opportunity.<sup>703</sup>

*Before developing and implementing a project solution it is critical to develop an agreed understanding and properly characterise the problem your proposal seeks to address, in terms of its cause and effect. Only once this is done can an agency decide what benefits, or objectives, it is trying to achieve in addressing the problem.*

Evidence presented by DBI to the Committee in July 2012 states that:<sup>704</sup>

*The purpose of the Melbourne Market Relocation Project (MMRP) is to relocate Melbourne's wholesale fruit, vegetable and flower market from its current Footscray Road site to a new 133 hectare site in Epping, to a modern, innovative and efficient fresh produce trading and distribution precinct.*

The Committee notes that this statement reflects the proposed solution for the market, rather than clearly articulating the need that the State was facing.

703 Department of Treasury and Finance, *Gateway Review Process*, July 2012, p.7. The Committee accepts that this is taken from an updated version of the documentation and the quote may not have been in the original.

704 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Markets Relocation Project, p.1

A number of issues that may have articulated the need have been discussed in evidence presented to the Committee, such as:<sup>705</sup>

- the inadequacy of the existing trading floor to handle growing demand;
- occupational health and safety issues inherent in the old building;
- the lack of refrigerated warehousing facilities; and
- poor work practices as a result of the existing layout.

In addition, at the time of the original business case, the Port of Melbourne was considering options for expansion, and intended to use the land vacated by the existing market.

The Committee notes that none of these needs and opportunities is articulated in the current project's purpose, and therefore the need for the project has not been properly expressed in any business case.

**FINDING:** The need for the Melbourne Wholesale Market Relocation Project has not been clearly articulated.

## Stakeholder management

In a hearing in August, a client representative from DBI was asked by the Committee about the management of stakeholder relationships. The witness remarked:<sup>706</sup>

*There have been times when we have been working very closely with them and other times when I suppose you could declare it to be a Mexican standoff.*

The Committee has established stakeholder management as a skill that is necessary for the successful completion of major projects. The Committee also considers that the management of stakeholder relationships has been one of the crucial issues for this project and its outcome.

**FINDING:** Stakeholder management has been a critical issue in the outcome of the Melbourne Wholesale Market Relocation Project.

Support by affected parties for the preferred option is a factor that makes success of any project more likely. Any action by a project manager that does not have broad support of stakeholders said to benefit from the project is likely to either add considerably to time and cost resources required, or lead to failure of the project entirely. In order to achieve this support, an effective two-way dialogue with all identified stakeholders will assist in identifying the most suitable option. Further, effective communication with stakeholders will foster support for the preferred option and assist the project's successful implementation.

705 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.6

706 Ms J. Niall, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.7

One of the purposes of DTF's Gateway 1 (Strategic Assessment) Review is to 'ensure users and key stakeholders support the policy, program or project'.<sup>707</sup> This Gateway review was carried out in January 2003.<sup>708</sup> As previously noted, the results of the Gateway Review have not been provided to the Committee. However, the stakeholder-related problems experienced during the project suggest to the Committee that either the Gateway 1 Review was not carried out comprehensively, or stakeholder-related issues raised in the review were not taken into account.

As noted in the Auditor-General's report, at the start of the project (in 2004), DPI:<sup>709</sup>

*...engaged a design consultant to work with the market community to develop a functional design for the market. Part of the reason for this was DPI's desire to obtain tenant buy-in to the market design and get them to sign pre-lease agreements before the construction of the trading floor began.*

The Auditor-General's report found that the initial stakeholder management strategy was only a broad document,<sup>710</sup> and lacked detailed plans, were not updated and did not communicate information effectively.<sup>711</sup>

If DPI had more effectively engaged the stakeholders, it may have understood that the provision of warehousing facilities by the private sector was not a universally preferred option.

The Auditor-General has noted that:<sup>712</sup>

*... the early business case indicated that the private sector or market users would be responsible for the warehousing, but did not outline how this would be facilitated.*

Later, during the MOU phase, DPI was still unable to garner stakeholder support. Representatives of MPV stated at the hearing:<sup>713</sup>

*Initially there did not seem to be a presumption that the tenants would not want to come. Subsequently they [DPI] did have difficulty communicating with the tenants, and that was why the PPP broke down.*

The contractor provided evidence at the hearing that: 'It has not been our focus to understand exactly where the stakeholder issue is.'<sup>714</sup> However, in the case of a project where there is a large stakeholder buy-in issue, it would be normal practice that:<sup>715</sup>

*There would be a commitment, an understanding of a detailed brief. There would be stakeholder commitment to that brief depending on the type of project. If it was a retail project, there would be a level of commercial precommitment from lessees to the facility. ... where is the tenant demand or the purchaser demand or the stakeholder demand and how is that locked in? Where is the funding? Where is the commercial return? Where is the price certainty for the facility?*

707 Department of Treasury and Finance, *Overview: Gateway Review Process*, October 2009, p.10

708 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.14

709 Victorian Auditor General's Office, *Melbourne Markets Redevelopment*, March 2012, p.36

710 *ibid.*, p.25

711 *ibid.*

712 *ibid.*, p.1

713 Ms J. Niall, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.9

714 Mr G. Moore, Lend Lease Project Management and Construction, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.8

715 *ibid.*

In the more recent phases of the project, stakeholder engagement has been handled by DBI and MPV. At the public hearing in August, the Secretary, DBI, expressed his view on the importance of having a consistent approach to stakeholders, including a consistency of representation.<sup>716</sup>

*To get any major project up you need a strong line of champions, because they are going to take hits on the way through. ... You need an absolute, bloody-minded view that you are actually going to do this, from the political executive right through to the people, often, who are the clients who are going to benefit. If that chain is broken anywhere, you can bet you are going to ask for trouble. ... if that chain is broken, how do you exert leverage on people who have to agree?*

However, at a more operational level, the department appears to be making renewed efforts in stakeholder communications. At the August public hearing, the Committee heard from representatives of MPV that:<sup>717</sup>

*...at the moment we have a very active consultation process happening. ... I think at the moment we are on top of the communication with the market community. Earlier on it was a bit difficult; we did not have anything to tell them for quite a while. It is very hard to manage the consultation process when they are keen to hear the information that is going to affect their businesses in the future and you cannot tell them.*

## Investigation of options

As noted above, the Committee considers that the need for the project has not been clearly indicated. Because of this lack of a clear purpose, the scope of the project is not able to be defined, and because of this, options cannot be comprehensively assessed as achieving the scope. Also because of this, other options that may have successfully addressed the scope in a more novel or innovative way may never have been considered.

In a hearing, the Committee inquired whether any consideration was given to the more fundamental question of whether a central market was required at all. The response was that:<sup>718</sup>

*...there were two sets of considerations. One related to relocating the market and the expansion to the port, and the other related to the need for a central market. There was some consideration of it in terms of public good associated with retaining the smaller retailers and having a place where prices for fresh produce could be fixed.*

The Committee is uncertain of how or whether the public good associated with the existence of the market was assessed. Apart from this, the Committee has received no evidence that the option of not having a market (including that of having decentralised markets) was considered further.

**FINDING:** The Committee has received no evidence that the option of not continuing to have a central market was comprehensively assessed.

716 Mr H. Ronaldson, Secretary, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.9

717 Ms J. Niall, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, pp.7-8

718 *ibid.*, p.6

Early in the project, the option of refurbishing the market in its current location was considered.<sup>719</sup> This option was not preferred as it did not generate the estimated benefits of the alternative uses for the Footscray Road site.

The 2004 business case assessed a number of options for relocating the trading floor (without providing warehousing and other facilities). The preferred option was the ‘*design, build, finance and maintain under a PV arrangement*’ option.<sup>720</sup> It was several years before the provision of the additional infrastructure was countenanced. Committing to a scope without the provision of the warehousing and other features indicates to the Committee that either planning and/or stakeholder management skills were lacking in the development phase of the Project.

The Auditor-General reported that there was only one adequate tender for the eventual trading floor procurement, having been decided in September 2009. The only other tender:<sup>721</sup>

*... did not comply with the contractual requirements, demonstrated poor understanding of the specification design requirements and the design proposed was not adequately supported or costed.*

According to the Auditor-General, ‘*this is likely to result in the government paying more for the trading floor than they should.*’<sup>722</sup>

In responding to the Auditor-General’s report, the Secretary, DBI, stated that the Department had followed a documented process which had:<sup>723</sup>

*... culminated in the selection of the better of two compliant tenders, both of which were priced below the pre-tender estimate. On this basis, even if VAGO considers that this has not been demonstrated, it is reasonable to conclude that fairness and value for money have been achieved.*

The receipt of only one fully compliant tender for the trading floor provision does not demonstrate of value-for-money. However, the Committee considers that because the tender received was lower than the pre-tender estimate, value-for-money is likely to have been achieved.

**FINDING:** Value-for-money on the trading floor procurement, while not demonstrated, is likely to have been achieved.

## Benefits realisation

In the original feasibility plan, developed by MPV in 2002, more than half of the benefits of relocating the market lay in the Port of Melbourne making use of the Footscray Road site.<sup>724</sup> However, these benefits have not yet been confirmed. The DBI submission to the Committee noted that:<sup>725</sup>

719 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, p.7

720 *ibid.*, p.8

721 *ibid.*, p.36

722 *ibid.*, p.x

723 *ibid.*, p.46

724 *ibid.*, p.7

725 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, p.3

*At this stage, there is no decision on the future use of the market land, so it is not possible to quantify any resulting benefits.*

The Committee asked the Secretary, DBI, whether the Port of Melbourne still intends to use the site. The Secretary responded that ‘*I honestly do not know*’.<sup>726</sup>

Neither has the Secretary of the Department of Transport been able to confirm that there are any plans for this site.<sup>727</sup>

*I am afraid I am going to have to say that that question of the future of that precinct, and precisely how it will be developed, is something the government is currently considering as it develops its freight logistics plan.*

The Committee notes that there have been a number of opportunities during the development of the Wholesale Markets Relocation plan where it would have been appropriate to confirm that the project was still on track to achieve the benefits projected in the business case.

**FINDING:** Actual benefits of the alternative uses for the site identified in the original business plan have yet to be confirmed.

In addition, there is some disagreement as to whether the overall demand for the trading floor is going to increase or decrease over time.<sup>728</sup> This calls into question any benefits (or more specifically costs avoided) arising from the provision of a larger trading floor.

## Public interest

The public interest test addresses, broadly, whether the project achieves its objectives, and whether it does in a manner that is in accordance with government policy, legislation, regulation and current practice.

When the Committee asked DBI about the public interest test, DBI responded:<sup>729</sup>

*The MMRP commenced as a PPP but the project delivery model was changed in 2007 to a Memorandum of Understanding (MOU) process involving a potential transaction with the market community to deliver significant parts of a major State project. In 2009, the MMRP was transferred to DBI when the joint venture involving the market community did not proceed.*

The Committee considers that discussing procurement models did not sufficiently answer the question. This may be due to the question referring to the public interest test being required under *Partnerships Victoria* guidelines, and the project no longer being a PPP.

The Committee considers that to date, the Project is yet to demonstrate that it has aligned with the public interest. Aspects where it has encountered, and continues to encounter difficulties include scope changes (which have impacted on the project’s capital cost and date of

726 Mr. H. Ronaldson, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.6

727 Mr. J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 8 October 2012, p.17

728 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, p.8

729 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, p.3



commencement), and a longstanding and ongoing inability to lock in wide spread stakeholder support.

### 6.11.6 Maximising transparency and accountability

Term of reference (d) also requires the Committee to report on the extent to which the project has maximised transparency and accountability over the life-cycle of the project.

Transparency and accountability relates to: the transparency of decision-making; the transparency of the costs and benefits associated with the project over its life-cycle; accountability processes in place to govern the management and decision-making on the project; the level of public disclosure and reporting; the accuracy and completeness of documentation; and the accuracy and completeness of public reporting.

As noted above, the Auditor-General found that the Melbourne Markets Relocation project, ‘lacked transparency and accountability’.<sup>730</sup> Stakeholders had (at the time of the VAGO report) not having been given sufficient information to make decisions about their own businesses.<sup>731</sup> At the time of this Report, rents still have not been finalised for tenants who move to Epping.

#### Governance

As outlined in Section 6.11.2, Governance arrangements for this project have changed on a number of occasions over the life of the Project to date. These changes have been the result of changes in responsible departments and procurement methods. The Committee considers that these changes in governance have contributed to inconsistent accountability over time.

At the Committee hearing in August 2012, the Secretary, DBI remarked that:

*I do not think anyone would say it has been a remarkably consistent approach in terms of governance across the years.*<sup>732</sup>

As previously noted, the early stages of the Project were managed by DPI, with the Ministers of Agriculture and Major Projects being jointly responsible for the project.<sup>733</sup> During this phase MPV and DPI worked on their own roles ‘without due consideration of the other’s role’.<sup>734</sup> Representatives from DPI, MPV, DPC and DTF were on the Project’s steering committee.<sup>735</sup>

The governance arrangements under the Memorandum of Understanding changed.<sup>736</sup> The Auditor-General notes that under these arrangements, the Department of Primary Industries reported to the Minister for Agriculture, but Major Projects Victoria reported separately to the Minister for Major Projects.

730 Victorian Auditor General’s Office, response to the Committee’s questionnaire, received 13 July 2012, p.10

731 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, p.14

732 Mr H. Ronaldson, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.9

733 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, p.4

734 *ibid.*, p.12

735 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.14

736 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, p.10

The role of the steering committee were less clear during the MOU phase, ‘with DTF and DPC representatives on the committee indicating to VAGO they were less able to directly influence the management of the project’.<sup>737</sup> DTF advised the Committee that:<sup>738</sup>

*During its delivery with DBI, the Project Steering Committee including DPC and DTF representatives has acted as an information and advisory committee feeding into a Project Control Group comprising DBI and MPV only, rather than as a decision making body.*

## Probity

The Auditor-General highlighted a number of probity problems with the project. The Committee notes that DBI is now taking steps to address these problems.

In relation to probity, DBI advised the Committee that:<sup>739</sup>

*... VAGO concluded that probity was not well managed on this project and is not consistent with better practice, recommending that MPV revise its procurement policy and operating procedures to align with contemporary best practice in public sector purchasing, and provide regular probity training for all staff involved in procurement activities.*

The Auditor-General’s report raised a number of problems with probity in the awarding of the contract for the trading floor. Conflicts of interest were not managed and fairness was not demonstrated.<sup>740</sup>

In addition, after the tenderer had been announced, significant changes continued in the design of the Project.<sup>741</sup>

Further, the Auditor-General suggests that on two occasions, the actions of MPV may have had the effect of advantaging one possible supplier over another in the selection process.<sup>742</sup> This issue contributed to the Auditor-General’s recommendation that further probity training be provided for Major Projects Victoria staff involved in procurement activities.<sup>743</sup> DBI did not fully accept the Auditor-General’s conclusions about MPV’s regarding fairness and value-for-money of the trading floor procurement.<sup>744</sup> However, in its submission to the Committee, DBI has indicated that it has accepted the Auditor-General’s recommendations, and is taking a range of remedial actions.<sup>745</sup>

## Transparency

In its report of March 2012, the Auditor-General found that transparency in the early phases of the Melbourne Markets Relocation project was inadequate. Stakeholders had not been given sufficient information to make decisions about their own businesses.<sup>746</sup>

737 *ibid.*, p.11

738 Department of Treasury and Finance, response to the Committee’s questionnaire, received 3 August 2012, p.14

739 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, p.7

740 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, pp.39-43

741 *ibid.*, p.ix

742 *ibid.*, p.41

743 *ibid.*, p.44

744 *ibid.*, p.46

745 Department of Business and Innovation, response to the Committee’s questionnaire, received 20 July 2012, section on Melbourne Markets Relocation Project, pp.14-15

746 Victorian Auditor General’s Office, *Melbourne Markets Redevelopment*, March 2012, p.14

In addition, the Auditor-General has communicated to the Committee that decisions resulting in a number of major changes to the way the project was delivered were not adequately documented and supported.<sup>747</sup>

The Committee asked DBI about how well informed the community was now in respect to which body is accountable for the delivery of the project. The Department responded that:<sup>748</sup>

*This was announced in 2010 and is well understood by the market community. DBI representatives have spent considerable time in the market community engaging with market members and they are aware that DBI has overall responsibility for policy and that MPV is managing the Contract.*

Further, DBI has stated that since the publication of the Auditor-General's report:<sup>749</sup>

*...the Minister for Major Projects has endeavoured to be as open and transparent as possible, given that some commercial information is sensitive in anticipation of future tenders. Consultation with the market community has been particularly open and transparent in relation to key relocation issues; for example, a detailed briefing was recently provided on the financial model that underpins the rental options released for market comment.*

The Committee notes that based on the details available on the Melbourne Markets website, the details of the warehousing, specifically the costs that will be imposed on the market community, have still not been finalised.<sup>750</sup>

*If the Government builds warehousing, the costs will be fixed and not negotiated on an individual basis. Any additional warehouse features above base build will be at the cost of the individual. If, however, a developer is engaged to build warehousing, individuals may be able to negotiate.*

With regard to Gateway reviews, DTF have reported to the Committee that four Gateway Reviews have been completed for the Project.<sup>751</sup> The Committee requested copies of review reports from DBI, but these have not been supplied to the Committee.<sup>752</sup>

### 6.11.7 Competencies and skills on the project

Given the focus of the Committee's Inquiry on skills and competencies of the public sector in the delivery of major infrastructure projects, the Department of Business and Innovation was asked to provide information about any special competencies and skills which have underpinned examples of good practice on the Project.

The Committee has received no evidence that shows scope definition and scope management skills are lacking. However, scope and delivery model changes have characterised this project.

747 Victorian Auditor General's Office, response to the Committee's questionnaire, received 13 July 2012, p.10

748 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Markets relocation project, p.6

749 *ibid.*, p.7

750 Melbourne Market Authority, 'Statement from the Minister for Major Projects on rent options for the new wholesale market at Epping', <[www.melbournemarkets.com.au/wp-content/uploads/2012/06/Minister-statement-on-rent-options.pdf](http://www.melbournemarkets.com.au/wp-content/uploads/2012/06/Minister-statement-on-rent-options.pdf)>, 4 October 2012, accessed 25 October 2012

751 Department of Treasury and Finance, response to the Committee's questionnaire, received 3 August 2012, p.14

752 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Markets Relocation Project, p.14

DBI have not described any skills gaps identified as a result of this project.<sup>753</sup> However, following VAGO comments, the Department notified the Committee that the Melbourne Market Authority (MMA) has engaged consultants experienced in information sharing and stakeholder consultation.<sup>754</sup>

In addition, since 2010, DBI have engaged a specialist with skills for detailed and rigorous financial modelling. According to the Department, this has enabled:<sup>755</sup>

- support for the 2010 DTF review of the project;
- preparation of a submission to change the funding model and obtain additional funding;
- a sound basis for ongoing tenant discussions; and
- a greater level confidence in the financial basis of the market itself.

DBI have also notified the Committee that business case and other project documentation skills have been supplied by consultants including:<sup>756</sup>

- Biruu (business case);
- Ernst & Young (financial and commercial);
- Root Projects Australia (technical and engineering); and
- Minter Ellison (Legal).

### 6.11.8 Better practice

The Committee asked DBI to advise how the project could have been better implemented.

DBI have reported to the Committee that *‘the work completed on the financial model has been exemplary and its impact on re-setting the project considerable’*.<sup>757</sup>

Also referring to the most recent phase of the project, DBI claim that:<sup>758</sup>

*The work currently being undertaken by the MMRP Client Team and the MMA regarding market community consultation on relocation issues is achieving success in providing the market community with the information needed to make the relocation possible.*

Responding to a question from the Committee during a hearing in August, the Secretary, DBI, remarked: *‘As a quick quip, the lesson is: do not do a markets project again’*.<sup>759</sup>

753 *ibid.*, p.11

754 *ibid.*

755 *ibid.*

756 *ibid.*

757 *ibid.*, p.16

758 *ibid.*

759 Mr H. Ronaldson, Department of Business and Innovation, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.14

## Consult stakeholders without creating expectations – if possible

During the same hearing, the Secretary suggested that, because stakeholder consultation is likely to generate expectations within the market community, such negotiations were difficult at an early stage in the process. Some way of gathering stakeholder support without raising expectations would be preferable, although the Secretary can offer no advice on how this may be done.<sup>760</sup>

*...you might try to bring about the circumstances where at least you have prima facie negotiations before the political executive is locked in, if that is possible. That brings with it dangers, too. There are expectations it might be built and all that sort of stuff. But if you could do it and it makes sense commercially, perhaps deeper soundings before you actually formulate a business case I suspect would have helped, if you could have envisaged that.*

## Make sure of stakeholder support

In its submission to the Committee, DBI have stated that:<sup>761</sup>

*Significant changes in direction and delivery mechanisms, both experienced on the MMRP, are not ideal for successful project delivery. Clearly defining the role of Government in relationship to the ownership and operation of a central wholesale market, for example, may have been of assistance to the project.*

## 6.12 Key findings and points for future reference

Drawing on the Committee's review of the evidence presented in relation to the development and implementation of the six projects, the following are presented for the delivery of future infrastructure projects.

### 6.12.1 Alignment with the public interest

#### Value-for-money

- Quality assurance reviews should be carried out on PSC calculations, and evidence for cost and time estimates and other calculations should be documented.<sup>762</sup> This was noted in the new Royal Children's Hospital Development project and is now part of the *Partnerships Victoria* requirements. The Committee notes that DTF is considering other options to strengthen the PSC process.<sup>763</sup>
- A PPP can enable and encourage innovation in design that trades operational costs against capital costs, allowing the whole-of-life costs to be minimised.<sup>764</sup> This advantage was demonstrated during the Melbourne Convention Centre Development project as well as the new Royal Children's Hospital project.

<sup>760</sup> *ibid.*

<sup>761</sup> Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Markets Relocation project, p.10

<sup>762</sup> Victorian Auditor General's Office, *The New Royal Children's Hospital – a Public Private Partnership*, May 2009, p.40

<sup>763</sup> Department of Treasury and Finance, *Future Direction for Victorian Public Private Partnerships: Request for Public Comment*, November 2012, p.7

<sup>764</sup> Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, section on Melbourne Convention Centre Development, p.24

- The structured negotiation process, where two bidders are treated as though they are the preferred tenderer and further refinements to scope and other details are then negotiated, may bring about innovation and better value-for-money. The process could also mitigate the risk of the project delivery deviating markedly from the agreed contract.<sup>765</sup> This was a feature of the Melbourne Convention Centre Development project.

### Stakeholder relations

- Broad support from stakeholders expected to benefit from the project is critical to the success of the project. Once gained, such support can be a significant factor in project success (e.g. the new Royal Children's Hospital project).
- Conversely, consideration needs to be given to the attitude of users and whether there is resistance to change (as occurred in the Melbourne Wholesale Market Relocation project and in the clinical application of the HealthSMART Program project). In these situations, a plan should be developed to manage the behaviour and attitudinal changes required as a result of the new systems or procedures being proposed through the project.
- Effective, continuous and demonstrated two-way dialogue with stakeholders (as seen in the new Royal Children's Hospital project) promotes stakeholder ownership and support for the project.
- Assumptions about the investments of private sector stakeholders must be rigorously tested. This was evidenced in relation to private sector provision of warehousing facilities in the Melbourne Wholesale Market Relocation project.

### Vendor relations

- It is naive to assume that the vendor understands the business and the specific project requirements. Meaningful and productive interaction between the client and the supplier/vendor is critical: Articulate-Discuss-Confirm. (This issue was evidenced on the myki ticketing project.)
- The myki ticketing project also demonstrates that a common understanding of project requirements is an essential part of building an effective and productive client/vendor relationship.
- The 'interactive tendering' process can engender a functioning partnership between the public and private sectors. This was shown in the new Royal Children's Hospital project. This leads to a shared vision and reduced risk of conflict during construction and operation.
- A comprehensive, high quality and carefully developed brief minimises the risk of contract disputes during the construction phase.<sup>766</sup> This was shown in the new Royal Children's Hospital project.

765 Victorian Auditor General's Office, *Audits of 2 Major Partnerships Victoria Projects*, November 2007, p.24

766 Department of Health, response to the Committee's questionnaire, received 20 July 2012, p.9

## Early stage planning

- Investing time and money early in the project planning phase will bring about a more comprehensive and detailed plan. This can save time and money later in the implementation phase. This has also been noted in the Evans & Peck report, which states that: *‘the later in the process a change in scope is made, the more significant the cost impact is likely to be’*.<sup>767</sup>
- Rigorous planning in the early stages of a project, independently assessed through Gateway Reviews, cannot guarantee success, but enhances the chances of a positive outcome by identifying and allowing the management of risks. Examples are the new Royal Children’s Hospital project and the Melbourne Wholesale Markets Relocation project.
- The existence of a well-developed and robust business case is integral to successful project implementation. DOH acknowledged in its response to the Committee that the original HealthSMART Program business case was *‘at a strategic level’* rather than *‘a more detailed implementation plan level’*.<sup>768</sup>
- For further discussion about Victoria’s ‘informed buyer’ status, see Section 8.4.3.
- Project time and cost estimates should be referenced and verified against similar projects, including overseas projects, which have been delivered. (Refer the myki ticketing project and the HealthSMART Program.) This is the subject of a recommendation in Section 5.4.4.
- For ICT-enabled projects, such as the HealthSMART Program and myki project, ensuring user requirements are well-specified in the initial planning stage and discussed with the vendor, will save time and money later.
- Processes to better develop more accurate budgets for ICT-enabled projects (such as the HealthSMART Program and myki project) must be developed. The Ombudsman has made a number of recommendations as part of his *‘Framework to better manage ICT-enabled projects’* directed at agencies being able to develop more realistic budgets and timeframes and seeking funding for projects.<sup>769</sup>
- DOH has stated that it is very difficult to estimate project cost and budgets for ICT projects at approval stage as products have not been selected and there has been no opportunity to work through detailed implementation plans. The Department suggested that a two-staged approval process could be considered with an ‘approval-in-principle’ stage supported by indicative costs and timelines to allow approval to tender. After products have been selected a detailed time and cost budget could be prepared for final approval.<sup>770</sup>

## Feasibility and review of options

- A clear expression and understanding of the strategic infrastructure requirements of the State will lead to a well-defined scope for the project. Such a scope definition will enable options to be evaluated objectively and reduces the chance of scope alterations

767 Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects — Final Report*, December 2012, p.46

768 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.14

769 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, pp.52-3

770 Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.10

later in the project. This was shown in both the new Royal Children's Hospital Development project and the Melbourne Convention Centre Development project.

- Placing the focus on one option during the feasibility and planning phase discourages examination of other options that may also appropriately address the scope. This focus may be the result of early public announcements about the project.
- Procuring an infrastructure investment as a PPP can enable innovative options that exploit and enhance the proposed public sector investment, by adding private developments within the same precinct.<sup>771</sup> This was demonstrated in the Melbourne Convention Centre Development project, and to a lesser extent with the hotel development for the new Royal Children's Hospital project.

## Optimism bias

The Committee discussed 'optimism bias' with Professor Flyvbjerg of the University of Oxford. Optimism bias is one cause of cost overruns and benefit shortfalls in major infrastructure projects.<sup>772</sup> As part of its research, the Committee heard that in more than 90 per cent of projects, the final business plan will look much better than the actual outcome. This can be unintentional or be caused by deliberate bias in the early business planning phases.

To counter this, the Committee considers that:

- the time and cost estimates must take optimism bias into account;
- DTF should develop more detailed guidance material in relation to the assessment of optimism bias and associated risk in the delivery of large projects; and
- rigorous global benchmarking on cost, user take-up and timeframes (sometimes referred to as reference forecasting) might be a beneficial approach for government to adopt to avoid optimism bias. This approach could have assisted in developing a more realistic budget for the myki ticketing project.

## Gateway Review Process

The Committee considers that the Gateway Review Process is useful and can result in significant benefits in project management. These include providing a framework to keep the project on track and formally flagging problems throughout the project. Avoidance of Gateway Reviews or not taking results of reviews into proper consideration is a significant risk to project success. The Committee therefore considers that a rigorous application of these Reviews to projects, other than HVHR projects, would be both prudent and beneficial to the effective management of major projects.

The Committee received advice from Evans & Peck that challenged projects were characterised by conspicuous shortcomings, particularly at the early stages, and further:<sup>773</sup>

771 Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, p.24

772 Prof. B. Flyvbjerg, 'Survival of the Unfittest – Why the Worst Infrastructure Gets Built – and What We Can Do About It', *Oxford Review of Economic Policy*, vol. 25:3, 2009, p.349

773 Evans & Peck, *Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects: Final Report*, December 2012, p.36



*We would have expected these shortcomings to have been picked up in the Gateway Review process, and question whether opportunities to scrutinise a project's investment value through Gateways are being capitalised upon and whether findings were actually implemented.*

## Risk management

The Committee heard evidence that in both the private and public sectors and world-wide, ICT projects are generally viewed as inherently risky. This is due to their complexity and a history of cost and time overruns. This in itself should indicate that a much more conservative, thorough and evidence-based approach is needed in the planning and development of ICT projects than would be necessary with a 'bricks and mortar' type infrastructure project.

The Committee considers that reference class forecasting would benefit the preparation of business cases for ICT projects. This process involves the examination of similar projects (in terms of scope, time and cost) in other jurisdictions (both within Australia and overseas) and evaluates the proposed project's timelines and budget in comparison.

The process of reference class forecasting is discussed further in Section 5.4.4 of Chapter 5.

## Implementation

- ICT project requirements need to be verified and validated through testing. An appropriate allowance for validation and testing should be made (both in terms of time and money) in the project budget (see the myki ticketing project.)
- A piloted or phased approach could be beneficial in the development and implementation of large and/or broad based ICT-enabled projects. For example, the Committee received evidence from the vendor of the Clinical System and also from DOH indicating that the HealthSMART Program should have included the piloting of some components. The lack of piloting as an option indicates poor initial planning and decision-making on the run which then likely impacted on the project delivery schedules and cost.

## Staff knowledge and expertise

- Without a clear understanding of the strategic infrastructure requirements of the State, and of the shortcoming which is being addressed, the development of a comprehensive business case difficult.
- Having a team that encourages robust debate between subject matter experts, management and the private sector partner enables a deeper understanding and management of risks.<sup>774</sup> This was shown in the Melbourne Convention Centre Development project.
- Lack of continuity of staff at senior level in project management presents additional risks. Continuity of senior staff enables an understanding of the 'intent' of the contract, which aids in managing a range of risk and commercial issues.<sup>775</sup> The Melbourne Convention Centre Development project operated under three MPV project directors

<sup>774</sup> Department of Business and Innovation, response to the Committee's questionnaire, received 20 July 2012, p.25

<sup>775</sup> *ibid.*

between 2004 and 2010, which ‘was not ideal’.<sup>776</sup> The Melbourne Wholesale Market Relocation project has been the responsibility of two different departments over its life to date.

