

VERIFIED VERSION

PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE

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

Melbourne — 21 August 2012

Members

Mr N. Angus

Mr P. Davis

Ms J. Hennessy

Mr D. Morris

Mr D. O'Brien

Mr M. Pakula

Mr R. Scott

Chair: Mr P. Davis

Deputy Chair: Mr M. Pakula

Staff

Executive Officer: Ms V. Cheong

Witness

Mr B. Carolan, Chief Executive Officer, Transport Ticketing Authority (sworn/affirmed).

**Necessary corrections to be notified to
executive officer of committee**

The CHAIR — I declare open the Public Accounts and Estimates Committee hearing on the inquiry into effective decision making for the successful delivery of significant infrastructure projects. On behalf of the committee I welcome from the Transport Ticketing Authority Mr Bernie Carolan, chief executive officer. Members of Parliament, departmental officers, members of the public and the media are also welcome.

In accordance with the guidelines for public hearings, I remind members of the public gallery that they cannot participate in any way in the committee's proceedings. Only officers of the PAEC secretariat are to approach PAEC members. Transport Ticketing Authority officers, as requested by the chief executive officer, can approach the table during the hearing to provide information to the chief executive officer, by leave of myself as chairman. Written communication to witnesses can only be provided via officers of the PAEC secretariat.

Members of the media are also requested to observe the guidelines for filming or recording proceedings in the Legislative Council committee room, and no more than two TV cameras are allowed at any one time in the allocated spaces. May I remind TV camera operators to remain focused only on the persons speaking and that panning of the public gallery, committee members and witnesses is strictly prohibited.

All evidence taken by this committee is taken under the provisions of the Parliamentary Committees Act, attracts parliamentary privilege and is protected from judicial review. However, any comments made outside the precincts of the hearing are not protected by parliamentary privilege.

All evidence given today is taken under oath or affirmation and is being recorded. Witnesses will be provided with proof versions of the transcript within 15 working days of this hearing, which are to be verified and returned to the committee secretariat within two working days of receipt. Unverified transcripts and PowerPoint presentations, if any, will be placed on the committee's website immediately following receipt, to be replaced by verified transcripts within 48 hours of receipt.

Following a presentation, if any, by the chief executive officer, committee members will ask questions relating to the inquiry. Generally the procedure followed will be that relating to questions in the Legislative Assembly, with this committee's own tweak to that process. I ask that all mobile telephones be turned off, or at least to silent.

I now call on the chief executive officer to give a brief presentation, if he chooses, of no more than 5 minutes.

Mr CAROLAN — Which I will not be doing.

The CHAIR — Thank you, Mr Carolan. Therefore the remaining time is allocated to questions. I might just lead in by reiterating the purpose of this hearing. The committee is concerned to seek the advice from the witness in relation to experience in project management in relation to the transparency, accountability and efficacy of implementing a complex public project in relation to the work undertaken by the TTA. The issues that we will canvass during this hearing include those accountability and transparency issues, lessons learnt from experience and relevant skills and capacities. I think it stands out that the committee will be interested to hear commentary around the issues of delays, increases in time lines and costs over the project period. My inclination is to deal with what is overtly probably the obvious issue, which is the increasing cost of this project, and particularly the delays in implementation. If, Mr Carolan, you would like to make some very specific comment about that without being prompted by questions, I am happy to take the comment; otherwise we will go directly to some specific questions.

Mr CAROLAN — Questions are fine.

The CHAIR — I am going to ask Mr O'Brien to ask a question about that issue in particular in a moment, but in terms of the information before the committee, we received your response to our questionnaire. While quite informative in some respects, that response was not specific as to the information sought by the committee. There were requests for information to be provided about the four key project phases — namely: business case, tender process, contract development management and project service delivery — and we were seeking information to be sufficiently detailed to ensure that the committee was able to properly analyse aspects of this project. However, it is clear from the questionnaire response that the TTA has presented all cost variations under one project or service delivery phase. I am interested to know if you are in a position at the moment to break that down for us into the form in which the committee actually asked for the information.

Mr CAROLAN — First I should clarify that the response you referred to is actually from the Department of Transport, not the Transport Ticketing Authority. We collaborated on that response, of course, but it is a response from the Department of Transport on behalf of both.

The CHAIR — So it is a joint response, yes.

Mr CAROLAN — The project, right from its early days, has been referred to in an extremely peculiar way as to its budget and in my opinion not only a peculiar way but a very unhelpful way for anyone to understand the componentry of the costs. The costs that are in the public mind are not the costs of the project, so that is the first thing that should be said. The TTA was established as a particular type of government entity with various responsibilities, and therefore it needed to deliver a budget that related to all those activities. In major categories those activities are not at all apples and apples. They are very much apples and oranges that are then aggregated together to give some sort of overall costing.

The four major categories that are embedded in what is called the total cost are the cost of investing and building in a new ticketing system for Melbourne — and I will come back to that in a moment; the cost of then operating that system through until 2017, as was the time period of the contract at the time of awarding the tender; TTA's own administrative costs for the period; and the costs of operating the Metcard system as a legacy system for as long as it is needed.

The actual costs for investing in the new ticketing system for Melbourne is quoted in budget paper 4 of this year as \$610 million. In terms of most of the discussion that I believe this committee is interested in, that should be the area that we focus on. The \$610 million includes about \$140 million of TTA's costs, that under standard government accounting rules are allowed to be defined as capital expenditure. That leaves about \$470 million for investing with the contractor in the delivery of a new ticketing system for Melbourne. That \$470 million includes around about \$145 million of civil works and access costs that flow straight through the ticketing contractor out to the people who do the physical work on the system, who in many cases are transport franchisees.

In terms of understanding what is involved in something that is closer to the true meaning of the project and investing in something for the future of the state, it is those numbers that we need to focus on, in my opinion.

The CHAIR — Then the response would be: what is the total cost to the government, really, in delivering the project? There may be areas that you would prefer the committee to focus on, but I think — —

Mr CAROLAN — The total cost of delivering the project as a project is \$610 million, according to budget paper 4.

Mr O'BRIEN — That is just not correct. The total cost, according to your figure, is \$1.5 billion at the moment. Are you expecting it to increase, or is that the latest estimate?

Mr CAROLAN — The total cost of the TTA's budget is \$1.5 billion, I agree. The total cost of delivering the investment in the new ticketing system for Melbourne is defined in budget paper 4.

Mr O'BRIEN — Just if we go back, that is the reference on page 6, the \$1.52 billion. That is the present statement. Would you accept that if there is an analysis of the total costs, one needs to look at the capital and operating costs?

