PRODUCTIVITY COMMISSION

INQUIRY INTO PUBLIC INFRASTRUCTURE

MR P. HARRIS, Presiding Commissioner
DR W. MUNDY, Commissioner
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TRANSCRIPT OF PROCEEDINGS

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Continued from 11/4/14 in Brisbane

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MR HARRIS: We might start. We have to get through a whole bunch of hearings today, I think the largest single number of presenters at the hearings ever in the Productivity Commission's history, so we have to go pretty much flat out until 6 o'clock tonight, so let's get started.

I'm Peter Harris. I'm the Presiding Commissioner of this inquiry. We have Warren Mundy and Paul Lindwall as Assistant Commissioners. The purpose of this round of hearings is to facilitate public scrutiny of the Commission's work and to get comment and feedback on the draft report. Following this hearing today we will be finished our public hearing process.

Participants in this inquiry will automatically receive a copy of the final report once released by the government, but I should advise you that the government has up to 25 parliamentary sitting days to consider our report and so when you get your final copy could be some time after we actually finish. We are planning to finish around the end of May.

We like to conduct all hearings in a reasonably informal manner, but I remind participants a full transcript is being taken and for these reasons comments from the floor will not be taken today, but at the end of proceedings at 6 pm, for anyone who really wants to hang around to make comment, we will provide opportunities for anyone who wishes to make a brief presentation who is not on the list here today. Otherwise I would say to you we will take comments by email and so you can provide us with further advice after this hearing. The transcript will be made available to all participants. It will be available on the Commission's web site following the hearings and submissions are up on the web site, as I'm sure most of you know.

To comply with the requirements of the Commonwealth occupational health and safety legislation, you're advised that in the unlikely event of an emergency requiring the evacuation of this building, follow the green exit signs and the instructions of staff at this venue. I think that will probably do for the opening remarks. I believe we have the first presentation from RICS Oceania. Could you identify yourself please for the purpose of the record.

MR HOGG (RICS): Certainly. My name is Roger Hogg. I am building cost information service manager for RICS Oceania.

MR HARRIS: Okay. For those who don't know, it's the Royal Institute of Chartered Surveyors?

MR HOGG (RICS): It's the Royal Institution of Chartered Surveyors. It's the largest property membership organisation in the world. From probably later on this year, actually, we will have more overseas members than UK members. It was originally established in the UK; many, many surveyors in Australia and New Zealand, throughout Commonwealth and former Commonwealth countries - a very large presence. The office in Sydney was established in I believe the year 2000 or thereabouts and has been growing and sustaining membership in Australia since that time.

Building cost information service is an adjunct service to that and, as was noted in the comments that are produced for the Commission, is currently under contract to DEEWR, or Department of Education as it is now, to produce a building cost information service for Australia as a follow-on from the BER report. The final report of the BER was some two or three years ago. The object of the exercise was originally to set out to capture the BER data, to have that in a permanent managed database and then also to look at projects going forward - business as usual, as it were - and to create facilities where projects could be captured, analysed, maintained, managed and sustained in a permanent environment.

That's just building projects. There are various schemas within that scenario and we believe that infrastructure could be a schema that could fit into that scenario very, very comfortably. One of the big advantages of having situations where you have building and engineering costs in the same place is that suddenly you see the whole of the construction market across Australia and we believe that that would be a very strong place to be.

MR HARRIS: Right. That was I think the primary question, for me anyway, that came out of your submission, so what was an education review arrangement, and therefore focusing very much on data that was captured in the course of one particular infrastructure exercise. Are you saying that I guess the register or the arrangement that you're putting together will capture this across the full range of infrastructure projects?

MR HOGG (RICS): At the moment the concentration is on building projects but in essence there is no difficulty of expanding and extending it to heavy engineering projects. It depends on your definition of infrastructure, of course, but currently we have New South Wales Health Infrastructure, for example, signed up to provide analyses. We provide a little bit of service to them, they provide information through their consultants who provide information in the structures that we require for maintenance of these projects within the database.

So the result is that - and this is ongoing level of education projects, level of health projects and I'm speaking to the independent education sector, for example, tomorrow in Melbourne and the intent is to get the public sector very much on board as well as the private sector too, so we have a nice rounded service which could then make comment - we make analysis and make comment on the functioning and the development of the markets, and the way the markets are moving. So it's not just a question of capturing projects themselves, but also analysing them in such a way as to understand how things are actually taking place within the market, how tendering is going, how projects relate to each other, how costs are moving and that's the background of it.

MR HARRIS: Has the thing reached a form where anybody has been able to use it as yet?

MR HOGG (RICS): Yes, it has. We have not launched it completely yet, but it is being made available to senior management in New South Wales Health Infrastructure. What's happening is really quite interesting. They've provided us with several projects thus far and there are more to come from them, ongoing projects. We haven't dealt back historically, although we will when they're comfortable that we have produced what they need us to produce. What we find interesting is that the projects themselves are coming from different consultants, so they're helping us with the analysis and we are rounding off some of the rough edges. What we finish up with is a situation where we have a database composed of projects which come from multiple consultants and the consultants are basically saying, "What do these other projects look like?"

So their interest in other's analyses or analyses of other's projects, that's a very positive sign for us because it seems to me that will assist everyone in benchmarking increased transparency and then reduce risk potentially at the other end of this process because people will know more about more, rather than simply the projects that they have in front of themselves in their own consultancy.

MR HARRIS: So that's the consultant's end who are - I guess are they working for both the provider of the project and the funder of the project? In other words, is this widely accessible to both sides of the transaction kind of institution arrangement?

MR HOGG (RICS): Yes, very much so. So a good example would be New South Wales Health Infrastructure. They can access the projects that consultants - those which are identified by them as to have access to the projects would be able to have access, but it will be driven by New South Wales Health Infrastructure as to who, other than their own consultant on that particular project, has access to other projects.

MR HARRIS: Yes, but as an example, could Western Australia Health get access to it?

MR HOGG (RICS): Well, that's a matter between really Western Australia Health and New South Wales Health Infrastructure. If they agree that is to be the case, then that's a tick-box exercise for us in terms of making that information available one to the other. There's no difficulty in doing that, it's a question of whether they choose to facilitate - to permit that to take place.

MR HARRIS: So you understand we're doing a national infrastructure project.

MR HOGG (RICS): Yes.

MR HARRIS: The entire thematic of the report is about removing barriers to exchange information. You mentioned at the start federal education was involved in this. So federal education was involved, by the sound of it, to say, "Let's vacuum up the data," rather than, "Let's develop this as a resource tool that's available to everybody"?

MR HOGG (RICS): Well, in principle I guess it's a question of vacuuming the data that's passed and that exists in the system. That's to be captured and is being captured, but it's also about moving forward and projects that are coming up, what we've termed business as usual, the essence being that as much is captured as is possible, but these are independent bodies that we're talking about so they have to come to the party as well or they have to choose to come to the party. We can't force them and nor can DEEWR. They can suggest - perhaps that's a step too far. Perhaps DEEWR can't force them, I don't know the answer to that. But the reality is, we talk to them individually and try to persuade that this is a good way to build.

MR HARRIS: Sure. No, I wasn't trying to put the burden on you. I'm trying to think of this and the people who are initiating it, whether they designed it for the purpose of making sure that it was widely and comprehensively available, because that's obviously a crucial issue. You can't really expect too much value-add to come out of a database that's only available to a limited number of parties.

MR HOGG (RICS): No, it's available right across the board. It will be accessible right across the board. It's Internet based, it's secured on the Internet by our software designer.

MR HARRIS: Yes, but our interest is - for example, in the report we cite rail infrastructure projects and vast variations between different jurisdictions on what appear in principle to be very similar projects. Even though having done some rail projects myself, I know they are all unique, nevertheless there are some basic benchmarks and they don't appear to be being gathered. That's why your proposition is actually quite an interesting one.

There appears to be no current home for these things to be made available widely across jurisdictions so that they know when they get initial estimates for a project or indeed when they construct their initial estimates to advise government what a project might cost. They're somewhat flying blind and it hasn't been done here before seems to be the rationale and therefore the variations are three, four hundred per cent sometimes from the initial estimates to the final estimates.

MR HOGG (RICS): Yes, I agree with that completely and that's exactly what we are focusing on and, yes, some of the infrastructure projects, the health and education infrastructure projects, if you like, were already capturing these; but, yes, that would be another step, another string to their bow, as it were, which would be very, very valid.

MR HARRIS: Yes, okay, sorry.

MR LINDWALL: The design of the database that you've got, the metadata, if you like, is that flexible so that if it were to be expanded to more generally outside of education, you could add different types of data collection, information?

MR HOGG (RICS): It's not constrained at all by the type of building in this respect. We already have health infrastructure projects there. Right across the board we have a structure which allows us to capture all building projects. That's one schema. Another schema would be to capture engineering projects, pure engineering projects. That's difficult as well but don't think that we haven't thought about that. What we need is a set of documentation which prescribes what the key criteria are for particular types of engineering projects and that will produce some of the benchmarks that Peter just mentioned; but these are a separate schema, we have a schema for building projects and other schemas for different types of projects.

That also creates a facility to be able to expand to New Zealand and take in Indonesia, Singapore, Malaysia, Hong Kong et cetera et cetera, so there's scope for international comparison as well. We accept that there are issues as far as currency comparisons are concerned but there's certainly efficiency et cetera issues that can be dealt with on a very rational basis.

MR LINDWALL: What do you think about our proposal about having a general publicly available benchmarking for the infrastructure sector as a whole?

MR HOGG (RICS): I think that's really the transparency that we all seek. In an ideal world we would have all these projects available, all of the analyses available, all the high-level aggregate data, all the detailed data as well. As we move into the process and move on with the experience of how the process works in terms of having captured these projects in detail, I do believe that that is the direction in which we will go.

At the outset with what we're hearing from a lot of certainly consultancies, well, that's our IP information, and the issue with that is that that IP resides really with the clients so it's a client's decision. It's always a client's decision whether a project is analysed in the first place and then what happens to that information; whether it's in the public arena or whether it's private to them or them and their agents, that's for them to decide as well.

MR LINDWALL: In your submission you mention about the shortage of quantity surveyors. Is that an issue that's changed over time as to being only recent? I understand you also wrote about the red tape that might be a barrier to entry from foreign chartered surveyors. What type of red tape in particular and what type of regulatory changes would you like to see to ease those barriers?

MR HOGG (RICS): That's really not my specialist area but I would suggest that there has - quantity surveying was placed on the migration occupations and demand list a few years ago and I think that was a step forward. There are other issues I believe with other forms of surveying such as building surveying which don't have the same recognition status as just quantity surveying, but really my personal view, I think it's an immigration issue more than anything else, it's the accessibility to jobs in the large commercial environments.

It's one thing coming to Australia from an external environment and working in somewhere like Darwin; it's a completely different thing going to somewhere like Melbourne, Sydney or Brisbane or Perth because the commercial environments are larger. It's very difficult to bring somebody or for somebody to come to Australia and actually work on large commercial projects in a small non-capital city environment; there's so little of it, the market is primarily based in the large commercial centres.

DR MUNDY: So the nature of employment perhaps in comparison, say, to certain engineering professions is much more corporate and ongoing rather than project based?

MR HOGG (RICS): It tends to be, yes, because the large engineering projects that I suspect you're talking about, like the huge mining environments in WA and Queensland et cetera, they're very specific; yes, they're very large but they're very specific and the numbers of quantity surveyors I would suggest are based predominantly in the more urban environments. Yes, there are QSs, there are surveyors out in mining environments as well, but - - -

DR MUNDY: But they'd largely be employed in firms of quantity surveyors and consulting firms and would go out.

MR HOGG (RICS): It can be both. They can be employed direct as well; it can be both.

MR HARRIS: Other things?

MR LINDWALL: Not really.

MR HARRIS: I'm going to try to keep to time so in fact we're running a little early. Are there things that we'd missed asking you that were relevant from your original submission?

MR HOGG (RICS): No, I think you've been pretty thorough in expanding on what it was that we submitted.

MR HARRIS: Just one thing final then from me, because you can see from our report we're going to run some kind of proposition in relation to benchmarking. This would be more of a personal judgment from you because I'm sure you wouldn't want to answer this question in a way that binds any of the parties who are involved but I guess in a context sense we would like to suggest that the benchmarking arrangements for infrastructure be built up by accessing all of the credible data sources; you hold a credible data source. It may be viewed - because it's primarily buildings oriented, although as you say you do cover for some engineering - as being a partial resource.

We wouldn't want to recommend something where it was likely that the parties would be reluctant to participate, simply because you can divert an awful lot of effort into those. So do you have a personal view on the preparedness of parties to share information in this area? You mentioned people's concerns, some consultants' concerns about their IP. Are we likely to face resistance in this area - not to say malintentioned but nevertheless are we likely to face resistance in this area if we were to suggest that this database be swept up into a larger one?

MR HOGG (RICS): I think there would be a wariness rather than a resistance. The issue is: is there going to be a benefit to me as a consultant, speaking as a consultant, to actually having that information? That's the process. This is relatively and that's a process. This is relatively new here. This is a first cab off the rank, as it were, as far as real project benchmarking on an ongoing basis.

I think as we move into this more and more, it will become more and more a part of the real benefits that there are to particularly people like QS in order to have that information at their fingertips and be able to say to clients, "I have dealt with this, this and this project. I'm really pre-eminent in this particular field. This is where I'm strong." I think that as we move into a situation in which there is more and more information being captured, that would be a strong place for people to be.

I think it is difficult at first because it's new. It's a step in a direction that we haven't gone in before and people are enthusiastic and then they think about it and there's a lot of process engineering and maintenance of thoughts going forward. We are getting there. We can see the changes that are taking place. People are thinking, "There is something really valuable here," but it's a process. It just takes a lot of our time. I'm not sure you would get reluctance so much as nervousness.

MR HARRIS: Fair enough, because it's new.

MR HOGG (RICS): Yes.

MR HARRIS: Look, we appreciate your submission because you drew attention to something that we weren't conscious of initially without it, so that's immense value and we probably will do a little bit further investigation in this area. I appreciate you making your time to come here today. Thank you.

MR LINDWALL: Thank you.

MR HOGG (RICS): Thanks a lot.

MR HARRIS: I think we're going to bring NICTA up. I know Hugh is here. I don't know whether he has got his entire team. He has got his entire team. Could you identify yourselves for the record and spell out NICTA in full, so that everybody in the room knows what the acronym stands for.

PROF DURRAN-WHYTE (NICTA): Good. I'm Hugh Durran-Whyte. I'm the CEO of NICTA. NICTA stands for National ICT Australia. ICT is Information and Communications Technology. We are Australia's national centre of excellence in ICT.

MR FITZPATRICK (NICTA): I am Rob Fitzpatrick, director of infrastructure, transport and logistics at NICTA.

MS JAKUBOWKSI (NICTA): Ms Jakubowski, director of government relations.

MR HARRIS: Welcome. Thanks for your submission which is going to I think provide us with a few very interesting vignettes for the inquiry, if nothing else, and hopefully more than that. Do you want to make some opening kind of remarks, Hugh, or are you guys just happy to go to questions?

PROF DURRAN-WHYTE (NICTA): Yes. Look, I've just got to make a couple of points that I think are important. We often use the catchphrase a computer is not concrete in the sense that I think an awful lot of new builds and construction in infrastructure would benefit substantially in terms of a productivity outcome from the use of ICT, but equally I think the integration of ICT with existing infrastructure and the better use of existing infrastructure incorporating ICT is critical to making simply better use of what we have.

I will also say that I think it applies across the board. Things have changed a lot in the last three to five years, in the sense of ICT really needs to be considered up-front when you design new infrastructure and I think there are vignettes, which I won't go into, which really address exactly the kinds of savings that can be achieved through that but also in the construction and the way that new infrastructure is actually dealt with. I think the Commission can say a lot about simply making the right allowance for the integration of IT when infrastructure is now built and of course in the operation.

I feel the need to point out this is really a life cycle issue to do with ICT. We need to be treating it as how we actually operate it, control it, gather data from it, the maintenance for operation, whatever, throughout its entire life cycle. So I think IT is really a very critical part of all future infrastructure and I think I'll stop at that point and take questions.