- The myki project shows that the client must have a clear understanding of what it wants. This will require a heavy involvement of personnel with relevant knowledge and understanding of the needs of the business.
- An understanding of the business model to be used is an advantage. This was evidenced in the new Royal Children’s Hospital Development project, where an internal project team with prior experience was used. It was also seen in the Melbourne Convention Centre Development project, where the business model, that of convention centres, hotels, and related retail developments, was well understood by the project team.
- A centralised pool of ICT skills and expertise should be available to project teams. This raises issues of developing the relevant skills, as well as attracting and retaining staff. The Ombudsman has identified a lack of skilled ICT staff across government departments (refer the HealthSMART Program).<sup>777</sup>
- Developing a system for capturing lessons learnt from projects will increase the likelihood of success on future similar projects.<sup>778</sup> This was demonstrated in the new Royal Children’s Hospital Development project and DOH is seeking to implement this experience in the Bendigo Hospital redevelopment project.

## 6.12.2 Maximising transparency and accountability for the life-cycle of the project

### Public communication

- There is a need for simple, clear and informative communication with the public up-front about how major projects such as are being delivered and financed (refer the Victorian Desalination Plant project).
- Any compulsory acquisition of property (such as in the Victorian Desalination Plant project) should be communicated well in advance of the project announcement.

### Public disclosure and reporting

- There needs to be full transparency of reporting in terms of the costs and benefits associated with major infrastructure projects and any reporting should be consistent so as to avoid confusion and mistrust about what is being reported.
- Full disclosure of estimates of project costs and timelines at the end of the planning stage will enable a full, public and transparent account of the success of the project on its delivery. It will also enable full accountability for the success of the project. This has been seen in projects such as the Melbourne Wholesale Market Relocation project, for which both timelines and cost estimations have changed.

<sup>776</sup> *ibid.*, p.24

<sup>777</sup> Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.59

<sup>778</sup> Department of Health, response to the Committee’s questionnaire, received 20 July 2012, p.9

- Effective monitoring during implementation is required in order to prevent (or transparently identify) ‘scope creep’. Significant changes in scope have been seen in both the HealthSMART project and the Melbourne Wholesale Market Relocation project.

### Effective governance and probity

- Probity processes and mechanisms should be effectively designed to ensure fairness and transparency of the procurement process but should not act as an inhibitor to the achievement of value-for-money and effective outcomes (see the HealthSMART Program).
- It is not effective or to have probity requirements which effectively inhibit discourse between the client (the government/public) and the vendor. Such discussions are integral to ensuring that requirements are clearly understood and shared by both parties and that the client has the best opportunity to optimise value-for-money.
- Project scope creep is especially an issue in ICT projects. Effective oversight and monitoring is critical to keeping the project under control and identifying issues as they occur. This will also enable the development of solutions to keep the project on track and to avoid cost blowouts.
- Representation of personnel from the vendor or contractor on the Steering Committee of a project may provide significant benefit in terms of the development and implementation in the most efficient and effective manner. In relation to the HealthSMART Program, the Committee was advised by the RVEEH and the vendor of the Clinical System, that the decision to give Cerner a permanent place on the Clinical Systems Steering Committee added some real value in terms of building relationships and improving transparency and trust between the parties.<sup>779</sup>
- Changes in governance during the project (for example moving from one responsible agency to another) confuse and dilute accountability.
- A continuous audit process, such as that undertaken during the new Royal Children’s Hospital Development project can add quality, retain staff focus and prevent delays.<sup>780</sup>

### 6.12.3 Discount rates and the Public Sector Comparator

Literature suggests that there are a number of different approaches which can be taken to selecting the most appropriate discount rate used in the calculation of the Public Sector Comparator:<sup>781</sup>

- ‘Social time preference rate’ – This is the rate that society is willing to pay for getting something now rather than later. Calculations suggest that in most developed countries this figure is around 3.5-4 per cent in real terms.
- ‘Social opportunity cost of capital’ – This is in effect the pre-tax internal rate of return. This approach is used in New Zealand and Canada.

779 Ms A. Clark, The Royal Victorian Eye and Ear Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, pp.7-8

780 Prof. C. Kilpatrick, Chief Executive Officer, Royal Children’s Hospital, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.7

781 J. M. Sarmento, ‘Do Public-Private Partnerships Create Value for Money for the Public Sector? The Portuguese Experience’, OECD Journal on Budgeting, vol. 2010/1, 2010, pp. 6-7

- A hybrid of the two rates presented above – This assumes that for practical purposes, the public cost of capital is the sum of the real interest cost of government debt, the typical amount of tax paid on marginal returns to private sector capital and an amount for systematic risk or uncertainty.
- ‘Equity premium’ – This argues that the cost of capital for the public sector is considerably less than values in the private sector and therefore the discount rate should be the pre-tax government borrowing rates.
- The ‘risk-free interest rate of the country’ – This is the interest rate of public debt relating to the maturity of the project.

The literature also notes that in some countries, the long-term borrowing rate is used as a discount rate. In the UK a discount rate of 6 per cent, used for a number of years, has been recently changed to a ‘social time preference rate’ of 3.5 per cent with public sector agencies being advised to estimate other factors (e.g. risks) separately.<sup>782</sup>

All of this shows that the figures used to demonstrate value-for-money in a PPP project are reliant on the philosophies behind the calculation of the PSC. Disclosure of the discount rate and the rationale to support the rate used are important components in maximising the transparency and accountability of public infrastructure decision-making.

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782 *ibid.*, pp. 7-8

# CHAPTER 7 TERM OF REFERENCE (E) – RELEVANT DEVELOPMENTS IN NATIONAL AND INTERNATIONAL JURISDICTIONS

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## 7.1 The assessed scope of term of reference (e)

Term of reference (e) requires the Committee to consider and report on:

*relevant infrastructure delivery strategies and practices, including in public-private partnerships, in relation to enhancing public sector expertise in place in other Australasian jurisdictions and relevant jurisdictions outside Australia.*

This term of reference involves the Committee in the study of contemporary best practice developments in infrastructure management outside Victoria. It relates to strategies and practices implemented by other jurisdictions to strengthen public sector expertise in the management of infrastructure projects.

The Committee's response to term of reference (e) was informed by its desk-top research and literature reviews as well as suggestions relating to the term of reference raised by various parties in their submissions to the Committee. Following this review, the Committee identified national and international jurisdictions that were well advanced in their practices and strategies in relation to infrastructure planning and delivery.

The Committee's work program for this aspect of its Inquiry included official visits to selected organisations and individuals in:

- Canberra, Sydney, Adelaide and Perth in 2011 and 2012; and
- Canada, the UK and Paris in September 2012.

These visits enabled the Committee to explore the views and experiences of key private and public sector organisations and individuals. Through the visits, the Committee obtained valuable first-hand insights into best practice national and international strategies for enhancing infrastructure expertise and project management.

The purpose of this chapter is to bring together the more significant external developments that have come to the Committee's attention during the course of its Inquiry.

Other chapters in this report, including the Committee's recommended future directions for Victoria's infrastructure sector, make reference to particular developments that have been assessed as offering clear opportunities for adoption in Victoria. These developments have been taken into account in the formulation of the Committee's findings and recommendations in those chapters.

## 7.2 National jurisdictions

During the Inquiry, the Committee conducted desk-top research and literature reviews of developments in infrastructure management across Australian jurisdictions. Its considerations included recent experiences in particular jurisdictions with Public Private Partnerships (PPPs) and other major infrastructure projects. They encompassed academic studies and issues on infrastructure raised in reports of Auditors-General.

The Committee's analysis of national contemporary developments was the forerunner to its official visits to particular Australian jurisdictions.

The Committee's research centred on bodies in Canberra, Sydney, Perth and Adelaide.

## 7.2.1 Canberra

Organisations situated in Canberra identified as of interest to the Committee included the following.

### **The Australian Parliament's Joint Committee of Public Accounts and Audit**

As part of its work on national infrastructure developments, the Joint Committee of Public Accounts and Audit issued a July 2011 report which was a follow up of an Auditor-General's report concerning the national infrastructure priority list prepared by Infrastructure Australia. That Auditor-General's report recommended that, in future, Infrastructure Australia should provide clear and consistent advice on the level of funding and necessary conditions it recommends for priority projects.

At the time of the Committee's research, the Joint Committee of Public Accounts and Audit was also undertaking an Inquiry into national funding agreements.

### **The Australian Auditor-General**

The Australian National Audit Office (ANAO) conducts audits of Commonwealth departments and authorities. The Department of Defence is the main Commonwealth department directly involved with delivering infrastructure projects.

A significant level of Commonwealth funding for infrastructure purposes is channelled to the states. Legislation has been passed by the Australian Parliament which provides (through amendments to the *Commonwealth Auditor-General Act 1997*) the ANAO with the authority to audit Commonwealth funding provided to the states for infrastructure projects. Under this legislative power, the ANAO will have authority to examine the performance of state entities in delivering infrastructure projects and the performance of contractors. The exercise of the authority to audit state entities requires a reference from the Australian Parliament's Joint Committee of Public Accounts and Audit.

### **Engineers Australia**

Engineers Australia is the national forum for the advancement of engineering and the professional development of its members. The organisation has more than 95,000 members embracing all disciplines of the engineering profession.

The organisation produces infrastructure report cards that include ratings for each Australian state and territory on the quality of its economic infrastructure. The latest report cards were published in November 2010.

It has directed attention in its recent publications and other work on the shortage of engineering and related employment skills in Australia.

Engineers Australia has contributed to the Committee's Inquiry in several ways including as part of the Committee's official visit to Canberra, provision of a detailed submission and the furnishing of evidence at a public hearing of the Committee.

## Commonwealth Department of Infrastructure and Transport

The Department of Infrastructure and Transport is responsible for the provision of policy advice to the Australian Minister for Infrastructure and Transport. Its functions, including a regulatory role, extend to infrastructure planning and coordination.

In recent years, the Council of Australian Governments (COAG) Infrastructure Working Group has commissioned two volumes of best practice case studies in infrastructure management and delivery. These studies were released by the Minister in December 2010 and February 2012. They are published on the Department's website. The case studies draw on selected infrastructure projects managed within each Australian jurisdiction. They identify key best practice lessons emerging from the various infrastructure projects (see also Section 5.4.4 of this Report).

### 7.2.2 Sydney

Organisations situated in or around Sydney that formed part of the Committee's research for its Inquiry included the following.

#### Infrastructure Partnerships Australia

Infrastructure Partnerships Australia describes itself as the peak body for Australia's infrastructure sector. It aims, by harnessing the expertise and experience of its membership, to lead and shape the national infrastructure debate toward world's best practice delivery of critical infrastructure.

The best practice initiatives of the organisation include annual National Infrastructure Awards, a commitment to the principles of efficiency, innovation, customer service, value-for-money and excellence, and publication of case studies on particular infrastructure projects.

Infrastructure Partnerships Australia furnished evidence at a public hearing of the Committee in addition to meeting with the Committee during its official visit to Sydney.

#### Infrastructure Australia

Infrastructure Australia is the key national advisor to the Australian Government on infrastructure funding and on the development of national policies and guidelines for the delivery of infrastructure.

The organisation's focus is on assisting Australian governments to develop a strategic blue print for unlocking infrastructure bottlenecks and to modernise the nation's economic infrastructure. It is supported organisationally by the Office of Infrastructure Coordinator.

Infrastructure Australia furnished evidence at a public hearing of the Committee in addition to meeting with the Committee during its official visit to Sydney.

#### SMART Infrastructure Facility, University of Wollongong

The term, SMART, within the Facility's official title, stands for Simulation, Modelling, Analysis, Research and Teaching.<sup>783</sup>

783 SMART, University of Wollongong, 'About Us', <[smart.uow.edu.au/about/index.html](http://smart.uow.edu.au/about/index.html)>, accessed 2 February 2012

SMART's website describes it as a new \$62 million world-class research and education centre. It focuses on researching, modelling and promoting holistic and rigorous planning for Australia's urban and regional infrastructure systems.

It provides strategic advice, research and skills training across the whole infrastructure industry.

### **Infrastructure NSW**

Infrastructure NSW was established under the *Infrastructure NSW Act 2011*. Membership of its Board, comprising six members including the Chair, was announced by the NSW Premier in July 2011.

Infrastructure NSW has a wide range of statutory functions on behalf of the NSW Government including:<sup>784</sup>

- preparation of long-term infrastructure plans for NSW and project implementation plans for individual projects;
- overseeing and monitoring of the delivery of major infrastructure projects;
- evaluation of the risks involved in planning, funding, delivering and maintaining infrastructure, and the management of those risks; and
- conduct of reviews of completed projects.

It also provides advice to the NSW Government on appropriate funding models for infrastructure.

### **7.2.3 Perth**

Organisations and contemporary developments in Western Australia's infrastructure sector formed part of the Committee's research for its Inquiry.

#### **Water Corporation**

Western Australia's Water Corporation is responsible for providing a sustainable water service to Western Australia's current and future generations. It has developed a ten-year plan to meet this principal objective.

The Committee's research identified that the functions of the Water Corporation have relevance to its examination of experiences with Victoria's desalination plant at Wonthaggi (refer Section 6.10 of this Report).

Western Australia operates two desalination plants.

The Seawater plant at Kwinana was opened in 2006 as Australia's first large-scale desalination plant. It contributes 17 per cent of WA's water supply.

A second plant, the Southern Seawater plant, was opened at Binningup in September 2011. The Binningup plant has been reported as opening three months ahead of schedule and within its \$955 million budget. The WA Government announced an expansion of the plant in August 2011.

<sup>784</sup> Infrastructure NSW, 'About INSW', <[www.infrastructure.nsw.gov.au/about-insw.aspx](http://www.infrastructure.nsw.gov.au/about-insw.aspx)>, accessed 2 February 2012



The Water Corporation has identified that this expansion is the first stage of its ten-year plan. Its website states that it expects climate-independent seawater desalination to produce half of the State's current water needs, over 150 billion litres a year, by 2012-13.<sup>785</sup>

The Committee's desk-top research was complemented during its official national visits by a site visit to the Southern Seawater Desalination Plant. This enabled the Committee to view firsthand the main features of the plant's structure and operations, and explore subsequently with relevant officials of the Water Corporation the best practice elements of the plant's planning and contractual framework.

### **Western Australia's Department of Treasury**

The Strategic Projects Division of the Department of Treasury manages the Western Australian Government's high-risk infrastructure projects. It oversees major non-residential building projects and pursues optimum cost, time and quality outcomes. The projects assigned to this Division are typically greater than \$100 million in value.

### **Western Australia's Department of State Development**

Western Australia's Department of State Development has responsibility for:<sup>786</sup>

- developing and co-ordinating significant State projects;
- leading co-ordination of approvals processes for major resources, industrial and infrastructure projects across government;
- negotiating and managing agreements between development proponents and the State Government;
- enabling the development of strategic industrial land and infrastructure to meet industry needs; and
- providing strategic policy advice on State development issues.

In some cases, Western Australia employs a common-use infrastructure model. This provides alternative infrastructure funding through multiple parties entering into a common user agreement. This model also allows for the infrastructure to be publicly owned and partially privately funded.

## **7.2.4 Adelaide**

The Committee's research on infrastructure developments in South Australia centred mainly on the role and functions of the State's Department of Planning, Transport and Infrastructure.

### **South Australia's Department of Planning, Transport and Infrastructure**

This department co-ordinates the development and updating of *South Australia's Strategic Infrastructure Plan 2004/5 to 2014/15*. A discussion paper designed to facilitate input to the Plan by key stakeholders, including infrastructure users and providers, identifies the key

785 Water Corporation, 'Planning for water services', <[www.watercorporation.com.au/W/water\\_sources\\_new.cfm](http://www.watercorporation.com.au/W/water_sources_new.cfm)>, accessed 2 February 2012

786 Western Australia Department of State Development, 'About the Department of State Development', <[www.dsd.wa.gov.au/278.aspx](http://www.dsd.wa.gov.au/278.aspx)>, accessed 2 February 2012

challenges and opportunities to be considered in future planning for 15 infrastructure sectors within the State.

The Department's website mentions that South Australia's first infrastructure plan was released in 2005. It states that the plan has guided significant progress in infrastructure development with more than 80 per cent of the priority projects listed in the plan either completed or underway.<sup>787</sup>

It was of interest to the Committee that the discussion paper included the comment that '*work is well underway on the Adelaide desalination plant which, when complete and fully operational, will be capable of delivering 100 GL per annum for metropolitan Adelaide.*'<sup>788</sup>

The Committee determined that, similar to the position in Western Australia, the experiences of South Australia in the planning and formulation of contractual arrangements for its desalination plan would have relevance to the Committee's deliberations under the Inquiry.

### 7.3 International jurisdictions

In April 2012, the Committee undertook preliminary desktop research to identify relevant organisations in overseas jurisdictions which could provide:

- information on new initiatives being undertaken in the area of delivering significant public sector infrastructure projects; and
- comparative information against which current infrastructure management practices in Victoria might be evaluated.

Countries investigated were:

- Canada;
- the United Kingdom;
- France;
- Germany;
- Sweden;
- Belgium; and
- the Netherlands

Canada and the United Kingdom were considered to be the most relevant countries from an Australian and Victorian perspective because their parliamentary systems of government are so similar and also because they have had extensive experience in the management of public private partnerships.

787 South Australia Department of Planning, Transport and Infrastructure, *Strategic Infrastructure Plan for South Australia — 2010 Discussion Paper*, <[www.infrastructure.sa.gov.au/\\_\\_data/assets/pdf\\_file/0015/53034/00\\_InfraPlan\\_Discussion\\_Paper.pdf](http://www.infrastructure.sa.gov.au/__data/assets/pdf_file/0015/53034/00_InfraPlan_Discussion_Paper.pdf)>, September 2010, accessed 2 February 2012, Foreword

788 *ibid.*, pp.108, 172

### 7.3.1 Organisations researched

The organisations researched included parliamentary committees, Auditor-Generals' offices, government ministries and departments, private sector organisations and member associations with a focus on the most recent developments and information available. Research also included some examples of the projects being undertaken in overseas jurisdictions.

The following paragraphs present the information generated through the Committee's initial research. This information was evaluated to determine those organisations which could offer the best value to the Committee in terms of the opportunities to learn from experiences overseas.

### 7.3.2 Canada

Public Private Partnerships were first initiated by Canadian provinces in the 1990s. The identification of cost savings and efficiency gains led to the establishment of central procurement agencies and centres of excellence in Alberta (1999), British Columbia (2002), Quebec (2004), and Ontario (2006).<sup>789</sup>

Canadian provinces of British Columbia, Ontario, Alberta and Quebec were initially investigated as they were considered most relevant given the size of the population in those provinces and the projects which have been, and are being, undertaken by their governments.

In addition to relevant government ministries responsible for infrastructure and transport, each of these provinces has a Crown corporation which is specifically dedicated to the development and management of PPPs (also referred to in Canada as P3s).

Research was also undertaken in relation to Federal agencies in Canada. In particular, PPP Canada was examined as it was considered that a review of the federal-provincial interface could provide useful comparison with the PPP framework within Australia.

The following organisations were researched by the Committee in determining the focus for its visit to Canada.

#### PPP Canada and the Canada Fund

PPP Canada was established in 2009 with a mandate to improve the delivery of public infrastructure by achieving better value, timeliness, and accountability to taxpayers through PPPs.<sup>790</sup>

In 2009-10 the Canadian Government launched an economic action plan to stimulate the economy. The Plan included the establishment of the 'P3 Canada Fund'. The Fund is a merit based program designed to encourage consideration of PPPs in public infrastructure procurements with the aim of achieving value for taxpayers.<sup>791</sup> The Canadian Government expects the \$CAD1.25 billion P3 Canada Fund to leverage \$CAD5 billion in PPP infrastructure investments in Canada.<sup>792</sup> The Fund is administered by PPP Canada and submissions for funding come from 11 provinces and territories across Canada.

789 Author unknown, 'Three decades, three growth eras', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.6

790 PPP Canada, 'Overview', <[www.p3canada.ca/about-ppp-canada-overview.php](http://www.p3canada.ca/about-ppp-canada-overview.php)>, accessed 22 March 2012

791 PPP Canada, 'Overview', <[www.p3canada.ca/p3-canada-fund-overview.php](http://www.p3canada.ca/p3-canada-fund-overview.php)>, accessed 22 March 2012

792 Mr J. Flaherty, Canada Finance Minister, 'View from the top', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, pp.7-8

PPP Canada employs a three phased process to assess the merit of project submissions: a Screening phase; a P3 Business Case Readiness phase; and, an in depth evaluation of the investment. An overview of these phases is presented as follows:<sup>793</sup>

- Screening (first phase) – The project is screened against a number of eligibility and merit criteria to determine that it has the greatest potential to advance the objectives of the P3 Canada Fund. Factors considered include: public benefit; meaningful private sector involvement; competitive procurement; potential to achieve value-for-money; risk transfer; market development potential; realistic funding and timing expectations; and applicant’s experience and skill capacity.
- P3 Business Case Readiness (second phase) – Receipt of a robust business case with sufficient support from the sponsoring jurisdiction and funding partners. The Business Case should include a detailed review of value to taxpayers; sound procurement strategy; and is financially viable.
- Investment (third phase) – The main focus is on the structure and quality of the proposed P3 approach including an examination of value-for-money, procurement strategy and viability.

The primary focus of PPPs in Canada has been in the health sector, schools, correctional, police facilities and transport infrastructure. There is more recent interest in the area of renewable energy, rapid transit, water and wastewater areas.<sup>794</sup>

## Partnerships BC

Partnerships BC serves British Columbians through the planning, delivery and oversight of major infrastructure projects. Partnerships BC was established in 2002 and is a Crown corporation, wholly owned by the Province. The organisation is committed to transparent operations and achieving wide recognition for innovation, leadership and expertise in public procurement.<sup>795</sup>

Partnerships BC provides project structuring services from the business planning stage through the competitive selection process and into design, construction and operations. The company’s clients are public sector agencies such as ministries, Crown corporations, health authorities, higher education institutions, municipalities, the federal government and other provincial governments.<sup>796</sup>

Partnerships BC’s service model is a consulting model which is based on a fee-for-service structure. The Company provides services directly through its own expertise and also by engaging external consultants where specialised advice is required.<sup>797</sup>

Partnerships BC evaluates all proposed provincial infrastructure projects over \$CAD50 million in cost. According to the Government of British Columbia, since 2002 Partnerships BC has delivered 35 projects worth \$CAD12.5 billion to British Columbians. This includes approximately \$CAD5 billion in private capital. Projects include the:<sup>798</sup>

793 PPP Canada, Application Guide & Application Form — Round Four | April – June 2012, April 2012, pp.9-13

794 Mr J. McBride, PPP Canada, ‘Raison d’etre’, *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.9ttt

795 Partnerships British Columbia, ‘Welcome to Partnerships BC’, <[www.partnershipsbc.ca/index.php](http://www.partnershipsbc.ca/index.php)>, accessed 22 March 2012

796 Partnerships British Columbia, *Service Plan — 2012/13 – 2014/15*, n.d., p.2

797 *ibid.*, p.2

798 Ms S. Clark, Partnerships BC, ‘Partnering with British Columbia’, *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.12

- \$CAD1.9 billion Canada Line (a rapid transit rail line);
- \$CAD600 million improvement in the ‘Sea-to-Sky’ highway linking Vancouver with Whistler; and
- \$CAD130 million replacement of the Kicking Horse Canyon highway.

Since 2002 Partnerships BC has developed a lot of expertise in PPPs and offers advice to many other clients outside British Columbia.<sup>799</sup>

Partnerships BC is considering more health and transportation projects and more possibilities in the areas of energy and wastewater, which the organisation views as good applications for PPPs.<sup>800</sup>

### Ministry of Transportation, British Columbia

The Committee reviewed information but did not meet with the Ministry of Transportation, British Columbia.

The Ministry of Transportation in British Columbia plans transportation networks (roads, rail, buses, ferries), provides transportation services and infrastructure, and develops and implements transportation policies. The Ministry also administers federal-provincial funding programs, including the Building Canada Fund, directed at helping to build sustainable communities.<sup>801</sup>

The Ministry’s *2012-13 – 2014-15 Service Plan* identifies a number of major capital projects currently underway:<sup>802</sup>

- Kicking Horse Canyon is an upgrade to a 26 kilometre section of the Trans-Canada Highway;
- Evergreen Line Rapid Transit Project is a rapid rail transit which will connect the current “SkyTrain” network to downtown Vancouver and includes integration with the regional bus networks. The Project is estimated to take four years to complete at an estimated construction cost of \$CAD1.4 billion;
- South Fraser Perimeter Road commenced in 2010 and is a 40 kilometre, four-lane road which will link Vancouver’s ports, rail yards and industrial areas to three major highways heading east and into the United States. The overall cost of the project is estimated to be \$CAD1.2 billion; and
- Port Mann/Highway 1 Improvement Project includes construction of a new ten-lane Port Mann Bridge and improvements to 37 kilometres of Highway 1. Responsibility for this project resides with TI Corp (Transport Investment Corporation) which is a provincial Crown Corporation. TI Corp’s primary mandate is to manage and ensure the successful delivery of the project and to recover the capital costs of the project, as well as operating and maintenance costs of the bridge and highway, for a period of up to 40 years.

799 *ibid.*

800 *ibid.*

801 Ministry of Transportation and Infrastructure, *2012/13 – 2014/15 Service Plan*, February 2012, p.6

802 *ibid.*, pp.23-6

## Infrastructure Ontario

Infrastructure Ontario is a Crown corporation, wholly owned by the Province, whose role is to support the Ontario Government to modernise and maximise the value of public infrastructure and real estate, manage government facilities and finance the renewal of the Province's public infrastructure.<sup>803</sup>

The organisation has 4 business units:<sup>804</sup>

- Project Delivery;
- Lending;
- Real Estate Management; and
- Ontario Lands.

Infrastructure Ontario is guided by a number of Provincial strategies including 'Provincial Capital Plans' and the Province's 'Building a Better Tomorrow Framework'.<sup>805</sup>

Infrastructure Ontario refers to their approach to financing projects in the Province as 'Alternate Financing Procurement (AFP)', not PPPs. The two main models of project procurement are:<sup>806</sup>

- 'build-finance' – where the province provides the general design and asks a contractor to deliver at a fixed price on a fixed date. No payments are made until the project is completed to satisfaction. These are usually smaller projects where an existing facility is being upgraded or expanded; and
- 'design-build-finance-maintain' – mainly applied to new facilities costing more than \$50 million. This is similar to what is generally known as a PPP, but Infrastructure Ontario say they 'tweak' the model in places.

About a third of the Province's projects have been 'build-finance' and two thirds 'design-build-finance-maintain'. Examples of the latter are:<sup>807</sup>

- \$CAD334 million Durham Consolidated Courthouse;
- \$CAD594 million Toronto South Detention Centre; and
- \$CAD293 million Ontario Provincial Police Modernisation.

Between 2007 and 2010, Infrastructure Ontario completed more than 35 projects representing approximately \$CAD15 billion worth of capital. In terms of forward planning, Infrastructure Ontario is looking at opportunities relating to the upgrade of highways, the transit system and preparation for the 2015 Pan-American Games in Toronto (including athletes' villages, an aquatic centre and a stadium).<sup>808</sup>

The following areas of interest were noted through the Committee's research of Infrastructure Ontario:

803 Infrastructure Ontario, 'What We Do', <[www.infrastructureontario.ca/templates/WhatWeDo.aspx](http://www.infrastructureontario.ca/templates/WhatWeDo.aspx)>, accessed 22 March 2012

804 *ibid.*

805 Infrastructure Ontario, 'Welcome to Infrastructure Ontario', <[www.infrastructureontario.ca](http://www.infrastructureontario.ca)>, accessed 22 March 2012

806 Mr V. Georgiou, Infrastructure Ontario, 'Proof is in the pipeline', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.14

807 *ibid.*

808 *ibid.*

- the Strategic Opportunities Committee, which is aimed at enhancing collaboration with industry in an effort to share issues, resolve conflicts and identify opportunities to work together. The Committee meets quarterly and includes executives from Infrastructure Ontario, the Ontario Association of Architects, the Ontario General Contractors Association, Consulting Engineers of Ontario and the Association of Registered Interior Designers of Ontario as well as Infrastructure Ontario's project service providers;<sup>809</sup> and
- 'bundled' PPP projects – e.g. Ontario's Provincial Police Modernisation. In September 2010, Ontario finalised a \$CAD548 million PPP to be paid over 30 years for the construction of 18 new facilities for the Provincial police force. The facilities will replace old buildings and provide state-of-the-art regional headquarters, detachments and forensic units. The project represents the second bundled project for Ontario; the first was the Ottawa Hospital Regional Cancer Program.<sup>810</sup>

In addition, evidence was received at the Committee's March 2012 public hearings that a regular stream of infrastructure projects in Ontario has encouraged the creation of a 'centre of excellence' for infrastructure procurement and has increased market and community confidence that infrastructure needs are being forward planned and addressed by Government.<sup>811</sup>

Also, it has been suggested that centralised infrastructure procurement has shortened the bidding and tendering phase and reduced costs. It has been asserted that bid costs are around 1.5 per cent to 2 per cent of capital costs in Australia while in Canada they are around 0.5 per cent to 0.75 per cent of capital costs, which encourages more bids.<sup>812</sup>

## Infrastructure Quebec

The Committee reviewed information but did not meet with Infrastructure Quebec.

Infrastructure Quebec was created in 2005 as PPP Quebec and only involved itself in PPP projects. In December 2009, the Quebec Government passed legislation to broaden the organisation's mandate beyond PPPs and gave it the responsibility to work with public sector agencies to prepare business cases for all projects over \$CAD40 million in cost, regardless of delivery mode.<sup>813</sup>

Recent projects include:<sup>814</sup>

- \$CAD564 million Sainte-Justine University Health Centre – procured under a 'design-build-finance' contract;
- \$CAD470 million Montreal University Hospital Research Centre – delivered as a PPP; and
- \$CAD1.3 billion McGill University Health Centre, a 500-bed health care facility in Montreal, which featured the largest issuing of senior bonds for a PPP project.