Mr CAROLAN — It depends what you are trying to do.

Mr O'BRIEN — If you are looking at the total project. You have got capital costs, and then you are upgrading costs over the life — —

Mr CAROLAN — By comparison with most other things that are called projects you would not look at the operating costs.

Mr O'BRIEN — Alone?

Mr CAROLAN — No. You would look at the delivery costs.

Mr O'BRIEN — Yes, except that when you first put the project forward, it was effectively the TTA — when I say 'you', I don't mean you personally; I mean the TTA — and to some extent the previous government that put it forward originally as a \$494 million project for both capital and operation.

Mr CAROLAN — Correct.

Mr O'BRIEN — Are you aware of Mr Batchelor's evidence to the Public Accounts and Estimates Committee on 9 June 2006?

Mr CAROLAN — Not specifically, but I am familiar with the \$494 million.

Mr O'BRIEN — What do you regard that as being for?

Mr CAROLAN — That was for \$175 million of building and whatever the balance is — 319, if my maths is correct — of operating costs for 10 years.

Mr O'BRIEN — For 12 years?

Mr CAROLAN — For 10 years.

Mr O'BRIEN — To put the words Mr Batchelor said — would you agree or disagree with this assessment, particularly in hindsight, from where we are now? What he says is on page 11:

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.

So do you think that was an accurate statement then in terms of the operation and the 12-year contract?

Mr CAROLAN — I can explain what the situation is.

Mr O'BRIEN — What about that statement then, because that is what was put to this committee?

Mr CAROLAN — I am not going to comment on someone else's statement.

Mr O'BRIEN — No; you can comment on the accuracy.

Mr CAROLAN — No. The accuracy of the contract award was a 12-year contract at its maximum term. In terms of budget coverage it was for an operating term of 10 years, and that 10 years needs to be understood that it included 2 years of operating certain services for which the TTA retained an option to take back in house and 10 years for certain other services.

Mr O'BRIEN — Another matter we could go to then is that the board accepts now that that was unrealistic, that two-year assessment. That is how —

Mr CAROLAN — That is a completely different matter. The two years that I refer to are nothing to do with the two-year implementation period.

Mr O'BRIEN — It is a two-year continuation rollout of Metcard, yes.

Mr CAROLAN — No, it is nothing to do with the two years of Metcard. In terms of operating services, Kamco had a contract. The operating contract is in two parts. So once the operating period commences they have a contract which entitles them automatically to 2 years delivery of certain services and 10 years for delivery of certain other services. The state had the right to influence what happened with what are called initial services.

Mr O'BRIEN — And this is in the context where Kamco, as per the Ombudsman's report, was later found — they were the successful bidder, and they were unable to evidence a proven solution in relation to other sites where a Metcard system had been operating. That is correct, is it not?

Mr CAROLAN — You are referring to last year's Ombudsman report?

Mr O'BRIEN — Yes, paragraph 324.

Mr CAROLAN — Correct.

Mr O'BRIEN — One of the options was to potentially extend the Metcard system for an estimated \$100 million, as per reports. Do you accept that that was an option?

Mr CAROLAN — I accept it was an option.

Mr O'BRIEN — So if the people of Victoria had been told back then that it was a total operating and capital cost of \$1.5 billion as opposed to a \$100 million extension, given the opportunity cost of that balance in terms of other infrastructure for road and rail, what do you think the choice would have been?

Mr CAROLAN — I think you are not comparing apples with apples when you compare \$100 million to \$1.5 billion.

Mr O'BRIEN — Exactly.

Mr CAROLAN — They are two entirely different cost bunches that are not comparable. The analysis that was done at the time obviously considered all the pros and cons of continuing with Metcard or some other option. It went through a very public open tender process where all parties were entitled to bid, and it came to a decision at the time.

Mr O'BRIEN — And one would prefer the \$100 million apple than the \$1.5 billion apple.

Mr CAROLAN — They are not comparable. I do not accept the thesis of the question. They are just not comparable.

Mr PAKULA — It appears that Mr O'Brien has managed to ascertain that myki has had some problems. It seems to me that what we have been doing for the last 5 minutes is kind of different to the scope of what these hearings are about. We have obviously had PAEC hearings before, both into myki more generally and into the probity of the tender process specifically, which went for weeks, and a lot of this ground has been traversed, but because the matter has been raised by my colleague, I think it is probably worth, Mr Carolan, to the extent you can, taking us back through in terms of Metcard and its rational life beyond, sort of, 2012-ish. I know you were not on the board until 2010, but what were the ongoing issues with Metcard, what are the ongoing operating costs day by day of running Metcard and, in terms of the \$100 million Mr O'Brien talks about, the ongoing operating costs per annum of running a system which is approaching obsolescence?

Mr CAROLAN — In part this goes back to the climate that was involved when the decision to implement a smartcard ticketing system for Melbourne was occurring, which was fully 10 years ago, back in 2002, when the conception of this scheme occurred. Of course at that time Metcard was no more popular or less controversial than in some people's minds myki is today, and that led to the whole process we are discussing. In terms of Metcard's operating costs, the biggest single change in the original budget that was announced in 2005 and the current budget is the extended payments to OneLink to operate that system. In the original budget the costs for Metcard were estimated at around \$40 million of operating costs for the period in question. Now, with the current aggregated list of costs we are involved in, the operating costs of Metcard are estimated to be about \$310 million.

Mr PAKULA — Until when?

Mr CAROLAN — Until the middle of 2013. That is an increase of \$270 million. If you want to do the maths, that adds up to something of the order of \$50 million per annum in operating costs. I cannot be more precise than that, because there are some commercial-in-confidence arrangements with OneLink.

Mr PAKULA — We are doing this topic by topic — —

The CHAIR — Yes, that is fine. You can just keep going.

Mr PAKULA — I just want to understand. When the tender was awarded originally it was \$998.9 million, I think — operating plus build, and then — —

Mr CAROLAN — Plus TTA's costs, plus Metcard costs.

Mr PAKULA — Yes, but all inclusive. Then 350 was added in 2008, and then another 160 was added in the last budget, and along with that 160 there were some scope changes, or scope reductions — changes, reductions; I will let you describe them as you will. Can you just take us through what the additional \$160 million announced last year is for and what the changes to scope are, either consequent on that or concurrent with that?

Mr CAROLAN — Sure. I think the arithmetic you represented then is correct; \$160 million includes two major components and then some subcategories. Some \$60 million of that \$160 million relates to OneLink and the further extension of Metcard and the Metcard contract through until the middle of next year. I should explain why the contract goes to the middle of next year. Although in other environments we often talk about Metcard ceasing use this year, those two things are compatible. After Metcard usage ceases there will be a need to undertake certain decommissioning activity, so the actual contract runs into next year.