MR LINDWALL: This is also related to BIM, or building information modelling, I guess. It is part of a design construct using technology to do work in three dimensions in particular and also to standardise the transmission of information from the various parties who are involved in the construction. Can you give us a bit of an insight perhaps about the scope for the savings that could be achieved if it was more widely used, such technologies.

PROF DURRAN-WHYTE (NICTA): Yes. Look, I will say some of that in terms of a business process and the types of standards that are going on I think and, as we heard in the previous presentation, are very important in terms of information exchange, although I think the real import of some of the things we're saying here is to do with some of the newer technologies around, for example, big data analytics. It turns out that in many cases the government holds an enormous amount of data both at the state and at the federal level about the operation of existing infrastructure. Almost none of that is exploited in the design process.

The typical way that these are addressed at the moment is someone goes out with a clipboard, does a survey. We use that survey to make billion-dollar decisions which is quite ridiculous, in my view, as opposed to actually taking the fact that we have typically real-time data from all the traffic lights or whatever else it may be that's in there, and we're not exploiting that in terms of how we design, I understand, even what needs to be built at some fundamental level. The data exists, the technology exists. It really should be a no-brainer to actually make better decisions about what it is we design and how we design it.

MR LINDWALL: This is used a lot more effectively overseas, like in the United States. So can you think of any reason why we don't exploit it to the extent we could?

PROF DURRAN-WHYTE (NICTA): Yes. We have a recent example where we've been. It's discussed a little bit in here about the Kwinana Freeway in Perth. The challenge there is there are no brownie points for adding IT to your contract, in fact on the contrary. Contracts are typically measured by the metres of road you can produce for a certain amount of dollars, and yet some idea in which you can ensure that a percentage of such contracts are actually focused on IT would be completely transformational in terms of the way construction companies would think about contracts. At the moment they have no incentive to do that because it's simply not measured in the whole life process of that piece of infrastructure.

So when you look at what happens in Europe, the equation is very different, particularly when it comes to things like rail transport and freight and things like that. People think very carefully about the application of IT because it is in there in terms of a productivity issue. I will say that may change if there are private operators of infrastructure and things. I think then the use of IT is clearly critical to the way private operators might use and control infrastructure.

MR LINDWALL: So is this also about the risk aversion of government procurers and the skill base of the government procurers, do you think?

PROF DURRAN-WHYTE (NICTA): No, I don't think that's the case. I will say that, and again if I can put one of our examples in here, around the Port Botany freight system, I think once people have seen what can be done, I don't think government are risk averse, on the contrary. I think it has opened their eyes a little bit.

MR LINDWALL: Yes.

PROF DURRAN-WHYTE (NICTA): But the tradition of the way contracts are tendered and in terms of how much rope can I get for my dollars or whatever else it may be, that's the driver, as opposed to thinking, "How much efficiency can I get from a particular metre of road?" which is a very different KPI.

MR HARRIS: There is a degree though, isn't there, where government gets no credit for improving the operation of a freeway by electronic means. There is nothing to whip and cut.

PROF DURRAN-WHYTE (NICTA): Yes.

MR HARRIS: There's nothing to announce at the national conference of the political party. There's very little to campaign on and as a consequence of that, there is no incentive from the top really for examining the alternative to pouring more concrete, as you put in your submission, through, for example, a better system management.

PROF DURRAN-WHYTE (NICTA): Completely agree. In fact again many of our studies actually conclude that actually there is no need to build the infrastructure at all. You just need to use it better. In that case we are patted on the back, but there isn't much credit for not spending money, rather than spending it in some sense. It is a little tricky.

MR HARRIS: We do require, therefore, some variation in the system to provide an incentive for people to examine the prospects for alternatives rather than pouring concrete as the first and, therefore, only and best solution. You have some experience obviously if the New South Wales government was prepared to consider Port Botany handling. Somebody had to at least decide that it was worth coming and asking NICTA the question. Presumably, given the chequered history of investment and infrastructure around Port Botany and the impossibility really of any transport mode supporting the improvement in another transport mode, that might have been what drove them at least to come and ask you the question. I don't know, but I'm guessing. So would you like to comment on that, because we are very interested in trying to alter the incentives in the system to have, you know, efficiency management conceded at least before moving straight to investment.

PROF DURRAN-WHYTE: Yes, I will make a brief comment and then I will get my colleague to comment as well. My view is that the focus for KPI needs to be - and I sort of briefly say it then - not on metres of road but on the amount of traffic you can get on any given metre of road, if you see what I mean. It's an efficiency, a productivity KPI that needs to be of infrastructure investments rather than just a quantity investment, because in the end it's the product of those two that actually determines traffic flow or goods flow or people flow, so at the moment we are only optimising one component of that product, if you see what I mean.

MR FITZPATRICK: Yes, it's a very interesting topic. The question really is about mind-set. How do we get people to have a mind-set, first and foremost of how do we get better use of what we have got before we spend dollars on new infrastructure? I think in the case of Port Botany, the challenge of mode shift, moving containers by rail instead of road is one where, frankly, our backs are up against the wall. We are in a situation where we have got two million containers roughly a year coming out of the docks at the moment. That will be going to seven million containers a year in the next 15 years, if the forecasts hold true.

86 per cent of containers are moved by road. If that continues, our chances of delivering on the growth will be limited, because the roads in the Port Botany area are congested already, so we need to find ways of shifting the mode choice from road to rail. When you get into then looking at rail, the first question is what is the capacity, and that is where the mind-set cuts in. Everyone in the sector for over a decade looking at consultant reports and similar has said, "We need to fix the infrastructure. The infrastructure is the bottleneck."

Our approaches with data analytics and optimisation these days allows us to do far finer-grained analytics so that we can figure out effectively how to manage peak loads, because across business and industry, getting better use of what we have got today is really about big load management. How can we shift those peaks? By doing those kind of deep analytics, where we are not looking at sample survey data for six weeks and drawing a straight line in perpetuity, by looking at the desegregated pieces of information and understanding where the opportunities are for getting better use, then what do we find? We find we actually don't need to invest in infrastructure. There are some basic operational changes that can give us extended life, at least for 10, 15 years, if not longer.

MR HARRIS: So is it true that after attempting and failing at all other alternatives, IT is then considered as a potential solution?

PROF DURRAN-WHYTE (NICTA): I will say, and you will see this in the examples we put, we have taken a process of going in and saying, "Have you looked at this?" and doing something, which was effectively a pilot, and once people see what is possible, I think things are gradually shifting, particularly in government. Still, I would say, the incentives are not right, the way contracts are let and these sorts of things, to actually make sure that that sort of technology is properly incorporated. So I will come back and say again an efficiency productivity KPI around the way in which infrastructure is actually tendered for is probably the key to integrating information technology, and that would provide the right incentives to at least look at all those different alternatives.

DR MUNDY: In a former life I was an airport planning director.

PROF DURRAN-WHYTE (NICTA): Yes.

DR MUNDY: The sort of use of IT would be described in planning in the airport sector frankly as old hat. We'd been working out how to put bits of taxiway in, rather than build runways for a long time; ditto in planning terminals, and do we need to build more terminal space or can we better arrange the space we have got, things like that. That's an observation I would make about both privately-owned airports and, perhaps to a lesser extent, publicly-owned airports, but perhaps not as strongly, particularly in emerging economies which want to be hubs for national economic development reasons.

It seems to me that the difference here is that to some extent there's an issue around the capital constraint. It's the rationing of capital, rather than its free availability, and indeed the incentive to then say, "I've spent two billion bucks on this road," rather than, "I spent a hundred million on it and look what I've saved you," is not there. So I guess the question in my mind, and I'm always wary to mandate technological solutions, because that leads to over-investment in technology on occasion, not always, but it can lead to that, and it perverts the proper cost-benefit analysis, because you would no doubt suggest that IT should be used when it's appropriate, but not for the sake of having it flashing a green light or something.

I'm just wondering how do we bring this on, how do we change these preferences, particularly in the public sector where the incentives around capital utilisation are not as great, in fact there are perverse incentives for capital expenditure through the political process. How do we embed this stuff? Is it an ownership problem? I mean, it's hard to find who owns the congestion problem around Port Botany. It's just as hard to work out who owns the Swanson Dock as well, I can tell you. So I'm just wondering, what are the institutional reforms that we really need to pursue, because it seems to me that part of the problem is no-one really owns the problem, and no-one has really got the job of fixing the capital.

PROF DURRAN-WHYTE (NICTA): I'm pleased you brought up the airport example actually, because without wishing to go into details, we are indeed working with airports. You are right in the narrow sense that airports themselves are well used to use of optimisation, because they are driven by a KPI that talks about their particular efficiency in that area.

DR MUNDY: I actually think it's driven by shareholders rationing capital.

PROF DURRAN-WHYTE (NICTA): Yes, because I'm on my way to Sydney Airport immediately after this meeting, I will not go there by taxi because unfortunately the entire supply chain around the airport is non-functional in Sydney, I think it's fair to say. Okay? In fact this brings us also back to the Port Botany problem. Every little bit of that thought they were doing well, but only when you laid out everybody that's involved in the process in one integrated model could you recognise the fact that the delays that were observed up here were actually caused by something completely different that no-one had ever thought about down the other end. I suspect that's true with my visit to Sydney Airport this afternoon as well.

So in some sense at a government level, the incentives are actually to, "Let's look at the whole supply chain," whether it's a people supply chain or a goods supply chain or anything else that's involved in that, "and let's see where is the best place that I could actually invest in this supply chain," because in the end, making one bit outstanding doesn't fix anything at all. Again, I will come back to some of my earlier background. I automated the Port of Brisbane, so I'm well versed in very efficient terminals. The problem is that that supply chain is no more efficient, because you've got a really good bit here, but the rest of it doesn't work as well, if you see what I mean.

So I think governments really need in their heads in a planning sense to have the complete issue, "How am I going to get people," for example, "from western Sydney to the city?" as a totality of problems, and then really think about the investment in infrastructure there. That's I think their KPI, their motivation. I'm not a political expert, but one would hope that one would wish to best spend one's money in order to achieve a particular capability or an outcome.

Then if I bring myself back to now, the construction company that's going to tender on a piece of road, okay, which I think is an important implementation of a component in that complete supply chain, then I think there is a role to either promote the fact that live existing data is used in the design process or, to some degree, a proportion, some consideration is given to a proportion of that contract actually being earmarked for integration of control or productivity solutions or indeed the integration of the sensing part of technology for maintenance; that is, the argument that says it is more than just building it and walking away, it's that total operation throughout its lifetime.

I think it's those KPIs in a contract who will drive the use of ICT, rather than mandating ICT up-front, which I think you are exactly right may cause - people will just buy a big computer and say, "I spent it on ICT." You don't want that. You want them to really think about "the ways in which I can actually get the max productivity out of the particular piece of infrastructure I'm building", but there's no performance in a typical contract that asks for that as part of the design, and I think maybe there is a risk aversion component there because of the lack of that KPI.

MR LINDWALL: Various technologies can be deployed to improve the efficiency of the road network. You have mentioned ramp metering, for example, but I can think of using the emergency lane during peak periods or changing the width of lanes even or having better synchronise traffic lights. Are they all important or are some more important than others?

PROF DURRAN-WHYTE (NICTA):   Absolutely. They are all important and I think our studies in this area - and I will say we are not the only people doing this sort of thing, so take all the existing data and we can measure all this stuff, you know, in many different cases and from that it is possible these days to predict if I open the emergency lane, what would the impact be at peak time, or if I put ramp metering in and I am actually measuring the cars, what impact would that have? Some of the figures are frankly stunning.

MR LINDWALL: For example?

PROF DURRAN-WHYTE (NICTA):   I will pick up the one that is not ours, the M1 in Melbourne. The introduction of ramp metering particularly allowed 40 per cent more traffic flow on the same road. With a computer you reduce the need for two or three additional lanes. That must be an enormous impact. Who gets the pay-off there? I think that is a KPI you need to think about in the way that it is phrased because if you just say things, and Peter brought this up at the beginning, then you do have a challenge, because who earns the savings?

MR LINDWALL: Yes.

PROF DURRAN-WHYTE (NICTA):   I think it needs to be appropriately incentivised as to whoever operates the infrastructure.

MR LINDWALL: Presumably if you had some sort of - as we have said in a pilot scheme - user charging on the basis of time and per kilometre, that would be linked quite nicely - - -

PROF DURRAN-WHYTE (NICTA):   Absolutely correct, yes. I think it works well when you think about those - I can think of pay-per-use types of roadway but I will say it is not limited to that. I mean, we brought up the airport example earlier; there are so many players in that supply chain, private and public, in many different ways. Just figuring out who is going to benefit if you do make a saving through that - I think that needs to be carefully thought about in the way that contracts were incentivised.

MR LINDWALL: A final one maybe from me: other persons have spoken, not in hearings, about the prospects of autonomous cars. Google have them. How far away do you think that is and what type of contribution would that make to - - -

PROF DURRAN-WHYTE (NICTA): I am so pleased you asked that because this of course is my specialist research area - a long way, much further than people think, for a number of different reasons. The sensors that are required on cars like that are way more expensive than the cars themselves at this point. There is a degree of integrity that I think still needs to come, so you clearly need to understand how to build it as a system and also, if you like, I like to liken this to the way computers developed. I think we are still truthfully in autonomous vehicles at the IBM-370 stage of development. We have autonomous trucks and autonomous straddle carriers which are millions and millions of dollars each and eventually we will have middle things and eventually we will work ourselves down where everyone has an autonomous car, but it will be a number of years, more years than the popular press thinks.

MR LINDWALL: Which is why we need to invest in the types of technology to help with that now.

PROF DURRAN-WHYTE (NICTA): Absolutely. I think there are many intermediate goals here. I think we have work that goes on that says let's instrument the roads so that people who have automated safety systems and things like that could actually exploit that road and be much safer, with a more efficient way of driving, and that you could envisage now.

MR LINDWALL: And pricing systems that - - -

PROF DURRAN-WHYTE (NICTA): And pricing systems, absolutely. I totally agree.

MR LINDWALL: Because the comment on autonomous vehicles is that you don't require an autonomous vehicle to implement a pricing system.

PROF DURRAN-WHYTE (NICTA): I completely agree, yes. That kind of technology, what is called vehicle to infrastructure technology, there's some great work that has gone on and it's implementable now.

DR MUNDY: A lot of what you have talked about by way of policy solutions is actually about changing the behaviour of procurers.

PROF DURRAN-WHYTE (NICTA): Yes.

DR MUNDY: That is fine, but are there any current barriers in relation to regulation or other issues on the supply side which are obstructing people who want to take up new forms of technology actually doing so? Are standards lagging? Is it a behavioural thing primarily on the part of those who procure infrastructure and a whole pile of coordination problems like you have outlined?

PROF DURRAN-WHYTE (NICTA): I don't believe there are any regular impediments, if you like. Our limited experience of this - and remember we are IT people, not infrastructure people - is that when we have worked with contractors to think about these things, immediately the pressure comes in the way that the contract is granted to eliminate "superfluous" IT or other technology and just focus on delivering metres of road. Do you see what I mean? The contracts typically are squeezed that way, so I think even if contractors did think that way and they are increasingly thinking that way, if you like, the environment is still, "How much road can I get for my dollar?" which is not really the question.

DR MUNDY: I agree.

MR HARRIS: In our draft report, we proposed a major shift to transparency on a continuous basis by governments, plural, in publishing first the concepts, then the developed analysis of the cost and benefits of the concept, then the revised design of the concept prior to committing to any prioritisation of this project versus that project. Thus a pipeline might emerge of projects simply by transparency, and over time, the continuous publication of concepts and the analysis behind them as it improves.

In terms of you having access to knowledge that governments are planning to "do something", this seems to me to offer you the opportunity to be able to put forward a proposition to a government when it first publishes its concept. You might be able to consider this from a system planning perspective, rather than from a "just build it" perspective. That's a sort of leading statement from me but the purpose of the hearings post the draft report is to ask people whether the ideas will offer improvements. I would like to get you on record in some way as observing or commenting at least on whether the transparency device is likely to benefit people who may have alternative ways of prescribing a solution to an infrastructure problem.