809 Infrastructure Ontario, 'Partnering with Industry', <[www.infrastructureontario.ca/About-Us/Partnering-with-Industry](http://www.infrastructureontario.ca/About-Us/Partnering-with-Industry)>, accessed 22 March 2012

810 Mr V. Georgiou, Infrastructure Ontario, 'Regional partnership for regional PPP', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.24

811 Mr K. Lavelle, Plenary Group Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

812 Mr P. Crowe, Plenary Group Pty Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.6

813 Mr N. Bergeron, Infrastructure Québec, 'Broader mandate, bigger ambition', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.15

814 *ibid.*

In 2009, Quebec signed a PPP contract for a new concert hall (\$CAD105 million). It anticipates savings of \$CAD48 million over a two-year construction phase and 27-year maintenance contract. In 2006 Infrastructure Quebec evaluated how much it would cost the Quebec Ministry of Culture and Communications to build and maintain the concert hall itself compared with doing it with private investment. The concert hall will be a revenue generating asset. So, under the agreed arrangement, the private partner will keep all revenue generated from the bars and cloakrooms of the concert hall and will receive additional payments for special events held at the concert hall such as corporate gatherings.<sup>815</sup>

Infrastructure Quebec expect more projects in the health care sector as many hospitals in the Province are 50 years or older. Transport is also predicted to be highlighted, starting with the planned reconstruction of the Turcot Highway Interchange in Montreal. Another sector which is expected to feature prominently is sporting facilities, as Quebec City plans to host the 2022 Winter Olympics.<sup>816</sup>

### Alberta Infrastructure – Alberta Schools Alternative Procurement (ASAP)

The Committee reviewed information but did not meet with Alberta Infrastructure.

The Alberta Schools Alternative Procurement project, in mid-2000s, became Canada's largest PPP for education infrastructure: 18 schools in Edmonton and Calgary accommodating 12,000 students at a net present value of the PPP costed at \$CAD634 million. The key drivers were the cost savings and efficiencies in bundling the schools together under one contract. Also it is expected that, as the maintenance will be handled by one private partner for 30 years, this will create efficiencies in the sourcing of labour and materials for the upkeep of the buildings.<sup>817</sup>

Alberta Infrastructure considers the project to have been very successful, with a further ten schools scheduled for completion in 2012.<sup>818</sup>

### Canadian Council for Public-Private Partnerships

The Canadian Council for Public-Private Partnerships (CCPPP) was formed in 1993 as a member-sponsored organisation with representatives from both the private and public sectors. The Council conducts research, publishes findings, facilitates forums for discussion and sponsors an annual conference on PPP-related topics. Each year the Council conducts a National Awards Program to celebrate examples of excellence and innovation in PPPs. The program is held concurrently with its annual conference.<sup>819</sup> Three awards are presented annually to public institutions/governments and their private sector partners for outstanding achievement in the following key areas:<sup>820</sup>

- project financing;
- service delivery;

815 Mr P. Benoit, Infrastructure Québec, 'Hitting the right note', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.25

816 Mr N. Bergeron, Infrastructure Québec, 'Broader mandate, bigger ambition', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.15

817 Mr J. Gibson, Alberta Infrastructure, 'School's in', *Infrastructure Investor Canada An Intelligence Report*, December/January 2010-11, p.23

818 *ibid.*

819 The Canadian Council for Public-Private Partnerships, 'About the Council', <[www.pppcouncil.ca/about-ccppp.html](http://www.pppcouncil.ca/about-ccppp.html)>, accessed 22 March 2012

820 The Canadian Council for Public-Private Partnerships, 'About the CCPPP Awards', <[www.pppcouncil.ca/awards.html](http://www.pppcouncil.ca/awards.html)>, accessed 31 August 2012



- infrastructure; and
- other.

The Council sponsors a range of publications including research papers, case studies, guidelines, opinion surveys and national inventories on key PPP subjects.

In April 2005, the Canadian Council for Public-Private Partnerships undertook market research with Partnerships BC with the aim of:<sup>821</sup>

- reducing the time taken during the procurement process;
- reducing procurement costs for both the public and private sectors;
- achieving optimal risk transfer in projects; and
- driving consistency through standardisation of procurement documents.

While PPPs can vary significantly in terms of size and complexity, they are often larger projects that can attract private sector interest and financing in the market place. Smaller projects have been 'bundled' to create a larger initiative that encourages private sector involvement (e.g. the Downtown Eastside Housing Renewal project in Vancouver, valued at \$CAD29.1 million and which involves the renovation of 13 provincially owned single room hotels into social housing).<sup>822</sup>

### The Conference Board of Canada

The Conference Board of Canada is an independent, non-partisan, not-for-profit research organisation which is funded through fees charged to the private and public sectors. The organisation seeks to build leadership capacity for a better Canada by creating and sharing insights on economic trends, public policy and organisational performance.<sup>823</sup>

In January 2010, the Board published the findings of a research report entitled, *Dispelling the Myths: A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructure Investments*.

The Report concluded that evidence shows that PPPs 'are delivering time and cost benefits relative to conventional procurement' but that 'not all projects are suitable for [PPP] procurement'.<sup>824</sup>

Other areas of research conducted by the Board include leadership and governance, risk management, organisational excellence and human resource management.

### Accountability and oversight

Research was also conducted on the following organisations with a view to obtaining the perspective of bodies involved in the accountability and oversight of the management of public resources in Canada:

- the Office of the Auditor-General of Canada;

821 The Canadian Council for Public-Private Partnerships, *Responsible PPP Procurement For British Columbia*, <[www.pppcouncil.ca/pdf/bc\\_procure.pdf](http://www.pppcouncil.ca/pdf/bc_procure.pdf)>, April 2005, accessed 22 March 2012

822 Infrastructure Canada, *Infrastructure Spotlight: Improving Canada's Infrastructure Through Public-Private partnerships*, 31 July 2012, p.4; PPP Canada, 'Downtown Eastside Housing Renewal Project (Vancouver, BC)', <[www.p3canada.ca/project.php?id=9](http://www.p3canada.ca/project.php?id=9)>, accessed 21 April 2012

823 The Conference Board of Canada, 'About the Conference Board of Canada', <[www.conferenceboard.ca/about-cboc/default.aspx](http://www.conferenceboard.ca/about-cboc/default.aspx)>, accessed 3 April 2012

824 The Conference Board of Canada, 'Dispelling the Myths: A Pan-Canadian Assessment of Public-Private Partnerships for Infrastructure Investments', <[www.conferenceboard.ca/e-Library/abstract.aspx?did=3431](http://www.conferenceboard.ca/e-Library/abstract.aspx?did=3431)>, accessed 3 April 2012

- the Office of the Auditor-General of British Columbia;
- the Legislative Assembly of British Columbia; and
- the Legislative Assembly of Ontario – Standing Committees.

### 7.3.3 United Kingdom

The current Government of the United Kingdom (UK Government) has undertaken a number of initiatives to review the financing and management of public sector infrastructure projects. The UK Government has expressed a strong commitment to redeveloping and renewing the Country's infrastructure and is keen to develop a strong partnership with the private sector to achieve economic growth and value-for-money in a tight fiscal environment.

Recent initiatives have been undertaken by the Cabinet Office and HM Treasury to improve forward planning (the 'infrastructure pipeline'), tighten approval processes for projects, improve program and project management skills and leadership capabilities and develop better working relationships with industry. In addition, the UK Government has appointed a Chief Construction Advisor to provide independent advice to relevant ministers.

Some research was undertaken in relation to infrastructure management in Scotland. However, in terms of priorities and time available, it was not considered feasible to include a visit to Edinburgh.

Research also identified a number of private sector firms in London which are dedicated to providing a range of project-related services to the public sector for infrastructure projects. It was considered that some of these organisations could provide useful insights to the Committee in its investigation of the necessary skills and competencies in the delivery of public sector infrastructure projects.

In addition, the Committee sought a meeting with Professor Bent Flyvbjerg who is a leading expert in Programme Management at the Saïd Business School at the University of Oxford. Professor Flyvbjerg came to the attention of the Committee by way of reference in the Victorian Auditor-General's submission to the Inquiry.

The following organisations were researched by the Committee in determining the focus for its visit to the United Kingdom.

#### UK Cabinet Office

The UK Government introduced a number of initiatives through the Cabinet Office aimed at improving public infrastructure procurement performance. Some of the initiatives identified are outlined in the following paragraphs.

- A Government Spending Review has committed to invest £40 billion in supporting project investments including new high-value road schemes; one of the world's first carbon capture and storage projects; a high-speed rail network, 'Crossrail'; two of the world's leading medical and engineering research facilities; and the Green Investment Bank.<sup>825</sup>
- An Efficiency and Reform Group (ERG) has been established with the aim of:

825 HM Treasury, 'Government launches National Infrastructure Plan', <[www.hm-treasury.gov.uk/press\\_56\\_10.htm](http://www.hm-treasury.gov.uk/press_56_10.htm)>, 25 October 2010, accessed 22 March 2012

- making government more efficient; and
- radically reforming the way public services are provided.

One of the areas nominated for specific action to achieve savings was to centrally renegotiate major contracts and improve the success rate of major projects across central government.<sup>826</sup>

- A Major Projects Authority (MPA) has been established within the Efficiency and Reform Group. The Cabinet Office notes that the MPA ‘*represents a sea change in the central oversight of central government’s Major projects at both an individual and portfolio level and aims to address issues raised in the National Audit Office report “Assurance of High Risk Projects”*’.<sup>827</sup>
- Major project approval and assurance guidance (April 2011), released by HM Treasury and the Cabinet Office, represents a strengthening of scrutiny and control over spending, both within departments and by the Treasury.<sup>828</sup>

### Other UK Government infrastructure strategies, plans and initiatives

In March 2011, the Cabinet Office issued the *Government ICT* [Information and Communication Technology] *Strategy*. The Strategy is aimed at improving the success rate of public sector ICT projects, creating a common ICT infrastructure, strengthening governance and improving the implementation of large ICT projects and supporting the IT profession within the public sector.<sup>829</sup>

The *Government Construction Strategy* published in May 2011, is aimed at reducing costs by up to 20 per cent by the end of the Parliament.<sup>830</sup> The Strategy outlines a number of objectives and actions aimed at changing the relationship between public authorities and the construction industry to ensure the Government gets a consistently good deal and the country gets the economic and social infrastructure it needs for the long-term.<sup>831</sup>

Under the Strategy:<sup>832</sup>

- the Government will define the necessary skills for specific roles in the governance structure with the aim of implementing these across government and initiating the tracking of capability;
- cost benchmarking will be established to provide consistency of value-for-money across each program and to establish a baseline for cost-led procurement;
- the Government will move towards using standard forms of contract;
- the Cabinet Office will co-ordinate the Government’s drive to prepare for the development of new standards and for training in respect of Building Information Modelling (BIM) technologies. The Government will require fully collaborative BIM level 2 (all project and asset information, documentation and data being electronic) as a minimum by 2016;

826 Cabinet Office, ‘Efficiency and Reform Group’, <[www.cabinetoffice.gov.uk/unit/efficiency-and-reform-group](http://www.cabinetoffice.gov.uk/unit/efficiency-and-reform-group)>, accessed 28 March 2012

827 Cabinet Office, ‘Major Projects Authority – improving project performance for the taxpayer’, <[www.cabinetoffice.gov.uk/content/major-projects-authority](http://www.cabinetoffice.gov.uk/content/major-projects-authority)>, accessed 22 March 2012

828 HM Treasury and Cabinet Office, *Major Project approval and assurance guidance*, April 2011

829 Cabinet Office, ‘Government ICT Strategy’, <[www.cabinetoffice.gov.uk/content/government-ict-strategy](http://www.cabinetoffice.gov.uk/content/government-ict-strategy)>, accessed 10 May 2012

830 *ibid.*, n.p.

831 *ibid.*

832 *ibid.*, pp.10-16

- the Government will reform its relationship with its major construction suppliers; and
- the Government will explore opportunities to achieve a more collaborative, integrated model of procurement which maintains competitive tension and demonstrates value-for-money.

In November 2011, the UK Government published the updated version of the ‘Funded Construction Pipeline’, a rolling two-year forward program of infrastructure and construction projects on a quarterly basis where funding has been agreed.<sup>833</sup>

### **Strategy for National Infrastructure (March 2010)**

In March 2010, the UK Government developed a Strategy for National Infrastructure. The Strategy encompassed the following features:<sup>834</sup>

- identifies a new strategic focus by the Government on infrastructure investment and management;
- under the Strategy, Infrastructure UK will develop the National Infrastructure Framework alongside the next Spending Review, after which it will be monitored and periodically updated;
- the National Infrastructure Framework will enable effective prioritisation and timing decisions to be made with a long-term, cross-sectoral view of infrastructure needs;
- the National Infrastructure Framework will also be used to support public spending decisions at future Spending Reviews; and
- an investigation into the cost of delivering major infrastructure projects in the UK was established under the Strategy.

### **National Infrastructure Plan 2010 and 2011**

The UK Government produced the first iteration of the National Infrastructure Plan in October 2010. The Plan sets out a broad vision of the infrastructure investment required to underpin the UK’s growth. The Plan states the role of the Government is to specify what infrastructure is needed, identify any barriers to achieving investment and to mobilise the public and private resources required to make it happen.<sup>835</sup>

The Plan identified £200 billion of public and private investment in UK infrastructure over five years.<sup>836</sup>

The Plan is aimed at improving the visibility of the infrastructure and construction pipelines which it is hoped will assist in improving construction supply chain growth and sustainability.

The actions and interventions identified in the National Infrastructure Plan were reviewed by the Engineering and Interdependency Expert Group to ensure that they were effective.<sup>837</sup>

833 Cabinet Office, *Government Construction Strategy*, <[www.cabinetoffice.gov.uk/sites/default/files/resources/Government-Construction-Strategy\\_0.pdf](http://www.cabinetoffice.gov.uk/sites/default/files/resources/Government-Construction-Strategy_0.pdf)>, May 2011, accessed 24 April 2012, p.3

834 HM Treasury and Infrastructure UK, *Strategy for national infrastructure*, March 2010

835 HM Treasury and Infrastructure UK, *National Infrastructure Plan 2010*, October 2010, p.3

836 *ibid.*

837 HM Treasury, ‘Engineering and Interdependency Expert Group’, <[www.hm-treasury.gov.uk/iuk\\_engineering\\_interdependency.htm](http://www.hm-treasury.gov.uk/iuk_engineering_interdependency.htm)>, accessed 22 March 2012

## Infrastructure UK (IUK)

Infrastructure UK was established in June 2010 and is a division of HM Treasury with the remit to provide a stronger focus on the United Kingdom's long-term infrastructure priorities. The Unit aims to provide greater clarity and co-ordination over the planning, prioritisation and enabling of investment in UK infrastructure and to improve delivery by achieving greater value-for-money.<sup>838</sup>

IUK advises the Secretary to the Treasury, who in turn reports to the Chancellor of the Exchequer.<sup>839</sup>

## Infrastructure UK Advisory Council

The Infrastructure UK Advisory Council was established to provide guidance on the strategic direction and work priorities of Infrastructure UK. The Council meets quarterly.

## Infrastructure Cost Review (December 2010)

In the latter part of 2010, the UK Government undertook an investigation of how the cost of civil engineering works on major infrastructure projects could be reduced. The final report was published in December 2010. The key improvement objectives of the cost review were to:<sup>840</sup>

- create better visibility and certainty of the infrastructure investment pipeline;
- implement effective governance of projects and programs, particularly in the public sector;
- instil greater discipline in the commissioning of projects and programs;
- develop smarter ways to use competition by improving risk-based assessment of procurement options; and
- create an environment that encourages industry and the advisory community to invest in efficiency and reduce direct construction costs.

The report concluded that there was no single overriding factor driving higher costs and identified a number of contributing factors mainly incurred in the early project formulation and pre-construction phases.<sup>841</sup>

The Cost Review concluded that infrastructure costs could be reduced by at least 15 per cent which would deliver savings of between £2 and £3 billion per annum.<sup>842</sup>

## Infrastructure Cost Review Implementation Plan (March 2011)

As a result of the Cost Review, a three-year infrastructure Cost Review Implementation program, led by Infrastructure UK, has been developed. The Cost Review Implementation Plan comprises six key inter-linked work streams:<sup>843</sup>

- visibility and certainty of forward program (infrastructure investment pipeline);

838 HM Treasury and Infrastructure UK, <[www.hm-treasury.gov.uk/ppp\\_infrastructureuk.htm](http://www.hm-treasury.gov.uk/ppp_infrastructureuk.htm)>, accessed 22 March 2012

839 *ibid.*

840 HM Treasury and Infrastructure UK, *Infrastructure Cost Review: Main Report*, December 2010, p.21

841 *ibid.*, p.11

842 *ibid.*, p.9

843 HM Treasury and Infrastructure UK, *Infrastructure Cost Review: Implementation Plan*, March 2011, pp.13-21

- stronger and more effective governance of projects and programs;
- improved commissioning of projects (e.g. in relation to specifications and cost estimates);
- developing smarter ways to use competition;
- creating an environment which encourages industry and the advisory community to invest in efficiency (reducing construction costs through more cost effective delivery solutions); and
- collecting infrastructure data.

Infrastructure UK plans to work with the Efficiency Reform Group in the Cabinet Office and other key stakeholders to implement a co-ordinated program of activities.<sup>844</sup>

### **The Infrastructure Charter (May 2011)**

The Infrastructure Charter was established as part of the *Cost Review Implementation Plan*. The Charter seeks to change the behaviours and working practice of both government participants and industry participants in relation to infrastructure delivery.

Under the Charter, Government will seek:<sup>845</sup>

- improved transparency and certainty in the infrastructure forward program (refer to the National Infrastructure Plan);
- more efficient, longer-term programs with clear, outcome-based objectives;
- improved competition and procurement processes;
- better whole-life outcomes not just lowest cost;
- better selection of supply chain partners;
- development of client technical expertise and intelligent commissioning capability and better use of infrastructure data for decision-making; and
- to create an environment for industry to invest in new technologies.

Under the Charter, the Government looks to industry to:<sup>846</sup>

- improve co-ordination and communication with Government;
- proactively support Government to reduce costs and remove wastage;
- develop long-term strategies to invest in innovation, training and improve safety, productivity and skills; and
- promote industry collaboration and joint venturing to improve efficiency and growth.

The UK Government is expecting departments to embed these principles/objectives into their processes and report annually to the Government Construction Board.<sup>847</sup>

844 *ibid.*, p.13

845 HM Treasury and Infrastructure UK, *Infrastructure Cost Review: Charter Commitments*, June 2011

846 *ibid.*

847 HM Treasury and Infrastructure UK, 'The Infrastructure Charter', <[www.hm-treasury.gov.uk/iuk\\_cost\\_review\\_infrastructure\\_charter.htm](http://www.hm-treasury.gov.uk/iuk_cost_review_infrastructure_charter.htm)>, accessed 22 March 2012

Industry peak bodies (the Association for Consultancy and Engineering; Civil Engineering Contractors Association; Construction Products Association; and the Institution of Civil Engineers) have backed the Charter and have committed to work as an alliance to provide feedback from industry as it is implemented.<sup>848</sup>

### Private Finance Initiative (PFI) Reform

In November 2011, the Chancellor announced the Government's intention to reform the Private Finance Initiative (PFI). A call for evidence was issued to all interested parties by HM Treasury in December 2011 with a closing date of 10 February 2012. Comments were being sought on reform of the PFI and also to raise proposals for a new approach to using the private sector in the delivery of public assets and services.<sup>849</sup> As at the time of this Report, reforms to the PFI have yet to be announced.

### Chief Construction Advisor to Government

The Chief Construction Advisor was established in November 2009 to provide independent reporting to the Ministers of HM Treasury and the Department for Business, Innovation and Skills. The responsibilities of the position include:<sup>850</sup>

- Chairing a new Construction Clients Board to oversee the implementation and further development of best value Government construction procurement;
- Chairing a sustainable construction strategy delivery board;
- assessing the key barriers to growth in the UK's low carbon construction sector;
- working with industry through the Strategic Forum for Construction to deliver the industry improvements agenda;
- promoting innovation in the sector; and
- co-ordinating the Whitehall response to reports featuring construction.

### Transport for London

Transport for London (TfL) was created in 2000 and is the integrated organisation accountable for the planning and delivery of London's transport facilities. TfL is a statutory corporation and has three subsidiary companies:<sup>851</sup>

- London Transport Insurance Guernsey Ltd;
- TfL Trustee Company Ltd; and
- Transport Trading Ltd.

848 *ibid.*

849 HM Treasury and Infrastructure UK, 'PFI reform: Call for evidence', <[www.hm-treasury.gov.uk/iuk\\_pfi\\_reform\\_call\\_for\\_evidence.htm](http://www.hm-treasury.gov.uk/iuk_pfi_reform_call_for_evidence.htm)>, accessed 22 March 2012

850 UK Department for Business Innovation and Skills, 'Government seeks new Chief Construction Adviser', <[news.bis.gov.uk/Press-Releases/Government-seeks-new-Chief-Construction-Adviser-67a14.aspx](http://news.bis.gov.uk/Press-Releases/Government-seeks-new-Chief-Construction-Adviser-67a14.aspx)>, accessed 2 July 2012

851 Transport for London, 'Company information', <[www.tfl.gov.uk/corporate/about-tfl/4510.aspx](http://www.tfl.gov.uk/corporate/about-tfl/4510.aspx)>, accessed 29 March 2012

TfL manages London's buses, London Underground, the Docklands Light Railway, London Overground and London Trams. It is also responsible for: operating London's Congestion Charging Scheme; managing a 580km network of main roads; maintaining London's traffic lights; regulating taxis; and, operating cycle hire in the City.<sup>852</sup>

TfL is directed by a board which is chaired by the Mayor of London. TfL's Commissioner and chief officers are accountable for the day to day operations of the organisation.<sup>853</sup>

Major projects include 'Crossrail', a major new east-west rail link, which is the largest addition to the transport network in London in 50 years. Crossrail is a joint venture between TfL and the Department of Transport and includes 21km of twin bore tunnels, 8 new underground stations and four overground spurs, including a connection to Heathrow Airport. Other recent transport upgrades (including a major emphasis on cycling in the City) were scheduled for completion in 2012 in preparation for the Olympic Games.<sup>854</sup>

The first two super highways, from Barking to Tower Gateway and Merton to the City opened in 2010 and it is planned that another ten will launch by 2015.<sup>855</sup>

### **Institution of Civil Engineers (ICE)**

The Institution of Civil Engineers (ICE) was founded in 1818. ICE is a registered charity that strives to promote and progress civil engineering. ICE is a qualifying body, a centre for the exchange of specialist knowledge and a provider of resources for innovation and excellence in the profession world-wide.<sup>856</sup>

In March 2011, the President of the Institution of Civil Engineers announced 'industry champions' who would provide the focus for ongoing collaboration between the Government and industry and to ensure that the new 'principles' outlined in the Cost Review Implementation Plan become embedded in practice. Implementation groups will be headed by a 'champion' drawn from across industry to focus on collaboration.<sup>857</sup>

### **Accountability and oversight**

Research was also conducted on the following organisations with a view to obtaining perspectives of bodies involved in the accountability and oversight of the management of public resources:

- the House of Commons, Public Accounts Committee; and
- UK National Audit Office (NAO).

852 *ibid.*

853 Transport for London, *Factsheet*, November 2010, p.1

854 *ibid.*, pp.2-3

855 *ibid.*, p.3

856 Institution of Civil Engineers, 'About ICE', <[www.ice.org.uk/About-ICE](http://www.ice.org.uk/About-ICE)>, accessed 29 March 2012

857 Infrastructure UK, *Infrastructure delivery models to be reformed*, 31 March 2011; HM Treasury and Infrastructure UK, *Infrastructure Cost Review: Implementation Plan*, March 2011



## Academia

Professor Bent Flyvbjerg is a leading international expert within the field of major program management and planning. He has undertaken consultancies for government, regulators, corporations, banks, audit offices, the EU Commission and the United Nations. Professor Flyvbjerg holds a PhD in Economic Geography and two higher degrees in Engineering and Science.<sup>858</sup>

Professor's Flyvbjerg's research was referred to by the Victorian Auditor-General in his correspondence with the Committee in relation to the Inquiry and covers:<sup>859</sup>

- cost overruns and benefit shortfalls in major programs/projects;
- theories of success and failure;
- complexity and innovation in major programs;
- optimism bias and strategic misrepresentation;
- cost and demand forecasting in high-risk environments;
- risk management; and
- governance of major programs.

Professor Flyvbjerg developed the research methodology called 'phronetic social science' and has employed the methodology in studies of city management and of mega-projects.<sup>860</sup>

Professor Flyvbjerg is credited in 2005, with identifying two main causes of misinformation in policy and management:

- strategic misrepresentation (lying); and
- optimism bias (appraisal optimism).

## Amber Infrastructure

Amber Infrastructure is an international private sector sponsor and manager of social and economic infrastructure with a strong focus on PPPs. As project sponsor, Amber assembles specialist teams to bid for the right to develop new public infrastructure projects. Amber's core business focuses on sourcing, developing, advising and managing infrastructure assets within the transport, renewable energy and regeneration sectors. Amber has been involved in:<sup>861</sup>

- Australia - the Royal Children's Hospital in Melbourne, the Gold Coast Rapid Transport project, Orange Hospital, the Royal Melbourne Showgrounds and Long Bay Forensic and Prisons Hospital;
- Canada - Alberta Province's P3 schools project; and Durham Region Courthouse in Ontario;
- UK – advised and completed acquisition for the UK Government on the Building Schools of the Future portfolio of over 100 schools; involved in UK off-shore transmission projects; appointed to manage the £100 million London Energy

858 Saïd Business School, University of Oxford, 'Bent Flyvbjerg', <[www.sbs.ox.ac.uk/research/people/Pages/BentFlyvbjerg.aspx](http://www.sbs.ox.ac.uk/research/people/Pages/BentFlyvbjerg.aspx)>, accessed 3 April 2012

859 *ibid.*

860 *ibid.*

861 Amber Infrastructure Limited, <[www.amberinfrastructure.com](http://www.amberinfrastructure.com)>, accessed 29 March 2012

Efficiency Fund on behalf of the Mayor of London's Green Fund; appointed as fund manager for JESSICA (Joint European Support for Sustainable Investment in City Areas) programs in Wales (£55 million) and Scotland (£50 million). JESSICA is being rolled out across Europe offering opportunities for public and private co-investment in regeneration and energy projects. Capital is sourced from the European Regional Development Fund. In Scotland, the Amber Green Consortium will work with the Scottish Government and the European Investment bank on the creation of a fund for Scotland which will offer loans to regeneration and energy efficiency projects in 13 Local Authority Areas across Scotland; and

- Germany – design, build, finance and maintenance of the Headquarters of the Federal Ministry of Education and Research in Berlin; the largest German PPP in 2011.

### 7.3.4 Europe

The desktop research identified a number of organisations across Europe which represented some relevant interest to the Committee's Inquiry. These were:

- NETLIPSE – a 'Network for the dissemination of knowledge on the management and organisation of Large Infrastructure Projects in Europe', located in the Netherlands;
- European PPP Expertise Centre (within the European Investment Bank), located in Luxembourg;
- International Project Managers Association (IPMA), located in the Netherlands;
- European Union, located in Brussels, and currently heavily involved with trans-European networks infrastructure projects; and
- The Organisation for Economic Co-operation and Development, located in Paris.

It was considered that organisations would be prioritised following further investigation of the relevance to the Victorian environment and the amount of time available to the Committee. The majority of these organisations and jurisdictions were subsequently not visited.

Sweden was also initially identified as a possible destination of interest as it is similar in terms of geographic area and is at the forefront in terms of its public transport, research, innovation and Information and Communication Technologies. It was also considered that the management of a number of projects being undertaken by the Swedish Transport Administration may be of relevant interest to the Committee (e.g. The Stockholm bypass (road infrastructure) and the Stockholm City Line (rail infrastructure)). While reviewed, Sweden was not visited by the Committee.

It was considered that France and Germany could present some logistical difficulties in terms of time available for travelling and systems of government administration.

## 7.4 The Committee's official visits to national and international jurisdictions

The Committee held discussions with 25 public and private sector organisations during its national visits. These organisations are listed in Appendix A2.1.

The Committee also held discussions during its Inquiry with 25 public and private sector organisations during its overseas visits. These organisations are listed in Appendix A2.2.

The Committee's discussions were private. Appendices A2.3-A2.5 outline, in a non-confidential sense, the more significant developments in infrastructure that have come to the Committee's attention during its official visits. The developments are categorised according to the visited jurisdictions and mainly follow the sequence of the Committee's visits.

## 7.5 Contemporary better practices in infrastructure planning and management in particular jurisdictions

From its research and official visits, the Committee has identified that better practice structural reforms for infrastructure planning and management have been implemented or are underway in:

- Canada, through the creation and operation of **Partnerships British Columbia** in the Province of British Columbia and of **Infrastructure Ontario** in the Province of Ontario;
- the UK, through establishment of the **Major Projects Authority** as part of a wide range of reforms introduced in the **UK Cabinet Office**; and
- the Australian State of New South Wales, following the creation of **Infrastructure NSW**.

The Committee has found that a common characteristic of these contemporary reforms has been the centralisation of key infrastructure planning and procurement functions. Dedicated responsibility for infrastructure planning and procurement has been assigned to these new independent bodies. The aim has been to provide greater assurance that optimal outcomes, in terms of achievement of expected community benefits, will result from delivery of major infrastructure projects.

Other features of these reforms include the presence of strong collaborative arrangements between the new centralised organisations and constructing public sector agencies, and favourable assessments from the private sector on the overall reform directions.

The Committee has drawn on these contemporary better practice initiatives in the formulation of its proposals for the way forward for Victoria in infrastructure planning, management and delivery.

Chapter 2 of this Report on recommended future directions details the nature of and the rationale underpinning the Committee's advocated structural reforms for infrastructure planning and management in Victoria. As explained in that chapter, such reforms are necessary if Victoria is to retain its historical leading edge reputation for infrastructure planning and delivery of major infrastructure projects within cost and time benchmarks and in line with community expectations.



## CHAPTER 8 TERM OF REFERENCE (F) – CENTRALISATION, DECENTRALISATION AND USE OF PRIVATE CONTRACTORS IN PPP PROJECTS

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### 8.1 The assessed scope of term of reference (f)

Term of reference (f) requires the Committee to consider and report on:

*the merits of centralisation versus decentralisation of available skilled experts in the Victorian public sector during the life-cycle stages of public-private partnership projects, including considering any benefits that may be derived from greater flexibility to contract specialist services from external sources.*

Unlike the other terms of reference, this term of reference is restricted to Public Private Partnership (PPP) projects. The Committee notes that there are some skills required for PPPs which are not required for other infrastructure projects. However, the Committee considers that the findings in this area are also generally relevant to other infrastructure procurement methods.

The term of reference introduces three different ways in which constructing agencies may acquire the expertise they need to deliver PPPs:

- hiring or developing staff within the constructing agency ('decentralisation');
- accessing appropriate experts in central public sector agencies such as the Department of Treasury and Finance (DTF) ('centralisation'); and
- contracting specialists from 'external sources', which the Committee interprets to mean the private sector (that is, contractors and consultants).

Each of these ways of acquiring expertise has particular merits as well as some limitations.

Victoria currently has a mix in which all three ways are used. The mix of decentralised, centralised and external experts varies according to the circumstances of the agency and the needs of the particular project. The Committee heard from a number of sources that there is not a 'one size fits all' solution and that there are benefits to the current flexibility.

