

# VERIFIED VERSION

## PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE

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

Melbourne — 22 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 G. Purdy, Senior Vice-President and Chief Executive Officer, Keane Australia Micropayment Consortium (sworn); and

Mr A. Lake, Executive Vice-President, Asia Pacific NTT Data Inc. (sworn).

**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 Keane Australia Micropayment Consortium, or Kamco, Mr Greg Purdy, senior vice president and CEO; and Mr Ande Lake, executive vice president, Asia Pacific NTT Data Inc. Members of Parliament, departmental officers, members of the public and 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 Public Accounts and Estimates Committee secretariat are to approach PAEC members. Kamco officers, as requested by the senior vice-president, can approach the table during the hearing to provide information to the witnesses, 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 person speaking and that panning of the public gallery, committee members and witnesses is strictly prohibited. Please note that these proceedings are not being webcast.

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 2 working days of receipt. Unverified transcripts and PowerPoint presentations, where they exist, if any, will be placed on the committee's website immediately following receipt. Following a brief presentation by Mr Purdy, committee members will ask questions relating to the inquiry. Generally, the procedure followed will be that relating to questions in the Legislative Assembly. I remind everyone to turn their mobile phones off or to silent. I now call on Mr Purdy to give a brief presentation, if he desires.

**Mr PURDY** — Thank you, Mr Davis, and good morning. Firstly, I would like to thank the committee for the opportunity to talk at this forum. My name is Greg Purdy; I am the senior vice-president and CEO of Kamco. Our offices are at 620 Bourke Street, on level 14. I joined Kamco in April of 2010 as the CEO, so any knowledge that I have of things prior to April 2010 are limited to what I have read in company documentation and from conversations I have had with staff. However, in support of this hearing I would like to note that in the past 30 years I have had extensive experience in large capability and IT projects across the Asia-Pacific and Japan, and I have been on both sides of the project: from customer to supplier, including as a customer in the defence department.

Just as an update to where we are with myki from a Kamco point of view, as you all know the contract was awarded in 2005. We went live on regional bus in December 2008, live on metro rail in December 2009, metro tram and bus in July 2010, and then in 2011 we commenced the retail rollout and the rollout of the authorised officer hand-held devices. In 2012 we commenced our card sales at our retail outlets, as well as at our card vending machines at the stations and the super-stops. 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 3 million transactions per day, which constitutes over a million touch-ons per day.

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.

In closing, I have given you a bit of an update on where we are. Should the committee wish to contact me after this hearing I would be only too pleased to cooperate.

**The CHAIR** — Thank you very much, Mr Purdy. I am very grateful that Kamco has been prepared to contribute to this inquiry. We think your contribution will be helpful in fleshing out some of the issues we are interested in. Essentially the committee is looking at issues relating to accountability, transparency, relevant skills and capacity, and particularly to understand the lessons learnt from the experiences with a number of projects, specifically as case studies, in terms of the relevance to the broader reference of the inquiry. I will commence by asking: could you give some commentary in terms of the quality and scope of project specification? In relation to Kamco's experience would you like to comment on the adoption of an open-architecture solution as well, because we have had some commentary around that by previous witnesses? Would you like to comment about the open architecture in relation to your understanding of the impact on the project?

**Mr PURDY** — The open-system architecture approach to the solution is not a bad choice, because it provides the end user or operator choice as you move forward with change rather than being locked into a proprietary system with one supplier and one product. However, from reading back through history, the requirement specification at the outset 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 at the time, it would have been better served by both parties — both by the contractor and the government at the time — to have invested more heavily in the beginning to flesh out the requirements before the system had started to be developed. It was two years into the system development before the government tabled the fares and ticketing manual. Whilst the project had moved on, it had moved on with understandings from a contractor point of view and a customer point of view that were not locked in solid requirements in writing. When the fares and ticketing manual came along, which underpinned how the government wanted the system to operate, it was different in people's minds, therefore those requirements then had to be written down and agreed. In the last two and a half years since I have been in this chair we have spent a lot of time in redefining those requirements, having those requirements written down into detailed specifications and both sides signing off on them.

**The CHAIR** — Thank you.

**Mr PAKULA** — I want to go back to your opening comments about the way the system is running now and reflect on some of the comments made by Mr Carolan yesterday in terms of the comparison with the length of time it has taken to bed down similar-type systems in other parts of the world. In other jurisdictions these smart card ticketing systems have taken a comparative length of time. I suppose what has impacted on Kamco's reputation and the reputation of myki has been the delivery time frame compared to the original expectation. Can you take us through how it was that — given that you say it is now running well and Mr Carolan says that is consistent with what has happened in a number of other jurisdictions — that you believed it could be done so much quicker than that and what has been the major impact on not allowing you to achieve that?

**Mr PURDY** — The answer goes back to the beginning essentially. As I said, I have only been here since 2010. At the time this contract was signed the quickest an 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. It may have been able to have been done more effectively and quicker had the time been invested, as I said earlier, in establishing the requirements. Maybe at the time, rather than trying to rewrite a requirement around the existing Metcard magnetic stripe-type system, it would have been better to break out of that paradigm and look to the new future, which was trying to be introduced by a long-life smart card and an automatic fare collection system. A lot of the complexity that we see in the system today is 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. Now to translate that into an automated system you have immense complexity in software. In summary, if we had simplified earlier and maybe taken it in chunks, it may have gone quicker.

**Mr PAKULA** — So that is a bit more digestible, are you suggesting — and I do not want to put words in your mouth — that in terms in simplifying or changing the paradigm, are you talking about doing away with zones or doing away with times and concessions and having flat-fare travel?