PROF DURRAN-WHYTE (NICTA): I think this goes back for me to the government's open data policy. There is an enormous amount of data that is available. If I just pick the CBD out here, all the data on traffic and traffic bytes and everything else is - in theory, have I got the data? It is available to a select minority. We have access to some of that data but I think if it was public, you would get alternative ideas - not that I am commenting one way or the other - on, for example, putting light rail down George Street because everybody would then have that data. Everybody could look and see the congestion, what the peak-hour issues are with buses, with cars and so on and there may well be some intelligent alternatives that come through simply by this whole process which is very common in IT of just making it open and letting anyone have a go. Enabling that openness with data, with that information, I can't see would harm anyone. I may be wrong, but by making that information available in the cabal kind of sense that we think about it in IT, you may even have a year 12 design student coming up with a completely different concept for the CBD.

MR HARRIS: So in marketing availability of modern energy exploration, most states invest very heavily in undertaking basic research and in putting all that information up online so that it is totally accessible to firms from around the world to investigate a small potential exploration area online outside the parish of something or other in far west New South Wales. We don't do that in most infrastructure areas apparently, so you are suggesting that providing this kind of data in some kind of universally acceptable form which seems to have grown up in minerals exploration could grow up in infrastructure provision as well.

PROF DURRAN-WHYTE (NICTA): Look, I have not personally thought of that suggestion but that is a very good idea. I have a background in the mining sector. Australia is almost unique in the world in its ability to attract people because of the openness of its geological information. Sources doing that in infrastructure would be great. Actually now I think about it, New York is a city that is currently doing something not dissimilar, but making all that data available would really transform the way people address or propose new projects. For example, the kinds of things I was talking about, about looking at the entire network supply chain types of things, would also be feasible at that point as well by not just government but also external people who work in the area. That would be transformational in my view.

MR HARRIS: I was just really building on your own concept with an analogy that I know from another area. I didn't know you had a mining background but you can see it quite readily made available in one sector and yet not made available apparently in another sector, for no apparent or good reason.

PROF DURRAN-WHYTE (NICTA): Yes, I agree with you entirely. That is a very good way of opening up the whole thing to anybody being engaged in it. I think that is reflected truthfully in the way modern society should be.

MR HARRIS: Okay. Paul?

MR FITZPATRICK (NICTA): If I could just add, picking up on a theme that Commissioner Mundy raised around the fact that we are in a capital constrained environment, I think that theme of open data works both at the micro and macro levels of the economy. Nowhere have we seen to my knowledge at least a real picture of this supply and demand forecast for Australia as a nation looking forward about our freight needs and freight movement over the next 15 to 20 years and what are the critical bottlenecks in moving that freight around, let alone thinking out to 2050 if we are to be the food bowl of Asia. We can take the data from an open data kind of environment and put it together into a macro model that would then be open for more transparency and more debate, as much as allowing the thousand flowers to bloom at a micro level and coming up with some really creative ideas about how we solve the movement in the city, for example.

MR LINDWALL: I think that is exactly right. Clifford Winston at the Brookings Institute says that there are two ways to view the road network; one is the very heavy, low-volume trucks with the weight on the axles which cause a thousand to 10,000 times as much pavement damage as light vehicles and the other high-volume cars, so theoretically you could construct a road with some heavy lanes and many light lanes at a much lower cost than just having everything at the heavy level, if you like. Is this the type of thing which would work well for your data deluge, which I think is the best way to put it?

PROF DURRAN-WHYTE (NICTA): It would be certainly something that could be addressed, particularly when you look in Sydney, for example, at the Botany-Parramatta corridor.

MR HARRIS: Do you have anything else?

MR LINDWALL: I think that is very good. Thank you.

MR HARRIS: Did we miss anything just before you depart, anything that you might want to put on record?

PROF DURRAN-WHYTE (NICTA): No. Thank you very much.

MR HARRIS: Thank you.

MR HARRIS: We are supposed to have morning tea, according to my program here. I am just wondering. Is the Australian Constructors Association here already? Would you like to start now and we will go a bit beyond morning tea?

MR LE COMPTE (ACA): If you want.

MR HARRIS: That will be great I think. Lindsay, if you would like to identify yourself for me for the record so we can track your comments.

MR LE COMPTE (ACA): Thank you. Lindsay Le Compte, executive director of the Australian Constructors Association.

MR HARRIS: Do you want to make any opening remarks or should we race straight to questions?

MR LE COMPTE (ACA): I would like to make a few opening remarks, if that is all right with you.

MR HARRIS: Sure.

MR LE COMPTE (ACA): I won't take too much of your time but there are some points that I think I would like to make that may assist in the process and then I would be more than pleased to answer any questions that you may have that I am able to respond to.

MR HARRIS: Thanks very much.

MR LE COMPTE (ACA): As the Commission knows, the association has made two submissions to you, as well as providing you with a report prepared at our request by Deloitte Access Economics. At the outset I would like to express the association's appreciation of the enormous amount of work that the Commission has undertaken to date in addressing the terms of reference and the time constraints under which you have been working. I know all about that because we have had to respond to them as well.

MR HARRIS: It has been a very rushed process. We all acknowledge that. The government, however, is very keen.

MR LE COMPTE (ACA): Indeed.

MR HARRIS: We all have those constraints.

MR LE COMPTE (ACA): This morning I just wanted to touch on a small number of issues and then we would be pleased to answer questions, as I have said. What we are saying I guess in this process is that the effective delivery of public infrastructure relies on two key propositions, each of which is underpinned by a range of operational components. I think it is fair to say that there is a multitude of issues that impact on the whole process but we think that they really come from a couple of areas.

Firstly, the industry needs to be able to interact with government clients who are experienced, well organised and commercially astute. We say at the moment that that proposition is not consistently the case across all governments and across all agencies. This does lead to various projects failing to achieve their expected outcomes, both at the prices that they anticipate and within the delivery times expected. This outcome has ramifications for both client and contractor.

What we say is that within that confine, the key areas that need to be addressed by governments are as follows: project selection and establishment, assessment of project risk and commercial terms, including relevant legal and financial issues, an efficient tendering or procurement process that properly identifies contractors with the corporate structures, skills and capacity to deliver and effective project management from a client's perspective. In other words, once the project is under way, the government still has a significant role interacting with clients and other stakeholders to maintain it on time and on budget.

We also say that while all of those issues are important, if inadequate attention is given to the establishment of the project, it is likely that however well the other components operate and are managed, there will be increased costs and delays because it really comes down to how the project is established, in the sense that once it is under way, many issues become apparent and they are difficult to deal with at that point in time - not impossible but certainly they take a lot of goodwill of all the parties.

While the Commission has only been given a relatively constrained time frame to undertake the inquiry, in hindsight - and you may have started this process, I know you were interested in it - but at the end of the day we think that there would be some significant value in the analysis of a range of government projects in the infrastructure area from start to finish which might have sort of added value to your process in terms of how things have been developed, how they have been operated and how they have been delivered. I say that because there are nuances that don't come out unless you are actually inside those particular projects and you can see the issues and how they are being unfolded.

We do note that you have identified the work of Infrastructure Australia which has recommended a project analysis and benchmarking process, designed to analyse how the public sector has performed on individual projects. This approach is supported by ACA and the association and its members are committed to working with government to achieve that outcome because it is in the industry's interests at the same time to be able to see how those projects are unfolding and what is working and what is not working. It's a partnership at the end of the day. It is not a competitive nature. It is a partnership process.

If the Commission had more time to undertake that process, we also think that a number of myths that are contained in a range of submissions, well meaning nonetheless - there are a number of myths that are before you in relation to a range of submissions about how the industry works and how the process fits together. Also I should add that if governments had the will in the future to get involved with this process of implementation on a KPI-type analysis, we think that will have a great outcome for all of the parties but they also need to combine that with a fundamental examination of procurement and tendering guidelines. They have been in existence for some time. They are tweaked from time to time but in a sense they could probably do with a root and branch review. Having said that, we know of course that COAG and its related entities are involved in examining a lot of these issues but nonetheless an external examination probably would add some more value to that. That might be something that your organisation would be able to look at in a little bit more detail later, although we understand, of course, that you have looked at major project processes, but being inside the game is another matter.

The other issue that I wanted to speak about today also is important and it relates to how the industry is regulated. You will be aware of the royal commissions that have been conducted into the industry over a long period of time and the more recent activities of organisations and individuals in relation to major projects that have been the subject of some fairly scathing findings by a range of different courts over recent weeks and months.

We made these points in our initial submission about the structure of the regulatory regime and we note and we're pleased that the Commission has taken up aspects of that, particularly in relation to suggesting that the Victorian industrial relations guidelines for building and construction projects be adopted across the board, and also for increases in penalties in relation to those people and organisations who deliberately do not comply with their responsibilities. We think that's important. We also think it's important that these more recent judicial determinations have actually come about in relation to projects or issues that have developed some time ago, so it's not as if it has all come out in the last couple of weeks. The issues that have been the subject of the judicial consideration have been around for some time and ongoing.

I guess what we would say is that while sectors of the industry such as the residential sector are able to get by under state licensing regimes, for example, as you increase the cost of projects and those projects become more important in a public or private sector context, the level and impact of industrial action rises exponentially.

I suppose one of the difficulties the Commission has faced is in looking at all of the statistical and other information, the material that has been available to you, it seems that it has been difficult for you to be able to get to the bottom of aspects of that in terms of how that particular information might apply to various smaller sectors of the industry, which can have a more significant public profile but don't necessarily involve a huge number of projects. It's just the way the statistics are collected. I think, as you have identified, we need to look at that more closely in the future so there can be more finetuning of that process.

What we want to say and just reiterate as we said in our first submission is that we think that the legislative and regulatory structure that was in place after the Cole Royal Commission should be returned, and of course there is legislation before the Australian Senate to that effect. We would like to see you go further in relation to your recommendations and effectively recommend that that legislation, which is currently before the parliament, be implemented in full.

The reason we say that is that the question of penalties is one thing. That's appropriate. An effective code of practice is another, but there are a number of pillars that underpin those approaches and to get it effectively done across the country we need to have federal legislation that is undertaken in accordance with what happened in the previous regime and underpinned by what the state governments are doing. Without that we're going to continue to have a situation where it's one operation in Victoria, one in New South Wales, one in Queensland, one relating to federal government projects, all of which are well intentioned but they don't get the outcome in a consistent way. So we would like to see you recommend a bit more in relation to that, in particular to cover it off going back to where it was.

We also think that you should have greater regard to the financial and productivity impacts of industry-wide pattern agreements that lock in whole sectors to a standardised approach and reduce competitive advantage. This was an issue which was raised by Cole. He recommended that they be outlawed. We don't have that at this point in time.

I stress here that what I'm talking about are really agreements that are put in place which govern, say, the whole electrical sector in Victoria which then rope in small, medium and large enterprises to a particular position and operate to restrict their ability to negotiate and to operate at their best advantage in a commercial context. Clearly as between small, medium and larger enterprises, their structures and operations are totally different, so when you're looking at ways and means of improving productivity or in lowering costs or making the industry more effective, those are the sort of issues that really need to be examined in more detail.

I think that it's also fair to say that coming out of all of these processes, the industry really needs to be in a position where there is cultural change and so a lot of the things that you have touched on in relation to skills and development of enterprises and all of those issues are important in achieving an outcome in the global sense.

If we have a situation where the industry is regarded by major stakeholders and in particular the public as not being the sort of place where they would recommend to their children that they should take up an apprenticeship or a traineeship, or if they're studying engineering that they should look for a position in the industry, then we suffer. So there are a lot of issues that all join in terms of the dots, but at the end of the day if the industry standing is low, then it suffers in relation to its ability to attract the right sort of people across the board.

It's not just a question, what we're saying, of infrastructure costs; it's also the impact of those issues across the industry as a whole. That's why we think that what you're doing here is very important. It's a long road, it's not going to happen overnight, but there does need to be a major cultural shift across the board. With that introduction, I'm happy to answer any questions or try to assist you further if that is possible.

MR HARRIS: Just on benchmarking and Infrastructure Australia, you will have noticed our draft report talked around the issue of who might manage a benchmarking arrangement, so you mentioned that Infrastructure Australia actually recommended that there should be one, but clearly the benchmarking processes that have appeared in Australia - and they're pretty limited as far as we can tell - also would suffer, it would seem to us, from not being consistently and persistently published such that you educated both contractors and clients as to what should be expected in a particular set of circumstances, and moreover the general public about how expensive some infrastructure actually is.

This transparency device has been, we think, sorely ignored in the past. It needs (indistinct) or it will continue to be ignored. In Australia we have a couple of quite powerful statistical publication entities but led by, obviously, the Australian Bureau of Statistics which both collects and publishes without fear or favour, independently, all that sort of thing. We don't have that model in the infrastructure. It doesn't exist in any part of it, although we have had some submissions on partial benchmarking arrangements that are around. We're interested in knowing whether you think in the current circumstances Infrastructure Australia is capable of delivering such an outcome.

MR LE COMPTE (ACA): I think that that type of organisation is an appropriate vehicle for that function. Somebody has to do it, but I think it's not just a question of looking at the KPIs, the statistical analysis et cetera. There needs to be an entity that understands the way the industry works and is capable of looking at those outcomes and providing commentary to industry and to government and other stakeholders as to what those findings really mean. Otherwise we're in the situation where, if it was ABS or some other entity which collects the material, they wouldn't necessarily be in a position to be able to provide the best analysis of what it all means and how it all fits together. It's very useful to have it, but it would then be left to a whole range of stakeholders to interpret the information as they would. So I tend to think that IA would be an appropriate vehicle for that purpose. I think we did in our original submission make comment about what is happening in the UK.

MR HARRIS: Yes.

MR LE COMPTE (ACA): Of course the Infrastructure Australia model was developed having that in mind. They have taken it a bit further though so far and I guess I would say that Infrastructure Australia was headed down that path. There's just a lag time frame, having regard to the fact that the model in the UK is a bit further advanced, not by very long by the way of course but nonetheless they have started a process where they are publishing information about how things are going. So I think that that's an appropriate outcome.

MR HARRIS: We're not sure though that it has the skills versus say if we move away from the ABS. What about an agency like the Bureau of Infrastructure and Transport Economics? As I say, this is not to criticise anybody. It isn't being attempted. It, therefore, needs a home and the home will have to have the skills. The question is: there's an entity which perhaps has limited involvement in this field but could develop into the field but that would require resourcing; there's an entity that has an entity that has skills but probably doesn't stand independent of the agency in which it's housed. We look at the field and we think no-one is purpose built for this. Obviously that's a circle. No-one has asked for it. Therefore, no-one is purpose built for it. Do you have an opinion between any of the parties like that?

MR LE COMPTE (ACA): I suppose the bureau is another option down that pathway. The question then is: how many organisations are going to be playing in this game and who has responsibility for what? I suppose if you look at the Bureau of Transport Economics et cetera, that's another option for you. When they produce the information, what will happen to it? Is Infrastructure Australia then going to use that information for its own purposes? I suppose it could then recommend policy and administrative change to governments as part of that but I can see value in it, all being in one agency from that viewpoint - - -

MR HARRIS: Sure.

MR LE COMPTE (ACA): - - -on the one hand. On the other hand it's about what model can work at this point in time? What organisation has the capacity to do it? I suppose in terms of the cost of doing that, I don't see that as being a huge cost but nonetheless a cost that would need to be examined. I don't know enough about how the interplay would work to be able to make a recommendation one way or the other, but those two entities you've suggested do make sense.

MR HARRIS: Okay, that's great. Warren?

DR MUNDY: Yes, I just want to come back to a few points in your opening statement. You talked a lot about the characteristics of government clients and government procurement. One of the challenges the Commission has had to date is that we do notice that there are a large number of infrastructure providers in this country who are not governments and who buy new runways, new port assets and so on.

What we're interested in trying to find out and have been able to get no evidence on to date is how do the government procurers stack up against the private procurers, point A, and point B, within the class of government procurement entities, of which there are a large and varied number, what procurement practices look like good practice from the point of view of your industry who's doing it, because it's one thing for us to have a crack and say, "They're just all lazy bureaucrats and they don't really know what they're doing. "It's another thing to say, "Here's a company that's doing it. Why don't you all do it like that?"

We haven't been able to get any positive feedback on this point from your part of the sector but also we haven't been able to identify those characteristics of private procurement which we could recommend governments pick up, or is it your view the private sector is just as bad as the public sector?