The other approximately \$100 million has a couple of subcategories to it. It includes some further allowances for TTA's own allowances for matters such as risks and contingencies. It included dealing with the scope changes that came out of the government's 2011 review on a net basis, and it certainly included some allowances for additional equipment to be installed on the system. It is important to understand that public transport patronage since 2005 has increased by close enough to 50 per cent, and as a consequence of that both governments have chosen to invest in additional devices on board — on the system there are additional buses that are operating that have to be equipped and so forth — and those impacts are embedded in both the 2008 adjustment and last year's 2011 adjustment.

Mr PAKULA — Just two last bits: so there is the impact of the decision to not proceed with single-use tickets, and does that \$160 million include an extension of the fare box guarantee to the operators?

Mr CAROLAN — No it does not include an extension. The dealing with the fare box revenue guarantee arrangements with the operators is entirely handled in accordance with their franchise agreements now with Public Transport Victoria. If there is an impact in that area, that is budgeted separately for by PTV or DOT.

Mr PAKULA — So it is not a matter you can — —

Mr CAROLAN — It is not in our numbers.

Mr PAKULA — And the single-use tickets?

Mr CAROLAN — The impact of that change in scope is embedded in the 160, yes.

Mr ANGUS — Mr Carolan, I want to go back to the original business case. There was reference to that on page 9 of the answer. It talks about various aspects of that, and it talks about the comparison and the evaluation that will eventually be taking place in relation to that. I suppose what I am particularly interested to know is: in relation to the original business case, were there details in relation to benchmarks, both for cost and timing in relation to the project? In other words, was there a yardstick to go back to at an early stage to see where the reality was departing from the business case that had been proposed?

Mr CAROLAN — This question does go to the more broad question that the chairman alluded to at the commencement about what might we have done differently. Back in 2004–05 there were a series of what I think are referred to in some of the documents as market soundings that were taken by government at the time, both at TTA, as it was just being formed, along with colleagues from other agencies. Those market soundings were largely taken with prospective suppliers, both nationally and internationally and were very productive and very useful. There was not so much effort, with hindsight, in taking what I would call jurisdiction soundings, if you like, going through the same process with other entities, either elsewhere in Australia or overseas, to canvass the pitfalls of implementing a new smartcard ticketing system. There were some examples that could have been looked at, and some lessons may have been learnt.

Mr ANGUS — In terms of within that business case then, there was no sort of marker points or criteria to cause that evaluation to take place along the way? In other words was there a trigger that should have been activated in the business case, if someone had gone back and looked at it, that would have said that when the costs got so much more than what we had budgeted, or when the time had got so much more, that should have been an alert to someone?

Mr CAROLAN — I am sure we will debate again and again what has happened with time and cost in response to other questions but at the time the capital cost that was being bid to deliver a new ticketing system for Melbourne, both by the successful bidder and by other bidders, would not have been viewed as out of the ordinary at all. They would have been viewed as quite competitive with other jurisdictions and other settings — and arguably still are, by the way; we might debate what has happened along the way, but arguably they still are.

Our colleagues north of the border let a tender for a new ticketing system in Sydney just last year, and the capital cost of implementing that new ticketing system in Sydney, which is being worked on right now, is quite comparable with the sorts of numbers that we have embedded in our project, even as adjusted for what has occurred in the interim.

The CHAIR — Is there anything further on this particular point? If not I would like to change direction.

Mr SCOTT — It may be something you are unable to answer, but in discussions of cost, which follows on, I do not know if you are aware, but the Auditor-General has presented evidence about a particular academic, and there is a concept of reference case forecasting. I am not sure if you are aware of it.

Mr CAROLAN — I am not aware of that.

Mr SCOTT — I will not pursue the matter then.

The CHAIR — We can drill into the history and the evolution of the project, and quite clearly in a general sense we know that there has been an evolution — that is, that what was envisaged was unable to be delivered in the time frame at the cost and so on, and it has evolved. The generic point about this inquiry is lessons learnt: what have we learnt out of this process? How is it that you can assist the committee to develop an understanding about what we could do better in the future? One of the issues that comes out of the Ombudsman's report, which has been previously referred to, is the one recommendation which basically suggests that there be an independent evaluation, and the inference of course is what improvements could be made to the project.

That recommendation was designed, in my view, to say now is the time to be concurrently running that review process so that any, if you like, improvements could be implemented concurrently. However, in your joint response to the questionnaire to the committee you indicate:

As the post-implementation review will compare the benefits achieved with the benefits anticipated in the project's business case, it will be scheduled once the implementation of the myki system is complete.

It just seems to me that there is no acknowledgment that it would be appropriate for that review process to be now running concurrently so as to draw on that process to better inform the TTA about implementation. Could you explain that to the committee?

Mr CAROLAN — Yes, I am happy to. Our response to the Ombudsman last year, as quoted in the report, was that we support the idea of a post-implementation review but TTA believes that that review should be conducted at the appropriate time and by a party separate to and independent of TTA. We certainly still believe it should be someone other than TTA — an independent — that conducts that post-implementation review.

In terms of timing, we would probably simply agree to differ on that. I think the best point for that review will be when the build phase of what we are attempting to deliver is finished. That, on current schedule would be in the early part of next year, certainly in terms of the metropolitan system anyway, so I think that would be the appropriate trigger point to commence the review. Others may think it could be commenced earlier, but that can be discussed with other agencies.

Ms HENNESSY — Can I just follow up on that point. In respect of the Deloitte consultancy, I know that the Ombudsman expressed a degree of frustration in his report that the government did not enable him to actually look at a copy of the Deloitte report, and presumably it is that report that formed the basis of the ultimate advice that DTF gave to the government. This committee has asked for a copy of that Deloitte report, but we have not been provided with a copy of that report. I was wondering if you could tell us if all of the board of the TTA has seen that report.

Mr CAROLAN — The government review conducted during 2011 was commissioned by DTF. Deloitte was involved, and another more technically oriented consultancy called ALCO was also involved, as has been referred to in other documents. 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 reports for DTF and government.