However, it was also suggested to the Committee that the current arrangement has some disadvantages. Various changes were suggested which, it was argued, would improve Victoria's capacity to successfully deliver infrastructure projects. These changes primarily relate to:

- building stronger skills within the public sector;
- reducing the use of contractors and consultants in some areas; and
- introducing strategies to mitigate some of the possible negative consequences of using contractors and consultants and ensuring that the kind of expertise contracted in is appropriate to the decision-making structure.

The Committee was also informed by various witnesses, though, that there are two major factors restricting agencies' ability to choose where to source expertise: public sector salaries; and the lack of continuity in public sector work.<sup>862</sup>

The conclusions of this chapter have informed the Committee in the new structures recommended in Chapter 2 of this Report.

## 8.2 The Victorian context

Although Victoria has more PPP projects than other Australian jurisdictions, it has fewer than some jurisdictions elsewhere (most notably Ontario in Canada – see Section 8.5.2). At the time of the 2012-13 Budget, there were 22 PPP projects in Victoria, of which 16 were operational and six were under construction. An additional two projects were being procured or about to be procured.<sup>863</sup> These small numbers mean that it is virtually impossible for most individual constructing agencies to develop and retain the skilled experts needed to deliver these projects.

The Department of Health and Department of Justice are currently exceptions to this. The Department of Health has procured three major PPPs in a row and is about to embark on another. The Department indicated that this has enabled it to develop and refine its documentation and gain valuable expertise.<sup>864</sup> The Department of Justice has also delivered three prisons through PPPs over the last ten years, following a number of earlier PPP projects. The Department believes this has enabled it to produce better outcomes.<sup>865</sup>

For most agencies, however, the flow of PPPs has been more sporadic and the agency has not had the opportunity to build and retain expertise. Even for the Department of Health and Department of Justice, the current flows of PPP projects are not guaranteed to continue indefinitely. Should there be a break at some time the internal expertise that has been developed within these departments may be lost.

### 8.2.1 Centralised services

For some time, DTF has played a larger role in PPP projects than in other projects. In addition to producing guidance, DTF has roles in oversight and business case development, similar to the responsibilities it now has for High-Value and High-Risk projects (see Section 2.3.2).<sup>866</sup> As described by DTF:<sup>867</sup>

*DTF has whole-of-government responsibility for:*

- *the Partnerships Victoria Framework;*
- *supporting and reviewing Partnerships Victoria projects; and*
- *monitoring and independently advising the Treasurer and Cabinet on significant PPP issues.*

862 E.g. Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, p.2; Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.26; Department of Sustainability and Environment, response to the Committee's questionnaire, received 29 February 2012, p.5; Department of Transport, response to the Committee's questionnaire, received 25 May 2012, p.16; State Services Authority, response to the Committee's questionnaire, received 14 March 2012, p.5

863 Budget Paper No.4, *2012-13 State Capital Program*, May 2012, p.7

864 Department of Health, response to the Committee's questionnaire, received 10 April 2012, pp.11, 13

865 Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.25

866 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, pp.4-5

867 Department of Treasury and Finance, *National PPP Guidelines: Partnerships Victoria Requirements*, January 2010, p.3

*Senior representatives of DTF and, where appropriate, other agencies, such as DPC, are to be members of the PPP Project Steering Committee. DTF is also to be represented at project working group level.*

*Procuring Agencies are to specifically consult DTF in relation to budgeting, accounting and taxation matters on PPP projects.*

DTF also facilitates a PPP leadership course and a PPP contract management course. The contract management course is mandatory for PPP contract managers unless they are granted an exemption.<sup>868</sup>

As a result of these requirements, there has been more centralised assistance available to agencies delivering PPP projects than other procurement methods.

Assistance to some agencies has also been available from Major Projects Victoria, which has a dedicated Partnerships Victoria group.<sup>869</sup> Major Projects Victoria has managed a number of PPP projects on behalf of other agencies. Major Projects Victoria is currently delivering one PPP project (the Biosciences Research Centre) and has also delivered the Melbourne Convention Centre and Southern Cross Station as PPPs in recent years.

**FINDING:** The number of PPP projects delivered in Victoria makes it difficult for most constructing agencies to develop expertise. However, the Department of Treasury and Finance has a larger role in projects procured through PPPs than most other projects. Major Projects Victoria has also delivered several PPP projects on behalf of other agencies and has a dedicated PPP unit.

## 8.3 Merits of centralised, decentralised and contracted skills

The Committee was informed that each of the three methods of acquiring skilled expertise set out in the term of reference has particular merits. Agencies also informed the Committee about a number of risks that could be associated with the use of external consultants.

### 8.3.1 Decentralisation

With decentralisation, the onus is on constructing agencies to ensure that their staff have the required skills and expertise. The Committee was informed through the Inquiry that the staff in constructing agencies are likely to have a better understanding than either centralised staff or external consultants of:

- the reasons why a project is required;
- the stakeholders connected with a project;
- the agency's policy environment;
- the service delivery environment in which the infrastructure will be used; and
- the internal workings and processes of the constructing agency.

<sup>868</sup> Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.12

<sup>869</sup> Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, p.6

This understanding allows staff to make decisions that are more likely to achieve the intended service delivery outcomes of an infrastructure project.

It was put to the Committee that staff in constructing agencies also provide the following additional benefits:

- an established relationship with stakeholders; and
- greater ownership and commitment to the success of a project.

However, as noted in Section 8.2, staff in most agencies are unlikely to have experience with PPPs or expertise in some of the complex technical aspects of PPPs. Agencies which rarely deliver major infrastructure projects (either as PPPs or otherwise) may have limited expertise on infrastructure delivery by any method.

**FINDING:** The merits of locating experts within constructing agencies relate to them being likely to have a better understanding of the agency and its service delivery environment than decentralised staff or external contractors.

### 8.3.2 Centralisation

With centralisation, skilled experts are located in central agencies. These experts provide advice or services to constructing agencies as required. In the current system, DTF and Major Projects Victoria are the main agencies which contain centralised PPP expertise for the use of other agencies (see Section 8.2.1 of this Report). However, the Committee was also informed that constructing agencies draw on centralised expertise in the Department of Planning and Community Development, the Office of the Victorian Government Architect and the Victorian Government Solicitor's Office.

The major strengths of centralised experts as identified to the Committee were:

- they are likely to have more experience than decentralised staff at procuring, negotiating and delivering PPPs (given that some constructing agencies<sup>870</sup> have a more constant flow of PPP projects than others);
- they gain experience across agencies, exposing them to a wider variety of approaches and solutions to common problems; and
- they are best placed to ensure consistency in the application of policies and processes across the public sector.

Based on these strengths, the use of decentralised experts may provide better solutions to problems, a capacity to negotiate better deals and may provide a valuable learning opportunity for the constructing agency, if the decentralised experts pass on their knowledge (see Section 8.4.2 of this Report).

**FINDING:** The key merits of centralised public sector experts is that they are likely to have more breadth and depth of experience and to be best placed to ensure consistency across the public sector.

870 Such as the Department of Health and Department of Justice.



### 8.3.3 External contractors and consultants

It was suggested to the Committee that contractors and consultants from outside the public sector can have a number of strengths that public sector employees may not:

- a broader range of experience from working on projects in other jurisdictions and in the private sector;
- specialised skills that are only used sporadically in any public sector agency or on a particular project (such as legal skills or design services); and
- levels of qualification, expertise or experience that the public service could not afford on an on-going basis.

It was also suggested that, when a particularly specialised skill is required, an advantage of external contractors and consultants is that the best international teams can be brought in rather than just the best local people.<sup>871</sup>

However, the Committee was also informed that there were risks associated with the use of experts from outside the public sector, including:

- higher costs than employing people in the public sector;
- possible loss of technical knowledge and commercial understanding of contracted PPP arrangements if they leave without transferring that knowledge to staff in the agency;
- a narrow focus on project deliverables rather than the needs of the organisation as a whole;
- high turn-over of staff (as contractors and consultants may be more likely to leave if they receive better offers elsewhere); and
- less understanding of public service values and environment.

Regarding the last point, the State Services Authority drew an important contrast between private sector and public sector projects, explaining that public sector projects ‘often need to balance multiple policy objectives (social, environmental, economic). In contrast, private sector infrastructure projects are predominantly undertaken for commercial objectives.’<sup>872</sup> The State Services Authority also noted that the public expects a higher degree of probity with public sector projects compared to private sector ones.<sup>873</sup>

**FINDING:** External contractors and consultants may bring broader experience, more specialised skills and higher levels of qualification, expertise or experience to projects.

### 8.3.4 Conclusion

Evans & Peck provided the Committee with an overall analysis of the benefits and risks associated with decentralised, centralised and external sources of expertise, broken down by the key roles on PPP projects (see Table 8.1).

871 Mr L. Wallace, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.3

872 State Services Authority, response to the Committee’s questionnaire, received 14 March 2012, p.2; cf. A/Prof. C. Duffield, University of Melbourne, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.4

873 State Services Authority, response to the Committee’s questionnaire, received 14 March 2012, p.2

**Table 8.1 Sources of skilled PPP project expertise – benefits and risks**

Topic	With line agency (i.e., decentralised)	Centralised in government	Outsourced from government
Where is a project best managed from?	<p>Project is managed and potentially technically delivered where the ultimate accountability lies.</p> <p>Reporting to tiers of government and understanding of government process is likely to be more straightforward.</p> <p>Understanding of the overall line agency business and intersecting issues in the framework of portfolio planning better understood.</p> <p>A rapport will exist with line agency management and the Minister that can ease process.</p>	<p>In a centralised government model, overarching government policy is more likely to be adhered to and reporting can be very direct to either line agency minister or other agency such as Department of Premier and Cabinet.</p> <p>The weakness in this model is that any project forms part of the overall line agency mandate for which an integral knowledge of the agency and its functionality is needed.</p>	<p>More specific and in some areas more capable, experienced expertise can be sourced and the project driven from an SPV [Special Purpose Vehicle] set up specifically for that purpose. This is appropriate only for large projects.</p>
Where is project management skill best sourced from?	<p>Experience internally is rarely sufficient for complex procurement forms but there are advantages in internal appointments as government process and context will be fully understood.</p>	<p>Broader inter-portfolio and precedent experience can be brought to bear.</p> <p>With procurement models like PPP and Alliancing, there is more chance that aggregating the volume of capital projects will support the centralised development and retention of skill base in specific procurement modes.</p>	<p>It is easier to locate specific suitable skills from the broader pool in the private sector. Alignment and commitment with agency and government policy may not be appropriate however.</p>
Where is detailed analytical skill best sourced from?	<p>The line agency is unlikely to be able to create and sustain these skills as one department is unlikely to have the volume of projects needed to build-up strong sustained expertise.</p>	<p>Input is likely to be more objective and less influenced by extraneous agenda so long as this function is separated from any functional checks and balances.</p> <p>In Victoria the economy can probably support retention of centralised skills.</p>	<p>Greater experience and access to precedent as well as private sector perspectives to inform commercial positions and negotiations can be brought to bear.</p> <p>Government must however retain sufficient expertise to manage and be truly accountable for making decisions.</p>
Accessing deal precedent and experience?	<p>Owing to lack of volume in any one line agency this is difficult to access without external input.</p>	<p>It is possible in a jurisdiction the size of Victoria, and with its established pipeline of PPP projects, to hold sufficient precedent expertise centrally in government.</p>	<p>The private sector is likely to have more access to a greater range of precedent but not necessarily at the project management and government policy level. This precedent expertise is more likely to address granular analytical capability.</p>

Topic	With line agency (i.e., decentralised)	Centralised in government	Outsourced from government
Consistent accountability capability and process	The line agency (on behalf of a portfolio Minister) is the ultimate accountable party and this accountability is difficult to place anywhere else. However, it is difficult for a line agency to influence consistency across all of government.	Centralised capability in government is the best place to ensure the consistency of application of policy and process across the whole of state government – so long as visibility through to the practice of individual line agencies and some ability to ‘impose’ appropriate and consistent practice is centralised as well.	These are unlikely to be roles that fall to outsourcing, but in the past there has been some reliance particularly on lawyers and financial / commercial advisors to supply this consistency as the ability to do it has been lacking in the line agency.
Cost efficiency of skill base?	Due to the sporadic use of specific skill base in a line agency, for specialised procurement types this would not seem efficient and results in skill base being duplicated between line agencies.	The skill base can be maintained more efficiently and more cheaply since it is potentially shared across all line agencies. Specialist agencies also seem to retain their staff and therefore their skill base more consistently.	Certain specific skills such as legal are more efficient to outsource. However, ultimately efficiency will reduce if government is not sufficiently skilled to make good decisions, to be able to lead negotiations and to be truly accountable.
Where should approvals, checks and balances be administered for a project?	If the line agency is managing the project then it should not be solely responsible for key decisions and process.	Generally the checks and balances should be outside the line agency but within government, however cannot be in the same area as any technical or project delivery responsibility.	This would not seem to be an appropriate role for the private sector.

Source: Evans & Peck, *Inquiry into Effective Decision-Making for the Successful Delivery of Significant Infrastructure Projects – Final Report*, December 2012, pp.60-1

## 8.4 Flexibility in acquiring experts

Given that each of the three ways of acquiring expertise has particular merits (and risks), the Committee considers that a combination of experts from all three sources is the best solution. An appropriate mix can build on the various merits of each source and mitigate the risks of over-reliance on any particular source.

The current system in Victoria provides a large degree of flexibility to constructing agencies in terms of where they acquire expertise from. DTF's view is that, *'having access to, and utilising, the appropriate mix of skills is of greater importance than where the skills are sourced, provided appropriate knowledge management processes are in place to retain critical knowledge within Government.'*<sup>874</sup>

A similar view was put by the Secretary of the Department of Transport:<sup>875</sup>

*... there are many ways to secure expert services, some based on public sector employment, and some based on the various ways of contracting with the private sector.*

*The various ways of engaging expertise are ultimately means, not ends in themselves. Our true goals are the successful delivery of the Government's program, and the maintenance of a long-term public sector capability to oversee that program and advise Government.*

*In regard to the program delivery, the optimal approach for government agencies probably lies with keeping the maximum flexibility in choice of the means of securing skills, especially in complex markets.*

Evidence received by the Committee indicated that a variety of different approaches has been adopted by different agencies, depending on the particular project and the circumstances of the agency. The Committee accepts that there is no 'one size fits all' mix that is appropriate to every project and every agency.

However, it was put to the Committee that there may be some advantages in changing the mix of decentralised, centralised and external experts currently adopted within Victoria. In particular, it was suggested that:

- there may be cost savings from reducing the number of external contractors (see Section 8.4.1);
- changes should be implemented to better ensure that knowledge is retained within agencies when external contractors and consultants are used (see Section 8.4.2);
- the current arrangements are not ensuring the Government is an 'informed buyer' in some cases (see Section 8.4.3); and
- changes could be implemented to increase accountability (see Section 8.4.4).

Overall, these issues suggest that the current level of flexibility has led to some disadvantages and that some interventions from central agencies would be advantageous.

Two major constraints were also identified as restricting how agencies source their experts. Firstly, it was suggested that salaries in the public sector make acquiring and retaining staff difficult. Secondly, it was suggested that the lack of volume of PPP projects can make the

874 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.13

875 Mr J. Betts, Department of Transport, correspondence to the Committee, received 25 May 2012

retention of staff within the agency (and within the public sector more generally) difficult. These issues and suggested solutions are discussed in Section 8.5.

The findings of these sections have contributed to the recommendations in Chapter 2 of this Report.

### 8.4.1 Reducing costs by reducing the use of external contractors or consultants

A number of agencies informed the Committee that cost was one consideration in deciding whether to use public sector staff or external contractors/consultants. DTF explained:<sup>876</sup>

*Where you have an ongoing need for a skill or a capacity that you can fulfil as someone on your payroll, it is obviously cheaper to have someone on the government payroll to do that job. Where it is one-off or spasmodic, it can be cheaper to use consultants or contractors for that purpose rather than having to have someone on your payroll all the time.*

The Committee was informed that there can be a large number of skills which are only needed on a one-off or spasmodic basis on a PPP project. Many of these are filled by external contractors or consultants. The Department of Justice (DOJ) explained:<sup>877</sup>

*The size of the PPP project team fluctuates through the life of the project (particularly during the procurement phase). Hence, while DOJ builds a core team from internal resources, it is always necessary to engage legal, commercial, transaction, design services and related external parties during procurement, which are called upon on an “as needed” rather than full time basis. For a short period during the most intensive phase of a PPP project, which is the time spent evaluating the private sector bids, there may be 30 or more external resources assisting the core project team.*

The Committee recognises that, for some roles, it may be cheaper to contract people in rather than to have them on staff. As noted in Section 8.3.3 above, there are also advantages to having contractors or consultants on a team in some cases.

However, it was suggested to the Committee that some roles that are currently contracted out could be filled by public sector employees. This has recently been recommended in Victoria by both the Ombudsman and Auditor-General:

- in relation to Information and Communication Technology (ICT) projects, the Ombudsman recommended that ‘DTF develop and implement a whole-of-government strategy to reduce the government’s reliance on consultants and contractors,’ citing costs as one of the reasons for this recommendation;<sup>878</sup> and
- the Auditor-General suggested that Major Projects Victoria may be using a number of expensive contractors in roles that could be filled by employees.<sup>879</sup>

876 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.16

877 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, p.27

878 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, Recommendation 41, p.59; note also recommendation 33 regarding increased use of the Victorian Government Solicitor’s Office

879 Victorian Auditor-General’s Office, *Managing Major Projects*, October 2012, pp.15-16

At the Commonwealth level, the Government has been reducing the number of contractors in the ICT area and replacing them with public service staff.<sup>880</sup> This follows a recommendation which estimated that this would save \$100 million.<sup>881</sup>

The Committee was informed on its evidence-gathering trip that the United Kingdom has implemented a number of measures to reduce the use of consultants and contractors. The Major Projects Leadership Academy (see Section 5.3.1 of this Report) has in part been founded to increase the skills of the public sector and thereby ‘*relinquish taxpayers from having to foot the bill for external consultancy to deliver the projects and services the country needs.*’<sup>882</sup> When consultants are used, agencies are also required to have skills transfer plans to build the capacity of the public sector.

In contrast to these approaches, DTF rejected the Ombudsman’s recommendation about reducing the reliance on consultants and contractors.<sup>883</sup> The Secretary of DTF explained to the Committee that, ‘*I am not clear that government overuses consultants and contractors in this space [i.e. ICT infrastructure projects].*’<sup>884</sup>

The Committee notes that the Victorian Government introduced initiatives to reduce the overall use of consultants by the public sector in both the 2011-12 Budget and the 2011-12 Budget Update.<sup>885</sup> Neither of these initiatives is specifically focused on infrastructure projects, though.

The Committee recognises that there will always be some cases where it is more appropriate to use contractors and consultants than public sector employees.

Based on the findings of the Ombudsman and Auditor-General, however, and following the initiatives in other jurisdictions, the Committee considers that Victoria should examine its use of contractors and consultants to identify any areas where using public sector employees instead might provide cost advantages. The new structure recommended by the Committee in Chapter 2 may also provide a cheaper alternative for agencies than the private sector for accessing some expertise.

**FINDING:** The cost of external contractors and consultants was noted as a factor when determining whether experts should be decentralised, centralised or external. The Victorian Ombudsman and the Victorian Auditor-General’s Office have both recently suggested that there are areas where the Government might achieve savings by reducing its reliance on contractors. Initiatives at the Federal level and in the United Kingdom have sought to reduce costs by increasing the skills of the public sector and reducing the use of contractors and consultants. An examination of practices in Victoria may identify areas where savings could be made through similar measures.

880 Commonwealth Department of Finance and Deregulation, ‘ICT Reform Program projects’, <[www.finance.gov.au/e-government/strategy-and-governance/ict-projects.html](http://www.finance.gov.au/e-government/strategy-and-governance/ict-projects.html)>, accessed 5 November 2012

881 Sir P. Gershon, *Review of the Australian Government’s Use of Information and Communication Technology*, August 2008, p.70

882 Rt Hon. F. Maude, quoted in Saïd Business School, ‘Saïd to Deliver New “Major Projects Leadership Academy”’, <[www.sbs.ox.ac.uk/newsandevents/news/Pages/MPLA.aspx](http://www.sbs.ox.ac.uk/newsandevents/news/Pages/MPLA.aspx)>, accessed 30 October 2012

883 Victorian Ombudsman, *Own Motion Investigation into ICT-Enabled Projects*, November 2011, p.59

884 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, p.16

885 Budget Paper No.3, *2011-12 Service Delivery*, May 2011, p.92; *2011-12 Victorian Budget Update*, December 2011, p.114

**RECOMMENDATION 17:** The Government undertake work to identify areas where cost benefits could be achieved by increasing skills within the public sector (either through training existing staff or hiring new staff) and reducing the use of contractors and consultants. Areas for consideration should include project management and ICT.

## 8.4.2 Retaining knowledge within agencies

DTF indicated to the Committee that ‘a key issue’ in terms of where skills should be sourced is the risk that, if external contractors are used, the skills and knowledge of these contractors may be lost when the contractors leave.<sup>886</sup> DTF described this as ‘an area that could be improved.’<sup>887</sup> The Ombudsman’s office also raised this concern with the Committee.<sup>888</sup>

Several agencies informed the Committee about advantages that come from retaining skills and knowledge within the agency. For example:

- the Department of Health indicated that having an experienced team within the Department had provided knowledge of ‘where you look for problems and where you look for opportunities for innovation’;<sup>889</sup> and
- the Department of Justice indicated that having skills within the Department protected ‘long-term value for money outcomes and the public interest’ by facilitating an understanding of stakeholder and business issues.<sup>890</sup>

Given the long operational period of a PPP contract, the Department of Justice also emphasised the importance of maintaining a relationship between the department and the PPP contractor and the difficulty of passing on knowledge about issues like relationship dynamics.<sup>891</sup> The Department indicated that it attempts to mitigate this by hiring certain external consultants for the entirety of the construction phase and the early operational phase, to ensure that knowledge can be passed on from one phase to the next. However, the Department noted that there are ‘limits to the effectiveness’ of this approach, as individual contractors may still move to new jobs, take leave or become unavailable for other reasons.<sup>892</sup>

One response to these issues would be to reduce the use of external contractors. However, a certain amount of contractor usage is inevitable. In addition, some agencies informed the Committee that contractors can be useful as a way for agency staff to develop their skills.<sup>893</sup>

886 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.20

887 *ibid.*

888 Mr J. Taylor, Victorian Ombudsman’s office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.7

889 Dr P. Philip, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 23 August 2012, p.14; cf. Mr L. Wallace, Department of Health, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.3

890 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, p.25

891 *ibid.*, p.21; cf. Department of Business and Innovation, response to the Committee’s questionnaire, received 29 February 2012, p.5

892 Department of Justice, response to the Committee’s questionnaire, received 7 March 2012, p.28

893 e.g. Department of Transport, response to the Committee’s questionnaire, received 23 March 2012, p.7

If contractors are to be used, it is therefore important to ensure that mechanisms for knowledge transfer are in place. DTF suggested that:<sup>894</sup>

*Strategies focussed on more effective approaches to mentoring, succession planning and shadowing could all be explored.*

The Committee was informed during its evidence-gathering trip that, in the United Kingdom, skills transfer plans are required when engaging contractors.

In its travel to Canada, where a number of central agencies have been established to procure and deliver PPP projects, the Committee was informed that skill and knowledge transfer from central agencies to line agencies can also be a problem when the project is transferred from construction to operation. This needs to be factored into new arrangements resulting from the Committee's recommendations in Chapter 2.

The Committee considers that the recommended new Victorian Infrastructure and Skills Authority should provide guidance on strategies to ensure that skills and knowledge are transferred when agencies use consultants and contractors (see Section 2.2.3). The Victorian Infrastructure and Skills Authority should also establish procedures to ensure that skills and knowledge are transferred from it to relevant line agencies when it procures or delivers projects on their behalf.

**FINDING:** The Committee was informed that a key issue with the use of external contractors is the potential that skills and knowledge might not be passed on to the constructing agency when the contractor leaves. The Department of Treasury and Finance indicated that this is an area that could be improved and suggested strategies to mitigate the risk. In the United Kingdom, agencies are required to develop skills transfer plans when engaging contractors. The Victorian Infrastructure and Skills Authority, a new body recommended by the Committee, should provide advice to agencies on strategies to ensure that skills and knowledge are transferred.

**FINDING:** Knowledge and skills transfer between central agencies that procure and deliver infrastructure and the line agencies that use the infrastructure is also important. To effectively deliver projects over their entire life-cycle, the Victorian Infrastructure and Skills Authority will have to ensure that it has appropriate mechanisms for skills and knowledge transfer when projects transition from construction to operation and responsibility is transferred from the central agency to the line agency.

894 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.20



### 8.4.3 Ensuring the Government is an ‘informed buyer’

#### Advantages of being an informed buyer

Related to retaining knowledge, the Committee was informed that a government’s ‘informed buyer’ status is critical in the successful delivery of public sector infrastructure, especially in terms of maximising value-for-money. An ‘informed buyer’ is one that has sufficient understanding of the technical and financial aspects of a project to:

- accurately assess the value-for-money of bids (including costs and other factors);
- judge the appropriateness of bids to meet the agency’s needs; and
- appropriately identify and allocate risks.

It has been suggested to the Committee that, in recent years, there has been an over-reliance on outsourcing at the expense of building informed buyer capability within the public sector. As explained by the Deputy Ombudsman:<sup>895</sup>

*I agree with flexibility as an approach provided you have the in-house capacity to test it. If you are relying solely on outsourced providers, you lose the capacity to say whether or not what is proposed to you is realistic. Myki is a good example; the two-year time frame was unrealistic. No doubt that was proposed by contractors and consultants. If you retain an in-house capacity to manage your own business, you will get things done more efficiently. We found that with the Department of Human Services and the child protection system and their inefficient computer system. Again, relying on outsourced expertise to run your own business, I do not think that is a healthy way for government.*

It has been suggested that cost overruns due to contract variations are less likely when government is an informed buyer.<sup>896</sup>

The Committee was also informed that being an informed buyer could reduce costs when negotiating:<sup>897</sup>

*The private sector brings very strong people to the table to negotiate on both deliverables and risk transfer — who manages the risk and who owns the risk — and they bring quite good financing arrangements. We need to have people equally skilled on our side of the table for those negotiations, and we are often challenged in that because many of the projects are one-off and the experience our people may or may not have might not relate to that particular arrangement or that particular commercial arrangement that is on the forefront.*

Being an informed buyer also has advantages in being able to provide clearer guidance to bidders. This can reduce costs to bidders (which may be passed on to government) and increase the number of companies bidding for work (which may reduce prices). As the Department of Sustainability and Environment explained:<sup>898</sup>

895 Mr J. Taylor, Victorian Ombudsman’s office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.7

896 Australian National Engineering Taskforce, *Realising an Innovation Economy: a Practical Roadmap to Ease the Australian Engineering Skills Shortage*, 2012, p.21

897 Ms K. Cleave, State Services Authority, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.3; cf. Prof. G. Hodge, Monash University, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.3

898 Department of Sustainability and Environment, response to the Committee’s questionnaire, received 24 July 2012, pp.17-18

*The private sector's willingness to participate in such major projects is dependent to some extent on the confidence that they have in the public sector managers, particularly where the project is highly complex, and requires significant investment on their behalf.*

*Appropriately skilled public sector managers can provide the reassurance that the private sector needs in order that:*

- *costs of bidding are minimised;*
- *commitments that the State takes on as part of the bidding/contract process will be met, and in a timely manner;*
- *the necessary facilitation to deliver the project will be provided; and*
- *the necessary capability is there to address the many commercial, legal, technical, planning, environmental, approvals, communications and other issues that require resolution.*

*The government also relies on the skills of public sector managers to manage the process of government briefings and decision making well, provide authoritative advice on the Project, provide solutions and options to government on Project issues and to be able to operate effectively within the machinery of government.*

The Committee was informed that adversarial behaviour and disputes can occur when the government is not clear in its requirements due to not being an informed buyer.<sup>899</sup>

Based on this evidence, the Committee considers that the public sector should be conscious of maintaining an informed buyer status when determining whether to use public sector staff or external contractors/consultants.

**FINDING:** The Committee heard evidence that there are a number of financial benefits to the Government maintaining an informed buyer status. The Committee therefore considers that this must be factored into any decision as to whether experts should be within the public sector or contracted in.

### **Do current arrangements ensure that the Government is an informed buyer?**

As discussed above, the Ombudsman's office considers that the Victorian public sector has not always acted as an informed buyer. The Committee also heard that, in some cases, Victoria had not been an effective informed buyer during the *Building the Education Revolution* program (see further discussion in Section 5.2.1).

The Building the Education Revolution Implementation Taskforce also identified that there were significantly fewer government employees with building-related occupations (especially building and construction managers) in Victoria compared to other states (adjusted for population).<sup>900</sup>

899 Mr C. Walton, Association of Professional Engineers, Scientists and Managers Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

900 Building the Education Revolution Implementation Taskforce, *Final Report*, July 2011, p.56. Figures are based on the 2006 Census.

The Committee notes that it received mixed views from the private sector about the extent to which the Government is currently an informed buyer. Views expressed to the Committee included:

- *‘The private sector is saying it is very difficult to deal with the government because it is hard to deal with anyone who is an uninformed purchaser.’*<sup>901</sup>
- *‘We believe government is increasingly exposed in its ability to act as an informed buyer.’*<sup>902</sup> and
- *‘The Victorian government is a very informed buyer. They have a lot of expertise within different parts of government that is brought to bear on procurement here. So they are very informed.’*<sup>903</sup>

The Committee heard from one witness that there is a variation between agencies in terms of how much they are informed buyers.<sup>904</sup> It was also suggested that an advantage of Victoria’s arrangements is that it allows high-level skills to be contracted in at rates above public service pay scales. The Committee was told that this has been required for Victoria to gain the skills to be an informed buyer on very large projects.

The Committee notes the varied opinions about Victoria’s informed buyer status. The Committee is not aware of any detailed, objective assessment that has been made of Victoria’s informed buyer status. Given the importance of being an informed buyer, the Government should consider further work in this area.

### Ways to maintain an informed buyer status

It was suggested by a number of witnesses, including the Ombudsman’s office, that skills need to be retained within the public sector, rather than outsourced, to maintain an informed buyer status.