MR LE COMPTE (ACA): I'm not saying that the public sector is bad. There are I think probably many organisations within the public sector that have excellent skills in developing and managing these types of projects. Organisations like Roads and Maritime Services in New South Wales, Roads Victoria, have got a lot of people working in them and have been with them for quite some time, and they have their models pretty well organised in terms of what their expectations are and how they see things unfolding.

It's simply a fact I guess that with the general demise of departments in public works across the country, a lot of people who had significant skills in engineering, architecture, project management et cetera are no longer there, so organisations have had to buy in in many ways expert - - -

DR MUNDY: The roads agencies, the railway agencies, to the extent they're still in public ownership, they do a lot of it, so they always procured separate from or largely separate from the public, so they were big enough to stand on their own two feet. Is it more in the area of I guess schools, hospitals, stadia, those sorts of things which governments don't procure as regularly with the same degree of turnover? I'm trying to understand where these problems actually are because there's a lot of conflating between the building of public infrastructure and the building of, for example, Myers Emporium building. These issues get conflated with commercial construction which are not within our terms of reference and we need to unpick them, as you acknowledge.

MR LE COMPTE (ACA): I'd be happy to take that on notice and come back to you in the next couple of weeks on some further commentary in that area from the ACA, if that would assist you?

DR MUNDY: It would.

MR LE COMPTE (ACA): It's a difficult process, in the sense that if you look at some projects like the Building the Education Revolution and you saw there in terms of the analysis of what happened a situation where it appears that private sector schools got a much better outcome than public sector schools in relation to - - -

DR MUNDY: In some states but not in all.

MR LE COMPTE (ACA): In some states.

DR MUNDY: I think you actually find more variation between school sectors than you do between the public and private.

MR LE COMPTE (ACA): Quite right which is why I was saying that it's not consistent across the board. It really depends on the individual organisation and who is working for it, its internal structure and systems as to how they end up which is why I was saying that the bigger agencies that are more solely involved in infrastructure manage those projects quite - - -

DR MUNDY: And if the roads go wrong, it's still Main Roads's problem because they're still there in five years' time. I suspect there's an ongoing ownership of the problem issue as well, but if you could come back to us with characteristics of what seems to work and what doesn't seem to work, that would be really helpful. You mentioned also that if one was able to get into a more detailed analysis of projects, we might be able to - you used the word "myth". I don't think you used the word "busting" but we might be able to indulge in a bit of myth busting. You obviously think there's some myths about the industry which a detailed analysis of projects would help deal with. What are the myths you're referring there to?

MR LE COMPTE (ACA): A lot of components of the industry have their own views about what works and what doesn't work. The submissions that you have received cover a myriad of those issues. What I was merely saying was that your analysis of a range of individual projects may well give you the information that would assist you more effectively in determining what works and what doesn't work and how it might work than being in a situation where you've been faced with so many different submissions raising so many different issues.

I guess that would also pick up for you the types of agencies that do operate their projects in a way which is effective and those projects which haven't worked as well and why they haven't worked as well. That comes back to issues about the cost of construction. In other words, the more groundwork is undertaken before projects are announced, the better it is once that tender process commences and the more informed the industry is about the nuances of what the government knows relating to issues and in terms of how that then cascades down into managing the risk, both financial, legal and operational, and how that risk is apportioned amongst the organisations. Obviously, I mean, one example that has been out there is NBN. You may recall that there was at one point, some time ago now, the call for tenders to do a lot of work on the NBN project, which subsequently was abandoned on the basis that there was an argument from NBN Co that the tendering came in and the costs were way above what they expected they might be. But from an industry perspective it would be argued that if not all the information is available, the industry will look at what it thinks might be the case and build those risks into the tender cost.

So the more information that is known and available and able to be managed the more likelihood you're going to get a better outcome, but the other flow-through issues that come out of that really comes down to a question of when industry is successful in a tender, if there are issues that come out then there is a tendency to say, well, how do we ensure that we get the internal rate of return that we anticipate we should get out of this project and it does lead to issues about who is responsible for what - arguments, disputes, delay and other things that impact, but more importantly the changes in projects over the life of the project can be devastating when it comes to business.

One of those, I think, would be the Reliance Rail project where I think it was Downer EDI Engineering was the principal contractor there, I understand that there were many thousands of variations to that project during its course. Now, they may have been appropriate variations but the question is were they raised at the right time or could the up-front work have been a bit different in dealing with that; and it's also fair to say that in terms of contractors, if projects are delayed that doesn't help them a great deal because with their own pipeline of work they have to manage the next project.

So if project X is delayed by six or 12 months, it has a significant impact on how they will manage other projects of no concern perhaps to the government client or any other client but significant in terms of the management of their business and that can then cost them a lot more to rework because subcontractors don't just wait around, they move on. So that's why I'm saying in the up-front component, if you get that reasonably right up-front then you do address a lot of potential problems downstream.

DR MUNDY: Can I bring in the question of market structure and I note that your membership in annexure A is really a who's who at the top end. It has been put to us by a number of parties - industrial parties, smaller contractors, all sorts of people that there is a duopoly going on here. We see that there are two firms that have got a substantial presence and that's really about as far as we get. Is it possible for you to provide us with any market share information by talking to your members, because this information is difficult to get?

Also, the Commission understands better than most that highly concentrated markets can be competitive and we understand better than most that there's probably a great deal of market segmentation and at various different points markets are much more contestable than simply counting up the number of firms might indicate, but is there any evidence that you can give us today or on notice that would suggest that competition outcomes are not as great as or competition concerns shouldn't be seen to be as great as many have put to us?

MR LE COMPTE (ACA):   I am able to come back to you on that issue. The point that we made in our original submission was really - well, I go back, sorry. There are some aspects of this which are important and the first one really is how government agencies construct their projects and I note that the Commission has identified some issues there, particularly the potential to split projects into more bite-sized chunks, if you like, which is entirely appropriate for the right projects where you can segment those components in a way which avoids potential crossovers but if you look at the projects themselves, if they are a very large project it's up to government to say, "Well, we want to present it this way or that way."

If it's presented in a way where you don't have a number of subcomponents, then you leave it up to those organisations who are prepared to take the risk to tender on that particular project, to manage the process themselves; and often what happens is you will have a tier-one contractor in effect that project-manages a particular project. They have their own personnel and they employ many thousands of people but on a work site the principal contractors' employees may be no more than 40 per cent, so 60 per cent of that work is undertaken by other parties and they would be either very major subcontractors or they might be tier-two or tier-three contractors who perhaps, in terms of risk profile, weren't prepared to bid on that project themselves or perhaps through some consortia.

But it depends on the individual project and how it's established as to what your likely outcomes are going to be and I notice that in New South Wales, for example on the North West Rail Link, Salini were successful with one component of that project which seems to be a component involving bridge work which is able to be segmented from other components; but they're an international organisation, they obviously satisfied the government as to the internal requirements. So I think you have also highlighted within your draft report that there are aspects of how these projects are established which potentially have an impact on who might bid and how they might bid and as we have put to you, the cost of bidding on these projects can be very, very extensive and complex.

So realistically I would adhere to the view we expressed initially that there is adequate competition within the marketplace at this point in time. You have identified that the ACCC has not seen fit to raise any significant issues and in this environment as well there are I would say a number of other industries unrelated to construction that you might put the same question to in terms of how many real players are there. So I think that most industries can operate in a way where you end up with a situation where there could be three or four major competitive entities and a range of others that are all involved in different components, based on their size.

But it's up to the client: the client controls the game; the client can work their procedures in a way which ensures that if they're concerned about the small number of major entities winning tenders they can address that. It's not coming back from the industry, and the ACA members are more than pleased to have as much competition as government and other parties can provide. They don't have a problem with that. They'd welcome it.

MR HARRIS: Paul, do you have anything?

MR LINDWALL: One quick question about Infrastructure Australia: does the ACA have a position on the current bill before parliament that the government proposes to reform in investment - Infrastructure Australia?

MR LE COMPTE (ACA):   We supported that legislation.

MR LINDWALL: Yes. Yes, okay. On industrial relations, as you know, as you noted earlier we recommended that the Victorian code be extended more broadly.

MR LE COMPTE (ACA):   Yes.

MR LINDWALL: At two of our hearings recently, one by the CFMEU came along and then the ETU said that there's a very large regulatory burden imposed by the Victorian code. Do you have any comments on that?

MR LE COMPTE (ACA):   Regulatory burden for whom?

MR LINDWALL: The claim was for the union as well as for companies as far as my memory of what - - -

MR HARRIS: I can give you an example of those because we asked for this. This is a question of submitting information continuously to the treasury or to a central agency on times entered onto a property, onto a project or on disputes or that sort of thing; in other words, the suggestion was there was a lot of red tape with data gathering inherent in the code and our interest is obviously if we're going to continue to recommend the code roll out nationally we're interested in everybody's opinion about whether its provisions are - - -

MR LINDWALL: Efficient.

MR HARRIS: - - - fundamentally okay.

MR LE COMPTE (ACA): I think that really comes down to a question of how you regulate an industry and at this stage I would say that governments are looking at it on the basis that they want to achieve certain outcomes and they want to be able to test that in a way which gives them adequate feedback to be able to determine how far they should go or what changes they ought to make downstream.

If you look at that process, going back in time to the APP, there was a code in place at that point. Nobody was complaining about it from the constructors' side of it. There was a significant involvement that the APCC had with the industry; some may say an intrusive component to that, but nonetheless it was all geared towards an effective regulatory model and we had an effective regulatory model.

With that being wound back after the change in government at the federal level, that model started to unravel. The states then started to bring in their own guidelines which obviously require a degree of reporting, but nonetheless I think that that's appropriate and certainly the ACA members have no issue with being required to comply with that. Over time, as the industry further matures under a different regulatory approach, it ought to be the case that the government in Victoria or anywhere else will start to adjust its position in terms of those areas where it needs to crank up further or where it can say, "No, that's okay."

By way of analogy, and you have referred to this, the Federal Safety Commission's Office is currently in the course of a review of the accreditation scheme which was introduced post Cole and now is an appropriate time to do that, but they are looking at it on the basis of, "How far do we need to go?" For example, if you have an organisation that has gone through a full accreditation process, does it need to be a further re-accreditation process every X period of time or do you operate on the basis of saying, "We know what you have got. We can see what your profile is in terms of any fatalities or injuries, et cetera." Does the regulator, if you want to call them the regulator, need to go back in there on as regular a basis to obtain that information or should they be really looking at organisations more closely who are not demonstrating that they're quite up to the market at this point in time. The long and the short of all of that is we don't have any difficulty at an ACA level with what is currently happening in Victoria.

MR HARRIS: Okay.

MR LINDWALL: Final thing then. There seems to be, as we have been going around, large variations between the states and infrastructure type and in fact unions as to the work practices that are observed and the effect on productivity at the micro level. Having said what we have recommended in terms of penalties and so on, I just wanted to be assured from your point of view that the proposals for the APP is not trying to crack a small peanut with a large hammer when the problems might be confined to one particular area geographically or a particular union or indeed a particular part of the infrastructure construction sector.

MR LE COMPTE (ACA): I think that the role and function of something like the APCC is only one component of a regulatory model. The APCC is just part of a process where that links in with an effective code which governs how negotiations might take place between employers and employees and their representatives. It also governs how industry works in a practical sense. It is also underpinned by various other legislation that rounds out that model. So I really think that it's not a sledgehammer to crack a nut.

If we keep having royal commissions into the industry - and how many other industries are the subject of this number of inquiries, including the Wilcox Inquiry, et cetera? It must be telling you something; that there is a problem. We can't just walk away from it and say, "No, it's only a few bad apples. We ought not regulate the industry at the top end this way because it's too onerous." It's a factor of what you read in the newspapers every day almost. In the overall scheme of things it's an industry that does need special regulatory involvement.

MR LINDWALL: Basically you're saying while there are significant variations, it's a systemic problem across the industry that warrants such an approach.

MR LE COMPTE (ACA): I think that you have to look at the industry as a whole and I'm not excluding contractors and subcontractors, nor anyone else in this sense. There was an inquiry here in 2012 in New South Wales run by Bruce Collins QC which really examined the impact of the industry in the context of those organisations that have gone into liquidation, so it's not just a question of how it works. It's a question of the whole structure and the particular points have to be there to be able to manage that. That's why it's an industry that does need fairly substantial regulation to ensure that it operates successfully.

Importantly, and I will finish on this, it's important to send a message to the people or organisations that would take advantage of others in the industry that they are not going to get away with it. Why it has to work in a way where quick action can be taken is that it's all over when a court comes along in 12 months, 18 months, two years or longer and makes a pronouncement. Everything has all happened before then, so it needs to be an industry where early and effective regulatory processes can be put in place and whether they are small, medium or large organisations, they ought to know that they can't get away with inappropriate practices.

It's that process which will result in cultural change. You have to start there at that level and then you can address downstream what adjustments you make, but unless you can effect cultural change, this is going to continue and there will be these continual ongoing problems.

MR HARRIS: Okay. Thanks, Lindsay, very much for your time, your model submissions and your preparedness to offer a little bit further information. We will follow you up on that. That has been very useful. Because I have changed the batting order I need to start again at 5 to 11, so I think we have PricewaterhouseCoopers, on my schedule anyway, starting at 5 to 11, but otherwise please go outside and hopefully the cup of tea is still available to you.

MR HARRIS: Let's start up again. I am glad to see everyone has been efficient and leapt to the table. PricewaterhouseCoopers, could you guys identify yourselves for the purpose of the record, please.

MR GREGORY (PWC): Sean Gregory, partner at PricewaterhouseCoopers. Two to my left is Martin Locke, a partner at PricewaterhouseCoopers and one to my left is Ross Rolfe, senior consultant at PricewaterhouseCoopers.

MR HARRIS: Do you have opening remarks you would like to make or should we just jump in with questions?

MR GREGORY (PWC): I would like to make a few remarks, if that is okay to the Commission.

MR HARRIS: Sure. Go right ahead.

MR GREGORY (PWC): A little bit of context I guess for our remarks, as we advised in our report: PWC have previously undertaken a detailed report in this area, reporting to the BCA in November 2013, that report around financing and funding. That report was significantly referred to in this brief response.

Just to give some context I guess for PWC's interest in the sector, we have a significant involvement in privatisations or capital recycling, working for both vendors and buyers in financial, tax, regulatory and economic aspects. We have a significant interest in greenfield developments, working in economic, regulatory, commercial and project management aspects, not engineering. As regards clients, we work across a span of state governments, super funds, offshore funds including Canadian and sovereign wealth funds and we work with developers - so a good array of experience there behind I guess some of our comments.

I do want to come back to make I guess our central comment which is around the funding or user pays piece, but just a couple of other comments, if I could: around 10 days ago we held a workshop with a number of prominent state government officials and heads of funds. IPA was there. ASFA was there and Infrastructure Australia. The purpose of that was clearly not to review the Productivity Commission report, but I would say that the report was widely acknowledged in that forum to be excellent, to be full of great facts, great coverage et cetera, so any comments I make would be in the context that it was perceived to be an excellent report into the state of where we are.

A couple of comments I guess before I get back to user pays: firstly, on the issue of project selection, one of your central themes, we certainly understand and support your stance on those, combined with the comments you make on pipeline. The only reflection we would make is that we suspect the debate around pipeline will continue. Whilst there would not be a need for a list of projects into the future, it is quite clear that if private capital or super funds are going to continue to invest, they do want clarity about what is coming next. That is how they keep their expertise; that is how they keep teams and capital focused in this area. We think, as your report suggested, that in the area of private capital whilst there is no magic pudding, it is clearly integral to the future of infrastructure.

The second comment I guess is around capital recycling. The report sought to separate decisions about capital recycling and greenfield projects and we understand the intellectual reasons why one would do that. We would observe I guess that the debate about capital recycling appears to us to have moved very considerably over recent years and it seems, at least in some way to us, that community engagement around hypothecation is part of the reason for that success, perhaps most notably in New South Wales. Whilst we understand the intellectual reasoning, we do think that community engagement is going to be a central piece of where we head on the user pays commentary.

Around greenfield projects, there was a very good discussion on that. User pays is absolutely critical to greenfield projects and funding. Other aspects such as demand, risk, innovation, planning risk and financing risk is absolutely critical to greenfield projects and funding. Other aspects such as demand, risk, innovation, planning risk and financing risk all seem to us to be areas where there was momentum and perhaps trajectory, but again coming back to user pays piece, it clearly to us seems absolutely integral to the success of greenfield projects.