**Mr PURDY** — Absolutely. There was the advent of the short-life smart card, the long-life card, passes, zones — as I said, there are 78 zones in the NTS because there are zones outside Victoria, because it was

envisaged to have ticket offices well outside the bounds of Victoria. These were all complexities that I think could have been rethought through.

There were things that were introduced at the time. The philosophy was to have a single card type so the card itself could transit through a person having a job and being a full-fare passenger to maybe going out of work and becoming a concession traveller. The concept at the time was to have a single card stock and allow the system to send an action list to that card and change the person's status. That was then changed to having printed, personalised cards, which then adds forms, passengers having to send their card back and get a new card. We actually embedded a lot of complexity that we really did not break the paradigm of that we could have taken the opportunity back in 2005.

**Mr PAKULA** — By going to flat fares?

**Mr PURDY** — Yes. Flat fares, single card stock, and taking advantage of the technology step that we were moving on.

**The CHAIR** — Thanks very much, Mr Purdy. Could I just turn to a question which I would like to give you the opportunity to respond to. It touches on your comment in your response to the Deputy's initial question, and that was relating to the layers in implementation. In the Ombudsman's report of last November — in the event that you have not had an opportunity to read this — he says at page 78:

In the initial evaluation of the six tenderers, only the successful bidder was unable to evidence a proven solution: all others nominated sites where their solutions were in place.

Acknowledging that you have only been with the team for a couple of years and that you do not have the firsthand knowledge of the bid process, I am sure you would have an understanding though about the principle that is being illuminated here, which is the Ombudsman is making a point that the Kamco consortia did not have the relevant experience which competitive tenderers did have in proving up a solution. Does that inform partly delays in the implementation, or is it irrelevant?

**Mr PURDY** — I do not think that has driven majorly the delay given the solution that was requested by the government at the time. I can only assume that the major tenderers who had solutions would have been more a proprietary system and less of an open-system architecture where the government was seeking an open-system architecture. Keane at the time was a well-established integrator and chose ACS, who has the front-end device and automatic fare collection and smart card ticketing experience, so that consortia was pulled together to take the best of breed of an open-system architecture in the rear end of the system for transaction processing and funds clearing et cetera as well as having a device expert on the front end. The delays were caused by the complexity of the system and the requirements that bound that system together needing to be established correctly to meet everyone's expectations.

**Mr PAKULA** — In terms of ACS, who was effectively your lead contractor? What relevant experience do you say they had?

**Mr PURDY** — ACS is a worldwide provider of front-end devices, and they also have their own proprietary system. They provided all the front office devices. The card vending machines, the validators, the bus driver consoles and the tram driver consoles all came out of reputable suppliers. The tram driver console and the bus driver console come out of Parkeon in the UK, and it is all integrated by ACS and then delivered to Kamco for integration into the broader system.

**The CHAIR** — So it is a chicken-and-egg situation when we are talking about the open architecture which enabled the consortia to buy in the expertise post contract, which effectively means that the tender evaluation issue relevant to the experience of other bidders was not as significant because of the open architecture. Is that essentially your point?

**Mr PURDY** — That is correct.

**Mr PAKULA** — To keep on this point, given that Kamco is effectively a consortia, and given that one of the key parts of the consortia has the experience you say they do — —

**Mr PURDY** — Yes.

**Mr PAKULA** — When you put that sort of chain to the Ombudsman — we are going to have an opportunity to question the Ombudsman — what do you say to the Ombudsman's findings then?

**Mr PURDY** — I am not sure of the answer to that, Martin. Can you elaborate on the question so that I can understand it better?

**Mr PAKULA** — When the Ombudsman says you did not have a proved-up solution —

**Mr PURDY** — That is correct.

**Mr PAKULA** — you say, 'We're a consortium and our key component manufacturer did have'. Did you put that to the Ombudsman and contest his finding, or do you accept it?

**Mr PURDY** — I think you could contest it. If you are looking for a custom-built proprietary system, which this system is, it is very difficult to go down a proprietary system that one of the other providers may have been offering. It goes back to the very requirement or the business case the customer wants to have settled. If back in 2005 the government had wanted to just pick up Oyster and stay with the single-fare flat transit across one mode of transport, they could have. But the government wanted to have a system that met the whole public of Victoria across all five modes and try to take that system to the public with a minimal amount of change, so that all the concession types and fares were all met. A proprietary system does not allow you that. So the government was right in not going for a proprietary system, in my personal view, but should have invested more time in getting the requirements down in writing so that everyone would have understood it quicker and implemented it quicker.

**Mr LAKE** — And the company's strength really was in that project management, the infrastructure projects, the pooling together of a large number of different partners and the different types of roles that they play within the consortium. That should not be undersold in terms of its complexity to not have a favourite but to be there and make sure that the government is able to take advantage of the best of what is in there and link everybody together and manage that across a large group. That type of infrastructure project management — that is the background that both Greg and I come from, and that is the strength of the company and why they would be chosen to lead that by the various partners that put the proposal together.

**Mr ANGUS** — Just going back to the tendering stage of the project, the whole matter of interactive vendor engagement was part of that process. Would you like to comment on how that was beneficial or how that impacted upon the effective delivery of the project?

**Mr PURDY** — Mr Angus, I was not around at that time, so I really cannot make valued comment on 2005 and how they did that.

**The CHAIR** — So you cannot, on the basis of, I guess, the corporate knowledge, add any value to that proposition about the interactive engagement?

**Mr PURDY** — If you would like to rephrase the question, I may be able to answer it, if you could.

**Mr ANGUS** — It is just that whole concept in terms of the front end, the tendering process I suppose, but as you say, you were not there. Perhaps something might have been passed to you in relation to the history regarding the initial tendering and whether there were any benefits in the tendering process that was undertaken in this case.