The Secretary of DTF, however, did not accept that the use of consultants and contractors was necessarily a problem. He suggested that clearer frameworks may improve the Government’s informed buyer status:<sup>905</sup>

*I think that there is a lot of significant work that needs to be done in enhancing the capacity of government to be a skilled purchaser. It is not clear to me that there is a causal link between that and use of consultants and contractors. I have not seen any evidence that that could be the case. I think the thing that we are trying to do to a lot of the frameworks we are putting in place is get greater clarity of what an informed purchaser looks like—that is, what are the things that they need to consider? Once you know what the things are that you are doing, as the agency that handles the project manager, then you need to make a decision about whether it is better to have that skill in-house or to bring it in, and that decision should be based*

901 Mr C. Walton, Association of Professional Engineers, Scientists and Managers Australia, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

902 Mr P Collier, Engineers Australia Victoria Division, , Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.3

903 Mr P. Crowe, Plenary Group, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 March 2012, p.4

904 Mr P. Cashin, Baulderstone Ltd, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.4

905 Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 August 2012, pp.16-17

*upon what is the most efficient and effective way to produce an outcome. I do not believe it should be based on some assumption that having it in-house is better than having it outsourced. That does not make sense to me. And I have not seen evidence of that in-house.*

Overall, the Committee considers that having an informed buyer status is important for the Government to deliver projects effectively and achieve value-for-money outcomes. The Committee considers that establishing the Victorian Infrastructure and Skills Authority as a centre of excellence may improve Victoria's ability to act as an informed buyer. The Authority should also maintain a 'watching brief' on the public sector's informed buyer status as part of its oversight of construction agencies (see Section 2.2.3).

**FINDING:** Though a number of witnesses suggested that it is important to retain experts within the public sector to maintain the public sector's informed buyer status, the Department of Treasury and Finance did not accept this. The Committee considers that the Victorian Infrastructure and Skills Authority would improve Victoria's ability to act as an informed buyer through being a centre of excellence and through its oversight of constructing agencies.

#### 8.4.4 Maintaining accountability

An additional requirement of any combination of experts from different sources is that the mix must provide adequate accountability. DTF informed the Committee that, under Victoria's current public resource management framework, '*accountability for managing and delivering projects (and the underlying service delivery outputs) has been deliberately devolved to the relevant line departments/agencies.*'<sup>906</sup> The Secretary of DTF has indicated that this approach supports accountability by making the same people responsible for delivery of the project and for service delivery once the project has been completed.<sup>907</sup>

The only exception to this is when the Minister for Major Projects is nominated as the responsible minister for a major project under the *Project Development and Construction Management Act 1994*. In this case, the Minister for Major Projects is responsible for delivering a project or certain components, though some responsibilities remain with the constructing agency.<sup>908</sup>

With this one exception, constructing agencies are accountable for their infrastructure projects, regardless of which roles they might outsource. To fulfil this obligation, an agency must be able to accurately understand a project's progress and ensure that it is on track to achieve the intended outcomes within time and on budget. The expertise and skills to fulfil these roles therefore need to be located within the agency.

906 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.8

907 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.3

908 Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, p.4; Victorian Auditor-General's Office, *Managing Major Projects*, October 2012, Appendix A

As DTF indicated to the Committee:<sup>909</sup>

*... ultimate accountability for effective delivery of the project remains with the public sector. As a result, there are some core competencies that must be maintained in the public sector and cannot be outsourced. In particular, contract management – appointing, managing and holding accountable the contractors and external advisers engaged to deliver the project or are part of the project team – is a critical capability that is core to effective infrastructure development and delivery.*

The Deputy Ombudsman expressed a similar view, explaining, ‘*Even if you are outsourcing, you still need to manage that relationship.*’<sup>910</sup> The Deputy Ombudsman cited the LINK police database in this context as an example of a project where a person without the skills to manage the external contractor had been given that task and project failure had resulted.<sup>911</sup> The Committee also heard evidence that some of the problems with *Building the Education Revolution* projects in Victoria came from a lack of informed oversight of the external project managers.<sup>912</sup> Overall, the Auditor-General informed the Committee:<sup>913</sup>

*... I observe in my role that too often agencies are, in my view, overly reliant on external advice, and they are not exercising due diligence in respect of the quality of that advice before they apply it. Because it has got the cover of a big firm, or something like that, they take it as gospel and as an authority.*

The evidence presented to the Committee suggests that, in some instances, agencies have not fulfilled the oversight roles that are required for them to be accountable for their projects.

The Committee believes that one reason for this is that there is relatively little oversight of agencies and their performance at delivering projects. The High-Value and High-Risk Framework (see Section 2.3.2) has been established to partly address this problem. As discussed in Chapter 2, the Committee believes that DTF should have an expanded oversight role in holding agencies to account for their management of infrastructure projects.

**FINDING:** Although agencies may outsource a number of roles in project delivery, they remain accountable for the project. Contract management and oversight have been identified as important governance roles that ought to be retained in the public sector wherever possible. The Committee was informed that some agencies have not been undertaking their oversight roles sufficiently. The Committee considers that increased central oversight of agencies, to hold them to account for the projects they manage, would improve this situation.

909 Department of Treasury and Finance, submission to the Committee, received 3 February 2012, p.13

910 Mr J. Taylor, Victorian Ombudsman’s office, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 22 August 2012, p.7

911 *ibid.*

912 Mr D. Chandler, formerly of the Buildings the Education Revolution Implementation Taskforce, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.6

913 Mr D. Pearson, Auditor-General of Victoria, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.4

## 8.5 Factors restricting where skills can be acquired

The Department of Health and Department of Justice have both been able to retain staff with PPP experience and skills. Both indicated to the Committee that this has provided a number of advantages. The Department of Transport also informed the Committee about advantages that have come to it from retaining staff with general infrastructure experience and expertise.

However, the Committee heard from a number of witnesses that the public sector has less ability to attract and retain staff than the private sector. This has been noted as a major factor limiting where public sector agencies obtain skilled experts.

A number of witnesses identified difficulties resulting from the high turnover of staff in the public sector. The public sector's ability to retain staff impacts on its capacity to retain knowledge (see Section 8.4.2 of this Report), to be an informed buyer (see Section 8.4.3) and to provide a number of opportunities for staff development, including career paths for graduates (see Section 5.2.1). The Committee also heard, from a private sector perspective, that a constant 'churn' of staff weakens the relationship between public sector clients and private sector providers and reduces each party's understanding of the other.<sup>914</sup>

Two major factors were identified by the Committee in the evidence gathered<sup>915</sup> as affecting the public sector's ability to attract and retain staff:

- differential remuneration levels between the private and public sectors;
- inability to promote the benefits of public sector work in an environment where remuneration levels between the private and public sectors are disparate; and
- the lack of continuity of work.

### 8.5.1 Non-salary benefits

A number of witnesses noted the importance of the non-salary benefits that can come from working in the public sector. These include the opportunity to work on large and high-profile projects, as well as good employment conditions. As the Secretary of the Department of Transport explained:<sup>916</sup>

*The public sector inevitably struggles to compete in some ways around pure remuneration in its efforts to retain and attract people with particular skills, but there are other things that we can offer. We can offer interesting work, we can offer job flexibility, and that kind of thing.*

Similar advantages were identified in relation to Major Projects Victoria:<sup>917</sup>

*Major Projects Victoria's position as the delivery agency for a diverse range of challenging, high profile projects of community importance makes it an attractive employer for highly experienced and motivated project professionals.*

914 Mr P. Cashin, Baulderstone Ltd., Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 21 March 2012, p.5

915 E.g. Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, p.2; Department of Justice, response to the Committee's questionnaire, received 7 March 2012, p.26; Department of Sustainability and Environment, response to the Committee's questionnaire, received 29 February 2012, p.5; Department of Transport, response to the Committee's questionnaire, received 25 May 2012, p.16; State Services Authority, response to the Committee's questionnaire, received 14 March 2012, p.5

916 Mr J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.7

917 Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, pp.1-2

...

*Other key strategies developed by Major Projects Victoria to attract and retain quality staff include offering study assistance and flexible work arrangements.*

These advantages are particularly important given that the public sector can struggle to compete on salaries compared to the private sector (especially some international firms).<sup>918</sup> Specifically in relation to engineering, the Committee also heard that Victorian public sector engineers are paid an average of 20 per cent less than their counterparts in the private sector and less than public sector engineers in any other Australian jurisdiction.<sup>919</sup>

In addition to the types of projects available in the public sector, the State Services Authority identified four ways that agencies can make working in the public sector appealing:<sup>920</sup>

- flexible working conditions;
- making it easy to apply for positions and making employment offers quickly;
- developing existing staff by providing experiential learning; and
- hiring people on an ongoing rather than fixed-term basis.

The Committee was informed that providing support for study has also been used as a way of retaining staff.<sup>921</sup>

To attract and retain the best staff, it is important for constructing agencies to ensure that they highlight the non-financial incentives of working in the public sector. The techniques identified by the State Services Authority should be implemented where practicable. The Authority might consider examining the extent to which agencies are following these strategies and identifying any additional techniques that the public sector can use to attract and retain skilled staff.

## 8.5.2 The lack of continuity of work

### Uncertainty about future years

The Committee was informed that a major difficulty for the public sector in retaining skilled experts is that the flow of infrastructure work tends to be uneven. The number of projects can change substantially from one year to the next, as can the scale of infrastructure investment. This is especially the case for PPP projects.

This unevenness makes it very difficult for the public sector to retain staff as staff that are needed in one year may not be needed in the next.

An additional problem is that governments generally provide very limited details of what projects will be undertaken in future years. This has been noted as a problem for both the public sector and the private sector in workforce planning.

918 State Services Authority, response to the Committee's questionnaire, received 14 March 2012, p.5

919 Association of Professional Engineers Scientists and Managers Australia, submission to the Committee, received 11 November 2011, p.2

920 State Services Authority, response to the Committee's questionnaire, received 14 March 2012, pp.5-6

921 Mr J. Betts, Department of Transport, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearings, transcript of evidence, 20 March 2012, p.11; Department of Business and Innovation, response to the Committee's questionnaire, received 29 February 2012, pp.2, 4-5

Details of future projects may be announced through media releases or budget papers and are not brought together into one source. The Committee has recommended changes to this recently, which the Government has not yet responded to.<sup>922</sup>

The Committee notes that a 'National Infrastructure Construction Schedule' website has recently been launched which seeks to include details of all funded infrastructure projects over \$50 million in Australia, including those funded by Commonwealth, state and local governments.<sup>923</sup> It includes both PPP projects and projects delivered by other methods. The intentions of the website are to:<sup>924</sup>

*... bring certainty and transparency that industry seeks. This initiative will facilitate broader involvement in the market, bring greater efficiencies in procurement and resource planning, and encourage increased investment by showcasing Australian infrastructure to the world.*

The website has been welcomed by Engineers Australia, which indicated that the website will help with workforce planning in the private sector.<sup>925</sup>

The Committee considers that the National Infrastructure Construction Schedule is a valuable initiative. However, this initiative is simply about publicising what has been announced. To resolve the problem of uncertainty, it would be necessary for governments to commit to projects further in advance. The Committee notes that there is some variability currently in different states' practices. Whereas some states have identified projects starting as far ahead as 2017, Victoria has not provided details to the National Infrastructure Construction Schedule of any project starting after 2013.<sup>926</sup>

The uncertainty around government plans makes it very difficult for the public sector to hire people in ongoing roles. Changes have recently been made to agencies' long-term planning requirements (including infrastructure expenditure) which may assist in this regard.<sup>927</sup> However, without a higher degree of certainty, it will remain difficult for agencies to retain staff.

Several strategies have been suggested to address this issue, as discussed below.

**FINDING:** There are substantial variations in the number and scale of infrastructure projects from one year to the next, especially PPP projects. In addition, relatively few details about projects in future years are available. These factors impact on the public sector's ability to hire people in ongoing roles and on the private sector's ability to meet demands on it.

922 Public Accounts and Estimates Committee, *Report on the 2012-13 Budget Estimates*, September 2012, Recommendation 6, p.25

923 Commonwealth Department Infrastructure and Transport, 'About NICS', <[www.nics.gov.au/Home/About](http://www.nics.gov.au/Home/About)>, accessed 9 November 2012

924 Commonwealth Department Infrastructure and Transport, 'National Infrastructure Construction Schedule (NICS)', <[www.infrastructure.gov.au/infrastructure/nics](http://www.infrastructure.gov.au/infrastructure/nics)>, accessed 9 November 2012

925 Engineers Australia, 'Engineers Australia Welcomes the Launch of the National Infrastructure Construction Schedule', <[www.engineersaustralia.org.au/news/engineers-australia-welcomes-launch-national-infrastructure-construction-schedule](http://www.engineersaustralia.org.au/news/engineers-australia-welcomes-launch-national-infrastructure-construction-schedule)>, accessed 9 November 2012

926 Commonwealth Department Infrastructure and Transport, 'Timeline', <[www.nics.gov.au/Timeline](http://www.nics.gov.au/Timeline)>, accessed 9 November 2012

927 Department of Treasury and Finance, *A Guide to Corporate and Long-Term Planning*, June 2012



It was suggested that creating more certainty around future investment, and providing a more even flow of PPP projects, would make retaining staff within the public sector more practicable. As the Department of Health explained:<sup>928</sup>

*The ability to retain staff expertise relies more than anything else on having a continuing pipeline of projects for the staff to work on. In the absence of a pipeline of projects, staff will inevitably look elsewhere for other opportunities as a project comes to an end.*

The Committee was informed that the Canadian Province of Ontario has established a large pipeline of PPP projects. To deliver this pipeline successfully, a central agency, Infrastructure Ontario, was created to provide procurement and delivery expertise. Infrastructure Ontario has been able to deliver 50 PPP projects since 2005. In addition to enabling Infrastructure Ontario to build and retain expertise, it was suggested that a number of other advantages had come from this pipeline:<sup>929</sup>

- *growth in experience and expertise within Infrastructure Ontario has allowed the Government the confidence to streamline the bidding process and reduce costs for both the Government and bidders;*
- *attracted significant international and local expertise to the Ontario economy that has filtered through the market; and*
- *created certainty in the public mind that the infrastructure gap is being closed.*

To create such a large pipeline, Ontario procures a mixture of different-sized projects through PPPs.<sup>930</sup> This is in contrast to Victoria, where PPPs are generally only considered for larger projects. The Victorian Government is currently undertaking consultation about the possibility of developing a streamlined PPP process in Victoria for smaller projects.<sup>931</sup>

The Committee notes, though, that Standard and Poor's have expressed concerns about the Province of Ontario's level of debt.<sup>932</sup>

The Committee also heard from a representative of the ANZ Banking Group that companies from outside Victoria require longer lead-times to bid. This pipeline would make it easier for these companies to bid and increase the competition for projects in Victoria.

While there may be potential to increase Victoria's pipeline of PPP projects, it would be impracticable for every agency to have a permanent, constant flow of PPP projects. For agencies which only conduct occasional PPPs, attracting and retaining skilled experts may still be difficult.

One solution to this is for there to be a centralised pool of experts within the public sector, who can be accessed by constructing agencies as needed. This is partly the solution currently in use in Victoria, with experts available to constructing agencies from DTF and Major Projects Victoria (see Section 8.2 above). As detailed in Chapter 2, the Committee considers that there would be benefits to changes which create new opportunities for centralised experts.

928 Department of Health, response to the Committee's questionnaire, received 1 November 2012, p.4

929 Plenary Group, submission to the Committee, received 17 November 2011

930 *ibid.*

931 Department of Treasury and Finance, *Future Direction for Victorian Public Private Partnerships: Request for Public Comment*, November 2012, pp.23-4

932 Standard and Poor's 'Outlook On Province of Ontario Revised To Negative From Stable Due To Risks To Fiscal Plan', <[www.standardandpoors.com/prot/ratings/articles/en/us/?articleType=HTML&assetID=1245332583774](http://www.standardandpoors.com/prot/ratings/articles/en/us/?articleType=HTML&assetID=1245332583774)>, accessed 26 November 2012

A constant pipeline of projects for the public sector as a whole, with information well in advance, will assist the public sector to attract and retain staff.

This is discussed further in Chapter 2.

**FINDING:** Providing more certainty about future investment and a more even flow of projects (especially PPPs) would assist the public sector to retain staff. The Committee was informed that this has occurred in Ontario, Canada, and has brought a number of other benefits with it as well.

## A national skills market

An alternative solution to the unevenness of infrastructure projects (especially PPPs) in Victoria is to create opportunities for skilled experts to be seconded to other jurisdictions in Australia. With such an arrangement, experts could remain Victorian public service employees and be gainfully employed during periods when their services were not required in Victoria. The secondment experience could also provide valuable learning opportunities and lead to staff with greater competencies and skills.

In 2010, the National PPP Working Group proposed that:<sup>933</sup>

*Jurisdictions will explore further the potential for inter-jurisdictional secondments to enable access to more opportunities for development.*

DTF advised the Committee that no formal national secondments have been implemented in Victoria. It pointed out, however, that members of Victorian project teams have been consulted by other jurisdictions, including the Northern Territory, NSW, Queensland and New Zealand.<sup>934</sup>

At the public hearings, the Secretary of DTF informed the Committee:<sup>935</sup>

*... the lumpiness of projects would mean that the public sector side of the delivery of those projects having a broader national market to access the skills sort of makes sense. We have done a bit within Victoria. Within the state itself I have seen individuals who have skills move around between departments and projects, and that has been a success. Probably more could be done in that space, but building up the national interface would be good. I am not certain how you do it, though.*

Subsequently, DTF informed the Committee that:<sup>936</sup>

*The COAG Infrastructure Working Group (IWG) at its 15 June 2012 meeting, agreed to establish a working group, led by the Commonwealth, to identify any skill-gaps, training options, use of external expertise, retention of expertise as well as appropriate operational and structural models that enable information and skill sharing across jurisdictions. The working group will bring forward options on*

933 National PPP Working Group, *National PPP Working Group Statement of Response to the Infrastructure Australia & KPMG Report "Review of Barriers to Competition and Efficiency in the Procurement of PPP Projects"*, August 2010, p.3

934 Department of Treasury and Finance, response to the Committee's questionnaire, received 22 May 2012, p.3

935 Mr G. Hehir, Department of Treasury and Finance, Inquiry into Effective Decision Making for the Successful Delivery of Significant Infrastructure Projects hearing, transcript of evidence, 20 March 2012, p.6

936 Department of Treasury and Finance, response to the Committee's questionnaire, received 9 November 2012, p.11

*building capability particularly within the public sector for consideration at the next IWG (November 2012). DTF is working with the Commonwealth and other jurisdictions to identify key issues.*

The Committee hopes that this working group will examine the possibility of sharing experts across Australian jurisdictions.

Regardless of the outcome of that working group, the Committee considers that Victoria should explore opportunities for Victorian public sector employees working on PPPs to be seconded to other jurisdictions. If appropriate relationships can be established across Australia, this could be used to retain skilled experts for longer within the public sector.

**FINDING:** Secondments to other jurisdictions may assist the Victorian public sector to retain skilled experts by providing them with opportunities for continued work when projects are not available in Victoria. Secondments could also be a valuable learning opportunity. The Committee considers that Victoria should liaise with other jurisdictions to establish such arrangements.

### Varied roles

The Department of Transport (DOT) and VicRoads have adopted a different solution to the problem of how to retain skilled experts in times when there is not a need for their services. They have sought to find alternative roles that these experts might fill or provide secondment opportunities to portfolio agencies:<sup>937</sup>

*Part of DOT's resource strategy involves actively identifying opportunities suitable to the skills of project staff and facilitating and encouraging placement of these staff in those roles. The view is that not only can critical skills be maintained in this fashion, but advantages in planning phases can be realised with the application of project delivery experience to the planning process. While it is acknowledged that skills can be brought in from industry, this is often difficult and expensive, and the view has been taken that maintaining actual employment links with such staff facilitates their return when those skills are required.*

*DOT's experience indicates that there are some skills (eg major rail projects) which are very difficult and time-consuming to build, and it is for these and for other highly experienced project staff that these opportunities are sought.*

*The timeline for this process varies according to the opportunities that arise, with some as short as 18 months and others which may extend to 3 years or more. Currently some 20 to 25 people are deployed 'on loan' to other projects, not only in the planning phase, but also in delivery of the Regional Rail Link.*

*VicRoads seeks to manage low points in funding cycles by allocating staff to planning for future work. Using experienced project practitioners in project planning functions provides the opportunity to share knowledge and learnings within VicRoads and across organisations, better consideration of delivery issues and risks in planning for projects, and progression of planning work to allow projects to be ready for preparation of business cases in the future.*

937 Department of Transport, response to the Committee's questionnaire, received 25 May 2012, p.16

*The secondment of staff to other organisations, or the management of other projects (non-infrastructure) within organisation also leads to better retention of staff (through challenging work).*

*The degree to which reallocation strategies are implemented is dependent on ongoing infrastructure work within other departments and availability of funding to progress project planning work.*

While this might not be practicable for all agencies, the Committee believes that considering this option should be a standard part of workforce planning.

**FINDING:** The Department of Transport and VicRoads have sought to retain skilled experts through lulls in the number of projects by engaging them in other productive roles (such as planning) and through secondments to portfolio agencies. These options could be considered generally by agencies when conducting workforce planning.

## APPENDIX A1 NOTES FOR TERM OF REFERENCE (B)

### A1.1 Central agencies policy and guideline coverage of requisite competencies

#### A1.1.1 National Public Private Partnership Guidelines

Reference	Page	Role/ activity	Description provided
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	6	Project Director	A Project Director [is] responsible for the delivery of the project.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	36	Project Director	The Project Director is a key resource and is responsible for delivering all critical elements of the project.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	38	Project Director	This is a dedicated role, with overall responsibility for delivery of the project and management of the procurement team, including external advisors and consultants. The skills needed include project management, well-developed commercial skills applicable to developing and negotiating contractual arrangements and knowledge of government processes.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	40	Project Director	The Project Director is responsible for ensuring that the contract director works with the procurement team to develop an effective contract management strategy, and that the procurement team provides practical help to the contract director in understanding the project and its inherent risks and ensures a smooth transition from procurement through construction to operations.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	6	Project Steering Committee	A Project Steering Committee [directs] the development of the project and deal with strategic and/or policy issues.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	38	Project Steering Committee	A Project Steering Committee should be established by the delivery agency to direct the PPP [Public Private Partnership] project and deal with key issues. The composition of this Project Steering Committee is at the discretion of the department or agency. However, the relevant PPP authority should be invited by the department or agency to make an experienced officer available to contribute knowledge of the handling of commercial, financial and process issues in PPP projects and to facilitate government approvals.
National Public Private Partnership Guidelines: Overview	21	Specialist Expertise	For PPP projects, the specialist expertise required for the project includes commercial, financial, technical, operational and legal skills. The exact skills and experience required will vary depending on the nature of the project. Special consideration may be required to ensure sufficient resources are available to fill specialist roles. It is critical to identify the time commitment required from key advisors in the PPP process.

Reference	Page	Role/activity	Description provided
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	38	Probity Practitioner (auditor or advisor)	The Probity Practitioner (auditor or advisor) must be capable of bringing an objective viewpoint to the project and is required to endorse a probity plan and monitor the bid process throughout.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	38	Specialist team member	Specialist knowledge required for the project, including financial, technical, operational, communication, environmental, contractual and legal skills will vary by project type.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	38	Commercial Manager	The Commercial Manager has oversight of, and responsibility for, the commercial, financial and legal aspects of the transaction.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	External Advisor - Legal	The advisors should have proven experience and a demonstrated track record in advising on public-private partnership projects.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	External Advisor - Commercial/financial	Given the complexity of a PPP transaction a financial and commercial advisor provides significant benefit in the procurement phase including the development of the commercial framework and proposed commercial arrangements, bid evaluation and contract negotiations.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Technical manager	The Technical manager [ensures] the physical aspects of the project are developed in accordance with government's requirements. This role includes development of the output based performance specifications for the design and the evaluation of design. A key requirement for the role is an understanding of the interface between the technical elements of the project and the overall PPP framework.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - Architectural	A Specialist Advisor (Architectural) can assist with the development of the reference project and the functional/architectural output specifications
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - Engineering	A Specialist Advisor (Engineering) can assist with the development of the reference project and the functional/technical output specifications.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - Quantity Surveyor	A Specialist Advisor (Quantity Surveyor) can assist with the costing of the project for the purposes of the PSC and the evaluation of proposals.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - traffic	
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - planning	
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - geotechnical	
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Specialist Advisor - security	

Reference	Page	Role/ activity	Description provided
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Operational Manager	The Operational Manager has primary responsibility for ensuring that the project's operational requirements are addressed, including the services to be provided by the private sector.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Facilities Management Advisor	The Facilities Management Advisor [develops] the output specifications for the services to be delivered.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	39	Communication Advisor	Communication is a key aspect of any PPP project. The responsibility for this aspect may be undertaken by an in-house team member or may be provided by an external communication advisor.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	40	Relevant PPP Authority	The relevant PPP authority will be the focal point for economic and financial assessment and advice on all PPPs and will assist government agencies more generally. It will ensure application of these Guidelines. The relevant PPP authority will also promote best-practice PPPs by absorbing and disseminating the lessons of experience and consulting with other governments on their experiences and practices. The relevant PPP authority should be consulted early in the development of a PPP proposal. It will normally draw on expertise from across the public sector and seek advice of private sector consultants when required.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	41	Evaluating bids	Accordingly, government officers seeking to establish the potential viability of a project, or involved in evaluating bids, require a sound working knowledge of relevant tax provisions (or access to such knowledge).
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	138	Contract Management	The resources required for good contract management include... personnel with the knowledge and experience to manage relationships with the private party and other stakeholders.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	6	Dedicated project team	A dedicated project team comprising both internal staff and external advisors to develop and implement the PPP project, comprising commercial, financial, legal, design, operational and other expertise.
National Public Private Partnership Guidelines: Volume 2: Practitioners' Guide	36	Public sector procurement team	The public sector procurement team should reflect the breadth of skills brought to the project by a private sector consortium. The quality of project resources is one of the most important factors in the success of the project. Therefore, an appropriate team structure with clear lines of accountability should be in place and quality resources applied.
National Public Private Partnership Guidelines: Volume 6: Jurisdictional Requirements	39	Procurement Team	An appropriately skilled and resourced procurement team, led by a project director, will be responsible for delivery of the project.
National Public Private Partnership Guidelines: Volume 5: Discount Rate Methodology Guidance	7	Discounted Cash Flow Analysis	It is not necessary for practitioners to have specialist knowledge of the available techniques and theoretical background to apply the Methodology.
National Public Private Partnership Guidelines: Volume 6: Jurisdictional Requirements	44	Public Sector Comparator (PSC)	Primary responsibility for the construction and use of the PSC rests with the Procuring Agency, in particular the development of the output specification and Reference Project. The construction of a PSC requires a high level of specialist skills that will generally require the engagement of external expert advisers.

### A1.1.2 Partnerships Victoria requirements

Reference	Page	Role/activity	Description provided
Partnerships Victoria Guidance Material: Contract Management Guide	20	Contract Management	For contract management to be effective, Contract Directors need not only a strong knowledge of this Guide, but also a detailed practical understanding of commercial and legal dimensions of contract management.
Partnerships Victoria Guidance Material: Contract Management Guide	107	Contract Management	The Contract Director, and the contract management team, should be enrolled in, or should have previously completed, the contract management training established by the Department of Treasury and Finance. This training will provide the Contract Director with skills to assist them to implement effective contract management.
Partnerships Victoria Guidance Material: Contract Management Guide	73	Contract Director	The Contract Director should ensure that they have thorough knowledge of the regulatory and policy frameworks that apply to delegation of legal power and financial capacity in the government party.
Partnerships Victoria Guidance Material: Contract Management Guide	27	Contract Management Teams	As part of establishing an effective contract management culture, Contract Directors and their teams should have undertaken training that provides skills and competencies in the contract management of <i>Partnerships Victoria</i> projects, including any Contract Director’s participation in whole-of-government contract management forums.