Mr PAKULA — I just wanted to follow up on the lessons-learned stuff. Obviously I do not want you to go into anything that would be commercially sensitive or that would impinge on your relationship with a contractor. We have heard from a number of witnesses over a period of time and particularly from some of the bureaucrats — you know, the secretaries of departments — about the difficulty of enforcing contracts when you have a project to be delivered, and I am wondering what lessons the TTA could provide the committee with about the efficacy of contracts and the ability and willingness of the government or government authorities to enforce them when you still have a project that needs to be delivered. In particular this question of the impact on a project of penalties in contracts putting the contractor in a position where any benefit for them out of the contract becomes incredibly marginal or non-existent. I think there are some lessons in regard to the contractor for this project in that. I am wondering if there are any lessons that you think are applicable more broadly as a result of that.

Mr CAROLAN — In answering your question, Deputy Chair, I would like to refer back again to the previous question asked by the chair in regard to the Ombudsman's report. In my opinion, one of the most interesting parts of the Ombudsman's report last year was its reference to some work that had been done by researchers at Harvard University about ICT projects, as they are known, in general, across all nations and across public and private sector undertakings. I am not sure if members are familiar with that section of the Ombudsman's report, but what it points out is that IT projects alone compared to other sorts of projects have a propensity to not so much have cost overruns but complete cost blow-outs, whereas in a physical project we may see cost overruns, as they might be called, of 10 or 20 per cent or whatever, we may find that in IT projects the cost differential between what was anticipated and what occurred is several hundred per cent. I think that is the most interesting part of the Ombudsman's report and leads to the most stimulating discussion of what we can learn out of this project and other state-driven IT projects, because I conclude that IT projects need to be deliberately managed and set up in a way that is different to physical projects — building something.

Coming to your question, Mr Pakula, that relates to the question of then what do we do about it if we get part way into a delivery project that includes IT. I keep emphasising IT, because one of the poorest understood aspects of the myki adventure is that it is fundamentally software. We tend to think of the ticketing system as being the devices on the station or the devices that the authorised officers carry in their hand or whatever. In terms of what we are trying to deliver, the most challenging aspect is software. The areas where the original bidders — not only the successful bidder but the unsuccessful bidders — will have underestimated their costs significantly will be in the hours and the manpower needed to write that software, test it, prove it and implement it to do the things that it needs to do and embed in a way to charge the fares that we all want to pay on the public transport system.

That then gets to the question of what do we do if we get part way through that and we find that it is not occurring according to what was anticipated. The choices are very difficult, which I guess is why you have asked the question. Sure, in theory we can pull the contract off the bookshelf, check what levers may be applicable and apply them if we see fit. However, that may mean we are further behind implementing whatever it is that we want to implement — in this case a ticketing system. Applying the contract as we may be entitled to, in the worst case, may lead to abandonment of the project, either by the state or the contractor, and therefore a need to completely start again. It is a very difficult choice.

Mr SCOTT — I am seeking some clarification on a point that you are making about the Harvard research. I would be interested to know, because I have seen some other research, whether that research just applied to the public sector or to both the private and public sectors?

Mr CAROLAN — I thought it applied to both.

Mr SCOTT — That concurs with other research that we have had.

Mr CAROLAN — I stand to be corrected, but I thought the reference in last year's report applied to both.

The CHAIR — Mr Carolan, could I pick up on the issue of IT particularly, because it is germane to the whole issue of the changing evolution, if you like, of myki as a project. One of the things that has been clearly acknowledged is that there was a lack of capacity on the board in the early era, and there has been capacity strengthening, if you like, by additional expertise. The question arises: would it be your view that the capacity within the authority — that is, at an executive level — was undercooked as well, not just at a board level? That is one issue about capacity. But also going to the changing scope and specifications, how much has that been driven by re-establishing an understanding or establishing an understanding about the difficulty of the project and necessarily then tweaking the scope and specs, which has had consequential impacts in terms of delivery time and delivery cost? These issues are tied up, are they not, that the capacity of the people who are responsible to deliver it will be reflected in the way the project is managed throughout, but particularly in the foundation period? Would you like to make an observation about that?

Mr CAROLAN — The project was conceived of in a heady era — as I touched on before — back in 2002 when Metcard was extremely controversial in its own right. It was known that that contract had a certain expiry date, and it was known that internationally transit systems were heading towards smartcard systems, so the setting was the sooner we could head towards a smartcard system for Melbourne the better. That era was also a very heady time in public transport management generally; 2002 was the time that the franchises that had been created back in 1999 were failing, and in the case of one operator of those franchises that I happened to be engaged with at the time it did fail and left the franchises. So the setting for government to deal with what it wanted to do with public transport ticketing was a very unique environment and undoubtedly left certain legacies in the way the project was then undertaken, the dominant one of which was an overly optimistic estimate of when the project could be delivered by in its build phase. I think we all know that the original estimate was that it would be initiated, delivered and operating during 2007. That was extremely optimistic and, with hindsight, I think wrong.

The CHAIR — Can I just pick that up? Is that directly related to the lack of capacity within the board and the management at the time or something else?

Mr CAROLAN — I think it is related to lots and lots of things, but probably primarily not the capacity of the board or the executive team at the time. As I said before, market soundings were taken. All the prospective parties who could bid, most of which did bid, were aware of that time line and contributed opinions that it would be achievable. Obviously subsequently the short-listed bidders reconfirmed that before one of the short-listed bidders was chosen, so I think it would be simplistic to reduce it to just the competence or otherwise of the management team at the time. I think it still goes to the fact that it may have been poorly understood that fundamentally this was going to become a software exercise and that software projects have a unique tendency to be difficult to fit within defined bounds.

There was another aspect of the process back then that I think is worth focusing on. The tendency at the time was to define the expectations of projects in terms of the expected outputs and then leave the very detailed examination of functional requirements at a micro level to occur after the award of the contract. With hindsight, and given what we know about IT projects that people have already touched on, I do not think that is a wise way to commission IT-driven projects. I think both parties, both the letting agency — in this case the state — and the prospective provider, would be better served by having extremely detailed functional requirements that allow both parties to have a better handle on what is likely to be involved in creating the software that delivers those functionalities.

Mr PAKULA — My only question about that, and I do not limit this to the TTA — you have a wide stretch across government — is that if you are going to have extremely detailed specifications for IT at the contract stage, in your experience does government possess the expertise to be sitting on the other side of the table and discussing those sorts of complex software requirements with a provider?

Mr CAROLAN — I think government can obtain the expertise to do so. It may or may not have it sitting in the particular agency that decides it needs a new system — certainly the Ombudsman's inquiry from last year which looked at multiple ICT projects would suggest that expertise does not necessarily naturally reside in the commissioning agency — but government can obtain that expertise, and it is —

Mr PAKULA — By buying it in or by having it sitting there?