Last comment perhaps on financing. I might ask Ross to make one or two comments, but in the financing aspect you will see from our submission we do have a belief that that is an area that is evolving. There has been substantial movement, in our view, over the last three, four, five years. There is considerable private capital available and that is increasing, not decreasing. There is innovation that is happening around convertible equity models and the like, and so there is clearly an awful lot of progress in the area.

I might ask Ross in one second just to comment very briefly on issues around the super funds and the need for super funds to have liquidity here, and also perhaps on bond markets and the need for a bond market. We see, as no doubt you do, a very different market in Canada and it seems one to us that needs considerable further thought and benefit. Ross?

MR ROLFE (PWC):   Thanks, Sean. I guess just to add on to what Sean is saying there, one of the things which came out of the discussion we had with the super funds, but also is I guess more generally apparent, is the key challenges we all see and hear really is around the financing of major greenfield projects, possibly very significant brownfield expansions on existing projects where there's a lot of development risk and what you might call ramp-up risk in the early patronage on those projects.

One part of the Commission's work which we thought was very useful and encourage, I guess, some recommendations around this is on the devices available to support the private sector in managing those risks. Clearly it's very difficult for entities such as super funds, or indeed really most investors, to manage that risk. It's one thing where you have got very mature levels of patronage. It's another thing entirely where you're very reliant on how that will grow and over the time at which it will grow, unless of course you can get very solid take or pay arrangements from creditworthy counter-parties.

Therefore, the true devices I think that you discuss which we were particularly attracted to or thought was worthy of further thought was the subordinated note repayable if and when projects perform with some possible upside sharing; and, secondly, the converting infrastructure bonds where bondholders receive a coupon fixed rate and once completed, converts to equity at a predetermined price.

We I guess in part are mindful here that if the public sector is going to recycle their capital, that it is worth looking at some devices where the public sector does recover something from the investment for the risk they're taking, otherwise you don't get to repeat the recycling exercise too often. That's an area which we thought was important.

I guess the other area which has been important - I'm not sure that it's as important as it previously was - is the depth of the bond market generally. I know that the conventional lenders are rising more to that occasion than perhaps a few years ago but, having said that, I guess the refi risk still is a significant one. They tend to be relatively short-term debt and often covenant-heavy, so the access to an active bond market does seem to us to be something which is really worth continuing to push for.

MR HARRIS: In our draft report and in a number of the second round commentaries to us, people have pointed to this refinancing, early refinancing and substantial bias even towards senior debt, towards bank-provided debt, as having been driven by the tender procedures of public sector proponents of projects with a desire for fully-financed bids and much harder to get a bond issue up in the context of a fully-financed bid because you don't have anything to hold the bond against, so if you're going to bid for a project you're going to get senior debt and bond issue is cut out of the equation until some later point in the period of the life of the piece of infrastructure. (a) do you see that as being a reasonable representation of reality, and (b) what can we do about it?

MR LOCKE (PWC): I can probably address that. I think the real issue relates to what the public sector is actually seeking in terms of committed debt. If we're then seeking committed debt at the tender stage, is there a significant difference between debt being provided by a bank and debt or bonds being provided by an institution? What we have seen occur over the last two to three years is some of the superannuation funds have actually set up their own in-house bond desks and they can come forward with offers of bonds exactly on the same basis as a bank would come up with an offer in relation to debt.

Is there a significant distinction between a bond and the debt in terms of being able to assess that there's a form of funding at the tender assessment stage? I probably would say not. I think the real challenge relates to the bid costs and the extent to which some of the superannuation funds would be willing to commit to develop up underwritten bond proposals at a tender stage.

Clearly the banks are willing to step up at this stage and provide underwritten debt offers and go through credit committees. Are superannuation funds willing to commit that same degree of resource to actually firm up their offers such that they can be presented with the same degree of certainty to government at the bid stage?

MR HARRIS: The reality, as I say we are advised, is that isn't the case here in Australia. You have referred to the Canadian market where it is more the case. We're trying to work out what the impediments are that says, "Gee, Canada can do this and we can't."

MR LOCKE (PWC): I can't say I'm an expert per se in relation to Canada. I have seen some of the statistics though. It does privately seem to me to relate to the greater liquidity and depth of the bond market per se as compared to the bond market that's operating here in Australia which is fledgling in comparison.

DR MUNDY: Why is that? The Canadian economy, you know, within orders of magnitude, is certainly roughly the size of the Australian economy.

MR LOCKE (PWC): Yes.

DR MUNDY: Its demand for infrastructure given the underlying economic characteristic of the place - it's a big place; sparse, big cities isolated from each other. So what is it? Is it its proximity to the US? We have always had quite liquid interest rate risk management instruments and markets, so where is - - -

MR LOCKE (PWC): There's a lot of similarity, obviously, between Canada and Australia. There's actually quite a good OECD paper that was published a couple of years ago that actually provides quite a helpful comparison. I think the most startling distinction between Canada and Australia does relate to the manner of the pension fund system. Within Canada there's far more focus around defined benefits. In

Australia there's far more focus around defined contributions. As a result, the Canadian market has tended to be long-term in its focus and that has actually sort of driven the market. When you look at the percentage of funding that's actually committed between Canada and Australia to infrastructure, it's both roughly the same.

The one startling thing that I found actually quite surprising is that despite all the talk about Canada being one of the most developed markets for investing in infrastructure, they get actually very, very little support from the domestic market. The government there tends to be very, very reluctant to privatise core infrastructure assets, so the market in general terms where it has been seen to be world class, is in these smaller scale PPPs more in social infrastructure and they have been like babes in the woods when it relates to economic infrastructure where you have actually got people stepping up and taking patronage risk and all we say - this is the market that Australia was very much the leader in and should remain so.

DR MUNDY: From what you're saying really there's nothing of a regulatory character that seems to have either explained these differences or that we could have a go at to remove some impediments. It's structural within their savings and capital system.

MR LOCKE (PWC): I don't know if you would like to comment. The only issue that I can think of from a regulatory perspective relates to liquidity requirements.

MR ROLFE (PWC): I was going to say the only thing that springs to mind is - - -

MR HARRIS: But what about this tender design, my opening question? It has been put to us that tender design pretty much guarantees that senior debt has first and most reliable (indistinct) because of this requirement for both exclusivity in consortia, which may or may not be generated by the market, but what is certainly not generated by the market is this idea that bids must be fully financed at the time they are presented. Do you have an opinion on that?

MR LOCKE (PWC): I probably would just restate my opening point. I mean, I don't really regard tender design as being the real issue that's actually sort of driving that outcome. I think it more relates to the reluctance of superannuation funds to commit time and effort to develop up resources when products are actually going through the bidding phase.

MR LINDWALL: One of the participants in the last couple of days, Assured Guaranty, said that the principal thing - as Peter mentioned about the fully funded bids - was the thing that was discouraging it from guaranteeing bond issuance from superannuation funds or whatever else - for projects, that is.

Anyway, could I move onto capital recycling. It does seem to be that you have highlighted the issue about it being a building community confidence in a project by privatising existing assets and then buying new infrastructure assets as part of a building community confidence in that. It seems to me also that the former, that is privatisation of brownfield assets which have a fairly well-known risk profile, and the new assets are greenfield which tend to be much more risky in a way - so can you give some guidance on how governments can do that without taking too much excessive risk onto their own balance sheet, since otherwise you would be systematically selling off things with lower risk and systematically buying things with higher risks.

MR GREGORY (PWC): A couple of comments. It's quite clear that some are thinking about, if you like, innovative ways to sort of share that risk perhaps, to take it on risk, to think up notes that sort of convert in due course to sort of equity notes. I guess our central premise - because we entirely agree with you, it makes no long-term sense to be privatising brownfield assets and, if you like, replacing them with assets with no supportable, sustainable economic structure to them.

Now may be the right time. I just want to make a couple of comments, if I can, about that and then come back. To us it sort of is the area that requires the greatest political courage to put in place a sort of user pays net that actually works, so there's sort of a combination for us of settings and framework that need to be advanced from where they are today.

There's probably five of them to me that sort of play together in this. The first is we do need to capture the whole economic benefit of new projects and we don't today and there are examples of where those whole economics are better captured than some today. The second piece does go to the issue of hypothecating future revenue streams and that seems to be something that we are more uncomfortable with and others use quite well, so the second would be hypothecation.

The third would be the role of super funds and noting clearly the sort of distinction between local funds and very interested offshore funds, but the Canadian funds have been great supporters of the Australian infrastructure market for a long time and so I do think that distinction is - you can exaggerate that distinction. We think the super funds have a great part to play in community engagement but we do not think that that currently happens today.

The transparency of business cases as greenfield projects are rolled out and what the wider benefits are; and lastly, you know, regulatory and institutional reform and who gets to sort of both roll out greenfield projects and then sort of fund and operate them into the future. It seems to us, to be honest, on all five of those aspects we don't have settings which support community engagement towards a broader user pays net. That's necessary to make these structures economic and that in itself drives further privatisation.

As a result for us of those settings being sort of - call it neutral at best, and I will argue some of them are not neutral, they're negative, but call them neutral at best. As a result of those settings all being neutral, we have to find financially engineered ways to share demand risk and those things when we all sit here and note that demand risk will exist in the first years of some projects. I guess Ross certainly has some thoughts about convertible equity and those sort of aspects, but from my perspective whilst ever those settings are all at neutral, it will continue to be one where putting money into greenfield projects will continue to be a struggle to justify.

MR LINDWALL: Before we move onto that, could we continue on the user pays concept? In our report I think we said there were three ways in which a project can be funded. One is user pays pricing, another is through a tax system, and a third would be munificence, if someone donates us a road or something - unlikely. Can you think of any ways to encourage user pays because, for example, Western Australia has so far seemed totally unwilling to embrace the user charges or toll roads.

MR GREGORY (PWC): I think, to be honest, it's a combination of the five things that I just mentioned. As I said, I think all those settings are at neutral. I think aspects such as super fund engagement and institutional reform of the bodies that sort of run these projects are necessary to go towards trust of the community and I don't think today we have the settings right on those aspects to encourage that.

DR MUNDY: Can I just ask you one thing on super fund engagement because I just want to be clear on this. It has been suggested in various quarters that in some sense super funds should be given preference over other forms of investments. That's not what you're saying.

MR GREGORY (PWC): Absolutely not. Absolutely not. I mentioned the roundtable we held earlier. There was clearly two sides to that debate. It is absolutely crystal clear that the duty of state governments is to tax payers and this is a competitive market and long may it remain thus, so it's absolutely not the case that super funds should be given preference, but they do have some natural advantages that they should play to and it's part of their - - -

DR MUNDY: That's indeed what Cbus said to us from Melbourne the other day. Just on capital recycling, you seem to be indicating - and I don't necessarily disagree - that the attraction at least in part appears to be political inasmuch as you give me the sense that you think that it's facilitatory of community acceptance and we certainly saw the demise of the Bligh government of Queensland around that edge. I'm just curious because asset sales are not new. When John Howard privatised the FAC, and indeed its predecessor would have been, there was no sense in which the five or six billion of the Commonwealth, well, 10 billion of the Commonwealth got out of airport sales much when Sydney was inhibited by a debate about where the proceeds were going, so I guess that's the experience of the second half of the 90s. What has changed in your mind? Obviously you've given some thought to the political issue. What has changed since then?

MR GREGORY (PWC): I'm going to make a comment and then I might ask Ross who has got a lot longer time frame than me to make some comments on that but I think both in New South Wales recently and, in my view, as a sort of business perspective in Queensland is that whilst those things may be true of the 90s, in the early to mid-2000s that pattern that might I say could be positive was probably reversed and I think the last period hasseen that reverse again with the use and I'm not a politician by any means but with the use of some clever connections, so I think the community's view on these issues does change over time. I don't think it's static and I think the last few years have seen that reversed. You mentioned WA earlier. Clearly WA is not convinced by that, by that - - -

DR MUNDY: No, not necessarily. It was a struggle to sell the bank. I guess the question then comes in relation to capital recycling. If you think it is a useful public policy to pursue, if only to some solve a principal-agent problem with government, what are the risks in it and what can we do to mitigate it?

MR GREGORY (PWC): The prime risk that I actually sort of see is that the underlying asset in question is not run more efficiently or better or beneficially thereafter. To go to issues of community trust, if an asset is sold for some value or other, there'll be an immediate reaction to, "That sounds like a good transaction," or "not a good transaction" but the reality that we see is if the asset itself is not run by people better able to run it, that will lead to the community trust and so when you go back to a holistic system of setting a pipeline out, the very expert operators can buy in and do the right things with. That becomes for us a virtuous cycle, so for me the greatest risk is actually the one that comes after the transaction.

MR ROLFE (PWC): Yes, I agree. I think one of the lessons, this is from a Queensland perspective, that were learned in the early asset sales in Queensland was that perhaps not enough thought was given to the post-sale environment that they were going into. I notice in your report you talk a lot about the importance of thinking about market structure and industry structure, post-sale in the way in which you look at how the assets to be vendored into the market, what the sort of universe of buyers are and that sort of thing. So if you look at the Dalrymple Bay sale and subsequently the electricity retailers sale, there was a lot of criticism which resulted from clients and users of that facility as caused by the way in which that was sold. There was debate in relation to the port infrastructure, whether there were the right incentives for the new owners to invest in that in response to the market requirements. So I think that's sort of an important - - -

DR MUNDY: Sorry, the criticism of the port industry, you're talking about the Port of Brisbane or the Dalrymple Bay?

MR ROLFE (PWC): Dalrymple Bay.

DR MUNDY: Do you have a view on the Port of Brisbane? It's more recent than - - -

MR ROLFE (PWC): Yes, it is. I haven't heard the same level of criticisms there. No doubt there'll be some challenges going forward in terms of how that owner is able to fund major greenfield or brownfield projects that arise, but I think that exercise has had far fewer issues than Dalrymple Bay had.

MR HARRIS: In our report we raised three potential areas of interest for attracting continued private sector involvement in infrastructure investment with a particular thought being given to greenfields where, as you've noted, there's patronage risks and other issues have been raised. The question is from equity's perspective, from superannuation funds in particular about whether they're prepared to play any more in greenfields.

You've mentioned two of them I think which were bonds reflecting the risks of projects which was the source of my earlier questions about whether bonds can be issued when tender processes - I do tend to discourage this, and also converting the bonds, but the third of them was the inverted bid model which has come to us from superannuation funds but we also know at least one large private equity investor is quite interested in inverted bid models, inverted bids being where equity effectively is the primary party that government chooses to engage with and with equity hand in hand the government then goes out to seek both a contractor and a financier and any other parties that they're looking for and perhaps in terms of design even. Do you have a view on this model at all?

MR GREGORY (PWC): I thought it was a very interesting model and I think it would be useful to trial it, to be honest. I'm sure there's going to be quite a lot of issues in there but it does address some of the issues about if you're the long-term owner investor you do have an interest in how the project is designed and sculpted from the outset. Sorry, Martin?

MR LOCKE (PWC): I might just make one comment. I must admit I'm personally a bit of a sceptic on this inverted bid model. I'll give you one good example, so this is a live example. We're currently advising on a courts redevelopment precinct in South Australia. There's quite a biggish deal, $500 million. We've short-listed three parties. The three short-listed parties include Cbus as one of the sponsors. The others are Capella and Investec. We are expecting those three parties to come back to us with proposals at the end of this RFP phase with a view to then moving forward into negotiation structuring.

I would then say, "Why would you actually want to feel it necessary to treat a superannuation fund distinctly different and give them this privileged position of an inverted bid model when at the end of the day the rules of the game are free for anybody to compete, as is done by Cbus in this particular case.

MR HARRIS: I guess the primary rationale that's put to us is one that you yourself have just put across the table five minutes ago which is community engagement and support. The idea that equity as represented by superannuation funds is in fact the key thematic that politicians are currently using to support capital recycling.

MR LOCKE (PWC): Yes.

MR HARRIS: There is a logical obvious clear-cut black and white, in the language of politicians ligature - so why is it that you've argued for community engagement and now you have a doubt about it?