**Mr PURDY** — From what I have read, it was handled in a very formal sort of RFT process of request for tender, response to the tender. I think the government at the time did do some overseas looking at what systems were available, and I do believe there were lots of discussions that went on in forming the final opinion and selection of Kamco as the tenderer. If you ask for my personal opinion, I think it is important that the government — or the customer of any type — gets involved very heavily at that tender time and invests at that tender time to understand the requirements that they are actually asking for and tests the requirements then. It is the old saying in project management: you pay now or you pay later. If you do not invest at the front, it is going to roll out into the back.

I encourage having that interaction early, but it has to be at a level that is in line with what you are trying to seek, so the customer has to have a very clear understanding of the business case that they are trying to fulfil, a

very clear understanding of what they want to fulfil and then be able to relate that clearly and succinctly to the supplier. The supplier then has a chance to challenge his views of what he is actually providing in the spirit of a tender and the thrust of actually wanting to win the work.

**Mr SCOTT** — I would just like to in part follow up on evidence that we received yesterday. There was a Deloitte report that was discussed yesterday. I was just wondering, to seek clarification, whether you have seen that report or whether you had any input into the drawing up of that report?

**Mr PURDY** — No, we had no input into that report.

**Mr SCOTT** — And you obviously have not seen it, either?

**Mr PURDY** — No, we have not seen that report.

**Mr O'BRIEN** — Mr Purdy, just one thing to clarify it. When you talked about the consortium and the contractor ACS, were they part of the consortium at the time of the tender? As I understand it, the Keane consortium that you put together then subcontracted 17 subcontractors.

**Mr PURDY** — From history — and like I said, I am not an expert on this; it is only from what I have read in document — ACS was brought into the consortium at the time of tender. I think as the original part of that tender process moved through, ACS was brought into being a tender partner.

**Mr O'BRIEN** — One of the concerns that has been identified with the project has been the extent to which the detailed specifications and the amount of subcontracting that had to be done effectively by the consortium post tender. It has been identified that there were in excess of 350 specification changes during the development process. Are you able to take us through that? While I am on it, there has also been some criticism in the Ombudsman's report, and I want to raise it sensitively and give you the opportunity to respond to it, effectively that some of the project management staff provided by Keane and the overseas-based vendors required regular intervention from the TTA executive and some conflicts et cetera between your consortium and the TTA have led to what is described as a fractious relationship. If you could take us through as best you can from the history you have, so that we can get the main factors that identified and impacted upon the project delays and cost overruns with the myki project.

**Mr PURDY** — As I said, I have only been here since 2010. The fractious relationship that was in the past I think was driven mainly by the lack of requirements and understanding of the requirements by both parties in the initial start of the program and then getting the program to a rollout position into regional bus and then the further requirements that were required then to roll into the next stage of rail and then tram and bus. The root of the whole situation goes back to the requirements not being well specified, well understood and well accepted by both parties at the outset.

**Mr O'BRIEN** — Just on that, I note that there is an acknowledgement. You may agree with this or not. The TTA annual report 2008 says:

The contractor and the authority underestimated the time that would be required for the development and fully testing of the new software to operate the system.

That was said by the TTA in 2008, and we had evidence to that yesterday. Do you agree with that, in hindsight?

**Mr PURDY** — I would agree that it was probably not as single sided as that statement. The contractor certainly probably did underestimate the amount of time to produce the system, but not if the system was to be produced as per the contractor's understanding at the time. So as the requirements moved out, in the customer's mind the requirements have not changed but in detail the requirements are significantly different. When you take a high level of requirement of 'the system will carry passengers' and then you try to devolve that down to 'the system will carry passengers within 78 zones with 68 concession types' and so on and so on, the complexity starts to drive down. The customer feels that they have said that all at once in their opening statement or opening requirement. It is only when you start to drive that down that the complexity starts to become evident and then that causes solutions to become bigger and bigger and delays just to be incurred.

As Ande was just saying, with the testing time, as you build these systems, to test all the massive permutations of what could happen in any one traveller's day takes many, many weeks. Then when you put that system out

there amongst the public, they do things that no-one can envisage in a test lab. So that brings the software back for rechallenge and it has to be then reworked. These are very complex systems. This system now is well bedded in and is working very, very well.

**Mr PAKULA** — Mr Purdy will appreciate that I am incredibly reluctant, and I am not going to talk about stuff that I have intimate knowledge of. There is a strong recollection that I think a number of people have that results that occurred in the test lab were not immediately replicated in the real world. Often the test lab results caused some greater optimism than was ultimately realised in terms of those machines and devices being taken into the real world. As you say, you have only been there since April 2010, but can you take the committee through how the test lab interacted with the real-life experience and why you have found some of those results more difficult to replicate when they got into the real-world environment?

**The CHAIR** — Thanks, Deputy. I take it you might be alluding to Lynne Kosky's experience.

**Mr PAKULA** — No, I am not.

**The CHAIR** — Okay, sorry. This is something that Mr Purdy would know nothing about.

**Mr PURDY** — I am not sure about the Lynne Kosky issue. As I said, when you go about building a system from requirements, you have to then take those requirements through a verification and validation process. You have to verify that the requirements match what the specifications say, and then you validate those requirements in tests. In validating those requirements in tests, you build test cases to test that the software and the requirements work in as many fashions as you can possibly think of. That is done with all the best intent, lots of effort and detailed specifications.

However, when you put things into the real world, things happen that do not necessarily happen in a test bed. Operators unplug devices, internet cables get disconnected and they re-plug them in, and passengers interact very quickly with devices and find different ways to trick devices into thinking they are paying. We have had incidents where teenagers have recorded the beep of the validator and played it as they are walking into the bus to make the bus driver think they have touched on. The system has to be tested. People come up with very innovative ways to test systems, and there is no one single incident that I could quote that is a classic case. It may be as simple as being that a person has come off a Shepparton bus into Bendigo, then from Bendigo onto a train, then the train onto a tram and then off the tram onto another bus, that the whole fare calculation as it trickles down may be 4 cents out, and that the whole trip was not necessarily envisaged as having been taken over a certain amount of time over a certain period.