Mr CAROLAN — I suspect it is probably better to buy it in — you know, to get someone or somebody, plural, to get people who are experts in the particular field. While I keep focusing on the software writing task, nonetheless it is software that relates to the business rules of public transport tariffs and how they apply to different customers, so you need a mix of expertise in the subject matter area as well as expertise in the software.

The CHAIR — Is this on a related point?

Mr O'BRIEN — Yes. Just going back, then, to the accountability question which is at the other end of this, there has been some evidence in a previous session that, in a sense, all government projects blow out or have a tendency to blow out, particularly with ICT. That is really not good enough in terms of a contractual relationship in a comparison with the private sector, is it, to have that sort of expectation that because it is a government project and it is ICT related it is going to be impossible to contain the costs?

Mr CAROLAN — I am not seeing your question, Mr O'Brien.

Mr O'BRIEN — If I could take you to the Ombudsman's report where it talks about accountability, page 316 says:

The TTA board is responsible and directly accountable to the minister and Treasurer for delivering myki. I have been provided with no evidence that the board was held accountable for the failure of the TTA to meet the system deliverables.

You mentioned this situation with contractors. There has not been any desire to hold the contractor to the original scope of the project or to make them deliver it or in effect contractually ask for compensation from them if they do not deliver it on time and on budget, has there?

Mr CAROLAN — I am not necessarily seeing exactly what your question is. In terms of the board's accountability, I know what was written in the Ombudsman's report last year. I believe the Ombudsman is appearing before the committee tomorrow, so you can ask them what they meant.

Mr O'BRIEN — That said, just to direct you to the question, there is no evidence of accountability for this project in relation to the board?

Mr CAROLAN — Yes, but 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.

Mr O'BRIEN — No-one is suggesting — —

Mr PAKULA — Nor the same CEO.

Mr CAROLAN — So I am just not sure.

The CHAIR — Mr O'Brien, I am just going to go around this from a slightly different way, which is, I think, your point. What I think Mr O'Brien is trying to get to — and certainly the committee is interested in, is that the fact is that there have been time delays and cost overruns. That is what we are dealing with, and the question arises as to your view about the accountability in terms of who is responsible. This is an opinion I guess I am seeking rather than an observation of fact. Does responsibility lie with the TTA board and management? The Department of Transport? The Department of Treasury and Finance? Or indeed with the contractors and/or other agencies? Do you have a view about how you apportion that responsibility for the outcome as to where we are with this project now, or is it too difficult to have a view about it?

Mr CAROLAN — No it is not too difficult. The accountability must rest with the responsible agency. In terms of delivery of a new ticketing system for Melbourne, that responsible agency is the TTA, and I think I am about to sign an annual report which says I am the accountable officer.

The CHAIR — Yes.

Mr CAROLAN — So in that sense I am accountable, even more than the board. However, it is simplistic to relate that accountability simply to taking the contract off the shelf and enforcing it. Our true accountability is to

attempt to oversee the delivery of a new ticketing system for Melbourne in accordance with what was expected, but if that setting alters we then have an accountability to give government and other agencies advice on what the remedial measures are. The remedial measures are not as simple as saying, 'Let us enforce the contract'; they are way more complex than that. The exercise of our accountability becomes broader than simply questions — can we penalise the contractor, or should we do something else? They are way broader.

The CHAIR — Ms Hennessy, you wanted to pick that up?

Ms HENNESSY — Yes, I can segue it into accountability if you like, but it is actually on a technology point, and a specific technology point. Mr Carolan, I understand that part of the extra \$150 million — or \$149.748 million — that was allocated by the government for capital expenditure on myki was partly related to the removal of vending machines from trams, and that was based on the view, as I understand it, that the technology could not operate on a moving vehicle. I understand the bus industry has some concern about the impending redundancy of Metcard. Is it essentially the same technology that is going to be installed onto buses, and are we not anticipating that we will encounter the same sorts of problems?

Mr CAROLAN — There are several partial answers to that question. The decision about whether or not to implement ticket machines on trams was taken last year by the government on the basis of some of the recommendations in the Deloitte and ALCO reports —

Ms HENNESSY — Which we would love to see.

Mr CAROLAN — but also based on well-known circumstances from other jurisdictions and advice from the Department of Transport and the Yarra Trams franchisee. It is increasingly the case on public transport throughout the world that you purchase a ticket before you travel, in particular on very busy street tram or light rail systems which are carrying very heavy loads of people. The desirability of having what is a quite large ticket-dispensing machine in the middle of that vehicle would have been a highly unusual thing to do and is not replicated elsewhere. The decision was taken based on Deloitte and ALCO but based on other advice as well.

In terms of buses, the equipment that is to be installed on a bus is not the same as that which would have been installed on a tram. The tram machine was a self-service customer ticket vending machine that is much like the machines we see at the moment on stations or at tram and bus stops, whereas on a bus the devices that will be fitted are by sight much like what is there now, except it will be a myki bus driver console rather than a Metcard console and will be operated by the driver.

Mr O'BRIEN — Returning to the lessons learnt, going back to one of your annual reports of 2008 it says there that the contractor and the authority underestimated the time that would be required for development in the full testing of the new software to operate the system. To some extent in terms of the timing of any review — back at least in 2008 — you had become aware or the TTA had become aware, as well as the contractor, of the underestimation. Is that correct?

Mr CAROLAN — Correct.

Mr O'BRIEN — Just nodding does not last.

Mr CAROLAN — No. It is correct.

Ms HENNESSY — It is not the trial of Lizzie Borden.

Mr O'BRIEN — One of the things that then emerged was a reduction in the scope. If you go back to the transcripts from the Public Accounts and Estimates Committee of 9 May 2007, Minister Kosky makes reference to a scan-on, scan-off effectively, where she says on page 13:

You will not have to insert your ticket into the validator anymore — it is simply a scan on and scan off. I have actually tried it with the card in the handbag, and that works as well. The view is that that will mean that it will actually help with moving numbers of people more quickly onto systems and off systems as well, and so assist in some of the issues of punctuality.

As we have seen since the rollout there have in fact been major problems, and in subsequent evidence to PAEC that gets shifted to a reference to the touch-on, touch-off system. The other aspect was the reduction in regional — an idea that the one card would go across the whole of the state, about which Minister Kosky says

that having spoken to regional Victoria, not having to buy a ticket once they get into the metro system will make a huge difference. So in a sense we have had a reduction in scope but an increase in the cost of the project — in regard to lessons learned from 2008.