MR LOCKE (PWC): I don't have a doubt about it at all. All I'm really saying is that you can still actually have a process to decide who is your preferred party to take it forward in the tender process. I totally agree that in the case of Cbus, the Cbus I've seen, has been a very attractive tenderer in this particular process, being able to bring on not only the community but also the construction workers but at the end of the day rather than being given a preferred position and disregard other tenderers, they're needing to actually just prove up what their proposition actually is.

MR HARRIS: I don't think the model actually did involve a preferred position, more an attempt to just see whether equity could offer a value, but I understand that if it did involve a preferred position that might be a different matter.

MR LOCKE (PWC): That's the only rationale for why I would have some reservations. Otherwise, I totally agree - I'm a firm believer - that finding third party equity and being able to get superannuation funds to invest in this sector is the key but I look back on some of the PPP projects that have been completed in the recent couple of years and it has not stopped people like Host Plus investing fifty per cent equity in the convention centre, for instance.

MR HARRIS: Yes.

MR LINDWALL: Just quickly, do you think there's any particular reason that there is a procured favouring short-term bank debt in the short which is causing a number of problems when it gets refinanced and, you know, there's a tendency to take the short-term debt market, which is at a low interest rate comparative to longer term debt, and yet procurement of course is a long-term process.

MR LOCKE (PWC): From a government perspective we're not necessarily dictating what form of funding actually is put in place. We're being open. We're just looking for committed funding offers. It is up to the proponents then to work out how they can best deliver a long-term financing solution. If at the end of the day they as equity parties and sponsors are willing to take on that refinancing risk and price long-term funding within their SPVs, then that provides an efficient, long-term cost of capital to support people proposing an availability payment. There's nothing to stop people, as I said, putting forward a 15-year debt solution. For instance, on the - - -

MR HARRIS: (indistinct) price.

MR LOCKE (PWC): I will give you an example. In the case of the Gold Coast Rapid Transit Project - now, fair enough we reduce the operating franchise down to a 15-year operating term, but the sponsors in that particular case did provide long-term committed funding from export credit agencies to support their debt and there's no reason why a similar structure couldn't be provided here.

MR HARRIS: Except it wasn't in the context of an Australian bond market then by definition. If it was foreign export credit agencies, it will be in the context of foreign government support.

DR MUNDY: Of exports. You worded the fact that bond markets can occasionally be covenant-heavy and it was certainly the case around the time of the GFC that all sorts of infrastructure financing had covenants of all sorts suddenly emerge which we hadn't seen before. My sense in talking to primarily airport chief financial officers is that the issues of covenants have retreated somewhat in the last couple of years. Is that your experience too? We have been told an awful lot by a lot of people about bond markets have become much more problematic since the GFC. The sense that I get from CFOs of large brownfield companies in Australia is the problem has largely sort of fixed itself. I'm just interested in what your view is.

MR LOCKE (PWC): From my perspective as a sort of a banker, I have always regarded the most rigorous due diligence being undertaken by bankers, not the bond market. If, quite frankly, a project can be proven up to be bankable and accepted by bank credit committees, there's absolutely nothing to stop that being adopted in the same form by the rating agencies which the bondholders would ultimately place reliance upon.

DR MUNDY: Would that perhaps be an indication why we have seen recently in large refinancing both bond issuance and bank issuance going - effectively the bondholders are riding on the back of the banks' credit committees to some extent?

MR LOCKE (PWC): I would agree with that to some extent, yes, but I don't think that having a bank debt is a precondition to being able to mobilise bond finance. If my memory serves me correct, going back to the 2000s we certainly had plenty of capital market issues. We had plenty of credit wrappers pre-GFC. If Assured Guaranty thinks that's where the market is going to come back, obviously there's nothing to stop them actually doing that.

DR MUNDY: Can I just ask one other thing? You mentioned major brownfields developments - augmentations, I think - could look something like a greenfields project or PPP. Can you give me some sense either in the scale or the dollar spend how it relates to the size of the business as it sits? What sort of would be the ballpark in which those issues became apparent when I'm just mindful that the Brisbane Airport seems to have been able to finance the best part of (indistinct) for a new runway, so how would we think about the brownfields augmentation starting to look like a greenfields project?

MR ROLFE (PWC): It probably turns a bit on the definition of "brownfield" and it's probably very project or sector-specific, so if you take a large water pipeline servicing a gas project or the coalfields and you have got one or two users, it might be technically a brownfield expansion but the risk is probably not much - - -

DR MUNDY: So the business is (indistinct).

MR ROLFE (PWC): Yes, to it being a stand alone greenfield project.

MR GREGORY (PWC): I think it will also depend on the way in which the existing security pool is used or otherwise to bank an augmentation versus fund a greenfield - - -

DR MUNDY: I'm trying to understand what the business model is. That's all. Okay, thank you.

MR HARRIS: All right. To try and keep the time we're going to have to close off there, but I would like to thank you for your multiple presentations to us and your preparedness to come here today. There are a couple of things we might choose to follow up with you. I'm just hoping we can possibly do that by email, but I very much appreciate your time and effort in contributing to this. Thank you very much.

MR GREGORY (PWC): Thank you.

MR ROLFE (PWC): Thank you.

MR HARRIS: Now I think we have Infrastructure Australia. For the record, could you do the identifications for us.

MR BRENNAN (IA): Rory Brennan, Infrastructure Australia.

MR ROE (IA): Paul Roe, director of financing and funding, Infrastructure Australia.

MR ALCHIN (IA): Stephen Alchin, executive director planning, Infrastructure Australia.

MR HARRIS: Thanks very much for your multiple presentations and submissions to us. Is there something you would like to say by way of opening remarks?

MR BRENNAN (IA): Yes, thank you. It's a pleasure to be here in front of the Commission again. Perhaps to just paraphrase our submission in relation to the draft report, we're very supportive of many of the findings or recommendations that are outlined in the draft report, particularly the broader application of the use of charging, better use of existing infrastructure, better governance around infrastructure, privatisation generally, and I suppose in addition we would suggest that water infrastructure be looked at in addition to ports and electricity assets, and particularly a better collection of data around infrastructure costs but also more broadly in terms of usage and performance.

In our submission we provided some additional information on assets to be considered as well as electricity and ports. We talked about bond financing and organisational framework for collecting and disseminating project pipeline information and costs and benefits of corridor preservation. Today we will be more than happy to talk on any of those issues but particularly we're prepared to speak around privatisation, asset recycling, bond financing, the organisational arrangements for pipeline information, and corridor protection. We're more than happy to take questions on any of those.

MR HARRIS: Could we start on corridor protection because you have put quite a substantial piece of paper in on this. I guess one of my great interests in this is long term there has been a lot of interest in the planning system in preparing for future infrastructure needs - long term, as I said, over the last 80 or 90 years. It has certainly dissipated in recent times and your own submission tends to indicate that with, you know, 1951 plans and then absences of plans from substantially beyond that.

It sort of goes to this question of how, because I have never met anybody in infrastructure who isn't supportive of the concept of anticipatory planning but I have found relatively few people who have ever been prepared to take responsibility for putting it in place, and that would include statutory planners whose primary job this would be who seem to see it as the responsibility of politicians nowadays. Perhaps that's an unfair observation, but help me out with the how because I'm always reluctant to write in our reports, if you like, the motherhood statement of, "Gee whiz, there should be much more corridor planning," without actually addressing in any sense the practicality of who should do this and how.

MR ....: Stephen?

MR ALCHIN (IA): Sure. Thank you, Commissioner. Before I answer your question if I may, in your draft report you made a request for further information. I have here two further papers that might be of some assistance. One is on increases in urban land prices here and in Melbourne in the decade 1994 to 2004 and shows again a significant real increase.

MR HARRIS: Yes.

MR ALCHIN (IA): The second paper goes to your request for information about overseas practices. The paper, is a little bit dated, 2002, but it's specifically about practices in Europe.

MR HARRIS: Okay, that will be great. If you can leave them over there and we'll collect them in a minute, that would be good.

MR ALCHIN (IA): As to your question to who, this is quintessentially an area where governments ultimately have to take a lead. It is up to governments, and as argued in the submission, it's a joint responsibility. I think the risk is that unless joint and intergovernmental approaches can be pursued, particularly around issues of funding for the acquisition of corridors as required, then it will always be the first thing that gets knocked off at budget time. Recent experience in the last 20 years or so has suggested that is the case.

So in terms of how, I think some form of joint approach, some form of hypothecated funding, just what worked in the past. I know there's a lot of debate about the pros and cons of hypothecated funding but in a context of needing to be confident that money is set aside for this purpose, the things that worked in the past, for example the Sydney Region Development Fund, the Melbourne Metropolitan Board of Works, the current Perth Metropolitan Regional Improvement Tax, those are the things that are absolutely fundamental if this is to work.

MR ROE (IA): And it's true to say the Western Australian model, this was probably the best case in an Australian context where there is a hypothecated fund and they are able to preserve - - -

MR ALCHIN (IA): That's right. It raises, I think, something in the order of $90 million per annum at the present time which is used to acquire corridors in Perth. It still has its own limitations - it's statutorily limited to the area covered by the Perth Metropolitan Regional Planning Scheme. So it's not covering the Peel region which is part of the areas that Perth is expanding into. But it's still the only area now where there's any significant application of this approach which has steady, small amounts of money made available as required to deal with either so-called hardship acquisitions or, as the submission notes, pursue some opportunities where governments may choose to acquire land ahead of time. The submission, in one of the footnotes particularly references the experience here in Sydney with the acquisition of a golf course and the development of the Rouse Hill town centre.

I think some of the other research we have pulled together, like the Urbis Valuations report, shows that although there will always be cycles in this area there is significant prospect of real term increases in land prices over time.
That, plus the fact of or the ability for governments to rent out the properties or make use of interim land uses on these corridors, suggests that to some degree at least, corridor protection can be a no regrets policy, in as much as if a future government decides that it doesn't want to pursue a particular corridor, it can divest itself of the land and get a reasonable return on its investment.

MR HARRIS: It sounds like from what you're saying though that this is a question of money and tax - - -

MR ALCHIN (IA): Absolutely.

MR HARRIS: - - - rather than a question of planning.

MR ALCHIN (IA): It is a question of planning in as much as needing governments, particularly with nationally significant corridors to have a joint long-term view that is genuinely long-term, that is genuinely a joint view. It's not at the level of platitudes and high-level principles, it's corridors defined with sufficient precision, rather, that real funding decisions, real acquisition decisions can be taken. In that sense it is about joint planning but ultimately unless the funding question is grappled with, it is something that will be little more than ell-intentioned statements in planning documents. When there is pressure on budgets it is always a very easy thing to set aside the amounts required for some corridor protection, even though the long-term cost of not doing so can be very significant.

MR LINDWALL: It's also very easy to sell it off at that point too.

MR ALCHIN (IA): Indeed. Indeed it is, and one of the arguments put forward in this submission is that for the nationally significant corridor, having a joint arrangement puts some fetter, some constraint on the ability of a single government to unilaterally sell off the property.

DR MUNDY: But the issue though relates not only to the physical corridor itself but the land around it. I used to be an airport planning director, I know a bit about urban plans. We now have a situation, for example, what we saw in Brisbane but more what (indistinct) now with development of the second east-west parallel in Melbourne which has been in the Metropolitan Planning Scheme, in fact it's been in the Melway since 1990 and it is now emerging that even though the noise impacts are smaller in terms of their footprint than was expected in 1990 or indeed in 2000, there is going to be significant resistance and whilst we've seen some efforts with the Melbourne airport environ and indeed in Western Australia with corridor protection studies into the different land with things like that, what's IA's view on how we can better protect the land? It's one thing to put your foot on the land, it's another thing to make sure the land is still going to be socially available for the purpose in 30, 50, a hundred years' time.

MR ALCHIN (IA): Yes, but we would strongly agree that the land use planning arrangements applying to the land adjoining these corridors is just as important, so that the utility of that corridor is maintained over time. It's not just airports. The freight line into Fremantle for example had high density development allowed around the line. I think it does require - again is to be wrapped up into intergovernmental agreements to make, to keep the states honest to be blunt about it, to actually put these provisions into place.

I think the other thing that's helpful here is to put notices on what's described in the report as the equivalent of the section 149 certificates. They're the certificates that purchasers or their solicitors acquire when they're buying property. At the moment as far as I can tell, certainly in New South Wales, these certificates are atomised, applying only to the individual parcel and they give no sense of what is happening around that bit of land and so it doesn't say there is a corridor here and there are going to be lots more trains or lots more trucks. Nor does it say, in the case of corridors that have been protected, for example the F6 in Sydney, where to minimise the risk that community pressure builds up from those residents that have moved into an area just to see the corridor as an extension of their local open space. These certificates need to be more strategic and embracing so that when I buy, if I was to buy a property down there I would know, yes, my property is zoned to permit certain development but the certificate also gives me a story about what happens in the area. As I'm saying, that there is a corridor down here and it's not part of your open space, it's actually a corridor for future development.

The only other thing I would say in responding to your questions is the importance of looking for opportunities for joint use of corridors and not just within the transport sector (although examples show that it's been spectacularly unsuccessful in doing that), but also cross-sectors. The submission makes passing reference to some of the needs of TransGrid here in Sydney or around Sydney for a corridor. It cannot be beyond our wit to find a way of having joint corridor protection and planning.

DR MUNDY: Stephen, if I could just ask you on that just to take this on notice but in that point of no decent corridor two streets over or if there is any good practice that IA has been able to identify anywhere in the country that we might be able to - I don't mean right now. If you could just take it on notice that would be helpful.

MR LINDWALL: For example, I mean, when a person buys a new block of land they might have to sign a document noting the fact that there's a corridor just down the road or something like that.

MR ALCHIN (IA): Yes.

MR LINDWALL: Hypothetically.

MR ALCHIN (IA): Yes, and I'll make a submission on that.

MR LINDWALL: Do you want to talk about asset recycling, since it's a good topic and can I start firstly because I like to make this clear, that when people talk about
asset recycling it doesn't mean that you're obviating the need for good project selection and good process in terms of what you privatise as structure of the market. It has been privatised, et cetera.

MR ROE (IA): That's right, and we fully agree with the draft report in regards to those points. I guess where we respectfully disagree is I guess the benefit that we see from hypothecating net proceeds from asset sales to economic infrastructure and its ability to bring the community along - you know, sort of the ability of that hypothecation to bring the community along through the politically difficult area of asset sales.

What we're talking about here - I mean, I guess we just need to be clear on terms. Capital recycling I guess implies some sort of perpetual recycling of government assets from, as you have mentioned in the PWC session, brownfield low-risk assets and to greenfield high-risk assets. It's not necessarily a consequence of asset recycling, so the first step is to I guess look at the stock of existing assets on government balance sheets and look at the appropriate regulatory arrangements and look at what's suitable for sale, always in mind with trying to maximise economic efficiency rather than asset sale proceeds, and it's the net proceeds from that sales process that's hypothecated into economic infrastructure.

The economic infrastructure that's hypothecated into is not necessarily government-owned economic infrastructure. I think the IA decision-making framework would argue against that as a default position, so we should look at the full exploration of user charges to address the viability gap in the funding of that infrastructure and demonstrate the need for government funding, even if it is hypothecated capital from asset sales, and there should be a full options analysis on how that economic infrastructure should be delivered, whether it should be delivered by the private sector or it should be delivered by government. It's certainly not a default position for government taking on greenfield risk and owning the economic infrastructure and then selling it at a later point when somehow that asset has been de-risked.

I think the advantage of hypothecation is that community benefit in bringing the community along and sort of demonstrating to the community the benefits of reform in this area. A lot of the economic infrastructure assets are at the state government level and the state government is also responsible for the delivery of a lot of greenfield infrastructure as well, so in a sense there's a direct link to that part of I guess the state government's activities through recycling.

MR LINDWALL: I accept the logic there but does that mean that you think it's basically very difficult or improbable for governments to explain coherently to the public that such-and-such an asset should be privatised on its own account because it's in the good of the country or the good of the state?

MR HARRIS: Or efficient to do so.

MR LINDWALL: Efficient to do so.

MR HARRIS: Let's focus on efficiency for a second.

MR ROE (IA): As I mentioned, economic efficiency is paramount but it has proven difficult historically to - I suppose there have been periods of crisis like in Victoria in the early 90s where reform was able to occur fairly seamlessly, but it is difficult to demonstrate to the community the benefits of reform.