**Mr LAKE** — But as soon as those issues come to light we go through a root cause analysis to try to figure out whether we can recreate it and how we can recreate it. We work with TTA in that instance, and then we will add that test case to our lab going forward. Once we have it and once we find a way, then that becomes a new level. But as Greg said, with the permutations and combinations things just happen, and often trying to get to the root cause of those things presents a challenge, and so we work diligently, and on that side that is a continued investment. We are paid from a deliverable standpoint, so we are paid based on the final outcome and the results, so we have to continue to invest and invest. Obviously the fewer problems we introduce — the less we can do — is a huge incentive for us, but we also recognise those as common and use them to improve moving forward.

**The CHAIR** — I just want to go back. We touched on time lines a little. I need to tease this out before we move forward. I am interested to know what input, if any, Kamco had in relation to establishing and advising and the continuum of the changing time lines of implementation. Did you, as a consortia, have any significant input into the termination of time lines, or were you presented entirely with achievable time lines from a purchaser's perspective?

**Mr PURDY** — I think at the outset that the time line, as I said earlier, was overly optimistic, from both Kamco's and the government's view — —

**The CHAIR** — So Kamco agreed with the time line initially?

**Mr PURDY** — Absolutely. Kamco would have agreed at the time. I was not there, but I am sure that they signed the contract, which meant that they agreed to it.

**The CHAIR** — They were clearly committed, but they did not provide any advice that it was overly optimistic at the time?

**Mr PURDY** — My knowledge does not go back to those days, but I would imagine — —

**The CHAIR** — It is a qualified answer, I understand.

**Mr PURDY** — But if they signed a contract, I can only assume that they felt it was achievable, given their understanding of the requirements that they had to achieve. I think, in fairness, the TTA and Kamco have worked very well over the years to keep the program together in a schedule that has moved out as complexities have come about and complexities have been solved. We are very proud of our turnaround time at Kamco. When we see a defect or an issue arise in the system, we turn that defect around in world-standard times. The system has taken a long time to get to this position, but in terms of a system of this complexity, the inconvenience to those using it has been very small.

**Ms HENNESSY** — Mr Purdy, just in terms of the delay, in particular, of the review, could you talk us through what the impacts were on Kamco and your capacity to deliver arising from the six-month delay?

**Mr PURDY** — Which six-month delay?

**Ms HENNESSY** — Just in terms of everything being put on hold for six months and in terms of there being a review conducted.

**Mr PURDY** — During the government review?

**Ms HENNESSY** — Yes.

**Mr PURDY** — At the time, we continued to develop the core. So the project did move. The project did not stop. It did hold up progress in the rollout of certain devices, so we could not go about putting gates in at stations or things that were going to majorly change a decision that may have been different. But overall the program did move forward in that six months.

**Ms HENNESSY** — Has there been a reduction in terms of how lucrative this contract has been or is likely to be for the consortium as against original estimates?

**Mr PURDY** — Absolutely. The company has invested many millions of dollars in this project that will never be recouped by the company.

**Mr ANGUS** — Just in relation to the relationship between Kamco and the TTA, has Kamco got a view in relation to the skills and expertise in relation to managing the program that rested within the TTA?

**Mr PURDY** — It would be unfair for me to comment on that.

**The CHAIR** — That is what we are here for. This is not about being fair. We are here to draw out a perspective, and the perspective is that the committee is interested in the competence of the government agencies in delivery. That is the whole basis of this reference — to examine the basis of the competence of the government agencies that are implementing major projects, so we are seeking a perspective from the stakeholders involved in projects about their experience. Perhaps it might be helpful to you if I suggest that you might like to make an observation from your own 30 years of experience in the business — that is, sort of the relative expertise that has been available to the TTA with which you have interfaced relative to other jurisdictions and other projects you have been involved in.

**Mr PAKULA** — To be fair, Mr Purdy can probably only speak knowledgeably about his own experience since April 2010.

**Mr ANGUS** — I am sure there would be plenty of — —

**The CHAIR** — Let us not have a debate amongst members of the committee. Mr Angus has asked a question, and it has been clarified for Mr Purdy that he is entitled to make an observation, which would be helpful to the committee, because that is the purpose of this hearing.



**Mr PURDY** — I will make an observation, and this is not necessarily pointed at the TTA, it is pointed at how the customer in a government, or any customer, fulfils their role in a project. My personal view is that the government was not correctly skilled on this project as far as the system integration project and it certainly did not understand requirements and requirements management. If the government had understood 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, from the customer point of view, to ensure the contractor met the requirements.

But I think a lot of mistakes that customers and companies make are because of the philosophy that the team who starts the project finishes the project, and in large system integration projects that is an absolute recipe for failure. Projects, particularly in software and system integration, have people who are innovators at the beginning — people who see the next step in technology. They are starters; they like to dabble in the technology, and they like to move with technology. If you try and complete something with a starter, you will never complete it. A project has to have the maturity to move people. It does not mean that they leave the organisation but that you move people within the project aims as the project life cycle progresses. So you should start a project with starters — people who are seeking the next-step change in technology and are looking outside the paradigm. You put them in at the beginning.

Then when you get through the beginning and you get into the contract-and-build stage, you should change your team. You should put in people who know how to actually take those requirements and build something. Depending on the length of the contract and the complexity, sometimes you change your game at the end to put in finishers — people who know how to actually finish something. ‘Okay, we have done enough. The system is there. It is 99.9 per cent finished. Let’s not pull it all apart and recreate it again.’ In my experience of doing government projects, across the Asia-Pacific and Japan — not just in Australia — the same philosophy of having the same team at the beginning and the same team at the end is always prevalent. History says that over 80 per cent of IT projects fail.