You said that sometimes you cannot take the option to hold people to a contract, but when the cost is going one way and the reduction in scope going the other way, why is it not fair enough for all the people who are taxpayers and customers of the system to have demanded better accountability out of the contractor to have delivered it on time and on budget?

Mr CAROLAN — Two things — or possibly more than two: the first thing is that there was no reduction in scope in 2007 or 2008. References to Minister Kosky's statement are comparing myki to Metcard. They are nothing to do with the reduction in scope in myki.

Mr O'BRIEN — She is talking about a scan-off system in 2007, and then when she gives evidence later it is clear that the scan on has become the touch on, touch off. You cannot just — —

Mr PAKULA — It is a change in terminology.

Mr CAROLAN — It is the same process. Whether it is called 'scan' or 'touch' is — —.

The CHAIR — You say it is language.

Mr CAROLAN — It is language we use — —

Mr O'BRIEN — It is certainly not as usable as people thought it might be at the start.

Mr CAROLAN — It is the same usability. In terms of anything to do with the way the requirements have been specified, nothing has changed in that area. We use 'touch' in terms of the encouragement we give to customers, because the evidence is that people need to touch it and hold it still momentarily, whereas if we encouraged them to scan it in the sense of swiping in a continuous movement, then the ability of any system to function properly with that sort of action is not what it should be. So in terms functionality there is no change at all as a result of that change.

The CHAIR — Can I ask a really ignorant question, because I love ignorant questions: the touch on, touch off is pretty much the same as a credit card, which is a touch credit card now with a chip such that when you actually touch a — —

Mr CAROLAN — Tap and go.

The CHAIR — Tap and go, yes. It is exactly the same?

Mr CAROLAN — In terms of the customer action — yes, it is close enough to exactly the same.

The CHAIR — So that customers will be educated over time by that technology anyway?

Mr CAROLAN — They will.

Mr O'BRIEN — I have to specifically pull you up on that, Mr Carolan, again. It may be the minister's language or that the specifications have changed, and I am happy for you to clarify, but you have heard the description I gave about the handbag scan in 2007. I take you to 13 May, 2009, where again for this committee Mr Dalla-Riva asked very specific questions about the operations. He said:

You then went on to drop that and call it tag on and tag off ... and now you are using the words ... touch on and touch off.

Minister Kosky says:

You will have seen people when they are scanning, and if the card is in their bag and it is not right up against the outside of the bag, sometimes it does not work. Obviously if you have a busy system, which we do have, you want to make sure that it works first time — that people are not trying to do it through a bag.

So there you have this same minister at least changing her description of how the system works or is intended to work in 2007, when it was at the contract — and everything was positive, to 2009 when things had started to emerge.

Mr CAROLAN — So your question is — to me the only question I can answer is: did the functionality change in that area between the award of the tender, 2005, and 2008 or 2007 or 2009, and the answer is it did not. The same functionality was expected and is still being delivered. People may choose, if they wish, and do choose — those of us who use public transport see it all day, every day — people now are touching their myki card through their wallet, through their handbag or whatever. We do not encourage it. We encourage them to take it out and to use it right against the machine, but people are touching it through their bag or their wallet right now.

Mr O'BRIEN — For the more general point and for the sake of time I take you to the regional, which is a definite reduction in scope, and as a result, as I understand, there was an open architecture issue as well as the size of the fare structures. Again, why has the public not been able to see a project that was delivered on time for the same scope, rather than a reduced-scope project for more money? Why has there not been better accountability with the contractor who, it is admitted in the Ombudsman's report, also was learning on the job? If they were learning on the job, why has the taxpayer paid for that research and development rather than them being held accountable?

Mr CAROLAN — You will have the contractor here tomorrow — —

Mr O'BRIEN — We will.

Mr CAROLAN — So you can ask some of those questions. There is a statement buried away in that question and several other questions, including that the contractor has not been held accountable. I am not sure I accept that premise.

Mr O'BRIEN — Well, just tell us how they have, then.

Mr CAROLAN — We need to define what we mean by being held accountable or not held accountable. Have they had payments held back for delivery? Yes, they have. Have they been paid for delivery according to the original schedule, or are they being paid according to what is actually delivered? They are being paid according to what is actually delivered. Much of the capital payments they expected to receive by 2007 or 2008 are still payable. They are sitting in our bank account, not theirs. Are there still penalties that can be levied against them if they fail certain milestones which have liquidated damages attached? Yes, there are. Those provisions still exist, and consideration about applying them is yet to occur. So I am not sure how we define whether the contractor is being held accountable.

Mr O'BRIEN — Just a final question.

Mr CAROLAN — It is certainly not as simple as it looks.

Mr O'BRIEN — Thank you for the answer. It is hard to be simple at a time like this, over such a large project, but in relation to the original tendering, earlier you mentioned that one of the issues was that there was no detailed provision of the actual contract signed by the subcontractors at the time of the original business case and tender, was there?

Mr CAROLAN — I am not sure I said that, but it is certainly in some of the documents that that is the case, yes.

Mr O'BRIEN — That is the case, yes. And in that respect, if it is not the original contractor who has received the moneys from the total pool that has come out of the taxpayer — obviously more money has gone out than originally anticipated, so there is effectively a larger expenditure from the purse that has not been brought into account.

Mr CAROLAN — Has not been brought into account?

Mr O'BRIEN — There is more money spent than originally anticipated. If it has not gone to the head contractor, it has gone to some of the IT consultants or individuals. The bottom line is that there is more money out of the taxpayers' purse for the project. Do you agree with that?

Mr CAROLAN — I think it is well understood that the TTA's budget has increased, as we said before.

Mr O'BRIEN — And that money has gone somewhere.

Mr CAROLAN — Well, \$270 million of it has gone towards keeping Metcard operating. Other money has gone towards the purchase of extra devices and extra software; other has gone towards other scope changes. The original framework of the contract has not been reworded. It is not as if someone said, 'The original contract award, let's just rip it up and pay on some different basis'. That has not occurred.

The CHAIR — Can I perhaps get some further clarity around this? I ask you to explain to the committee how the costs incurred over the life cycle of the myki project have in fact been reported to Parliament. What occurs in terms of the relationship between the TTA and contractors is somewhat internal. Can you describe what the public accountability mechanism is in terms of the reporting process? For example, can you provide to the committee advice about the costs to the state of Victoria in relation to the financial years 2008–09 through to the present? Are the disbursements from the TTA articulated in a way that the committee can have access to that information?

Mr CAROLAN — Absolutely. The disbursements are all enumerated in full detail in our annual reports, so everything is there.

The CHAIR — And in terms of all the contract of payments, they are all included in the annual reports?