DR MUNDY: One could identify the quality of political leadership perhaps as also a characteristic.

MR ROE (IA): Yes, that's - - -

MR HARRIS: Don't worry about it, Paul. You don't have to comment on that. How do you draw a boundary around this hypothecation concept? I mean, people throw the term around quite loosely but we know hypothecation has come from the road sector where it has been anathema to treasuries for many years.

MR ROE (IA): Yes.

MR HARRIS: Capital recycling has been talked about generally in terms of roads, but what happens if the next road project is one with a poor benefit cost ratio, yet you have hypothecated? Are you going to not privatise this, even though it's efficient to do so, because you're going to have to put the money into this hypothecation fund which only has available to it quite poor benefit cost ratio road projects, for example?

MR ROE (IA): We're coming from, I guess, the unfortunate position of an infrastructure deficit where there is a long list of potentially good projects to fund. I guess the starting point is and the opportunity for reform in this area is the need for governments to fully explore funding options available to it in order to address the infrastructure requirements, investment requirements, that they face. At the state government level they're constrained from borrowing against the future to finance those greenfield infrastructure assets through their credit rating constraints and the governments are in a position of I guess being forced into this area of reform by - - -

MR HARRIS: But you see my point. If we accept deficiency as being the primary rationale for privatising something, we may have an infrastructure deficit, but if a government is of the view it doesn't want to invest in infrastructure you're also saying by definition under a policy of recycling, "Well, don't privatise it. It has to work both ways. Even though it might be efficient to do so, I don't plan to invest any more in those."

MR ROE (IA): I would review hypothecation when we don't face an infrastructure deficit so it's not - I mean, I understand your theoretical point and linking the two may - - -

MR HARRIS: It's a bit more than theoretical. We have had for a fair period governments not investing in infrastructure. The recycling policy would say, "If inverted, don't invest. Don't sell an asset that may be justified on efficiency grounds because we're not going to invest in infrastructure."

MR ROE (IA): I think we are seeing through the Restart NSW model and the various asset sale processes from individual assets and states where they have hypothecated the net proceeds sort of the demonstration of the benefit in bringing that community support along. I think that needs to be taken into account in the implementation of the policy framework, but I wouldn't be too sort of restrictive on the rules around hypothecation.

I think there is a clear difference between hypothecating revenue streams and hypothecating one-off capital decisions and the IMF budget accounting standards make that differentiation, so I think in the asset sales phase there is not the usual risks associated with hypothecation of being locked into some optimal spending decisions over a long term by locking up the revenue source.

MR LINDWALL: I think there's good reasons, as you were saying, but as long as we don't come to the view that the public have the idea that privatisation is only for the purchase of new assets, otherwise it's a bit like the trade, that we can only lower tariffs if we trade off some other things, even though it's in our own interest to lower tariffs - - -

MR ROE (IA): Yes, it's simply not about the purchase of new assets. It's about funding new infrastructure.

DR MUNDY: Can I just ask you two questions about privatisation and it goes to page 5 of your additional submission. I note that in table 1 there's a number of assets and not in that list is Airservices Australia, which is with the ARTC the only other infrastructure business in the Commonwealth. Did it not occur to you or do you have a view that it shouldn't - I mean, here's a business that has been operating subject to application of Part 7A of the Competition and Consumer Act and indeed way back when when it was the Prices Surveillance Act for a long period of time. It pays dividends to government. Did it not occur to you?

MR ROE (IA): Yes, that went - - -

DR MUNDY: Or did you have a definitive view that it shouldn't be sold?

MR ROE (IA): We haven't actually looked at that asset.

DR MUNDY: Could I ask you just to apply your thinking to that, both to its en route business but also to is locationally specific businesses, and perhaps if you can just send us an email, send us a short submission, on whether it would fall into that group. That would be useful

MR ROE (IA): Yes, happy to do so.

DR MUNDY: The other thing and I can't let Rory go without talking to him about work. We've spoken about work before and for the sake of the record, I should declare that I'm a director of the Sydney Desalination Plant but I guess the question is broader. The Commission has thought long and hard about urban water in appropriate and also to the extent to which councils still run water in places like New South Wales and Queensland.

I guess where we landed when we did our urban water report in 2011 was that the market structures weren't yet ready for privatisation of the water system broadly but to some extent individual plants were effectively being done off some sort of bill design and operate basically. They had no risk associated with its revenues other than performance related. Is IA of the view that since we did our report in 2011 much has changed or are we still in the space of the privatisation of desal plants, treatable plants but not yet at a point where we have water markets where competition can occur?

MR BRENNAN (IA): I might ask Paul to respond to that.

MR ROE (IA): Yes, we have looked at just applying the framework in an October 2012 report, the regulatory arrangements for water assets. There has been a lot of reform, regulatory reform, in the water sector over the last couple of decades. The Melbourne and Sydney water assets are subject to independent price determinations, so similar to the energy sector, so in that sense one aspect of monopoly rent concerns are addressed, are being addressed through the regulatory arrangements. That provides also for assets sales and provides a revenue stream for interested investors as well, to the extent that you've got independent pricing. In Melbourne - - -

DR MUNDY: Sorry, Paul. I'll just stop you but in most jurisdictions there isn't anything that looks like a market mechanism, other than what's provided in New South Wales under WICA, and I guess that's my question. It's not the regulation of the water utility per se. It's how the independent markets might emerge in the way that we have in electricity.

MR ROE (IA): Right.

DR MUNDY: It's the market design issue that was most critical with the Commission's concerns in 2011-12, rather than the behaviour of Sydney Water per se or one of the Melbourne utilities.

MR ROE (IA): Yes. WICA is a strength for New South Wales system. In Melbourne you've got the urban water entities set up into three separate entities and they're able to offer yardstick competition against each other, so they provide some element of comparative sort of benchmarking and pricing which I think does move you some way down the competition route. I think that those reforms and with independent pricing would give you some confidence that there would be economic efficiency benefits from private ownership of those assets.

MR BRENNAN (IA): I think I'd say in response to your question that not much has happened since 2011 that would suggest we're now in a position whereby utilities as a whole are ready for that sort of position. Although we've got independent price determination, a number of people would ask whether or not the return provisions in those price determinations are sufficiently commercial to be able to attract investors to a complete utility as opposed to, for example, a stand-alone asset line but these are planned or perhaps major waste water treatment plants or perhaps a combination of waste water treatment plants.

DR MUNDY: So just reading this here, you wouldn't be of the view then that the time is right to sell off South East Water?

MR BRENNAN (IA): No.

MR HARRIS: A regulated asset base becomes tremendously important in that context, doesn't it? I mean, if you have a regulated asset base set up for the purpose of effectively matching the pre-existing pricing structures then you'll have a financially engineered solution. If you have a regulated asset base, it's actually reflective of either efficient provision or even current provision; you have a different model. To your knowledge has anybody investigated any of that which would be a necessary precondition for setting up what we call a regulated market? To you knowledge, has anybody looked at those issues across water authorities?

MR ROE (IA): IPART as part of its pricing determination does it on the basis that you have a regulated asset base.

MR HARRIS: But whose regulated assets?

MR ROE (IA): Sydney Waters.

MR HARRIS: But I'm saying if I understand it correctly, prices didn't vary when that was done, so that's a financially engineered solution.

MR ROE (IA): Yes.

MR HARRIS: It says, "What's the regulated asset base to give us the current price?" What you want to do, surely, for efficiency purposes is in fact what the actual assets were, what should be written off, what should be revalued up because it's much more valuable and what, therefore, the efficient price is. This is our concern about market structures generally being addressed first. This is the whole purpose of doing an efficiency based privatisation, rather than a just flog it off because it has this much in revenue flow basis.

MR ROE (IA): Sydney water, I guess with the introduction of independent price regulation, there was a line in the sand approach where I guess future assets were regulated on those efficiency criteria. There were commercially acceptable rates of return. Enough time has past now that there's only a small proportion of the end of these assets that are subject to those historic provisions which were based on historic rates of return, so I think that independent pricing mechanism is self-correcting in that sense. So the whole entity's assets are subject to what is a commercially acceptable way to average cost to capital return for future investment decisions based on economic efficiency grounds. That's their regulatory framework.

DR MUNDY: You'd agree though that in any privatisation arrangement this question that the chairman raises with respect to what the asset base is needs to be resolved up-front rather than left to some subsequent regulatory process?

MR ROE (IA): Yes, I think it would be better rather than draw a line in the sand approach to actually revisit the existing assets and do that work up-front. It's more politically challenging and community challenging in terms that it might lead to a different sort of price outcomes but I think it is a better way than a line in the sand approach.

DR MUNDY: Surely the political issue would be more palatable if the rents are pruned from the price increase were put into the sale price and transferred to people rather than as might have been the case in other industries, where they were transferred to shareholders?

MR ROE (IA): Yes. That would be correcting if - - -

MR HARRIS: Thus our continuing interest in recycling efficiency first.

MR ROE (IA): Yes.

MR HARRIS: Just another way of illustrating exactly the same primary point.

DR MUNDY: Because the challenge that you have is if you set that asset base too low then the prices that emerge diverge from long-running incremental costs and prices have to go up to fund future investor needs. Hence the private owner.

MR ROE (IA): Yes, the line in the sand approach is the second best way of doing it. You should revisit existing assets but my understanding is where Sydney Water is at the moment is that it its WACC is pretty close to a commercial WACC, taking into account its pre-pricing assets and its post-independent pricing assets.

MR HARRIS: I was only really asking you to illustrate this whole question of recycling again. It's about efficiency first. Rationally you could only expect that to work.

MR ROE (IA): It is and all of Infrastructure Australia's reports we put that point front and centre, up-front, that it should be economic efficiency and shouldn't be about maximising the sale proceeds and costs of economic efficiency and you do privatise assets once you're comfortable that economic efficiency can be realised. As a general comment I think that governments have a lot of legacy assets on their balance sheet and there is scope for further privatisations than have occurred and purely on economic efficiency grounds purely on economic efficiency grounds.

MR LINDWALL: On financing, in our draft report we mentioned the prospect of an inverted bid model. In earlier conversations in the hearing we had a view put to us that the biggest constraint in procurement was the fact that you needed a fully-funded bid to go to tender; hence that gave an incentive for a short-term bank debt to be used, rather than a longer term capital structure which might be more congruent to the structure of the asset being purchased. What do you think of that idea of governments not requiring a fully-funded bid when they go to tender?

MR ROE (IA): I mean, it is worthwhile exploring the various models, particularly in the context of getting more tenor in the financing arrangements of these vehicles and undertaking it on a pilot basis would be worthwhile. We have undertaken fairly extensive industry consultation on infrastructure financing. As you correctly point out, it is the requirement of fully financed bids up-front during the tender process which does act as more of a constraint on getting project bond-debt into the vehicle than the banking sector, a debt for the vehicle largely because it is costly to hold credit positions over a long and usually uncertain period in a time sense. UK has experimented with having the preferred bidder and then looking at the form of financing for that vehicle post-bidder stage. I think there are advantages installing that in the Australian context as well.

I just want to follow up on, I guess, the Canadian model. The Canadian model is probably a good case study of where bank debt was quite prominent 10 or 15 years ago and longer duration bond debt has become more prevalent now. You would expect that. That would be your a prior position, given that a lot of PPPs do look like long-term bonds, so long-term debt should have a natural matching advantage in a PPP framework. I think in Canada they have reached that point of maturity. They have been quite proactive. They are looking to encourage bond solutions into their vehicles. They have compensated bidders for credit rate risk during bidding processes to overcome that issue that I mentioned earlier about holding credit positions over long and uncertain periods.

I mean, it is up to government to I guess be proactive and look to correct market deficiencies where they may be occurring and where the market is not going where you would expect in a long-term financing the solution would be.

MR HARRIS: By this sort of investigation of not requiring fully financed bids, at least in sufficiently high profile circumstances, you can see whether that action makes any difference at all, as an example. When you say governments should correct - - -

MR ROE (IA): It is always fertile policy ground to investigate, as you do in your draft report, the reasons why the market is not behaving in the way you would expect it to behave. There are reasons why you would think long-term debt would have a comparative advantage in financing PPP vehicles so it is a worthwhile area to explore and understand those impediments and address them if they do prove to be the cause of that position.

MR LINDWALL: One final question. I had better stop with this one. That is about the pipeline. I just want to be sure. What is IA's view about our proposal in the draft report that the quantum of measures that we have proposed forms a natural pipeline and we don't need to do anything more than that?

MR ROE (IA): Certainly I agree that the measures that the Commission proposes in its draft report around fully exploring beneficiary payment models and the like to address I guess the root cause of the infrastructure deficit which is the unsustainable funding models that are in place at the moment will go some way to create capacity for governments to be able to more effectively direct its funding to where it is needed in the infrastructure space. The Commission's draft recommendations around good governance in terms of infrastructure planning, project selection and the importance of cost-benefit analysis are important to give some confidence that the pipeline that is being developed is the right pipeline in terms of maximising efficiency and productivity.

I guess the open question is whether there is still a need for governments to break through short-term budgetary cycles and make longer-term across level of government funding commitments to projects that are selected on their merits. A pipeline that is unfunded and only being funded within one political term is still not going to give the private sector full confidence that those projects will ultimately come to market and they can start planning around those projects. I think long-term funding agreements between different tiers of government in the context of those broader reforms that the Productivity Commission is recommending would also be important in providing a fully-funded long-term pipeline that the private sector can have confidence in and plan their resources around.

MR LINDWALL: One final point on that is that although it is good to have a long-term plan, naturally we have also said that for individual projects that have been selected on a particular basis, a strong benefit-cost regime, for example, they are subject to review and government should always have a position to terminate a project when evidence gathered is sub-optimal.

MR ROE (IA): Yes. I couldn't agree more. There is the risk where you don't have a fully transparent independent decision-making process that when, for example, capital costs double and the benefit-cost ratio goes below one, the project still proceeds. A good example of political lock-in was one that Warren mentioned in the Productivity Commission's water report in relation to the Sydney desalination plant. It is very difficult for politicians to move away from a project once they have selected a project and tied themselves politically to that project. I guess to have the correct institutional governance arrangements - - -

DR MUNDY: The options theory doesn't work in politics.

MR ROE (IA): It is the correct governance arrangements - having those in place to be able to update politicians on cost-benefit analysis if the information comes to hand and the government committing to adhering to those principles during a project life cycle, which is important.

MR HARRIS: I think we are a bit over time but fortunately it is only chewing into our lunch time, so we are going to be back here at 12.50. That is not long away. Can I thank Infrastructure Australia for its continuing participation in this inquiry - it has been particularly helpful - and for your further tabled papers I think which we will pick up from you. Thanks very much for your time and effort today.

MR ROE (IA): Thank you.

MR BRENNAN (IA): Thank you.

(Luncheon adjournment)

MR HARRIS: John, is it?

DR GOLDBERG: John Goldberg.

MR HARRIS: Can you identify yourself, please, for the record and we will start up.

DR GOLDBERG: My name and affiliation?

MR HARRIS: Just who you are so that - it's a crown record afterwards, so we can track who said what.

DR GOLDBERG: Dr John Louis Goldberg.

MR HARRIS: Fine. John, do you want to tell us a little bit about your submission or do you want us to go straight to questions?

DR GOLDBERG: I will tell you a bit about how I came to be interested in this because if you look on the World Wide Web you will find quite a number of my papers which deal with the prediction of corporate collapse in toll road models. Some years ago I decided to extend this to econometrics rather than purely financial. There is a connection in that the discount rates which apply in the model examinations are similar to the ones that you have to use in econometric work.

I think this whole problem of misallocation is so bad in Australia that I have proposed the rather bold apolitical step of suggesting that a special infrastructure act be introduced in Australia with penal provisions. The reason I'm saying this is that the misallocation of scarce capital resources is an offence against the public interest and therefore you have to do something drastic to curb it.

I have given a number of examples here and you will see where I'm coming from. The last round of productivity submissions I gave you a cost benefit analysis of a rail track expansion in the Sydney region. The cost benefit analysis was done by an organisation named Deloitte and it was commissioned by Transport for NSW to justify this particular rail expansion. I could not get hold of this document. I applied to the Department of Planning and Infrastructure. They didn't have it. Transport for New South Wales said, "You can't have it because it's commercial in confidence," so I applied to Infrastructure Australia and eventually I got it with a delay of about six months.