**The CHAIR** — It is a very helpful observation, because it goes to the heart of one of the key issues the committee is trying to understand — that is, accountability. What you have just very succinctly highlighted is the difficulty of holding people, or in this case teams, to account for the successful delivery if the initiators are not the conclusers. If they have gone at the end, if they have moved on halfway through project, then that makes it very difficult to hold them to account for the failure to achieve the benchmarks progressively.

**Mr PURDY** — And the skill sets are varied. People who have skill sets, who are beginners, are not the people to build and then deliver and finish. It would be wrong to try and hold those people with that skill set to account because their skill set is in the concept and in the innovation. It is then handed over to the people who can then put that into a pre-app.

**Mr LAKE** — With the TTA, again I joined the project in January. Everybody has their role to play. They clearly have their end customers and they now stay focused on those customers, and we bring into our conversation now, since Greg and I came on the project, the question: ‘What is the value that this adds to our customer experience and customer satisfaction?’. So there is a real shift now to have them focus their job on that side. I think for a period of time they acted like they were big systems integrators, and they knew this. So I do not think we expect the government to have that expertise. That is why they chose to go outside and pick somebody who has expertise in that. What they need to do is focus on what their expertise is and let us use our expertise and use that to work together for the public.

**Mr PAKULA** — I just want to ask about the changes in the project scope. Can you just take us through, specifically, the changes in project scope as a consequence of the Deloitte review and the bringing in of Alcoa as a project manager or an assistant — I do not know if you would call them a project manager or an assistant — and what impact that is having and how the project is now going to be different for the customer in terms of short-term tickets and in terms of the rollout in the commuter belt for the V/Line regional? What change will the customer see at that end-user point as a result of those project scope changes?

**Mr O’BRIEN** — Just be careful. Some of those decisions may have been taken prior to the Deloitte review, particularly the regional rail options. I would not want you to roll everything up in relation to the Deloitte review, because I will ask you to elaborate on all project changes.

**The CHAIR** — Thanks, Mr O'Brien.

**Mr PAKULA** — I am sure we are very grateful for your intervention, Mr O'Brien.

**Mr PURDY** — As I said, we are not aware of the Deloitte report or review, as we have never seen it. However, we were instructed to look at the removal of the short-life smartcard, which is the major change, so that then impacts the program on the tram in that we will no longer implement the vending machines on the tram. It is not a technology issue; the vending machines were there. It is just not going to be implemented, and, at some stage, we will have to remove the short-life smartcard from sale in regional Victoria. Currently we sell around 20 000 short-life smartcards per day on buses in regional Victoria; that will cease, and patrons will need to use a long-life card.

That has not meant a major change to the system; however, it has made some system changes. We have had to do some HMI changes to the bus driver console so it will no longer display short-term ticket availability. It brings the screen up in a different format around top-up et cetera. The complexity has not really changed, and the system is no less or more complex because of the removal of the short-life card because the short-life card is out there now; it is being used.

**Mr PAKULA** — So where are the 20 000 per day primarily sold? Are they in major regional cities?

**Mr PURDY** — Just right across the regional bus network.

**Mr PAKULA** — So Geelong?

**Mr PURDY** — Regional. Yes, Geelong is the biggest regional bus, but I can certainly give you more detail; I just do not have with me today.

**Mr PAKULA** — That would be good, thank you.

**Mr O'BRIEN** — I would like to follow that point up in relation to the changes in the scope and the effective downscaling of the project from what was originally envisaged. What was referenced yesterday in relation to the original scope was to have people in regional Victoria being able to buy one ticket and use it on the whole V/Line network as well as on the Metro network. That has obviously been reduced in scope, and that decision was taken effectively, as I understand it, under the Labor government. So we will effectively not have myki on long-distance trains to Swan Hill, Warrnambool, Bairnsdale, Albury or Echuca. In terms of deliverables, I think there is reference to 350 specification changes. In terms of regional people, who are still effectively paying taxes but will not be seeing a benefit out of myki in relation to that one-ticket service, what sort of evidence can you provide in relation to the ability or otherwise of the network to have coped with a full regional rollout and why it has not been able to cope with that?

**Mr PURDY** — I am not sure I can answer, parts of which are government policy, for us to change the system. The system was designed to have V/Line and could still have V/Line implemented; it is just that the government changed its needs and its specifications to have those included in the system.

**Mr O'BRIEN** — If I could direct you back to the open-architecture issues, as I understand it one of the things that you have battled with as a consortium has been the number of different fares and fare structures, particularly with the nature of the contract being an outcomes-based contract. Should it have been the case that the fare structures et cetera should have been simplified prior to a system like myki being rolled out, so that you had a singular smartcard able to deal with a simpler system?

**Mr PURDY** — It could have been. I am not an expert on V/Line or its operations, but it is my understanding that V/Line has a different ticketing system. It is more a conductor-based system, and the conductor sells more products than just a ticket per se. There are other purchases on a V/Line train that are made, and that was potentially going to be part of the myki system.

**Mr LAKE** — I think you really need to go to the TTA for answers to that. I think if you come back to the lessons-learned idea and you take our experience of big projects, as a company and as individuals, we have learned to get it right the first time. Having a clear view of where we are headed up-front would be hugely valuable. Then every time you choose to change that, that introduces more complexity. 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. We would say, 'Communicate, communicate, communicate'. It is very difficult and complex here, given the number of constituents — the various stakeholders — who have an opinion when you start to talk about our customer base.