Mr CAROLAN — Yes, absolutely.

Mr O'BRIEN — With reconciliation against the original estimates back to the business case prior to tendering would be — —

The CHAIR — That essentially should go to satisfying the question about this progressive payment issue, which is — —

Mr CAROLAN — Yes it will, but it needs to be absolutely understood that that cannot be done if we focus on the 1.5 billion. It cannot be done, because the 1.5 billion is itself an aggregation of four markedly different categories of expenditure. So the rationalisation and reconciliation needs to occur within each of those four categories and their relevant subcategories. It will not make any sense if we just focus on 1.5 billion, and it never has.

Mr PAKULA — Before I ask a question, I just want to make a point, Chair. We have four days of hearings ahead of us and we have specific terms of reference, and there is information that we will be seeking to extract from witnesses to assist us with the writing of our report and our inquiry. I have held my tongue for the last 70 minutes, but Mr O'Brien, it seems, has no interest in extracting information for the benefit of this inquiry. Mr O'Brien's interest is only in putting political assertions to the witness and seeking to have the witness agree with those political assertions.

There is no benefit in regard to our terms of reference in going back through and trying to find contradictions in statements made by Minister Kosky in 2007 as against 2009 in terms of our terms of reference. I suppose I make the point because we can either have a period over the next four days where, with a series of witnesses, we extract information which will be of some use to us or we can have a series of hearings which is just effectively one member of this committee seeking to put to witnesses a series of political statements and have them agree with them for the record.

Mr O'BRIEN — On a point of order, Chair, I believe I am entitled to respond to that.

The CHAIR — Yes.

Mr O'BRIEN — That was a most unprovoked and unjustified allegation. Nothing that I put to this witness was not relevant to our terms of reference; in fact it was highly relevant, as identified by the Ombudsman. I had

not sought to make any political points, and I had not asked about Mr Pakula's term as minister. I would be highly tempted to do so; in fact that is — —

Mr PAKULA — Go right ahead.

Mr O'BRIEN — Well, one of the decisions relates to your time and the decision of whether or not to terminate the contract in 2010.

Ms HENNESSY — And very little questions — —

The CHAIR — We could take a short adjournment and some of us go outside and resolve our differences, but I think it would be more productive —

Mr O'Brien has forensically pursued some issues, and I congratulate him for doing that, and Mr Pakula has responded that he would prefer a more languid approach, perhaps. Now my view is to ensure that the committee continues to examine the witness and seek information which I am sure the witness is desirous of sharing with us.

I always come back to the key issues that we are examining. We are interested in transparency and accountability, and more critically we are interested in lessons learnt. So the purpose of this inquiry is for us to have collectively a better understanding of all those matters. From my point of view I think we have actually covered quite a bit of ground. I think you will be surprised, colleagues, how many of the key issues we have identified and actually touched on.

Mr PAKULA — Touched on? No pun intended, Chair?

The CHAIR — Yes — touched on, no pun intended. I am going to call Mr Angus, who I am sure will have a more languid approach that you will be more comfortable with, deputy.

Mr ANGUS — I want to just refer back to my earlier comments — as the Chair has said numbers of times, we are after the learnings from this — and particularly my line of inquiry regarding the business case and that whole aspect from the outset. I quote from page 25 of the written submission:

While TTA conducted market soundings and consulted with potential suppliers in planning the tender, there was no thorough, independent assessment or examination of experiences with smartcard ticketing implementation of public transport systems around the world. Had such an investigation of experiences around the world been undertaken, more realistic budgets and time frames for the project might have been established from the outset.

The unrealistic time line has been the single biggest cause of project difficulties —

and it goes on.

I suppose the point I am still trying to get clear is: why were there not more red flags earlier on in the project, when it became obvious or it should have become obvious to the board, about whom other people have questioned this morning, or the executive or anybody — the contractor — that the time was blowing out and inevitably the costs would also blow out?

Mr CAROLAN — I have already referred to that paragraph effectively before, when I said I think with the benefit of hindsight what I call jurisdiction soundings would have been valuable at the time as much as the market soundings that were taken with potential providers. So I do not have a different view on that from what I stated before.

In terms of the ongoing impact of that two-year time line being overly optimistic, I think we should actually delve into that as well, in the context of IT projects in particular and the learnings that we can have from them. I suspect it is the case that language gets in the road even when we call myki a project. I think it would be better if we conceived of and viewed myki and related sorts of projects that have a strong IT component more as programs than projects. A project tends to connote for all of us that you can define it, you can fit it into a box and when you deliver it you are going to be happy and that is it.

Public transport ticketing is not like that. The world of public transport is forever changing. You cannot define it at a point in time and say, 'Deliver against that'. It just does not work. We then build new train stations, change

the way the tariffs are going to work, operate more bus routes — whatever it may be. It does not stand still. Most of the other smartcard systems around the world have in fact been developed on that more gradualist or modular model, if you like. Some of the functionality that we are delivering in Melbourne now is only being delivered in Oyster, the famous smartcard system in London, around about now as well, even though Oyster has been operating for 8 or 10 years. So I think we have to be careful about the whole orientation.

I understand that the committee is attempting to learn about decision making in projects, but in the case of this example I think we should even think about how we define it as a project and whether in fact a more modular approach to developments would serve us better. Obviously if you define it in a more modular way, then the experience you learn in the real world of delivering that module can inform how you go about the subsequent module. The red flags that you might refer to, sure, they might arise in regard to the initial module maybe, but they do not necessarily give you a chance to remedy and review before you set yourself on the remaining modules.

Whereas in our case it was packaged in a sense as if it was inside a box, it was nice, with 20/20 hindsight in my view that was wrong. It would have been better to have approached it the other way.

Mr ANGUS — So really what you are saying, then, is that the business case at the outset was problematic in the way it was constructed, because there was a lack of understanding as to the complexities or potential complexities of the overall project as it transpired?

Mr CAROLAN — I think everyone would say that, with the benefit of hindsight, there must have been flaws in that original business case and the model that was proposed to take it forward. I do not really see how anyone who has looked at the history over the last 10 years could come to a different view.

Mr ANGUS — That is the very point, from this committee's perspective, as we are going to have to ensure that there is absolute robustness and a full consideration of all sorts of aspects of a project at that very early stage to prevent a recurrence of a matter like this.