### A1.1.3 National Alliance Contracting Guidelines

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	69	Owner	<p>Ensure delivery of the Owner’s Value-for-Money (VfM) Statement including:</p> <ul style="list-style-type: none"> <li>• monitor progress, direct corrective action and approve deliverables;</li> <li>• revisit Business Case to ensure on track;</li> <li>• ensure compliance with governance arrangements;</li> <li>• consider and approve any changes to the project as per the governance arrangements; and</li> <li>• undertake statutory obligations that cannot be undertaken by the alliance but have significant impact on the alliance works.</li> </ul>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	69	Owner	<p>Lead the procurement process including:</p> <ul style="list-style-type: none"> <li>• establish and negotiate the Project Alliance Agreement (PAA) and Commercial Framework;</li> <li>• manage the Expression of Interest (EOI)/Request for Proposal(s) (RFP) processes;</li> <li>• negotiate the Target Outrun Cost (TOC);</li> <li>• seek approvals from government to Business Case changes (if necessary); and</li> <li>• manage the EOI/RFP processes.</li> </ul>



Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	71	Owner	<p>The Owner is ultimately responsible for delivering the service outcome to the government (as set out in the Business Case).</p> <p>The Owner may be the Minister, the departmental head, the agency's CEO or board.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	125	Owner	<p>The Owner is ultimately accountable to the government for delivery of the Project.</p> <p><b>ROLE:</b></p> <ul style="list-style-type: none"> <li>• Provides effective corporate governance in relation to the Project to ensure successful project outcomes.</li> <li>• Corporate direction.</li> <li>• Treasury functions.</li> <li>• Determines and delegates appropriate authority for project delivery.</li> <li>• Provides to the alliance the VFM Statement.</li> </ul> <p><b>RESPONSIBILITIES:</b></p> <ul style="list-style-type: none"> <li>• Establishes corporate policy in relation to the Project.</li> <li>• Provides adequate and timely Project funding.</li> <li>• Exercises the Owner's Reserved Powers in accordance with the PAA, e.g. approve necessary expenditure outside the established project budgets; approve all supply and revenue agreements; and/or approve all major contract procurement for the performance of the works in accordance with delegated authority levels.</li> <li>• Provides appropriately high level project liaison and representation.</li> </ul>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	69	Contracting - Owner	<p>Identify gaps in community service levels.</p> <p>Develop the Business Case.</p> <p>Progress and obtain approval of the Business Case.</p> <p>Prepare the VFM Statement.</p>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	78	Owner participant	<p>The importance of Owner Participants being involved in key alliance positions and having the necessary skills and experience is often underestimated. The number of Owner resources, and the skills and experience level of those resources, will significantly influence whether VFM is achieved in the project delivery phase. They will bring to the alliance a critical understanding of the Owner's business values and wider corporate environment and network systems.</p> <p>The complex commercial relationships which operate within an alliance demand that key Owner Participants (e.g. Owner's members on Alliance Leadership Team (ALT), Alliance Management Team (AMT) and other senior project roles) collectively have the same level of capability as the (Non-Owner Participant) NOPs, in each of the key project delivery disciplines. A distinction should be made between Owner Participants having actual project delivery experience with alliances, and having experience with performing manager/supervisor roles under traditional project delivery models. Owner participation is necessary to provide reasonable coverage of the key disciplines which will impact on whether VFM is achieved, including design and construction, procurement, commercial and project management and project controls.</p> <p>The Owner Participants also need to take a pro-active approach to determining alliance resource needs and selecting the right candidates for key alliance positions. This requires sufficient experience to determine the suitability and ongoing performance of alliance resources, and to initiate corrective action when insufficient or inadequate resources are identified.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	71	(Owner) Participant	<p>The Owner acts as part of the alliance ('inside the alliance') through the Owner's Participants, who have been delegated responsibilities to deliver the capital asset as part of the alliance.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	125	Coordinator (Owner's representative)	<p><b>ROLE:</b></p> <ul style="list-style-type: none"> <li>Provides independent advice and corporate view to the Project Control Group (PCG) (if established, otherwise the Owner's CEO) on any issues or reports in connection with the Alliance.</li> </ul> <p><b>RESPONSIBILITIES:</b></p> <ul style="list-style-type: none"> <li>Provides independent advice to the PCG (if established, otherwise the Owner's CEO) on any reports, submissions and/or recommendations from the ALT.</li> <li>Supports the Owner's independent expert advisers.</li> </ul>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	104	Alliance Team	<p>Ensuring that the alliance team has adequate project delivery skills and experience is fundamental to achieving the Owner's VFM outcomes. These skills are required in both the Owner's Representative and in key alliance personnel.</p>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	125	Project Control Group	<p>ROLE:</p> <ul style="list-style-type: none"> <li>Accountable to the CEO/Board for monitoring and reviewing performance of the Alliance to achieve the objectives in the Owner's VfM Statement.</li> <li>Makes recommendations to the Owner on reports and submissions from the Alliance.</li> <li>Investigates deficiencies and initiate responses.</li> <li>Provides effective project based governance for the delivery of the Project (rather than day-to-day management).</li> </ul> <p>RESPONSIBILITIES:</p> <ul style="list-style-type: none"> <li>Ensures the Owner's VfM Statement is clearly understood by the alliance.</li> <li>Puts recommendations to the Owner on submissions from the Alliance.*</li> <li>Effective and accurate reporting to the Owner.</li> </ul> <p>* An alternative is that the PCG provides (all or some) approvals to the alliance under delegation from the Owner.</p>
National Alliance Contracting Guidelines: Guidance Note 2: Insurance in Alliance Contracting: Selling Insurable Risks	27	Risk Advisor	<p>The risk advisor role can be filled by either an appropriately qualified and experienced internal officer or an external advisor selected from a preapproved panel or through a competitive tender process. Appendix G shows a suggested process for appointing third parties.</p> <p>The risk advisor should be an experienced person or organisation familiar with the risks encountered in similar projects and more generally in project alliancing.</p>
National Alliance Contracting Guidelines: Guidance Note 2: Insurance in Alliance Contracting: Selling Insurable Risks	49	Risk Advisor	<p>APPENDIX G: RISK ADVISOR APPOINTMENT</p> <p>The risk advisor selected should be a person or organisation familiar with the risks encountered in project alliancing and, where appropriate, should be a member of a relevant professional association such as the:</p> <ul style="list-style-type: none"> <li>Risk Management Institution of Australasia Limited;</li> <li>Australian and New Zealand Institute of Insurance and Finance; and/or</li> <li>Institute of Chartered Accountants, Australia.</li> </ul>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	70	Owner's Support Team	<p>Take a leadership role on behalf of Owner to manage the Business Case and provide the necessary services to finalise the Business Case.</p> <p>May be the Owner's Participants.</p>
National Alliance Contracting Guidelines: Template 4: Request for Proposal	16	Project Owner (including consultants core capabilities)	<p>Land acquisition.</p> <p>Planning and approvals.</p> <p>Communications and community consultation/liaison.</p>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	70	Project Director	<p>Optimise delivery of the Owner's objectives through:</p> <ul style="list-style-type: none"> <li>design and approval of NOP selection process;</li> <li>develop procurement road map; and</li> <li>manage implementation of procurement process and selection of NOPs.</li> </ul> <p>Business Case Alignment Report – the mechanism by which the government is informed of the outcome of the alliance selection and whether the tender outcome is aligned with the Business Case.</p> <p>May take a role in the ALT or the AMT, nominated on a best-for-project' basis.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	70	Selection panel member	Evaluate Proponents against selection criteria and recommend preferred Proponent.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	70	Owner's support team	<p>Maximise Proponent's project knowledge during Alliance Development Phase.</p> <p>Provide feedback to Selection Panel on team attributes.</p> <p>Provide guidance to ensure Proponents clearly understand scope of Owner's VfM Statement.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	71	Alliance Leadership Team (ALT) nominees (until selected)	Leadership group with accountabilities for project delivery as agreed in the PAA. Negotiate technical, commercial, legal and team arrangements.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	77	Alliance Leadership Team (ALT) Member	<p>The ALT is the key decision-making body for the alliance. It is responsible for providing leadership and governance to the alliance, and ensuring that the obligations of the Participants are fulfilled and the Owner's VfM objectives are achieved.</p> <p>The ALT members should be senior managers from within the Participant Organisations that have a deep understanding of the objectives expressed in the Owner's VfM Statement.</p> <p>All ALT members should have sufficient line authority within their home organisation to mobilise resources as required, and the appropriate capability and capacity to make the key decisions for the project.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	71	Alliance Manager (AM) Nominee (until selected)	Lead Proponents' response to procurement process.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	77	Alliance Manager (AM)	<p>The AM is selected by, and reports to, the ALT. The AM has the most senior manager accountabilities for the alliance and manages the AMT. The AM is responsible for managing the day-to-day operations of the alliance.</p> <p>While all alliance positions are populated on a best-for-project basis, it is common that the AM is sourced from the NOPs given the experience, skills and leadership they provide.</p>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	71	Alliance Management Team (AMT) Nominee (until selected)	Assist AM where required in responding to procurement process. Report to AM, executive accountabilities for project delivery as outlined in the PAA.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	77	Alliance Management Team (AMT) member	The AMT is responsible for the delivery of the project and the achievement of the Owner's project objectives in accordance with the ALT's strategy and policy. The AMT is headed by the AM and provides day-to-day leadership and management to the Alliance Project Team (APT). The Owner's AMT members should be experienced leaders in their disciplines appointed on a best person for the job basis.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	71	Alliance Project Team (APT)	The alliance project delivery team that reports to the AM.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	77	Alliance Project Team (APT)	The APT comprises all alliance members reporting to the AM. The Owner's APT members should be appointed on a 'best person for the job' basis. The Owner should also consider providing the senior finance manager for the project as they will be familiar with the governance and probity requirements for spending public funds.
National Alliance Contracting Guidelines: Guide to Alliance Contracting	72	Commercial Advisor	The Commercial Adviser has a specialist in-depth understanding of the markets and commercial workings of Proponents for an alliance project. They advise on how to tailor the selection process to achieve the project objectives and requirements set out in the Owner's VFM Statement. They support the Owner from the Business Case stage (once alliancing is confirmed) through to selection and often in the delivery and close out stages, providing commercial advice and evaluation. The Commercial Adviser assists the Owner in coordinating the involvement of other specialist advisers. Key activities may include: <ul style="list-style-type: none"> <li>• assisting the Owner to develop the alliance strategy, Commercial Framework and selection process;</li> <li>• assisting the Owner to develop procurement process documentation including the Expression of Interest, Industry Briefing, Request for Proposals, proposed PAA (including the Commercial Framework), and the Evaluation Plan;</li> <li>• assisting the Owner to determine and facilitate the most appropriate workshops for project development;</li> <li>• providing insights into the Proponents' offer and subsequent delivery;</li> <li>• assisting the Owner in evaluating the Proponents' Project Proposals;</li> <li>• reviewing Owner budget estimates (including Owner's Comparative TOC if appropriate); and</li> <li>• assisting the Owner during Finalisation and Award stage to optimise technical and contract requirements.</li> </ul>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	73	Transaction Advisor	<p>The Transaction Adviser programs and leads the implementation of the procurement strategy. Key activities may include:</p> <ul style="list-style-type: none"> <li>• assisting the Owner’s team to develop and quality assure procurement process documentation including the Expression of Interest, Industry Briefing, Request for Proposals, Proposed PAA, Commercial Framework, and Evaluation Plan;</li> <li>• assisting the Owner to coordinate and manage the selection process; and</li> <li>• facilitating Selection Panel discussions and evaluation workshops.</li> </ul>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	73	Insurance Advisor	<p>Assisting the Owner to determine the most appropriate approach to insurance requirements.  <i>Refer to Guidance Note No.2, Insurance in Alliance Contracting – Selling Insurable Risks, Department of Infrastructure and Transport, Commonwealth of Australia, March 2011.</i></p>
National Alliance Contracting Guidelines: Guidance Note 2: Insurance in Alliance Contracting: Selling Insurable Risks	28	Insurance Advisor	<p>The advisor should be a person or organisation capable of performing the tasks outlined below.                      They should be familiar with the local and international insurance markets that underwrite project alliance risks.                      The advisor should be a member a relevant professional association such as the:</p> <ul style="list-style-type: none"> <li>• Risk Management Institution of Australasia Limited;</li> <li>• Australian and New Zealand Institute of Insurance and Finance;</li> <li>• Institute of Chartered Accountants, Australia; and/or</li> <li>• Institute of Actuaries of Australia.</li> </ul>
National Alliance Contracting Guidelines: Guidance Note 2: Insurance in Alliance Contracting: Selling Insurable Risks	31	Insurance Broker	<p>The insurance broker can be appointed either by selection from a preapproved panel, or via a competitive tender process.                      The key considerations for appointing the insurance broker are described in more detail in Appendix C and include:</p> <ul style="list-style-type: none"> <li>• their experience;</li> <li>• the term of the appointment;</li> <li>• remuneration; and</li> <li>• duties and obligations of the broker.</li> </ul>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guidance Note 2: Insurance in Alliance Contracting: Selling Insurable Risks	31, 41	Insurance Broker	<p><b>APPENDIX C: BROKER APPOINTMENT - C.1: SELECTION OF THE BROKER</b></p> <p>The Owner selects the broker for an alliance project using the following selection criteria:</p> <ul style="list-style-type: none"> <li>• previous experience in placing alliance risks;</li> <li>• a demonstrable understanding of the alliance project risks;</li> <li>• international presence or strong international alliances to assist in placing risk in overseas insurance markets; and</li> <li>• an explicit commitment to maintaining consistency with the client service team.</li> </ul> <p>The insurance broker is a specialist in insurance risks and the insurance market.</p> <p>The alliance legal adviser provides legal input and advice to the Owner.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	73	Legal Advisor	<p>The Financial Auditor provides an assessment of financial aspects of each Proponent's offer for use in the selection process. Key activities may include:</p> <ul style="list-style-type: none"> <li>• investigating the financial capacity of individual Proponents;</li> <li>• investigating the Proponents' costing structures so that a clear understanding is gained of the proposed allocation of costs between Corporate Overhead and Reimbursable Costs;</li> <li>• assisting to establish appropriate definitions of Reimbursable Costs and Corporate Overhead;</li> <li>• confirming that the Reimbursable Cost rates (including direct cost multipliers) submitted by the Proponents reflect actual costs; and</li> <li>• considering the use of specialist support to assess not only whether costs were actually incurred, but also whether they should have been incurred.</li> </ul>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	74	Financial Auditor	<p>The Owner's Estimator has in-depth understanding of how designers/contractors cost infrastructure (or building) works and provides cost-estimating services to the Owner.</p> <p>The role of the Owner's Estimator is described in detail in <i>Guidance Note No.5</i>.</p> <p>Key activities may include:</p> <ul style="list-style-type: none"> <li>• developing an Owner's Comparative TOC if required and refining it as the project develops and further information emerges;</li> <li>• reviewing and commenting on the Proponent's proposed Project Solution and risk assessment;</li> <li>• validating that the Proponent's TOC (or each TOC component) is robust; sufficiently covers the key elements of the works (i.e. the TOC is sufficient to meet the Owner's requirements set out in the Business Case), and includes an appropriate risk contingency;</li> <li>• calculating a risk-adjusted price for each Proponent's TOC (or partial TOC) that will provide the Selection Panel with a better understanding of the commercial offering from each Proponent; and</li> <li>• verifying that the estimated cost of any Adjustment Events after the finalisation of the TOC represents an appropriate estimate of the associated cost.</li> </ul> <p>(Owners may find that some Transaction Advisers or Commercial Advisers can provide this service.)</p>

Reference	Page	Role/ activity	Description provided
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	62	Owner's Estimator (OE)	<p>In a non-price competition process, the OE must be sufficiently experienced in construction estimation and sufficiently resourced to thoroughly review the NOPs' estimate and to provide realistic feedback to the Owner on the validity of the quantities, rates, prices and risk contingency included in the estimate.</p> <p>This will require the OE to understand the design and delivery methodology and to review quantities, productivities and cost rates being used for each item of work to ensure these reflect current market conditions and best practice.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	75	Independent Verifier (IV)	<p>The IV provides assurance to the Owner that the alliance has effectively and efficiently designed and constructed the work to meet the requirements of the PAA.</p> <p>The need for an IV may arise if an Owner considers that they have a governance responsibility to be assured by independent parties that the alliance has designed and constructed the work in accordance with the PAA. To do this, the Owner engages an Independent Verifier (IV) who sits outside of the alliance and reports to the Owner.</p> <p>The IV may be one of the Owner's employees.</p> <p>The decision to use an IV will reflect several factors including the:</p> <ul style="list-style-type: none"> <li>• Owner's internal governance requirements;</li> <li>• risk and complexity of the project and the Owner's familiarity with these;</li> <li>• likelihood and consequences of non-complying quality (either in design or construction);</li> <li>• capability and capacity of the Owner's Representative(s); and</li> <li>• additional cost of the IV balanced against likely benefits.</li> </ul> <p>Owners will need to assess the above factors when deciding whether to use an IV and determining the scope of service.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	75	Probity Advisor	<p>The Probity Adviser ensures that the relevant Government probity standards and requirements are met through the selection and delivery process.</p> <p>The Probity Adviser will ensure that Owner interaction and/or integration with Proponents/NOPs can be achieved while satisfying probity requirements.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	75	Behavioural Coach	<p>Behavioural coaches can assist the Selection Panel to develop a better understanding of the Proponent's potential to form an alliance with the Owner's personnel.</p> <p>Key activities may include:</p> <ul style="list-style-type: none"> <li>• undertaking behavioural assessments; and</li> <li>• providing training and tools to allow the Selection Panel to undertake behavioural observation and assessment.</li> </ul> <p>After the PAA is signed, the alliance may decide to use a Behavioural Coach to consolidate alliancing behaviours.</p>



Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guidance Note 4: Reporting Value-for-money Outcomes	28	Procurement team	<p>The track record of advisers in successfully:</p> <ul style="list-style-type: none"> <li>• assisting to empower the Owner;</li> <li>• transferring knowledge;</li> <li>• making available nominated individuals as agreed;</li> <li>• providing its advisory services on time;</li> <li>• prudently managing advisory costs;</li> <li>• consistently providing industry leading and tailored advice, and</li> <li>• should be established as the key selection criteria in the Owner's procurement processes.</li> </ul>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	44	Evaluation Team	<p>It is essential that the evaluation panel has the capability to assess the Proponents on the intellectual effort required of the Full Price process and outcomes so achieved.</p>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	46	Base Capability and Experience	<ul style="list-style-type: none"> <li>• sound knowledge of Owner's Business Case and VfM Statement (preferably authored it);</li> <li>• sound knowledge of Owner's operational requirements and objectives, risk appetite and corporate standards;</li> <li>• good knowledge of functional specs, concept design &amp; general project information;</li> <li>• good understanding of alliancing and alliance principles; and</li> <li>• experience in project of similar type, project procurement procedures and probity processes.</li> </ul>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	44	Partial price selection	<p>In partial price selection, the Owner needs the same basic capability as in the full price process, with the addition of further expertise in the elements it has left for negotiation outside the competitive process and which must be negotiated on a one-on-one basis.</p> <p>These negotiations require additional capability or skill from the Owner over and above the usual baseline capabilities required for full price competitive selection.</p>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	46	Partial price selection - additional capability and experience	<p>ADDITIONAL CAPABILITY &amp; EXPERIENCE</p> <p>Previous direct experience in alliance contracting.</p> <p>Demonstrated commercial alignment or best equivalent to the Designer/Contractor teams involved.</p> <p>Relevant project cost or benchmarking experience and understanding.</p>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	44	Non-price selection	<p>In non-price selection, the selection process for the Preferred Proponent concludes prior to the commencement of TOC development, although it remains beneficial to the Owner to preserve, and make clear, its right to invite an alternative Proponent to prepare a TOC if the Preferred Proponent is not performing to the required standard.</p> <p>During the non-competitive phase of the tender 'selection' process, the Owner needs the same basic range of capabilities as in the full price selection process plus a far greater skill set to understand all aspects of the Project Proposal negotiated outside competition.</p> <p>In this case, the Owner requires capability at least equal to that of the Proponent in the areas to be negotiated, including the capability to:</p> <ul style="list-style-type: none"> <li>• assess the design and project solutions without any direct comparison;</li> <li>• understand the proposed construction methodologies, delivery and procurement strategies, risks and costs associated with the project solution; and</li> <li>• negotiate contract terms with a party who will have misaligned commercial drivers to the Owner.</li> </ul>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	48	Non-price proponent evaluation	<p>The evaluation panel will require superior skills in judging the potential capability of the individuals and teams, both technically and behaviourally. They are likely to also require expert support in assessing behaviours and performance potential. Owners should exercise great care in selecting NOPs based on brief interactions, interviews and workshops. The types of interactions found in full and partial price selection allows a better evaluation of the non-price attributes the Owner should be seeking in a successful alliance Proponent.</p>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	60	Owner	<p>When using full competition, to negotiate reasonable commercial terms and a fair TOC, the Owner would only require the capabilities of any competent agency experienced in procuring and delivering capital projects. However, a non-price process requires the Owner to match capability with a leading industry expert when both participating and evaluating the TOC development. When this symmetry is not achieved, there is a heightened risk to the public interest.</p>
National Alliance Contracting Guidelines: Guidance Note 5: Developing the Target Outturn Cost in Alliance Contracting	46	Alliance - Non-price selection - additional capability and experience	<p>Previous direct experience in alliance contracting.</p> <p>Demonstrated commercial alignment or best equivalent to the Designer/Contractor teams involved.</p> <p>Relevant project cost or benchmarking experience and understanding.</p> <p>Strong capability to direct Proponent and intervene where necessary to prevent scope creep and extraneous.</p> <p>Strong cost estimating knowledge and relevant benchmarking experience and understanding.</p> <p>Sound knowledge of construction risk relevant to project and highly developed understanding of risk allocation/sharing principles of alliancing.</p> <p>Preferably some direct project management, delivery or construction experience on projects of similar type.</p>
National Alliance Contracting Guidelines: Guide to Alliance Contracting	43	Alliance Contracting	<p>A sound understanding of alliance contracting and appropriate in-house resources, skills and systems are necessary prior to undertaking an alliance.</p>

Reference	Page	Role/activity	Description provided
National Alliance Contracting Guidelines: Guide to Alliance Contracting	104	Alliance - Owner Auditor	<p>The role of the Owner's financial auditor is typically limited to verifying that the Participants' costs have been actually and reasonably incurred. The alliance financial auditor checks that expenditure has been actually incurred in accordance with pre-determined processes and authority levels.</p> <p>The Owner should consider supplementing the financial auditor role to verify that expenditure by the alliance has been incurred in accordance with the Owner's VFM statement and government procurement standards; and in the most efficient, effective and economical way.</p>

#### A1.1.4 Investment Lifecycle and High Value/High Risk Guidelines

Reference	Page	Role/activity	Description provided
DTF – Investment Lifecycle and High Value/High Risk Guidelines – Conceptualise	8	Strategic assessment	<p>It is recommended that these are developed with the assistance of a facilitator accredited by DTF who will lead Investment Management Standard (IMS) workshops.</p> <p>Note that the licence to use the IMS materials includes the requirement that any workshop facilitators <i>not</i> accredited by DTF must make this clear to all participants and indicate this on the logic map.</p>
Project Governance Guideline (draft)	10	Steering Committee Member	A Steering Committee that provides strategic direction and monitors the project.
Project Governance Guideline (draft)	15	Steering Committee Member	<p>The right people must be involved for project steering committees to work effectively and the size of the committee membership needs to be fit for purpose. Individuals with the necessary leadership and management skills, knowledge and attributes should be selected for project steering committee membership.</p> <p>In some instances it may be appropriate to include specific expertise on the steering committee during particular phases of the project lifecycle, for example, a design expert in the early phases of a project. These parameters are consistent with guidance for general board membership set out below.</p> <p>For effective board performance, individual members and the board as a group need to have a broad range of skills, expertise and personal attributes.</p> <p>Accountability, strategic thinking, networking and teamwork are core competencies for all types of boards and committees. It may also be desirable to appoint board members with specific expertise in areas such as finance, investment, law, human resources, marketing or public sector administration. A board may include persons with superior knowledge of the particular sector and who may have valuable professional networks (though care should be taken to avoid potential conflicts of interest). Members, however, should not be appointed solely on the basis of functional expertise. Appropriate emphasis should also be placed on the skills and personal attributes required for effective board performance.</p>
Project Governance Guideline (draft)	10	Stakeholders and staff	A fundamental requirement is that the relevant people must have an appropriate mix of skills, experience and training.

Reference	Page	Role/activity	Description provided
Project Governance Guideline (draft)	11	Project Sponsor/Senior Responsible Owner (SRO)	In addition to being an experienced organisational executive, well versed in the details of organisational stakeholder and client requirements and relationships, the sponsor needs to have sound project management capability.
Project Governance Guideline (draft)	20	Project Director	The skills needed by a project director include well-developed project, risk and relationship management skills. Also commercial management skills applicable to developing and negotiating contractual arrangements and knowledge of government processes are important.
Project Governance Guideline (draft)	20	Project Manager	<p>The project manager is responsible for structuring project delivery in an appropriate manner.</p> <p>This person is the key manager of the day-to-day aspects of the project, as well as developing and updating the project management plan, also, to resolve planning and implementation issues, manage progress and the budget.</p> <p>The project manager is the key person around whom a project will ultimately revolve.</p> <p>The project manager (with the project director) will attend, report to, seek guidance and take direction from the project steering committee.</p> <p>The project manager needs to have appropriate experience and, preferably, accreditation or formal qualifications in project management.</p> <p>Responsibilities of the project manager include:</p> <ul style="list-style-type: none"> <li>• accountability to the project steering committee for delivery of the project; reporting, to the project steering committee at regular intervals;</li> <li>• ensuring the project is managed in accordance with agreed processes and tolerances;</li> <li>• dealing with the construction/contractors to ensure project progression;</li> <li>• maintaining the project risk register and the integration of risk treatments and control activities into project plans and activities;</li> <li>• approving minor variations to budget, schedule or scope, within agreed tolerances;</li> <li>• managing and monitoring the project activity through detailed plans and schedules and preparation of reports;</li> <li>• managing day to day stakeholder relationships and issues;</li> <li>• managing project sponsor and stakeholder expectations through the formal specification and agreement of goals, objectives, scope, outputs, resources required, budget, schedule, project structure, roles and responsibilities and communication to them on progress; and</li> <li>• inspecting project progress and element completion for quality assurance.</li> </ul>
Project Governance Guideline (draft)	19	Client Entity	The client entity is the ultimate owner of the new asset. The client entity will operate the asset to deliver the benefits.
Project Governance Guideline (draft)	10	Operations/Asset Manager	Manages the project outputs after project closure, including the change management processes for effective implementation, and is responsible for the realisation of agreed outcomes (benefits).

Reference	Page	Role/activity	Description provided
Project Governance Guideline (draft)	19	Operations/ Asset Manager	<p>An operations (or asset) manager must be identified for all projects, no matter what the size or complexity. There may be one or more operations managers at a number of managerial levels, depending on the size of the project. The 'operations manager' need not necessarily be the on-the-ground operations manager, for example it may be the contract manager for the (future) service provider.</p> <p>An operations manager is a core member of the project steering committee. The operations manager's responsibilities are:</p> <ul style="list-style-type: none"> <li>• contributing resources to the project to ensure outputs are developed satisfactorily and sustainably to meet business and operational needs (this involvement is ongoing from the conceptual phase through to accepting and/or testing the output products);</li> <li>• ensuring the project is planned with the end in mind (to meet the desired outcomes);</li> <li>• ensuring each output is specified and delivered fit-for-purpose;</li> <li>• managing project outputs for their operational use;</li> <li>• securing resources for the ongoing maintenance of the asset;</li> <li>• being accountable to the project sponsor for the measuring and reporting project outcomes; and</li> <li>• being responsible for the realisation of benefits from the investment.</li> </ul>
Project Governance Guideline (draft)	21	Project team	<p>A project team is led by the project manager, and works for the successful delivery of project outputs as outlined in an investment business case and/or project management plan.</p> <p>It is desirable that a project team includes representatives from the business unit(s) affected by the project.</p> <p>The specialist expertise required for the project may include financial, technical, operational, communication, environmental, risk, procurement, contractual and legal skills.</p> <p>The mix of skills and experience will vary by project type. The composition of the team may change as the project moves through its lifecycle phases. The assessment and selection of people with the requisite skills required for each phase of a project is critical to overall success. The skills should be explicitly identified as a part of the project planning process.</p>
Project Governance Guideline (draft)	22	Probity practitioner	<p>Consistent with government policy a Probity Practitioner (an auditor and/or advisor) should be engaged to ensure a transparent and robust process where appropriate.</p> <p>The Probity Practitioner must be capable of bringing an objective viewpoint to the project and is required to endorse a probity plan and monitor the bid process throughout.</p> <p>The selection of probity practitioner(s) should be based on the experience and the extent of involvement required for the particular nature of the risks in the procurement process.</p> <p>As a minimum, all public officials or non-government personnel nominated as probity practitioners should have completed government-accredited procurement training or have a level of competency and professional standing acceptable to the responsible departmental officer.</p> <p>[Source: VGPB Conduct of Commercial Engagements Policy and DTF Financial Management Compliance Framework.]</p>

Reference	Page	Role/activity	Description provided
Preparing Project Budgets for Business Cases Technical guide (draft)	21	Base cost estimator	Estimating the base cost is complex and, when done properly, it requires a high level of professional skill and judgement.
Preparing Project Budgets for Business Cases Technical guide (draft)	21	Base cost estimator	Developing the base cost estimate: The base cost estimate is prepared by senior experienced cost estimators who have a track record of successful estimation practice. They are required to understand and have relevant experience for the project they are engaged on. They need to be recognised by peers as showing wisdom and knowledge of the current market and future trends.
Preparing Project Budgets for Business Cases Technical guide (draft)	21	Base Cost estimate reviewer	Peer/independent reviews of the base cost estimate should be carried out by personnel with appropriate estimating and estimating management experience. Generally a minimum of five years' estimating experience in the specific sector would be expected, and preferably additional specific industry experience in other sectors.
Preparing Project Budgets for Business Cases Technical guide (draft)	41	Senior Cost estimate advisor	<b>BACKGROUND, SKILLS AND COMPETENCIES:</b> <ul style="list-style-type: none"> <li>background in quantity surveying, estimation, project engineering, contracts and procurement with a proven track record at a senior technical or project management level;</li> <li>in excess of 15 years' project experience, preferably as a senior estimator with a broad background in providing accurate and achievable cost plans, first principle estimates and value management advice for large infrastructure projects, for example, involving PPPs and alliances;</li> <li>ability to lead teams to produce accurate project cost estimates and budgets from concept to definitive information;</li> <li>thorough knowledge of current estimating strategies and techniques;</li> <li>conceptual and integrative thinking capacity related to complex systems and operating environments and ability to accurately infer or visualise a whole project in all aspects (e.g. scope, program, constraints and stakeholders) with incomplete information;</li> <li>relevant tertiary engineering or construction-related qualifications are desirable but not essential;</li> <li>proven ability to lead, communicate with and influence people to achieve complex and challenging objectives;</li> <li>commercial acumen necessary for accurate cost estimates on multimillion/billion dollar projects; and</li> <li>rigorous and thorough in approach including ability to apply a high level of attention to detail.</li> </ul>

Reference	Page	Role/activity	Description provided
Preparing Project Budgets for Business Cases Technical guide (draft)	28	Risk estimator	<p>Agencies should ensure they engage well-qualified and experienced professionals capable of providing the depth of input required to prepare risk estimates that do have substance.</p> <p>Risk analysis is complex and, done properly, it requires a high level of professional skill and judgement. Essentially two types of skills are required:</p> <ul style="list-style-type: none"> <li>• process skills that include workshop facilitation, interpretation and coordination of assumptions, financial modelling and interpretation of analytical results; and</li> <li>• technical skills – highly trained professionals experienced in the technical disciplines required to deliver the project (e.g. design and construction capability) such as architects, engineers and cost estimators.</li> </ul> <p>Delivering a risk analysis requires both skills from formal learning and considerable professional judgement, which can only be acquired by experience.</p> <p>Risk estimation is by its very nature uncertain. Budget approvals require a level of confidence that risk estimates are developed to a professional standard. Analogous to the legal test applied to claims of negligence, the standard expected is that of a skilled person exercising and professing to have that specialist skill.</p>
Preparing Project Budgets for Business Cases Technical guide (draft)	43	Risk estimator	<p>1: Project risk and control services: coordinate and facilitate the risk process, including workshops, and apply best practice risk management standards. These services are relatively well established in the market, including:</p> <ul style="list-style-type: none"> <li>• qualitative risk analysis in line with risk standards;</li> <li>• quantitative risk analysis that depending on the complexity of the project and the nature of the risks (includes risk modelling using various stochastic software packages); and</li> <li>• verifying the risk estimates (undertaking a sense check).</li> </ul> <p>(Risk facilitation is a skilled role that is usually carried out by a professional that has a deep background in capital investment and a track record in facilitating workshops and applying best practice risk management standards.)</p> <p>2: Risk quantification and modelling services: specialist modelling capability is engaged for complex projects with many significant and interdependent risks. This requires professional skills in coordinating risk assumptions and combining these in a risk quantification model. Often this work is combined with the project risk and control services as both involve coordination and interpretation of risk assumptions provided by technical experts.</p>
Procure (draft)	37	Tender evaluation team	<p>The tender evaluation team is normally made up of a team leader and team members from specialist areas with the requisite skills to undertake detailed evaluation of bids.</p> <p>Specialists from <i>financial, commercial, legal, technical</i> and <i>environmental</i> disciplines are often required. The skills required will depend on the project.</p> <p>External support may be required for aspects of the evaluation.</p>

Reference	Page	Role/activity	Description provided
Procure (draft)	22	Tender evaluation	<p>The Code of Practice notes that clients must:</p> <ul style="list-style-type: none"> <li>not engage in any conduct that would defeat the purpose of a fair and transparent selection process and must avoid any practice that gives one party an improper advantage over another;</li> <li>predetermine the tender evaluation criteria and apply those criteria fairly;</li> <li>use selection and engagement procedures that are auditable, transparent and accountable;</li> <li>have tenders assessed by those with relevant skills and knowledge; and</li> <li>respect the intellectual property rights of all parties and not use intellectual property submitted with a tender to obtain prices from, or negotiate with, other tenderers for like or similar scope.</li> </ul>
Procure (draft)	41	Negotiation Team	<p>The government project team should bring together a small, skilled group of staff to conduct negotiations. The team should be capable of addressing all disciplines included in the project requirements. The negotiation team should be lead by an experienced manager who has the authority to finalise a suitable deal. It may also be appropriate to have a number of specialist advisers available to support the negotiation team. The team members must be good communicators, preferably trained in basic negotiation. Including an experienced contract manager (or the person to be appointed as the contract manager) can promote awareness of contract management issues.</p>
Procure - ICT [Information and Communication Technology] projects Procure and deliver (draft for comment)	10	ICT project procurement	<p>Large, complex ICT projects create highly detailed and complex relationships between the vendor and the client. Each principal role has unique elements that require specialist skills and differing relationships. ICT projects should appoint appropriately skilled staff to the following key roles:</p> <ul style="list-style-type: none"> <li><i>Delivery management</i> – this role is tasked with managing the delivery of the project, including managing the scope of work, the schedule, risk and issues registers, management of budget and costs and the scope change management process.</li> <li><i>Commercial management</i> – this is a financial and legal task focused on managing agreed changes to the scope and schedule as well as resolving contractual disputes.</li> <li><i>Vendor management</i> – this role manages the long-term relationship between the vendor and the client. It will survive the delivery relationship. The vendor management function establishes the business and technology management interfaces between the parties to ensure a productive relationship between the department and the vendor.</li> </ul>



Reference	Page	Role/activity	Description provided
Procure - ICT projects technical guidance Procure and deliver (draft for comment)	14	ICT project delivery	<p>At each stage in the project lifecycle, it is important to ensure scoping and requirements specification is done by appropriately skilled and experienced people. Due to the often evolving nature of scoping requirements, the appropriate skillset for this task may not be the same throughout the project. For example, a business subject matter expert should assist in defining business benefits and outcomes, whereas a technical expert may assist in defining capability and technical requirements.</p> <p>Support should be provided to subject matter advisers and the project delivery team, and provide continuity to requirements collection and management functions throughout the project.</p> <p>This is often a project team member performing the following tasks:</p> <ul style="list-style-type: none"> <li>assist in engaging the appropriate people to define requirements at each stage;</li> <li>provide techniques and support for collecting, refining, documenting and managing requirements through the full project lifecycle;</li> <li>assist in managing changes to requirements through the change control process;</li> <li>provide continued assistance to the project team in terms of requirements clarifications and supported interactions with business; and</li> <li>act as a point of contact for stakeholders to the project to discuss details of requirements or raise a change request.</li> </ul>
Procure - ICT projects technical guidance Procure and deliver (draft for comment)	14	Independent review (ICT procurement)	Requirements specifications at each stage of the project should be reviewed by independent (internal or external) subject matter experts. Independent review provides advantages of a fresh perspective, new thinking and potentially a different skillset. It also provides a perspective clear of any potential bias resulting from involvement with the project or its stakeholders. It may be necessary to look outside the business for the appropriate level of experience and independence.
Procure - ICT projects technical guidance Procure and deliver (draft for comment)	15	Stakeholder engagement (ICT procurement)	An agency embarking on a complex ICT or service transformation project with a significant ICT component should ensure accountability for the development and implementation of the change management plan rests with suitably experienced and skilled staff.
Implement	16	Commissioning and handover	Commissioning usually starts after the project manager or superintendent accepts that contract quality and performance criteria have been achieved. The commissioning team should have sufficient skills and experience in the type of infrastructure, or in complex processes, to assess its acceptability.
Implement	10	Owner, principal or client	The organisation or person identified in the contract as the contracting entity. The owner is usually responsible for paying for work undertaken.