If we give customers advice about where we are behind and communicate about how the decisions are being made, it is hugely important to have people understand that, rather than us just going off and doing it or saying, 'It is not there'. Those things are pointed at the TTA and I think are key with what is here. It sounds like you have some constituents who are frustrated with what is there, but we did not make any of those policy decisions. We take the input that they give — and they are the experts on that — and we find a way to implement that and make it available to the patrons at their request. So I think the question is better addressed to them.

**The CHAIR** — Can I just clarify this, and then I will move on: as I understand it, the issue that Mr O'Brien raised specifically relates to regional or country travellers, who will not have access to this ticketing system in their localities. Therefore that was a specification change after the fact of the awarding of the contract — yes? — so that the scope of the project was significantly altered. I am trying to do this so that I actually understand it because I seriously do not: was it driven by the complexity or the cost?

**Mr PURDY** — It was driven by the government's decision not to implement the system on those modes.

**The CHAIR** — But presumably it would have required further investment?

**Mr PURDY** — There was still system development required for some of the V/Line components, but those components are within the existing contract.

**Mr SCOTT** — Mr Purdy, you gave some very interesting evidence previously, and I would like to follow up two points. Firstly, you stated that 80 per cent of IT projects fail. I am interested in the source of that. Is that just from experience, or is it based on academic research?

**Mr PURDY** — A bit of both.

**Mr SCOTT** — A bit of both. So that is about a rule of thumb, is it?

**Mr PURDY** — That is about right. When I say 'fail', it does not mean they have failed and all gone to God.

**Mr SCOTT** — No, I understand it.

**Mr PURDY** — They do not meet the objectives initially within the time frames and budgets.

**Mr PAKULA** — Is that private and public?

**Mr PURDY** — Yes, that is private and public. There is a lot of evidence. There are lots of published documents on the failure of IT programs.

**Mr SCOTT** — You were saying that the failure rate, in your experience, is of a similar nature between private and public, and you drew some interesting evidence further on about project management and the different stages of project management and the staff requirements. It seemed to be from your evidence that you were drawing a distinction between the private experience and the public experience of that.

**Mr PURDY** — I think it is probably more predominant in the public system, and it is mainly the complexity and the size of the programs which drives the difference. A lot of private programs are very small.

**Mr SCOTT** — And a lot of large-scale private programs.

**Mr PURDY** — Large-scale private programs can have very similar problems, absolutely.

**Mr SCOTT** — The way it is described in your evidence is that you had a discussion around those who were good at developing ideas, then those who were good at implementing and those who were good at finishing. As far as I could see you drew it into three phrases of project delivery. Are there any public jurisdictions that you are aware of that have addressed those sorts of different requirements in staffing and project delivery?

**Mr PURDY** — No, absolutely not.

**Mr SCOTT** — But in the private sector you think there is a greater awareness of those needs?

**Mr PURDY** — Particularly in private sector areas where there is large construction, particularly in major defence programs, quite often that philosophy will be taken through.

**Mr SCOTT** — That is the private sector in the defence industry, as opposed to the public sector?

**Mr PURDY** — Absolutely, given the fact that it is the private sector that does the delivery.

**Mr SCOTT** — Thank you; that is quite useful.

**Mr MORRIS** — I am interested in the format of the contract. Page 79 of the Ombudsman's report refers to an outcomes-based contract. He was quite critical, suggesting that it lacked specificity, that there were misunderstandings of which document took precedence and that that led to uncertainties and ambiguities, a couple of which just did not work. I am wondering whether you can indicate to us whether in your view that form of contract was appropriate, and, if it was not, what perhaps might be the best contractual arrangements for a project of this nature?

**Mr PURDY** — I think the answer to that is that the Ombudsman is correct. It was not an appropriate contract form for a system as large and as complex as this system. It was probably an outcomes-based contract for a very simple system, a very short duration system, and that is maybe something that is okay and valuable — I cannot really think of an instance. Ande, can you think of an instance? A system like this should have been a more traditional contract, a requirements-based contract, and driven through a requirements life cycle. I think then we would have had a different outcome at the beginning that would have then had a different outcome into the future.

**Mr PAKULA** — I am interested in exploring that element of your evidence, in terms of what you say are the issues with the original contract. At the point where Kamco was tendering — to the extent that you are knowledgeable about that period of time — and entered into the negotiations with TTA about the deliverables, in terms of the interaction about what was in the requirements, what did Kamco say at the time about that? Did Kamco say, 'Look, there is not enough specificity here', or did Kamco say, 'That is fine. We can work within those parameters'. I mean at some point there is obviously a requirement put to the contractor by government and acceptance of that requirement. Did you highlight these issues at the time? Or is not with the benefit of hindsight that you say, 'There was not enough specificity'. What was Kamco's attitude in 2003, 2004, 2005?

**Mr PURDY** — I cannot answer what Kamco's position was early in 2005 because I was not there; however, I can only imagine, and from documents I have read, that Kamco had a view of the requirement and articulated their view of the requirement. In these programs that are outcomes-based, as time moves on and as the understanding of that overarching requirement becomes better understood by both parties, that requirement can morph, and I think that is the underpinning issue here. Kamco obviously entered a contract with a view that it understood, but I think what it understood was probably different to what was actually in the minds of the customer.

**Mr PAKULA** — In a more general sense, in terms of going back to the question Mr Scott raised and the issue you have raised about the success of IT projects globally, whether they be private sector or public sector, what general comments would you make on the basis of your general experience, not just with Kamco, about the ability of governments to be an informed purchaser when they are dealing with major IT systems integrations organisations? In other words, what comments would you offer about — and we have had some evidence about this yesterday — whether the government needs to have more IT-based professionals on the books in a permanent sense? Do governments around the world generally have sufficient IT expertise and capacity to be able to deal with the private IT sector as equals; or do governments have a real or genuine deficiency in that regard, which makes it difficult for them to elucidate their requirements to the IT sector?