The CHAIR — Because I am anxious about the time and that other members wish to ask questions I would like a very brief clarification in relation to the Oyster card. You said there are some upgrades to the Oyster card going on at the moment; people who have travelled in London would be familiar with it. I assume those upgrades are simply a consequence of, if you like, the design time frame: that Oyster was designed and implemented a long time before we were in the market in Victoria, and therefore it would not have been a presumption that the technology that is being applied with myki would have been anticipated at the time of designing Oyster. Is that — —

Mr CAROLAN — That is certainly true in part. Some of the technologies that are emerging now, such as the tap-and-go credit card technology you referred to earlier, were not around in 2002. But there has been a different mindset in some other jurisdictions as to the way to implement smartcard ticketing: start small and build out, if you like, rather than define it as a very holistic requirement in the first instance.

The CHAIR — I think that was actually a point that Mr O'Brien made initially when he talked about an upgrade for \$100 million versus what has turned into a \$1.5 billion project. I think that is the very issue.

Mr CAROLAN — Although the two technologies were different. Metcard magnetic stripe technology is very different to smartcard technology.

The CHAIR — Yes, I understand.

Mr PAKULA — The sort of modular approach you talked about is interesting, the notion that you would initially create a spec for a portion of it and build on it as you go. Does open architecture — as has been well ventilated and was the basis of myki — help you if that is your frame, or does it hinder you? That is the first point. I mean, do you want an open architecture system if you want a system where you are going to build components as you go? I might get you to address that, and then I will come back to the second question.

Mr CAROLAN — The open architecture model that was followed in the myki case was followed for all the right reasons at the time, because I think virtually everybody back then adopted the view that no-one wanted to become beholden to a single supplier, if you like, for 5, 10, 15 years, or whatever it may be. So the logic to say

'Let's see if we can deliver something here that allows us the flexibility to bring in different partners, different suppliers at different times' was fairly compelling. As far as whether it works ideally in a modular approach, it can, but it needs to be carefully designed. You need to think through which modules are going to be first in the sequence, if you like. So even under a modular model, as I would describe it, does not mean you do not have a vision of where you want to get to in the end. You still need to have that vision, and then you need to work back to a careful sequencing of early deliverables.

Mr PAKULA — In terms of what is going to happen from here on in in terms of the rollout, just take us through the period where the rollout was stopped, which was for six months or so, and put on hold, and then the engagement of ALCO. As you know, Ernst and Young had been giving some project management assistance to the board in 2010. So ALCO comes in, and the project rollout gets held for a period. How does that then, the confluence of those two things, impact on what we are going to see from now on?

Mr CAROLAN — Not greatly; not now. Fundamentally the review was conducted in the first half of 2011 with input, as we have discussed, from Deloitte and ALCO. The government's decisions were made around about the middle of 2011, and from that point on both we and the contractor have been vigorously attempting to deliver what still remains to be delivered. From this point on a few areas of metropolitan implementation still need to occur — booking office machines at stations; and buses, that we have talked about before — and that will all occur through the rest of this year, with the decommissioning and other activity occurring in the early months of next year along with the extension of myki to the V/Line interurban services, as they are called, which are the services to Geelong, Ballarat, Bendigo and the Latrobe Valley. The remaining schedule — the bits that still need to be delivered, if you like — is fairly straightforward on paper.

Mr O'BRIEN — Talking about paper and words — and responding further to Mr Angus's question and tying this together — I would just like to take you to a passage from back in 2005–06, because I put to you that a lot of what you have said about modulisation and the need for that was actually promoted back then as what this system was going to do. I would like you to reflect on that and provide some final remarks. Under the heading '2005–06 achievements' and the subheading 'Delivering a world-class ticketing solution' says:

After a comprehensive and robust tender process, TTA entered into a contract for the development and operation of the NTS in July 2005. The \$494 million contract was awarded to the Keane Australia Micropayment Consortium Pty Ltd (Kamco).

Following contract award and mobilisation, TTA and Kamco commenced specifying the detailed requirements of the NTS, working closely with customers, transport operators and other stakeholders. This work (the 'solution requirements' phase of the project) was successfully concluded in June 2006.

Here is the rub:

In addition, Kamco developed and delivered the integrated software prototype, demonstrating the first of the end-to-end processes to deliver government's fare policy. This prototype forms the foundation for proving incremental integration and customisation. As such, it is a critical element of TTA's strategy for reducing risk by delivering a ticketing solution that works from the outset, and ensuring that the project will be delivered on time and on budget.

That is essentially an encapsulation of what you put to Mr Angus as the solution. Here we are in 2012, and it has not worked. Is it not the case that you need more than just words; you need action in active contract administration?

Mr CAROLAN — I refute that that is an encapsulation of what I said in response to a previous question. It is not what I said at all.

Mr O'BRIEN — Okay, then tell us what the distinction is.

Mr CAROLAN — No, I have already said it. It is not what I said. I do not propose to say it again. That statement is a statement, I assume, out of our annual report.

Mr O'BRIEN — Yes.

Mr CAROLAN — It is talking about the view of somebody at the time. But it is not the same as what I said to Mr Angus.

Mr O'BRIEN — You talked about a module and a software prototype. What is the difference?

Mr CAROLAN — No, I did not. I did not mention the word ‘prototype’.

Mr O’BRIEN — No, I did. You talked about a module. What is the difference between your modularisation and a software prototype, if you have accepted that software was a problem with this?

Mr CAROLAN — There is a complete difference in the way the contract and the whole program would be put together. As you well know, this project was built up on the basis of a single delivery contract, as you refer to, for a build contract at the time of \$175 million. What I would be talking about is what effectively would be a series of individual contracts that would only be let one at a time and would build up into aggregation over time. It is an entirely different concept.

The CHAIR — Thank you. We have but 1 minute. One of the issues that is relevant in terms of this inquiry is dissecting costs, including labour costs, and given the time, which is on the wing, what I might do is give you this question on notice along with a couple of others which we will follow up on. It really relates to the disaggregating labour costs both for the project in relation to what the trend has been in terms of specific costs and the comparisons between budgets and final costs, which we will go to in some detail as a written question. But also I did earlier ask a couple of times about assisting the committee to understand the total project costs analysis, so we might give you something in writing just to clarify that.

Mr CAROLAN — If the secretary gives us a template that you would like to have filled in, we will do our best to fill it in accordingly.

The CHAIR — That would be great. Thank you very much. On that note, I thank Mr Carolan for his attendance today. Apart from the matters I have raised I do not know that there are any unanswered questions, but we will follow up with something directly in writing later. I thank you very much for your very fulsome response to all questions and your tolerance of the robustness of the participation by committee members. We will be in touch with a transcript later on.

Mr CAROLAN — I wish the committee well in its labours.

The CHAIR — Thank you.

Witness withdrew.