Reference	Page	Role/activity	Description provided
Implement	10	Project board, project steering committee, governance committee or project control group	<p>A group consisting of key agency and government stakeholders that is responsible for guiding the project. It may have the following functions:</p> <ul style="list-style-type: none"> <li>• approving changes to the project and its supporting documentation;</li> <li>• monitoring and reviewing the project;</li> <li>• resolving significant project conflicts and issues;* and</li> <li>• formally accepting project deliverables.</li> </ul> <p>*The board or steering committee resolves issues of significance that have been escalated through the project management organisational structure.</p>
Implement	10	Project director or project sponsor, senior responsible owner	The person representing the owner, who is ultimately accountable and responsible for the project.
Implement	10	Project manager	A person responsible for delivering the defined project.
Implement	10	Project team	The supporting team to the project manager.
Implement	10	Superintendent (other terms may be used under different contracts)	<p>Person nominated by the principal to administer the contract. Obligations may include:</p> <ul style="list-style-type: none"> <li>• verifying that the work complies with the contract requirements;</li> <li>• certifying that the work is satisfactorily completed and assessing and valuing progress and final claims;</li> <li>• instructing the contractor (through Superintendent's Instructions) where the contractor is seeking approval or clarification of a contract requirement so they can proceed;</li> <li>• ordering and valuing variations to the work and (on approval of the Project Board or other relevant group) approving variations within their designated authority; and</li> <li>• keeping the Principal informed of progress and contractor performance.</li> </ul>
Implement	10	Superintendent's representative	Represents the superintendent, with delegated authority under the contract.
Implement	10	Contractor	An organisation or person with an obligation to perform certain works or services as described in the contract documents.
Implement	10	Contractor's representative	Person nominated by the contractor to supervise and manage the work under the contract.

## A1.2 Australian Qualifications Framework: Business Case Development competency requirements

Unit descriptor:	This unit covers market analysis, development and costing of options, and justification for a recommended business solution. It includes researching a business case, examining business solutions, and constructing and finalising a business case.	
Application:	N/A	
Element:	Performance Criteria.	
1 Research a business case	1.1	Business problem is identified and confirmed in accordance with organisational policy and procedures.
	1.2	Analysis of key <i>stakeholder</i> requirements is used to clarify objectives.
	1.3	A range of <i>factors</i> is considered through research to identify opportunities and constraints.
	1.4	<i>Market analysis</i> is conducted in accordance with <i>legislation, policy and procedures</i> .
2 Examine business solutions	2.1	Business and technical impacts and <i>risks</i> are analysed through research and consultation and documented in accordance with organisational requirements.
	2.2	Community, environmental and human resource impacts are analysed.
	2.3	Alternative solutions and their financial implications are canvassed and discussed with senior management and business case originator.
3 Construct a business case	3.1	Options are developed and impacts, risks, costs and stakeholders are determined and documented.
	3.2	Recommendation is made and justified.
	3.3	Business case is prepared in accordance with organisational requirements.
4 Finalise a business case	4.1	Business case is presented and recommendations are explained in a manner suited to the audience.
	4.2	Approvals and management endorsement are obtained in accordance with organisational policy and procedures.
Required Skills and Knowledge:		
This section describes the essential skills and knowledge and their level, required for this unit.		
Skills: Look for evidence that confirms skills in:	<ul style="list-style-type: none"> <li>• consulting with others</li> <li>• managing financial/other resources</li> <li>• using language and style suited to written submissions</li> <li>• using technical and other vocabulary</li> <li>• using a variety of words and language structures to explain complex ideas to different audiences</li> <li>• interpreting and explaining complex, formal documents</li> <li>• preparing written advice and reports requiring reasoning and precision of expression</li> <li>• engaging in discussion using exchange of complex oral information</li> <li>• responding to diversity, including gender and disability</li> </ul>	
Knowledge: Look for evidence that confirms knowledge and understanding of:	<ul style="list-style-type: none"> <li>• government and organisational goals, policies and practices</li> <li>• legal requirements related to the business activity</li> <li>• financial and accounting issues relating to developing a business case</li> <li>• whole-of-life considerations</li> <li>• approval processes</li> <li>• aspects of trade practices law, commercial law and law of contract relating to the development of business cases</li> <li>• equal employment opportunity, equity and diversity principles</li> <li>• jurisdictional legislation that applies to business case development including occupational health and safety and environmental requirements</li> </ul>	

Where and how to assess evidence:	<p>Valid assessment of this unit requires:</p> <ul style="list-style-type: none"> <li>• a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when developing a business case, including coping with difficulties, irregularities and breakdowns in routine</li> <li>• business case development in a range of (2 or more) contexts (or occasions, over time)</li> </ul> <p>Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:</p> <ul style="list-style-type: none"> <li>• people with disabilities</li> <li>• people from culturally and linguistically diverse backgrounds</li> <li>• Aboriginal and Torres Strait Islander people</li> <li>• women</li> <li>• young people</li> <li>• older people</li> <li>• people in rural and remote locations</li> </ul> <p>Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:</p> <ul style="list-style-type: none"> <li>• case studies</li> <li>• demonstration</li> <li>• portfolios</li> <li>• projects</li> <li>• questioning</li> <li>• scenarios</li> <li>• simulation or role plays</li> <li>• authenticated evidence from the workplace and/or training courses</li> </ul>
For consistency of assessment:	Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments.

Source: Commonwealth Department of Education, Employment and Workplace Relations, *PSPMNGT607B Develop a business case*, 26 May 2012

### A1.3 Individual competencies appearing in key documentation identified in Section 3.2

Competency/Skill	National Public Private Partnership Guidelines	Partnerships Victoria documentation	National Alliance Contracting Guidelines	Investment Lifecycle and High Value/High Risk Guidelines	Gateway review documentation	Victorian Public Sector Employment Capability Framework
<b>"Across the board"</b>						
Analytical skills	✓					✓
Experience and knowledge of constructability or delivery issues	✓		✓	✓		
Capital Asset Pricing Modelling (CAPM)	✓					
Knowledge of industry environment	✓		✓			✓
Experience in strategic portfolio analysis and planning	✓			✓		✓
Strategic subject matter knowledge and expertise	✓		✓	✓		✓

Competency/Skill	National Public Private Partnership Guidelines	Partnerships Victoria documentation	National Alliance Contracting Guidelines	Investment Lifecycle and High Value/High Risk Guidelines	Gateway review documentation	Victorian Public Sector Employment Capability Framework
<b>Communication &amp; stakeholder engagement and reporting</b>						
Knowledge of key stakeholders and their issues for this Project	✓					✓
Knowledge of entities the Program must engage with effectively						✓
Understanding of end to end Project delivery processes	✓		✓	✓		✓
Understanding of existing communication mechanisms	✓			✓		✓
Understanding of existing engagement mechanisms	✓					✓
Communication skills	✓		✓	✓		✓
Stakeholder engagement and relationship management skills	✓			✓		✓
Collaborative skills, multiple stakeholders			✓	✓		✓
Experience and expertise in communications management	✓					✓
Experience and expertise in media liaison	✓					
Knowledge of existing reporting regimes and mechanisms/ Understanding of existing reporting requirements			✓			✓
Reporting capability	✓		✓			✓
<b>Portfolio/program/service delivery (includes project evaluation)</b>						
Understanding of policy objectives	✓		✓			✓
Knowledge of Owner functions	✓		✓	✓		✓
Sufficiency of knowledge and awareness of the portfolio and service to be able to assess effectiveness of outcomes	✓			✓		✓
Sufficiency of knowledge and awareness of the portfolio and service to be able to manage the scope of the consultancy effectively	✓			✓		✓
Modelling	✓			✓		✓
Relevant domain or portfolio technical experience and expertise	✓					
<b>Project Leadership and project management (includes business case development, project scoping, project scheduling and project controls)</b>						
Experience and expertise in developing and delivering projects	✓					
Strategic/critical thinking	✓			✓		✓
Information analysis and reporting skills (including report writing)			✓			✓
Data analysis skills to ensure consistency and appropriateness of data and identify trends and issues in detailed data						✓
Expertise in writing, information structure and presentation	✓		✓			✓
Ability to solve complex problems across multiple interfaces	✓					✓
Media experience and skills	✓					

Competency/Skill	National Public Private Partnership Guidelines	Partnerships Victoria documentation	National Alliance Contracting Guidelines	Investment Lifecycle and High Value/High Risk Guidelines	Gateway review documentation	Victorian Public Sector Employment Capability Framework
Commercial skills/expertise and preferably also an understanding of technical, procurement and delivery issues	✓			✓		✓
Earned value analysis and reporting	✓					
Understanding of relevant Design Standards	✓			✓		
Ability to liaise with industry to identify design innovations			✓			✓
Experience and expertise in leading multi-disciplined design teams	✓			✓		
Financial and Economic Modelling	✓			✓		✓
Technical, commercial, economic and social analysis	✓			✓		✓
Leadership skills, including decisiveness and willingness to be accountable			✓	✓		✓
Management skills			✓	✓		✓
Project management skills/expertise (including ability to work to tight time frames under pressure and decisiveness)	✓		✓	✓		✓
Program development and optimisation skills (including understanding of Program interdependencies)						
Respected in industry				✓		
Experience in value management and benchmarking	✓		✓			
Experience in managing the performance of delivery providers	✓		✓	✓		✓
Expertise in quality planning, assurance and control			✓			
Expert knowledge in project planning, scheduling and costing			✓	✓		
Experienced in multi-project program cost and schedule control			✓			
Understanding of approvals, procurement, construction and commissioning timeframes and risks and impacts on schedule						
Industry recognised cost and schedule control software packages						
Understanding of project risks	✓		✓	✓		✓
Experience in quantification and definition of project risks	✓		✓	✓		✓
Ability to articulate project risks and impact	✓		✓	✓		✓
Risk management expertise			✓	✓		✓

Competency/Skill	National Public Private Partnership Guidelines	Partnerships Victoria documentation	National Alliance Contracting Guidelines	Investment Lifecycle and High Value/High Risk Guidelines	Gateway review documentation	Victorian Public Sector Employment Capability Framework
<b>Commercial, procurement, financing, tendering, contract and transaction management</b>						
Sufficient commercial and contractual knowledge to assess effectiveness of outcomes	✓	✓	✓	✓		✓
Commercial acumen and understanding of project procurement and delivery arrangements	✓			✓		✓
Demonstrated understanding of procurement policies and requirements	✓	✓		✓		✓
An understanding of the terms and conditions and pricing of various forms of private and public sector finance, or the future likely trends in this, of government budgetary and financing mechanisms						
Understanding of influences on cost: design, quantities, industry cost rates and broader industry	✓		✓	✓		
Understanding of private sector risk appetite						
Understanding of state risk appetite			✓			
Understanding of project risks and impact on costs	✓		✓	✓		
Ability to examine management accounts and understand the overall impact in terms of current revenues and costs and the impact of service and physical changes to the supporting asset base	✓					
Costing, high level design, modelling	✓		✓	✓		✓
Communication, negotiation and advisory skills	✓		✓			✓
Demonstrated ability to work to tight time frames under pressure						✓
Experience and expertise in managing contracts and public sector financial management requirements	✓	✓		✓		✓
Commercial evaluation capability	✓		✓			✓
Financial modelling	✓			✓		
Financial products	✓					
Typical finance terms and conditions	✓					
Contract management skills	✓	✓	✓	✓		✓
Negotiation skills	✓		✓	✓		
Hands-on negotiation experience in the particular delivery model			✓			
Some exposure to relevant legal documentation and standard approaches	✓	✓	✓	✓		
Hands on experience in management of significant contractor delivered projects (~10-15 years' experience)	✓		✓	✓		✓





## APPENDIX A2 NOTES FOR TERM OF REFERENCE (E)

### A2.1 The Committee's official visits to Australian jurisdictions

State/Territory	Organisation
Australian Capital Territory	Australian National Audit Office
	Joint Committee of Public Accounts and Audit
	Commonwealth Treasury
	Department of Infrastructure and Transport
	Engineers Australia
New South Wales	New South Wales Public Accounts Committee
	Transport and Infrastructure Committee
	New South Wales Treasury
	Infrastructure New South Wales
	Infrastructure Australia
	Infrastructure Partnerships Australia
	SMART Infrastructure Facility, University of Wollongong
Western Australia	Office of the AuditorGeneral, Western Australia
	Estimates and Financial Operations Committee
	Public Accounts Committee
	Department of Premier and Cabinet
	Department of Treasury
	Department of State Development
	Department of Transport
	Water Corporation
South Australia	Economic and Finance Committee
	Public Works Committee
	Department of Premier and Cabinet
	Department of Treasury and Finance
	Department of Planning, Transport and Infrastructure

## A2.2 The Committee’s official visits to international jurisdictions

Country	Organisation
Canada	Partnerships British Columbia
	Legislative Assembly of British Columbia
	Office of the Auditor General of British Columbia
	Legislative Assembly of Ontario
	SNC-Lavalin
	Infrastructure Ontario
	Canadian Council for Public-Private Partnerships
	Conference Board of Canada
	PCL Construction Leaders
	Office of the Auditor General of Canada
	PPP Canada
UK	Cabinet Office / Major Projects Authority
	Institution of Civil Engineers
	Transport for London
	Public Accounts Committee
	Infrastructure UK / Chief Construction Advisor
	National Audit Office
	PricewaterhouseCoopers
	Amber Infrastructure Limited
	ANZ
	Professor Bent Flyvbjerg, Säid Business School, University of Oxford
France	Organisation for Economic Co-operation and Development
	Nicholas Baker, Commissioner for Austrade

## A2.3 Official visits to selected Australian jurisdictions

### CANBERRA

#### A2.3.1 Australian National Audit Office (ANAO)

The Senate has passed legislation providing ANAO with the authority to ‘follow the money’ on Commonwealth funded projects. The authority to examine contractor performance is self-referencing and examination of State entities is on request from the Australian Parliament’s Joint Committee of Public Accounts and Audit. Discussion with the ANAO included:

- The criticality of ensuring all parties in a project have a shared understanding of the expected achievements for a project’s determined cost and time.
- The dependency of accurate cost estimation on the maturity of a project’s design – and the likelihood of cost estimates being unrealistic when ‘fixed’ before the project’s design is sufficiently advanced.
- The need to achieve a full understanding of environmental and similar approval requirements and their impact on project scheduling – prior to project commencement and particularly where designs may need to be altered to meet approval conditions.
- The impact of separate professional registration processes for each jurisdiction on the availability of engineers.
- The result of long-term outsourcing of project delivery, making government a project manager rather than a project deliverer – and the:
  - difficulties in retaining sufficient engineering expertise to know if what is being delivered meets a project’s requirements;
  - extent to which the private sector has ‘filled the training gap’ created, and the effect on the infrastructure industry as a whole; and
  - question of how to provide sufficient project delivery experience to public sector staff to enable them to successfully delivery major projects.
- The Southeast Queensland Infrastructure Program as an example of better practice in strategic infrastructure planning.
- The International Centre for Complex Project Management’s recent work in collaboration with the Commonwealth Department of Defence to develop the Complex Project Managers Competency Standards.

#### A2.3.2 Commonwealth Department of Infrastructure and Transport (DIT)

DIT has a regulatory role that extends to infrastructure planning and coordination.

While the State is the recognised deliverer, the work performed is typically outsourced to the private sector. DIT’s Major Infrastructure Projects Office provides centralised major projects delivery expertise, with a focus on being an informed purchaser.

DIT has established a type of ‘major investment board’ that includes independent members from the private sector. This board provides a challenge process for major projects.

Areas of interest raised during the meeting covered:

- The importance of the public sector to ensure it is a well informed purchaser and is capable of managing major contracts and construction relationships.
- The scope to improve public sector skills in the strategic management of major projects.
- The establishment of an Authority (under legislation) and use of an independent board in the delivery of the Regional Rail Link project – to provide a focus on the project, as opposed to subsumption into a department, and make use of private sector expertise and commercial experience.
- The introduction of a national course focussing on alliancing and run by the Council of Australian Governments (COAG) Infrastructure Working Group and the University of Melbourne.
- The use of Infrastructure Planning and Delivery Best Practice Case Studies and ‘lessons learned’ discussions in the COAG Infrastructure Working Group to enhance knowledge sharing.
- Introduction of national pre-qualification by the COAG Infrastructure Working Group to allow for the pre-qualification of providers in one state to be recognised by all Australian jurisdictions.
- Establishment of the National Infrastructure Construction Schedule aimed at (among other things) informing providers and potential bidders establishing bases in Australia as a gateway to Asia, about public sector infrastructure pipelines with information regarding:
  - all infrastructure projects over \$50 million procured by the general government sector; and
  - tender opportunities within a project for contracts estimated to be worth more than \$25 million.
- The Infrastructure UK Cost Review (December 2010), which highlights the effect of inadequacies in public sector purchasing on project cost overruns.
- The commissioning of the 2012 report *Disincentivising Overbidding for Toll Road Concessions* and the intention to include the topic of patronage risk in the 2012 Infrastructure Partnerships Australia National Conference.

### A2.3.3 Engineers Australia (EA)

Engineers Australia (EA) is the national forum for the advancement of engineering and the professional development of its members. It produces Infrastructure Report Cards that include ratings for each state and territory on the quality of its economic infrastructure.

EA drew the Committee’s attention to the COAG Infrastructure Finance Working Group’s work on infrastructure finance and funding reform. The report, *Infrastructure Finance and Funding Reform* was released in April 2012.

EA advised the Committee of its support of efforts to introduce a National Registration Scheme for engineers. It referred to a consultancy report. The *Economic Basis of the Case for National Registration of Engineers in Australia*, issued in January 2012.

EA stressed the importance of consistency in planning to achieve long-term growth.

Discussions with EA were supplemented by a formal submission by the organisation to the Committee’s Inquiry as well as the furnishing of evidence at a public hearing of the Committee.

## **SYDNEY**

### **A2.3.4 Infrastructure Australia**

Infrastructure Australia is the key national advisor to the Australian Government on infrastructure funding and on the development of national policies and guidelines for the delivery of infrastructure.

The organisation's focus is on assisting Australian governments to develop a strategic blue print for unlocking infrastructure bottlenecks and to modernise the nation's economic infrastructure. It is supported organisationally by the Office of Infrastructure Coordinator.

The Committee's meeting with the Executive Director of Infrastructure Australia traversed a range of matters associated with the organisation's key national role on infrastructure planning and its contemporary thinking on desired future directions and the high costs of bidding in Australia.

The discussions with Infrastructure Australia were a valuable forerunner to the Committee's March 2012 public hearing with the organisation at which the Committee received evidence to further consolidate its thinking on the key strategic work of Infrastructure Australia.

### **A2.3.5 Infrastructure Partnerships Australia**

Infrastructure Partnerships Australia describes itself as the peak body for Australia's infrastructure sector. It aims, by harnessing the expertise and experience of its membership, to lead and shape the national infrastructure debate toward world's best practice delivery of critical infrastructure.

The best practice initiatives of the organisation include annual National Infrastructure Awards, a commitment to the principles of efficiency, innovation, customer service, value-for-money and excellence, and publication of case studies on particular infrastructure projects.

The Committee's meeting with the Chief Executive Officer of Infrastructure Partnerships Australia covered a range of subjects including the organisation's assessment of the main challenges facing Australian governments in their management of major infrastructure projects.

The Committee's discussions with Infrastructure Partnerships Australia were complemented by its March 2012 public hearing with the organisation. At that public hearing, the Committee received valuable evidence which reinforced its awareness of the organisation's important peak body role in infrastructure management and delivery and its contributions to the promotion of better practice across Australia.

### **A2.3.6 New South Wales Treasury**

At the time of the Committee's meeting with the New South Wales Treasury, responsibility and processes for determining infrastructure project costs had not been established. However, Treasury advised that it planned to draw on Victoria's work in the development of its jurisdictional overlay on the National Alliancing Guidelines.

New South Wales has an allocation system called Restart NSW, which serves as an account for infrastructure funds allocated through the budget process. Treasury determines the spending of Restart NSW funds based on recommendation from Infrastructure New South Wales.

Treasury noted the importance of ensuring that alliancing contracting is restricted to cases where the project is difficult to accurately cost at the outset of a project.

### A2.3.7 SMART Infrastructure Facility

The Simulation, Modelling, Analysis, Research and Teaching (SMART) Infrastructure Facility is Australia's national centre for infrastructure solutions. SMART is located at Wollongong University, Sydney.

SMART was established using funds provided by the Commonwealth, State (New South Wales) and the University of Wollongong. The Facility includes 6 professorial chairs, 50 research staff, 200 PhD candidates, and 30 laboratories that are connected to a 'simulation hub'.

SMART provides research in what it has entitled 'integrated infrastructure planning and management', and its vision is to be a:

- world class intellectual leader and educator in 'integrated' infrastructure planning and management; and
- research and development powerhouse with an unprecedented level of impact within the broader infrastructure sector nationally and overseas.

SMART is building an 'infrastructure dashboard' that provides data about the consumption of and investment in infrastructure by different Australian jurisdictions. It also anticipates that it will provide customer and service benchmark analysis.

It is also undertaking research in government project selection cost benefit analysis, complex project procurement and management, and integrated land use and infrastructure provisions.

Discussions with SMART included:

- the challenges of forecasting for infrastructure to actually be able to accommodate future generations, for example in 1932, the spare capacity of the Sydney Harbour Bridge was at 98.5% with only 10,000 registered motor vehicles in NSW. Today there are 8 lanes on the Bridge, with a throughput per hour in every lane of 2,500 cars;
- the fundamental need to ensure that transport corridors exist; and
- the need for public sector capability to clearly articulate the purpose and strategic objectives of significant infrastructure proposals.

SMART drew the Committee's attention to the University of Melbourne's Australian Urban Research Infrastructure Network (AURIN) and their work in improving the management of urban planning through enhanced data management.

### A2.3.8 Infrastructure New South Wales

Infrastructure New South Wales was established under the *Infrastructure NSW Act 2011* and has a wide range of statutory functions, including:

- preparation of long-term infrastructure plans for New South Wales and project implementation plans for individual projects;
- overseeing and monitoring of major infrastructure project delivery;
- evaluation of the risks involved in planning, funding, delivering and maintaining infrastructure, and the management of those risks;
- conduct of reviews of completed projects; and
- provision of advice to the Premier and the Infrastructure Cabinet Committee.

It can also be directed to undertake sectoral reviews and may self-reference infrastructure reviews. The Premier is permitted to disagree with advice provided by the organisation, which it may publish, but is not mandated to do so.

The body's focus is on economic growth and the delivery of a framework in a 20 year strategy that sets out the government's key drivers, opportunities and necessary investments. Its structure includes a core infrastructure group as well as a major projects group. It is also required to establish a five-year plan with a capital program of major projects of over \$100 million that is agreed by Cabinet.

Topics canvassed in the Committee's discussions with Infrastructure New South Wales included:

- The importance of having a genuine challenge process that ensures discipline in setting specifications and clarifying the difference between a project's mandatory/core criteria and those that are simply desirable.
- The need for common planning assumptions (such as land use forecasts) for effective high-level coordination of infrastructure development.
- The challenge of recruiting staff with the necessary skills and attributes for major government projects.
- The skill sets within Australia's superannuation industry in comparison with other jurisdictions, such as Canada.
- Recommendations on skills and knowledge development made by the COAG Infrastructure Working Group, namely:
  - formal knowledge management programs;
  - secondments and formal rotation arrangements between industry;
  - national rotations to increase the availability of staff who have worked on very large/high value projects (which are by their nature infrequent); and
  - national skilling and development programs for projects directors and specialist skills.

## **PERTH**

### **A2.3.9 Office of the Auditor General of Western Australia**

The Office of the Auditor General informed the Committee of its recent work involving matters relating to the State's infrastructure. Areas examined by the Office have included:

- Major Capital Projects (October 2012) – an examination of the West Australian government's 20 highest value non-residential building projects;
- Managing the Priority Start Building Policy (June 2011) – an examination of how well government building contracts are used to support the employment of apprentices and trainees in the construction industry;
- Fiona Stanley Hospital Project (June 2010) – an examination of the planning and management of the project between March 2004 and April 2010;
- ICT [Information and Communication Technology] Procurement in Health and Training (October 2012) – including an examination of the procurement of a state-wide patient administration system;

- The Planning and Management of Perth Arena (March 2010) – an examination of the planning and management of the Arena project including tendering, contract award and construction between March 2004 and December 2009;
- Major Information and Communication Technology Projects – Performance Examination (April 2007) – including an examination of the Western Australian public sector’s performance in delivering major ICT projects; and
- Contract Management of the City Rail Project (August 2005) – a review of the effectiveness of the West Australian Public Transport Authority’s contract management of the City Rail Project and an outline of its [then] current status.

### **A2.3.10 Western Australian Public Accounts Committee (WAPAC)**

In November 2010, the WAPAC tabled the report of its *Inquiry into Project Planning and Funding Applications for Major Western Australian Infrastructure Projects*. The Inquiry examines and reports on the best approaches to decision making for major infrastructure projects in Western Australia, with particular reference to:

- the robustness of project planning and assessment processes; and
- whether funding cases are appropriately developed and presented to maximise access to Federal Government funding.

As a result of its Inquiry, WAPAC has commenced a program of annual assessment of a number of infrastructure projects to determine the degree to which the Western Australian Government’s Strategic Asset Management Framework is being successfully applied and whether anticipated outcomes are being achieved.

At the time of the discussion with the WAPAC, it intended to report on the results of these investigations in its annual reports to the Legislative Assembly.

In its discussions with the Committee, the WAPAC directed the Committee to the United Kingdom Treasury Select Committee’s 2011 report on the United Kingdom’s Private Finance Initiative (PFI). The report states that the Treasury Select Committee had not seen clear evidence of savings and benefits in other areas of PFI projects which are sufficient to offset the traditionally higher costs of the finance model. It also found that there remained significant incentives to use PFI which are unrelated to value-for-money that need to be removed and that stricter rules and guidelines governing the use of PFI must be introduced.

The United Kingdom Government has since responded to this report and, as identified during the Committee’s official visit to the UK, has implemented a range of measures to improve outcomes in the delivery of capital projects.

### **A2.3.11 Western Australian Department of Treasury, Department of Finance and Department of Premier and Cabinet**

The Committee’s official visit to Western Australia included joint discussions with these three departments.

The Department of Treasury includes an Office of Strategic Projects (OSP), which deals with Western Australia’s major projects. The OSP is required to report on the top 50 projects to the Government’s Expenditure Review Committee every two months.



The Department of Finance includes a business area that deals with public works, called Building Management and Works.

The Department of Premier and Cabinet plays a facilitative role in aligning and streamlining the approvals process for projects to maximise their efficiency.

The Western Australian Government has a Works Reform Business Solution Plan that outlines proposed reforms to the planning and project management for the design, construction, maintenance and leasing of government buildings. The Plan advocates business cases being written well in advance of the annual forward estimates period and being strongly linked to an agency's service delivery plan. Business cases are signed off by the OSP.

The Western Australian Government also has a Works Reform Implementation Plan that outlines the approach to be followed for the implementation and evaluation of the Works Reform Business Solution Plan.

Western Australia's Minister for Works receives regular reports on the State's major projects.