**Mr PURDY** — I was just thinking — if Ande would respond, although I would be happy to.

**Mr LAKE** — In my personal experience it kind of goes back to what we talked about with the people who do those sorts of deals — so the kinds of people who want to do the innovation, do the exciting stuff, take advantage of new technology. Those cowboys want to work for companies like ours so that they go into

organisations and do that over and over again. They want to do the exciting stuff, in the design, and do it, and then a different group of us move into the trenches and knock it out.

**Mr PAKULA** — I do not think you mean ‘cowboys’ in the same sense as we mean ‘cowboys’.

**Mr LAKE** — I am Canadian, so that is a — —

**Mr PAKULA** — We mean cowboys as in very cavalier-type people, not — —

**Mr LAKE** — No, sorry.

**Ms HENNESSY** — It is not the way you would describe government ICT?

**Mr LAKE** — Sorry, no.

**The CHAIR** — I was just patiently waiting to have this issue teased out.

**Mr LAKE** — Blame the dumb Canadian! But I was not talking about government; I was talking about the type of person to do this project. The kinds of people who do these big projects are a certain type of person, and that is what they are excited about doing. If government had a couple of people like that, in my personal experience they probably would not stay there because they do not see a long career of doing those kinds of things because government does not do enough projects. We hire a lot of those kinds of people when they are pumped up and they see this. It is a different kind of person who wants to see it through to the end. As a rule most governments do not have enough of those types of projects that keep the people who are really expert at doing it; they migrate themselves to organisations like ours. You have to go and bring in people. It is a special skill and in a way it is a bit of an adrenalin skill — it is a real challenge — and when you fix it they would be bored on the other side. To give a generality I would say you do not typically find those people in government.

I think it is also exacerbated sometimes in organisations that have big procurement pieces, so they spend a lot more time trying to focus on Ts and Cs or some coverage as opposed to what the business’s goal is and what the outcome is. The procurement people need to protect your investment, but they need to get out of the way because they do not understand what it takes to deliver big projects. By trying to protect the government or their client they end up adding more complexity, adding more expense, forcing people to work around stuff. That is why there is also generated a real industry, a cottage industry, in contract management and the sourcing of those — again, where experts come in who have done this over and over again and to have something that mutually works for everybody, so you get them also. That is, as I said, not geared here, but more personally.

**Mr PURDY** — I think Ande is 100 per cent correct in his comments.

**Mr LAKE** — Except ‘the cowboys’.

**Mr Mr PURDY** — Except ‘the cowboys’. The only thing I would add is that both the contractor and the customer, whether it be in the public or private sectors, have to have teams that do their job, and if one team starts to do the other’s job then it starts to unravel. The government has a role to play. In this case, in the myki case, it has the stakeholder management, it has the passenger management and it has the education to get on and deal with it. It should manage that role and let the contractor get on with the technology because that is why it has gone and got a contractor.

**Ms HENNESSY** — Chair, if we could just explore this for a moment, in light of Mr Lake’s comments — this is an issue that has arisen in respect of physical infrastructure, particularly in the areas of civil engineering and the concept of how does government become a more informed purchaser when it confronts the sorts of workforce challenges that you have outlined? Is it your evidence that the government needs to buy in that kind of support for the purposes of becoming an informed purchaser?

**The CHAIR** — Can I just clarify that? Ms Hennessy referred to infrastructure — that is, hard infrastructure.

**Ms HENNESSY** — Yes.

**The CHAIR** — I think the discussion here is about IT. Presumably you have a view about IT rather than hard infrastructure, or is it similar?

**Mr LAKE** — I do not have an opinion on large infrastructure. My lifetime has been spent in IT. In fact I started my career in government. I was one of those people who did an exciting project and at the end of it went to work for the company that put it in, because I wanted to go and do another exciting project like that, then on and on.

**Ms HENNESSY** — Perhaps if I put my question in a different way. What experiences have you had in other jurisdictions where you have been impressed with your dealings with government as an informed purchaser?

**Mr LAKE** — I think like anywhere there are — —

**Ms HENNESSY** — If any — —

**Mr LAKE** — No, I think anywhere there are great people. When you find people who are passionate about what they do, it is hard not to get caught up in that. As Greg said, here the government has a role to manage the stakeholders, the community, the education. We employ 150 people here in the city; every one of those people takes great pride in the work that they do and in seeing other people do it and takes great offence when they see it bashed for something. I think there are always people who are passionate and good and want to do the right thing and work hard to do that in every organisation, but as a generality it is hard to keep those people who are in any big company, unless they have a lot of ongoing projects to move those people on to.

**Mr ANGUS** — Just following on that same train of thought, I would be interested in Kamco's view in relation to the general efficiency and effectiveness of decision making during the project implementation, particularly couched in the terms we have just been discussing. Do you have a comment on that and also a comment in relation to the performance of the TTA board in managing and steering the project — the overall leadership of the project?

**The CHAIR** — I am conscious of the sensitivity expressed in relation to an earlier question, so you might make a comment in fairly broad terms.

**Mr PURDY** — I think the government has been in some cases slow in decision making, but having said that, there are other sides of that decision making that we are not privy to as the contractor. TTA has had to deal with the operators and with the travelling public. We quite often get a concept, 'What would it take to do something?', and from the time we get that 'What would it take to do something?' to when they actually say, 'Well can you now do it?' sometimes takes a long time. And in that long time there are people spinning wheels and 'Should we go forward?', 'Should we go back?', 'What's going to be the end decision?'. I think clear, decisive decision making, whether it be with this project or any project, is absolutely important. If people want to have a concept, think about the concept — maybe park it as a change, maybe do it in a different way — rather than sort of say, 'What about if we do this differently?', 'Can we flesh that out?', 'Can we flesh that out over time?', 'Can we have a little bit of a pause while we think about it?'. As a project is moving forward it is imperative to move forward and handle that change in a proper manner. As to the effectiveness of the TTA board, it has always been efficient as far as we have had to have dealings with it. We have actually had very few dealings with the TTA board.