### **A2.3.12 Western Australian Department of State Development**

The responsibilities of Western Australia's Department of State Development include:

- developing and co-ordinating significant State projects;
- leading co-ordination of approvals processes for major infrastructure projects across government;
- negotiating and managing agreements between development proponents and the Government;
- enabling the development of strategic industrial land and infrastructure to meet industry needs; and
- providing strategic policy advice on State development issues.

In some cases, Western Australia employs a common-use infrastructure model. This provides alternative infrastructure funding through multiple parties entering into a common user agreement. This model also allows for the infrastructure to be publicly owned and partially privately funded.

The mining boom has led Western Australia to increase its focus on import logistics and its potential to increase freight transport efficiencies.

Discussion with the Department also canvassed the issues of:

- demand-response infrastructure development versus infrastructure development arising from political imperatives;
- the importance of robust data to support infrastructure prioritisation, and its value in reducing perceptions of politically-driven decision making;
- the impact of access to development materials (equipment) and of delivering materials and people to development sites on time and with cost parameters;
- the need for adequate consultation with relevant agencies (planning, infrastructure, projects, treasury, etc.) prior to the submission of a business case; and
- non-financial incentives to encourage loyalty in the public sector workforce.

### A2.3.13 Western Australia Water Corporation

The Western Australian Water Corporation is a statutory corporation . Its sole shareholder is the Minister for Water. Under Western Australia's State supply policy, it is exempt from having to go through central government in its procurement processes.

Strategies formulated by the Corporation include:

- embedding a Design Manager into proponent project teams with the authority to direct the project team regarding the Corporation's design requirements;
- engaging an Owner's Engineer to supplement technical expertise and assist the Corporation in maintaining an informed purchaser status;
- establishing secondment arrangements with organisations with specific types of expertise;
- engaging experts to work with the Corporation's staff and develop their expertise in particular areas;
- facilitating trips for staff to research new technologies in areas of potential projects; and
- performing third party accreditation of overseas manufacturer products during the construction phase to minimise costs of having to send products back to the manufacturer.

## ADELAIDE

### A2.3.14 Synopsis of meetings

*[This includes: Department of Planning, Transport and Infrastructure (DPTI), Department of Treasury and Finance (DTF), Department of Premier and Cabinet (DPC), Economic and Finance Committee (EFC), Public Works Committee (PWC)].*

The South Australia's PWC is a Standing Committee of the South Australian Parliament with the mandate to investigate and scrutinize individual and specific public capital expenditure projects with a value of \$4 million or more. Commencement of physical work on the project is not permitted prior to the PWC's report to the Parliament. The investigations of the PWC address, for each examined project, its:

- purpose;
- necessity or the advisability of its construction;
- potential revenue (if the project is purported to be revenue producing);
- present and prospective public value;
- recurrent or whole of life costs (including construction and proposed use); and
- efficiency and progress of construction and reasons for expenditure beyond the estimated construction costs (where relevant).

Public Private Partnerships (PPPs) are not subject to scrutiny by the PWC.

The Department of Planning, Transport and Infrastructure is responsible for administration of the State's major project delivery. This includes contract administration and the maintenance of records, contract drawing and specifications, and project financial details. The Department's project management system has been accredited by the Australian Institute of Project Management.

Additional topics discussed included:

- customisation versus off-the- shelf design in ICT projects;
- the value of long-term workforce planning that allows project managers to build up a background in design and construction from within government;
- the recognition of project management and contract management as distinct components of project delivery;
- internal (government) capacity and capability versus industry- wide capacity and capability; and
- opportunities to work with professional associations to enhance capabilities industry-wide.

## **A2.4 Official visits to international jurisdictions**

### **CANADA**

#### **A2.4.1 Partnerships British Columbia**

Discussions centred on the role and functions of Partnerships British Columbia operating as a government-owned incorporated body. It is funded through fee-for-service arrangements. It provides expert consultancy advice to provincial agencies for the procurement of projects with a capital cost of in excess of \$50 million. It has a key role in the review of business cases. If asked by agencies, it can assume a wider role in a project's management and delivery. While self-funding through service provision, it appeared to the Committee to have a quasi-monopoly status because of an underlying policy expectation that all agencies draw on its specialist expertise in large PPPs and other procurement types. Nevertheless, the Committee formed the view that it is seen as a centre of excellence in public sector procurement and a principal catalyst for achieving consistency of approach to project management across the Province.

#### **A2.4.2 SNC-Lavalin**

This meeting focused on the professional views of SNC-Lavalin, a leading global engineering and construction group, regarding the planning and management of large infrastructure projects. The discussions canvassed the group's views on:

- The common challenges associated with transitioning from traditional procurement approaches to PPPs, including:
  - the importance of giving project proponents the freedom to be innovative and avoid the adverse consequences of over-specification in contracts;
  - the potential cost implications to governments of inappropriate risk transfers to the private sector partner which can lead to the injection of significant premiums into project bids, essentially leading to bad value-for-money outcomes – risk comes at a price; and
  - strengthening the attraction and credibility of jurisdictions to prospective bidders and enhancing competition through:
    - (a) avoidance of factors such as multiple design reviews that escalate costs;
    - (b) reinforcing a reputation of certainty of project completions by avoiding high incidences of cancellations or costly changes midstream; and

- (c) reasonable provision for reimbursement of some costs to bidders if a government fails to follow through with a project.
- The efficacy of strategies for purchasing intellectual property from losing bidders as partial compensation for the bid process – these strategies are viewed by the group as really only effective in smaller projects as bidders are likely to value their intellectual property at a higher level than the offered compensation.
- The influence on bid costs of the extent of time from initiation to financial close – which, according to the group, is typically 16 months in British Columbia against an estimated initial experience in the UK of around 30 months.
- Some specific features of what was described as Canada’s largest transit PPP (the group was the private sector participant in this project) including:
  - the use of joint financing arrangements with funding injected in the sequence of government contributions followed by debt finance and then equity which resulted in a huge saving in the project’s interest cost;
  - tight but realistic timelines;
  - an open performance - based framework with clearly defined and easily measured criteria facilitating transfer of construction and operating risk to the private sector partner; and
  - use of a small but very knowledgeable owner’s team comprising people who know the business.

### A2.4.3 Infrastructure Ontario

At this meeting, the Committee explored the centralisation of infrastructure expertise in Ontario through the creation of Infrastructure Ontario. This body is a Crown corporation with wide-ranging responsibilities for the delivery of infrastructure projects. Its creation was founded on the premise that the right body is in place going forward so that the Province can deliver projects on time and on budget. The five guiding principles underpinning the functions of the organisation are:

- public interest is paramount;
- value-for-money must be demonstrable;
- appropriate project control and ownership must be preserved;
- accountability must be maintained; and
- all processes must be run in a fair, open and transparent way.

A feature of its structure is the operation of a lending business unit. Through the issue of bonds, it has advanced approximately \$3.7 billion in loans which have financed projects with a value of around \$7 billion. The organisation does not have an infrastructure policy function. Priorities under a ten-year infrastructure plan are set by the Province’s Ministry of Infrastructure, guided by the Government’s strategic policies, which seeks advice from Infrastructure Ontario at two key stages before allocation to it of approval with budget to proceed with delivery.

The major projects division of Infrastructure Ontario put to market \$2.4 billion worth of projects in the last year. It has around 30 projects currently under construction, all proceeding on time and on budget. Regular progress reports are provided and projects with over-budgeted expenditure are audited by the Auditor-General.

The organisation stressed to the Committee the importance of working in a team environment, a true partnership, with agencies in the delivery of projects.

#### **A2.4.4 Canadian Council for Public-Private Partnerships**

Discussions were held with representatives of the Canadian Council for Public-Private Partnerships, a member-sponsored organisation with representatives from both the private and public sectors. The Committee's discussions centred mainly on obtaining the perspectives of members of the Council on contemporary directions on PPPs in Canada. Topics covered at the meeting encompassed:

- The value placed by the Canadian private sector on certainty that projects initiated under the framework established by Partnerships British Columbia and Infrastructure Ontario will be managed under a predictable contractual model and will be completed.
- The importance of contingency provisions embedded within government contracts to facilitate continuity of works in the event of problems encountered with a private sector partner – these provisions could include governments retaining ownership of some key assets or equipment.
- PPPs are not the answers for every project – the screening process is critical to determining the optimum procurement model.
- There have been some Canadian examples of bundling of a series of like projects into single large infrastructure projects for schools and police buildings – this approach can assist in the engagement of local contractors, although the experience in some cases has been the opposite where all projects were required to be constructed concurrently, limiting the number of key participants.
- The calibre of infrastructure skills in Canadian jurisdictions varies according to the size of the municipality – the view was expressed that the small to medium-sized municipalities tended to lack the necessary mindset and experience.
- Use of special purpose companies involving a small knowledgeable team of internal and external expertise for specific projects can help to strengthen a jurisdiction's informed buyer status.
- Emerging financing strategies employed by governments, with Ontario now reaching levels of 50 per cent capital cost contribution from government – it was emphasised that this approach needs to be contrasted with the inherent benefit of private sector consortiums assuming, as with PPPs, the full financing and construction risk, with no drawdowns on taxpayer funds occurring until financing and construction goals have been met.

#### **A2.4.5 Conference Board of Canada**

At this meeting, the Committee considered the functions of the Conference Board of Canada, an independent non-partisan, not-for-profit research organisation funded through fees charged to the private and public sectors. The Board seeks to build leadership capacity for a better Canada by creating and sharing insights on economic trends, public policy and organisational performance. The Committee heard from the Board regarding:

- A positive assessment of the framework established by Infrastructure Ontario – considered to be a unique approach which brings a horizontal view and a level of predictability to the delivery of infrastructure projects.

- The private sector favours projects in the \$1 billion to \$2 billion range, although the actual value of PPPs from 2007-2011 in Canada was just under \$US400 million – many projects are under \$100 million with limited risk (such as demand risk) transferred to the private sector which raises questions, from the Board's viewpoint, on the level of value derived from such approaches.
- Transfer of maintenance risk to the private sector under the PPP model contributes to better design considerations as well as supporting effective ongoing maintenance over the life-cycle of major projects.
- Higher levels of up-front capital from governments as part of the financing of individual infrastructure projects can impede the intrinsic benefits of the PPP model – with possible doubtful benefits of government being both a lender and owner in these circumstances.

#### A2.4.6 PCL Construction Leaders

During this visit, the Committee sought the perspectives of the private sector construction party, PCL Construction Leaders, Toronto, in the Bridgepoint Hospital project. This project is a major Canadian PPP which was described to the Committee at the meeting as a very successful project. The discussions were followed by a site visit. The Committee discussed the following general success factors:

- Early communication with the client is vital for aligning plans with the expected outcomes; this happened at the front end of the PPP process and would not have occurred so well in a lump sum model.
- Strong focus on regular liaison with the community and keeping them in the loop – reviews occurred on ongoing basis with community representatives, a process led by a hired community consultant.
- The forging of strategic partnerships with experienced subcontractors who make a clear contribution to the end product.
- Keeping a lid on the level of detail required in the 'product specific output specification' (PSOS) – excessive detail requirements can add greatly to costs without any specific benefits. It is best for governments to allow high-level engagement by a contractor with end-users during the project and progressively accommodate any necessary changes within core parameters rather than specify layers of requirements in advance.
- Facility management was a specific part of the process from the beginning with the emphasis placed on building systems, equipment selection and anything to do with maintenance.
- A disciplined approach to key milestones at the front end with, submission of project proposal through to financial close and construction start on-site, involving about five months.
- The emphasis placed by the contractor on the quality of its work schedules – planning its work and then working its plan.
- Everyone is aware of the major milestones and all are involved in their tracking and celebration of achievement.

## A2.4.7 PPP Canada

Discussions were held by the Committee with senior representatives of PPP Canada, a Federal Crown corporation set up in 2009 and run by a private sector Board, but fully owned by the Government of Canada. Its overall objective is to promote the use of PPPs where they produce value for taxpayers. Points covered at the meeting on the policies and perspectives of the organisation included:

- The Federal Government has set up a \$1.2 billion fund to broaden over five years the use of PPPs at the provincial and municipal levels.
- Annual investment rounds are held under which applications are screened and evaluated against, from a federal perspective, enablers of economic growth and jobs. The federal capital contribution is generally limited to 25 per cent.
- The benefits of PPPs are seen to arise from the discipline of the private sector capital and *their money on the line*.
- The strength of commercial experience and financial market experience, and not just engineering expertise, are seen as key determinants of a jurisdiction's informed buyer status.
- PPPs involve a change in skill sets from specifying how to specifying what – how do you benchmark credit rates, credit spreads etc. that are not conventional skills within government agencies.
- The value of a central repository of expertise and skills being involved in a continuous stream of projects from inception cannot be replicated at individual ministry levels that do not have continuous projects.
- It is important to match the life-cycles of projects with the life-cycle management of projects – the success of a PPP is over the life of a project, not just when construction is completed.
- Generally, the funding assistance provided by the organisation is predicated on a requirement that no capital payments are made until completion of construction.
- Two types of business cases apply – one for the type of asset and the other for the delivery of the project as a PPP procurement. PPP Canada may co-fund the cost of the business case, which has to comply with its business case guide – agencies have to hire qualified advisors, cleared through the organisation, to assist compilation of their business cases.
- A management committee created between the organisation and the funded agency oversees the project up to three years beyond substantial completion to provide assurance that the right resources and procedures are in place to effectively manage the project over its life-cycle.
- On its internal requisite skills, the organisation has established a competency directory for its core business areas including business case development and value-for-money analysis – its staff exhibit a mix of skill sets including experience in the delivery of PPPs, engineering and expertise in project finance.

## UNITED KINGDOM

### A2.4.8 UK Cabinet Office and Major Projects Authority

The Committee's initial meeting in the UK was with representatives of the UK Cabinet Office. This meeting canvassed a range of important initiatives implemented by the UK Government in recent times such as creation of the Major Projects Authority. It also addressed related matters associated with the functions of the Cabinet Office. These initiatives have been directed at strengthening the management and delivery of infrastructure projects, including the capability of key project officials. Discussions at this meeting covered several developments of interest to the Committee including:

- The Major Project Leadership Academy which focuses on harnessing project leadership capability through executive programs at two key project management roles, Senior Responsible Owners of projects and Project Directors. New executive development programs for these roles include residential modules at the University of Oxford – the aim of the programs is to produce quality leaders who can genuinely deliver successful projects.
- Tracking of turnover rates for the two key identified leadership roles and a study of any discernible links between turnover rates and project success rates.
- Introduction of a quarterly reporting regime for major projects which involves monitoring of progress against budget forecasts and key milestones.
- The creation of an integrated assurance and approvals program under which agreement is reached on the path a project is going to take through its various key stages and the degree of assurance that will be provided at each stage.
- Use of a Starting Gate Review stage which precedes business case development and Gateway Reviews – designed to encourage early consideration of the broadest range of options for delivery of a project and to reach optimal decisions as the basis for going forward.
- The challenges associated with retaining key leadership and other important project management skills and potential strategies for addressing these challenges.
- Longer-term goals established under a civil service reform plan to achieve optimum capability in the form of a talent pool for government rather than a narrower focus on talent pools for individual agencies.
- A requirement for agencies receiving approval for the use of consultants to implement skills transfer strategies in order to reduce the need to buy-in the subject expertise for future purposes.
- Implementation of a Government ICT Strategy which aims to place limitations on the value of any new ICT project and to bring about greater resource-sharing in this area.

The above discussions with the UK Cabinet Office were complemented by a later meeting with the Executive Director of the Major Projects Authority. At this meeting, the Committee was able to gain an understanding of the formal Mandate given to the Authority by the UK Prime Minister and the underlying strategies that have been established to implement that Mandate. These strategies include the creation of department boards, with several non-executive directors from the private sector, and actions to reinforce the accountability of departmental Heads for delivery of infrastructure projects.



## A2.4.9 Institution of Civil Engineers

Discussions were held with representatives of the UK Institution of Civil Engineers exploring the Institution's perspectives on a range of emerging developments in infrastructure management and delivery in the UK.

### A2.4.10 Transport for London

The Committee was able to meet with representatives of Transport for London. This organisation brings together almost all of the transport functions within London. The Committee obtained input from the organisation on several matters including the workings of London's smart card transport system, its forward planning strategies and the certainty in funding from government over the planning period that contributes to stronger decision-making on project directions and resourcing project teams.

On its informed buyer status, the organisation aims to have informed managers who can buy in design consultancy or project delivery contractors etc. Use is made of a *sponsor community* to manage stage one of a project's life-cycle – it defines the expected outcomes of projects and then creates and works with a specific delivery team to deliver the project. The delivery teams assume ownership and accountability for projects and progressively report to the sponsor group.

### A2.4.11 Infrastructure UK and the Chief Construction Advisor

A joint meeting was held with the Chief Construction Advisor to the UK Government and a representative of Infrastructure UK. Discussions focused on the role of the Government Construction Board and initiatives underway within Infrastructure UK. Key change programs referred to at the meeting included:

- A major cost review exercise comparing UK infrastructure costs with other jurisdictions.
- A focus on having the right behaviours in place to achieve results – developing the right sort of behaviours and collaborative practices within industry to make things happen on a sustainable basis.
- Improving the visibility of the construction pipeline through publication of a National Infrastructure Plan incorporating future directions and short and medium steps to meet those intentions.
- Improvement actions which reinforce the intrinsic relationship between certainty in direction embedded in the infrastructure pipeline and strategies for developing infrastructure capability.
- A study which addresses procurement decision making and the need to assess the capability of the public sector as the client, the sponsor's capability and the capability within the supply chain before embarking on a procurement decision.
- Application of an upper-limit of 30 per cent for government contributions to construction costs, made after construction, where private sector partners are engaged.
- An examination of transparency in project management from two angles – from the perspective of the community but also from the position of the public sector as the client in contracts.

### A2.4.12 Private sector organisations in the United Kingdom

The Committee was able, during its visit to the UK, to engage in separate discussions with representatives of the following private sector organisations to obtain valuable private sector perspectives on a range of public sector infrastructure issues relevant to its Inquiry:

- Price Waterhouse Coopers
- Amber Infrastructure Limited
- ANZ Bank

### A2.4.13 Professor Bent Flyvbjerg

A meeting took place with Professor Bent Flyvbjerg, Professor of Major Program Management in the Säid Business School of the University of Oxford. Professor Flyvbjerg is the Director of the Business School's PT Centre for Major Program Management. This insightful meeting explored the principles and strategies underpinning directions in research and training in mega project management at the Centre. Matters canvassed included:

- The root causes of optimism bias in project planning which may have an innocent basis or, through strategic misrepresentation, is deliberately devised. The centre has found that a final business case will look much better than an actual project in as high as more than 90 per cent of cases. Front end solutions are critical here.
- Examples of the impact of the application of optimism bias uplifts in adjustments to project budgets accompanied however by an incentive practice requiring such adjustments to be funded by the delivering agency.
- The importance of domain experience in the domain of major project management as a means of retaining and developing core internal expertise.
- The need to include accountability of organisations as well as accountability of persons in the accountability framework for major projects.
- The high level of risk of major cost blowouts with ICT projects – research indicates that, on average, one in six will have cost overruns of 200 per cent. Centralising ICT procurement functions in government can help. The Centre has the largest database worldwide on ICT projects.
- Successful ICT projects exhibit two clear characteristics – a project manager skilled in managing the stakeholders (all who have an interest in the system) and strong support coming from senior management.
- Benchmarking against other jurisdictions on elements of program management such as labour costs is challenging but can be productive.
- Experienced leaders in infrastructure management is the most critical ingredient, even more important than the right government structure.

### **A2.4.14 Parliamentary Committees and Auditors-General in Canada and the UK**

The Committee also held meetings with its counterpart Committees in the Canadian and UK National Parliaments and the Canadian Provincial Parliaments. These meetings canvassed parliamentary procedures for oversight of infrastructure management and delivery in those jurisdictions and for reviews of issues on infrastructure raised in reports of the Auditors-General. The meetings were complemented by separate discussions with Auditors-General in the respective jurisdictions. Individual private and personal views of members of parliamentary committees were also heard on the way forward for PPPs that did not purport to represent the relevant committees' views. Additionally, the Committee was informed that parliamentary committees in certain provinces can request that the Auditor-General undertake special audits into specific matters.

The Committee also heard the private and personal views of various Auditors-General regarding the strengths and weaknesses of particular infrastructure development and delivery bodies, including the adequacy of handover arrangements during the operational phase to competent and suitably experienced government agency officers and the need for on-going transparent public reporting obligations. The Auditors-General also shared their knowledge on lessons learnt on various PPP projects that they had tabled reports on, including appropriate accounting treatment in those jurisdictions.

Views were also obtained from Auditors-General that if the expectation of 'transparency of the books' is enunciated with private sector bidders at the start of a project, before contracts are awarded, bidders will agree to adjust their operations to facilitate compliance with a Government's expectations of an 'open book' approach.

## **FRANCE (PARIS)**

### **A2.4.15 Organisation for Economic Co-operation and Development (OECD)**

Discussions took place with representatives of the Organisation for Economic Co-operation and Development including the work of its Senior Budget Officials Committee on PPPs. Matters explored at the meeting included the various principles on PPPs that have flowed from that Committee's accumulated knowledge over the five years of its deliberations on PPPs. The three headline principles conveyed to the Committee were:

- getting the institutional framework right;
- addressing both qualitative and quantitative factors in ensuring achievement of value-for-money; and
- maximising transparency.

These three principles should apply to all procurement models, PPPs or otherwise.

### **A2.4.16 Australian Trade Commission**

The Committee met with representatives from the Australian Trade Commission, including the Commissioner for Austrade. An understanding was gained about priority areas in Australia for attracting and supporting direct foreign investment. Government projects from Australian jurisdictions are promoted for investment. However, global competition for investment funds is sensitive to bidding costs, the level of legal requirement in a jurisdiction, and the number of projects available.

The Committee learned that the European financial crisis has led to an available labour market of quality young professionals from countries such as Germany, France, Spain and Italy, who are able to traverse physical boundaries and adapt to business in any country.

## **A2.5 Overall comments on the Committee's official visits**

In its official national and international visits, the Committee has been grateful for the opportunity to canvass contemporary developments in infrastructure management during face to face meetings with many experienced parties and organisations.

The discussions have traversed a diverse range of topics. They have taken place with a wide cross-section of the national and global infrastructure industry. They have been a vital input to the Committee's deliberations under each of the terms of reference of its Inquiry.

The Committee wishes to publicly record its appreciation to all of the visited organisations and individuals. In all cases, their willingness to give of their time and expert views on infrastructure practices and directions was exemplary.

## APPENDIX A3 LIST OF SUBMISSIONS

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Number	Submission Author
1	Dr James Porter
2	RBconsult Ltd
3	David Chandler OAM
4	Victorian Auditor-General's Office
5	Ensemble Partners
6	Foster Infrastructure
7	Association of Professional Engineers Scientists and Managers Australia
8	Construction, Forestry, Mining and Energy Union, Victorian Branch
9	Australian Institute of Project Manager
10	Committee for Melbourne
11	Engineers Australia
12	Macquarie Capital
13	Consult Australia
14	Lazard Pty Ltd
15	Dr Graeme Hodge, Monash University
16	<i>confidential submission</i>
17	Plenary Group
18	Victorian Employers' Chamber of Commerce and Industry
19	Dr David Platt, VANZI Ltd
20	Department of Treasury and Finance
21	Project Management Institute
22	Institute of Public Affairs



## **APPENDIX A4 LIST OF PEOPLE AND DEPARTMENTS PROVIDING EVIDENCE AT PUBLIC HEARINGS**

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### **20 March 2012**

#### **Department of Treasury and Finance**

Mr Grant Hehir, Secretary  
Mr David Webster, Deputy Secretary, Commercial Division  
Mr Joe Monforte, Director, Infrastructure Risk Management  
Mr Jason Loos, Director, Partnerships Victoria

#### **Victorian Auditor-General's Office**

Mr Des Pearson, Auditor-General  
Mr Ray Winn, Sector Director - Transport, Performance Audit  
Mr Paul O'Connor, Sector Director - Technology Review and Annual Plan, Performance Audit

#### **Department of Transport**

Mr Jim Betts, Secretary  
Mr Gary Liddle, Chief Executive, VicRoads

#### **Department of Sustainability and Environment**

Mr Greg Wilson, Secretary  
Mr Peter Sammut, General Manager, Capital Projects  
Mr Andrew Fennessy, Director  
Mr Matthew Clancy, Acting Chief Finance Officer

#### **Infrastructure Australia**

Mr Rory Brennan, Executive Director,

#### **Infrastructure Partnerships Australia**

Mr Brendan Lyon, Chief Executive Officer  
Mr George Powell, National Policy Manager  
Mr Adrian Dwyer, National Policy Manager

### **21 March 2012**

#### **Former Deputy Chair, Building the Education Revolution Implementation Taskforce**

Mr David Chandler OAM

### **Department of Health**

Mr Lance Wallace, Acting Secretary  
Ms Leanne Price, Director, Capital Projects

### **Department of Planning & Community Development**

Mr Andrew Tongue, Secretary,  
Ms Prue Digby, Deputy Secretary, Planning, Building and Heritage  
Mr Ken Hudson, Manager, Construction and Procurement

### **Boulderstone Ltd**

Mr Pat Cashin, General Manager  
Mr Peter Murphy, Manager Project Development EPG  
Mr Michael Kalinowski, Engineering Manager

### **State Services Authority**

Ms Karen Cleave, Chief Executive Officer  
Ms Gabrielle Gronn, Assistant Director

### **Committee for Melbourne**

Ms Andrea Gaffney, Acting Chief Executive Officer  
Mr Tom Fricke, Executive Board Member

### **Monash University / University of Melbourne**

Dr Graeme Hodge, Director, Centre for Regulatory Studies, Monash University  
Associate Professor Colin Duffield, School of Engineering, University of Melbourne

### **Australian Institute of Project Management**

Mr Michael Ratcliffe, Victorian President  
Mr Leh Simonelli, National Director  
Ms Margie O'Tarpey, Chief Executive Officer

## **22 March 2012**

### **Department of Education and Early Childhood Development**

Mr Richard Bolt, Secretary  
Mr Jim Miles, Acting Executive Director, Office for Resources and Infrastructure  
Mr Chris Keating, Assistant General Manager, Office for Resources and Infrastructure  
Mr Phil Clarke, Executive Director, Skills Victoria

### **Association of Professional Engineers, Scientists & Managers, Australia**

Mr Chris Walton, Chief Executive Officer  
Mr Erik Locke



## **Department of Business & Innovation**

Mr Howard Ronaldson, Secretary

Mr Peter Noble, Acting Deputy Secretary, Investment and Major Projects

Mr Tim Bamford, Executive Director, Major Projects Victoria

## **Department of Justice**

Ms Penny Armytage, Secretary,

Ms Gail Moody, Executive Director, Strategic Projects and Planning

Mr Paul Delphine, Director, Built Environment and Business Sustainability

## **Plenary Group**

Mr Kelvyn Lavelle, Executive Director, Corporate Services

Mr Paul Crowe, Executive Director, Head of Origination

Mr Damien Augustinus, Associate Director, Origination

## **Ensemble Partners**

Mr David Hodes, CEO & Founder

Mr Richard Fowler, Marketing Manager

Ms Inge Brown, Partner, Commercial

## **Engineers Australia Victoria Division**

Ms Glenda Graham, Executive Director

Mr Paul Collier, Immediate Past President 2012, Engineers Australia Victoria Division

Dr John Wilson, Professor of Civil Engineering and Deputy Dean Faculty of Engineering and Industrial Sciences, Swinburne University of Technology

## **Capability Management International Pty Ltd**

Mr Vince Gill, Partner

Mr Jed Simms Partner

Mr Gerry Barry, Associate Partner

## **21 August 2012**

### **Transport Ticketing Authority**

Mr Bernie Carolan, Chief Executive Officer

### **Victorian Auditor-General's Office**

Mr Des Pearson, Auditor-General

Ms Simone Bohan, Sector Director Financial Audit, Central Agencies and Whole of Government

Mr Paul O'Connor, Sector Director Performance Audit, Technology Review and Annual Plan

### **Department of Business and Innovation**

Mr Howard Ronaldson, Secretary

Mr Tim Bamford, Executive Director, Major Projects Victoria

Ms Jane Niall, Client Representative, Melbourne Market Relocation Project

### **Department of Treasury and Finance**

Mr Grant Hehir, Secretary

Mr David Webster, Deputy Secretary, Commercial Division

Mr Jason Loos, Director, Partnerships Victoria

Mr Joe Monforte, Director, Infrastructure Risk Management

## **22 August 2012**

### **Kamco (Keane)**

Mr Greg Purdy, Senior Vice President and CEO

Mr Ande Lake, Executive Vice President, Asia Pacific NTT Data Inc.

### **Victorian Ombudsman's Office**

Mr John Taylor, Deputy Ombudsman

Ms Erin Barlow, Acting Principal Investigation Officer

### **CSC Australia (formerly iSOFT)**

Mr James Rice, Managing Director

Mr Gary White, Operations Director

### **Lend Lease**

Mr Geoff Moore, General Manager - Vic/SA/Tas

Ms Kim Sides, General Counsel

### **Austin Health**

Dr Brendan Murphy, Chief Executive Officer

Ms Fiona Webster, Executive Director, Acute Operations

Ms Jackie MacLeod, Director of ROMeO

## **23 August 2012**

### **Royal Eye and Ear Hospital**

Ms Ann Clark, Chief Executive Officer

Mr David Lau, Executive Director Ophthalmology Services

## **Department of Health**

Dr Pradeep Philip, Secretary  
Mr Lance Wallace, Executive Director, Finance & Corporate Services  
Ms Leanne Price, Director, Capital Projects & Service Planning  
Mr Tony Lubofsky, Royal Children's Hospital Project Director

## **Royal Children's Hospital**

Professor Christine Kilpatrick, Chief Executive Officer

## **Children's Health Partnership**

Mr Tom Kirkland, Chief Executive Officer

## **Lend Lease**

Mr David O'Shaughnessy, Project Director  
Ms Karin Ragel, Senior Legal Counsel

## **24 August 2012**

### **Plenary Group**

Mr Paul Crowe, Head of Origination  
Mr Glenn Hay, Chief Operating Officer  
Mr Chris Clifton, General Manager, Plenary Conventions

### **Department of Sustainability and Environment**

Mr Greg Wilson, Secretary  
Mr Peter Sammut, General Manager, Capital Projects

### **Aquasure**

Mr Chris Herbert, Chief Executive Officer  
Mr John Ridley, Communications Director

## **8 October 2012**

### **Department of Transport**

Mr Jim Betts, Secretary  
Ms Melanie Nanscawen, Director, Market & Product Development, Public Transport Victoria

### **Department of Treasury and Finance**

Mr Grant Hehir, Secretary  
Mr David Webster, Deputy Secretary, Commercial Division  
Mr Jason Loos, Director, Partnerships Victoria  
Mr Joe Monforte, Director, Infrastructure Risk Management