**Mr PAKULA** — I am assuming your last comment is because you deal more closely with the TTA senior management rather than the board.

**Mr PURDY** — That is correct; absolutely.

**Mr PAKULA** — You went to the question of interaction and interface with the operators. I am interested in that. What interested me was your comment earlier about students or young people recording the sound of the touch-on beep in order to try and fool bus drivers. I had not heard that one before.

**The CHAIR** — So have you got a tape recorder in your pocket?

**Mr PAKULA** — No, I am hoping we do not give anyone ideas; that is all.

**Ms HENNESSY** — You have got those young people and you put them in in the test room?

**Mr PAKULA** — I am hoping we have not just wised up a whole generation to a new approach. What it goes to almost wittingly is that question of interaction — for example, the issue about the beep is only an issue

when you consider the resources the operator has put into things like authorised officers and matters of that nature. People could do that on trams and on trains as well and it is only a problem if no-one ever checks their ticket. How would you describe the interaction between your organisation and the operators in terms of trying to work through those shared issues, whether it be about people trying to use the system or system integration issues more generally? It is one thing to talk about how you get along with the TTA and the government, but what has your experience been with Yarra Trams and Metro Trains and the various bus companies?

**Mr PURDY** — We do not have a lot of direct relationship with the operators; that is handled by the TTA. However, our technicians and our people on the street have lots of interaction. I have to say that the bus industry has been very supportive, Yarra Trams has been supportive and Metro has been supportive of providing us feedback where they see things. We then need to bring the things that are seen back to a test lab to then prove it. But the relationship and the interaction has been very good.

**Mr O'BRIEN** — Many Australian companies lead consortiums that do business overseas, so please do not take this in any offensive or pejorative terms, but — —

**Ms HENNESSY** — When somebody starts off by saying 'no offence', they are usually about to insult someone.

**Mr LAKE** — Are you going to insult Canadians? I make one cowboy crack and now I am going to get it!

**Mr PAKULA** — 'Please don't take offence at this, but'.

**Mr LAKE** — I am an Australian taxpayer now.

**Mr O'BRIEN** — That is very good; I like to see that. The Ombudsman, though, has identified specific problems in terms of lessons learned, and this may be a consortia-type issue for government in relation to what they call vendor management and relationships that project managers effectively were not experienced or there were problems with the overseas-based nature of the vendor — that is, your company Kamco. So are there lessons learned or, if we are going to have continuing relationships with overseas-based vendors, which I am sure we will, are there ways of ensuring that quality project management occurs here, particularly when problems emerge as they did in this project? That is identified on page 42 of the Ombudsman's report where it states:

This can be particularly problematic when projects become drawn out or face budget constraints.

From your experience, how would you advise is a way for this overseas relationship to work?

**Mr PURDY** — There is no reason why an overseas consortium cannot work. As Australians we should embrace technologies that are being developed overseas. We are a global community. Probably an observation of mine, which is not a direct answer to your question, is that what the country should do is to try not to customise things too heavily just to Australianise them. There are plenty of very innovative solutions from other countries that could easily fit within our environment without a lot of complex integration. We do, as a group of Australian citizens, like to Australianise things, and we should really look at that at the outset. However, project management of an overseas consortium is something that is well within the Australian capability. We have got our world-class project managers in this country, and overseas companies have experience in dealing offshore because one of their income streams is offshore delivery. The important thing is to have a strong Australian presence and have the key technologies present at the right points in time in the country. It is a mix, pretty much in line with what I said earlier, of the change of people in a project life cycle; you also need to have change in engagement during the life cycle where the company is through the life cycle.

**Mr MORRIS** — Ande, you are champing at the bit to say something.

**Mr LAKE** — Only that our company has been incredibly supportive of this project. We do not want people to think that somehow Greg and I are here, a long way from head office, doing what we want to do and not connect it in. We have regular calls, regular meetings, people who are always offering to help — flying in expertise to fix certain types of things and sending people to development labs in India to test certain kinds of things. There is a tremendous amount of value that I believe the government gets out of having Kamco and its extensive global organisation.

**Mr O'BRIEN** — This should clarify it very specifically then. Do you accept that there were problems identified in the Ombudsman's report about the quality of project staff provided by the overseas-based vendor, Kamco, in this case, or not?

**Ms HENNESSY** — You are doing a Barnaby Joyce on us, Mr O'Brien. They have answered the question.

**Mr PURDY** — We do not agree with that comment. I had not seen that comment, but we would not agree with that comment, no.

**The CHAIR** — You have had an opportunity to respond, albeit that you had not read the Ombudsman's report. We will be able to put similar questions to the Ombudsman in the next session. I would like particularly to thank Mr Purdy and Mr Lake for their attendance today. It is enormously helpful to the committee to hear not just from the government agencies but from the others on the delivery side. Thank you very much. You will receive a copy of the draft transcript for comment. I understand, although we have no questions on notice — —

**Mr PAKULA** — No, there was the matter on notice about the details of the short-term tickets.

**The CHAIR** — I beg your pardon, yes, one issue on notice. But you did indicate you would be happy to respond to the secretariat if there are any further questions.

**Mr PURDY** — Absolutely. We will do that.

**The CHAIR** — Thank you very much. This concludes this session of the hearing.

**Witnesses withdrew.**