When I examined this, I did an audit of this which is on the Web. It was fairly clear that the whole thing was false and misleading. The object was to produce a result which would be in favour of rail as against road. This is pretty serious stuff when you think about it, that they're going to the trouble of spending over a billion dollars expanding slightly the rail system through the north of Sydney for no economic benefit because the costs involved in road freight are really in fact less than rail. This comes out from an examination of Deloitte data.

This matter has a lot of other things attached to it but it's only one of a symptom. Some years ago I did a cost benefit analysis of the widening of the M2 motorway. This example I put into the submission as current to show the extraordinary extent that proponents will go to in order to mislead the public as to the economic value. There are pages of stuff there that I went through. This has taken me about a year to do, but I did it, mainly because I couldn't believe some of the things that they were putting in their analysis. I got a BCR value of .27. Transurban got one of 3.4. In other words, over an order of magnitude greater. How did they do it? Well, if you read the submission you will see the way they incrementally increase every segment in the analysis.

This is what you're up against. I am an old hand at this now. I'm in my 80s and I have welcomed the opportunity to put down what I know about these crooked methodologies that have been going on. As I haven't got all that long to live, I feel hopefully I have done a public service by at least guiding the way in which things ought to be.

I don't say for one moment that I can give you political solutions because what happens in fact, politicians get a bee in their bonnet about a certain road. For example, one of the things that's going on at the moment is two projects, NorthConnex and WestConnex, in the Sydney region. NorthConnex is a link tunnel between the M2 motorway and the F3 freeway. It has, I believe, been examined by Infrastructure Australia and found to be uneconomic, so why are they resurrecting it again?

Well, they're resurrecting it again for a number of reasons. Number 1, politicians like to promote the idea of free-flowing traffic. It doesn't exist in the city. It's a furphy, but they still persist. You see, "Oh, we're going to do this link road. We're going to widen this," they're going to do this and that, but it doesn't make any sense.

This one particularly is dangerous, this NorthConnex one, for another reason. $800 million of sovereign funding is to be joined to 600 million of funding provided by an organisation called Transurban. Transurban is a basket case, I will tell you now, and the appendix to the submission analyses at 33 pages as to why it is a lemon. The market has been rigged by unscrupulous people in the financial sector, but the point is they can't really get away with this because the asset values are so small. Most of them are due to intangible assets. How can that be useful? You see, if the thing falls over, as it may well, the sovereign lenders are going to be up for more. I explain this in detail in the submission.

The same applies to WestConnex, which Mr O'Farrell is very fond of. Well, it's another lemon. I tell you why. He talks about productivity gain. Productivity gain from a road is only obtained from what is called agglomeration economy. In other words, you have to have a whole lot of businesses in close proximity, but what a long road does is scatter them, disperse them, so you don't get the productivity, yet huge numbers have been put down in the WestConnex business case to justify this. Of course all it's doing is providing yet another vehicle for the politicians to show that free-flowing traffic is going to be a - your result from this promotion. Put it that way.

I can't give you any more at the moment. My submission is very extensive. I do suggest that you look at the two appendices. One of these is a full analysis of how I managed to predict the financial collapse of BrisConnections in Queensland. That involved a loss of $4.8 billion and that was private money, but so what? It's in the same category as everything else. It's money. It could be used for something else. It could be used for more useful purposes. The second appendix I just recall was a complete analysis of the market rigging of the Transurban security price.

Incidentally, I sent that paper over to a colleague at Oxford University and also to a colleague in George Washington University, so it has been looked at. I hope you find it understandable but if you want me to explain anything, please, I would be very glad to hear from anyone. For example, I just got a card from Pete Bannister who apparently refereed one of my papers for the ATRF. That's about all I can tell you, and good luck because you're going to need it. I'll be dead underground, but you will have to carry on.

MR HARRIS: Well, on that gloomy note, let me turn to questions. In summary, your analyses - which, by the way, we are very grateful for your original submission because I think it drew attention to some areas of cost benefit analysis that are exposed as a consequence of that.

If I summarise it simply, some claimed benefits in cost benefit analysis are actually costs in your initial submission. Discount rates are being adopted to provide a positive impression of a project without necessarily being evaluated across, for example, a range of discount rates, and excessive claims are being made for potential benefits without recognising that, for example, travel time might be improved initially but traffic will be (indistinct) to the consequence of that and so as a result over the long term you may actually see a disbenefit rather than a benefit. There's more in your analysis than that, but just for the purposes of questions today that's roughly what you're drawing attention to, that the analyses can be misused by at least those primary factors.

DR GOLDBERG: Yes. I just make one point about discount rates. When you go over from public to private or you mix the two, the discount rate goes up because you have to put in a risk term according to capital asset pricing model. One of my papers - 2009 I think it was, which was published in the United States - there's a form analysis of how to actually calculate the discount rate. See, there's about six terms you have to take account of. It's all laid out there in the Journal of Business Valuation 2009 and that's referenced in the - - -

MR HARRIS: I was going to say, is that one of your sources I think in the original submission?

DR GOLDBERG: Yes.

MR HARRIS: Just on discount rates, I guess the way traditionally (indistinct) introduced in this area is regardless of whether the project is ultimately going to be funded by the public sector or fully financed by the private sector, if you adopted a range of discount rates you would get a range of evaluation results and as a consequence it will be transparent to the public, to the politicians, to the people who actually have to pay for the thing, how much variation there's likely to be depending on the circumstances of - - -

DR GOLDBERG: I can answer that by telling you first of all the conventional view of cost-benefit analysis only deals with the discount rate and variations. My paper in 2010 which was published by ATRF shows how to put in all sorts of variations and I hope that will be a model for the future because you have got to have - I mean, these things are statistics. They are not absolute values that you can just plug in. I mean, the whole world of finance is uncertain, so should the whole world of economics be uncertain. This is what I have tried to bring out in the 2010 paper.

I didn't do it for the audit I did of Deloitte, simply because I didn't have the time because it is fairly complex, but it is all laid out in the paper - how it is done. I even went into the matter of probability distributions that you have got to use, Behrens Fisher and others that you have to look at. I hope it can be a model for the future. I have not used it since because it is very, very difficult, long-winded thing but you could automate it all. I mean, I put everything on a spreadsheet eventually. I was able to see variations in this variable and that variable and that variable and then in combination, because you get correlation effects and so on. Does that answer your question?

MR HARRIS: Yes, it does. Are you aware that any of these projects - the Transurban one I don't think would have, but have any of the Connex projects gone via an analysis by Infrastructure Australia?

DR GOLDBERG: I am sorry; would you repeat that

MR HARRIS: Have any of the projects gone through Infrastructure Australia's review of the cost-benefit analysis?

DR GOLDBERG: No. I don't think they have because, you see, you can tell that political processes are cornering the whole - I mean, here in the case of the rail expansion one, Deloitte kept hands-off. They wouldn't cooperate at all. Infrastructure Australia did have a copy but they only found that out by accident. It suits the political process or, shall I say, corruption process to do what they do. There is a whole political dimension out there surrounding the mathematical one. I don't need to stimulate your imagination on that one because it is obvious.

MR HARRIS: Yes. We sort of live in this area regularly. In practice, what you are not just drawing attention to is the fact that the cost-benefit analyses can be varied very substantially by these factors that you identify but also you can avoid the process of submitting the project to independent analysis, for example, by Infrastructure Australia.

DR GOLDBERG: There is another problem here. I mean, I have perfect confidence that Infrastructure Australia is the appropriate body to do this work. I think they were involved in refereeing some of my work too but, you see, the reality is that if you have got a situation where a politician wants a result, then he has got to stimulate the activities of people whose credibility is marginal. Put it that way. That is a nice way of putting it.

MR HARRIS: Paul, do you have anything else?

MR LINDWALL: Yes. Dr Goldberg, I can understand and I have seen examples of misuse of cost-benefit analysis myself. The Commission has recommended in its draft report that cost-benefit analyses be published - transparent, in other words - and that they can be reviewed correctly and by doing that it should correct some of the problems that you are mentioning, but I wonder if you have a view on whether there is something systematically different in Australia compared to overseas, because one can imagine there is a range of projects that potentially could be funded from ones with very high benefit-cost ratios down to ones that are very low cost-benefit ratios and why are we always seeming to pick, according to you, very low ones?

DR GOLDBERG: I have had experience with the French and the English. I know the people in France. They wouldn't dare do the sorts of things that Australians do. There is an integrity which possibly goes back to the time of Descartes; you know, the French scientific ethos is there. We haven't got that here. It is unfortunate but we haven't got it. The British wouldn't carry on this way either. The Americans might.

One possibility is that you could have the French look at it, for example, and see what their view is. In other words, spread the whole thing internationally to knock out the preposterous approach that you find in this country.

MR LINDWALL: You spoke about opportunity cost earlier. I am interested: do you think that the reason there are so many projects with low benefit-cost ratios is because there are not many that have high benefit-cost rations, or are they systematically being avoided?

DR GOLDBERG: I really can't answer that in any precise way. What I was referring to with the WestConnex proposal was the use of CBA in a way which is non-standard. I put it down in writing. There were two factors, one of which was the productivity and the other one was reliability. The numbers that Mr Duncan Gay is throwing at us at the moment are just preposterous. 12,100 million dollars worth of benefits and reliability about one-quarter of that - that is just added on.

Reliability is never put into CBA. Reliability is a statistic on its own. It is to do with the fact that can a road maintain a speed for a motorist. The point is that if you take, say, a new motorway with a hundred kilometre per hour limit, 90,000 cars are not going to go down that road at a hundred kilometres an hour. There is a statistical spread. Of course that has got to be reflected in the reliability and it isn't. You have got to put a variance on top of a mean value and of course that enters into this uncertainty parade that we talked about.

Productivity as I said is simply - there is a paradox, by the way. In my submission I have gone into that. There is an interesting paper on the paradox of roads caused by the fact that productivity gain is only obtained if you have an agglomeration. It is like have a hundred kilometre road and every kilometre you have a shop. That is not going to be an agglomeration, is it?

MR LINDWALL: No.

DR GOLDBERG: So you have got agglomerate. I mean, it's a situation that arises naturally in considering traffic flows, land use, transport interaction - the whole lot of things like that. Productivity can't be measured easily, and yet we see the New South Wales government putting down numbers that enhance their BCR but have no meaning whatever. You know, it goes on and on.

MR LINDWALL: Okay.

MR HARRIS: I think to keep to time we're probably going to have to thank you for your presentation at this point but, as I mentioned earlier, I think particularly your original submission was quite useful in framing some ideas - - -

DR GOLDBERG: Is it on the Web yet?

MR HARRIS: The original submission? We think so.

MR LINDWALL: And this one should be too.

DR GOLDBERG: It will be.

MR LINDWALL: And the transcripts too.

MR HARRIS: Yes (indistinct) transcripts will be.

DR GOLDBERG: Do you want a precis of what I - - -

MR HARRIS: No, no. That's fine. I think we will be fine with the information we have got.

DR GOLDBERG: Okay. Thank you.

MR HARRIS: Thank you very much for your presentation.

MR LINDWALL: Thank you very much for appearing.

MR HARRIS: Now, Financial-Architects Asia. Again for the record if you could identify yourselves, that would be great.

MR BELL (FAA): My name is Ian Bell. I'm director of Financial-Architects.Asia.Pty Ltd.

MR ECONOMIDES (FAA): Leo Economides, associate of Financial-Architects.Asia.

MR HARRIS: Do you want to do a quick run-through of your presentation or should we go to - - -

MR BELL (FAA): I'm not 100 per cent sure. Very interested listening to what other people have said and it may not be apparent, our background is actuarial, so Leo is a modeller extraordinaire I call him. We have built a career on building financial models for projects and things to do with finance.

MR ECONOMIDES (FAA): Correct financial models.

MR BELL (FAA): To elaborate, in a career which included a period with a big four accounting firm where there was actuarial input to project and infrastructure financing, I discovered many, many errors in financial models and we developed techniques where a bank would come in with some massive financial model for a specific purpose - it might be an airport privatisation, whatever - and we developed techniques of basically being able to rebuild a model from scratch on the essential features of what the client was trying to achieve and use that as a broad overall check on the outcome of the more detailed model and then you would drill down and you would find out why the more detailed model was different in certain respects and, for instance, discovered a $60 million error in an airport privatisation. So there are techniques that you can use and that's our background.

The reason I mention that first up is I wanted to respond to this question of discount rate because in our submission we do make a point about discount rates. Essentially the point is this: if you're looking at very long-term infrastructure projects - and I think the classic is rail. The Sydney to Newcastle main north line has been in existence for 125 years. Some of these rail assets are very long-life, as can be road assets but road assets need renewal and we have put more investment in to straightening them and so on over time. If you're using discount rates which are the typical treasury-adopted discount rates - I'm talking about, in New South Wales' case, 7 per cent real - then you are discounting things that are happening in 100 years' time at an unbelievably high discount factor compared with what you're doing with things in 10 years' time.

We basically say that the discount rate methodology should attach itself to current market conditions and what conditions have been historically in the financial markets for interest rate instruments and cost of equity and things like that. We think that where people go wrong is they assume that a discount rate will cope with all the uncertainties and it's amorphous. They don't try and understand what are the uncertainties they're implicitly assuming that that discount rate is discounting. It is the desirable approach that where there is something that you have as modellable as a risk factor, that you actually model it. You then don't have that component in the discount rate. That can give you quite different answers in a 100-year project versus a 30-year project. That's the point.

MR HARRIS: Can I then ask you about that in the same way I asked the previous submitter. It has been my impression doing cost benefit analysis, which I used to do for a living but it was a long time ago, 30-odd years, and things have moved on and it's much more sophisticated nowadays, but where you had a doubt about the discount rate - and it's legitimate for people to have doubts about the discount rates - you do a range and you write your risk factors against the range and then some people read them and go, "That's a stupid risk. It's utterly eliminated after year 10," and through that you learn. People criticise and learn because of the range that's made available, but also nevertheless the results still come out the other end and they, as you say, create very, very large variations around analyses like that.

In our draft report we haven't tried to say that cost benefit analysis is the be all and end all of judgments on infrastructure projects. We have, however, argued that it is a very good transparency device for just these things, exposing risks as an example, or the non-calculation of risks where they're not even evident in the analysis. What would your view be on that, on a range versus a particular choice?

MR BELL (FAA): Leo, do you want to answer that?

MR ECONOMIDES (FAA): Part of the problem with all these benefit cost calculations - and if you have done them before, you probably would have faced the same issue - sometimes it comes down to what answer do you want because I can make a BCR in a project too and I can make it point to - - -

MR HARRIS: I think we're quite conscious of that.

MR ECONOMIDES (FAA): Part of the problem is if that's what you get out of it, why bother? We were talking to Sir David Higgins, who has now gone to the UK recently - or a long time ago, but we talked to him recently - and he basically said they don't do them any more on his rail projects because you're always going to say that the project doesn't work and they have done so much work over there and seen the value of those projects that he is actually basically dismissing the benefit of it because people cannot do it reliably. I'm not saying let's not do any work, but I'm just saying to rely on one number gets you in a lot of trouble.

MR HARRIS: No, but my point is not one number. You see, my point is a range of numbers.

MR ECONOMIDES (FAA): I will give you from .2 to 2. Which one do you want to use?

MR HARRIS: I will read the risks - - -

MR BELL (FAA): Hang on. Let me answer this.

MR HARRIS: I will read the risks that you attributed to those variations and I will make a judgment on that, so it's not a number. We're pretty clear about this mentally. Perhaps we haven't been clear enough in the report. The value in it is a transparency device. I don't know what the UK is now doing for rail projects, although they do have quite an interesting history in rail projects.

MR BELL (FAA): The UK is now using a 3 per cent real discount rate.

MR HARRIS: That may or may not be so. I'm saying that they still have a transparency device or they won't meet Her Majesty's treasury's requirements for capital investment, so there will be a transparency device. It will necessarily come down to a series of numbers. Those numbers will have assumptions behind them. Our argument is the transparency of the assumptions. Benefit cost analysis is particularly - well, I won't say particularly good. It can be effectively used for that purpose and if transparent, if published before you commit a dollar, or be it a step in a process, will enable other people, critics potentially of the project, to say, "You have ignored this risk," or, "You have added too much for that risk."

MR BELL (FAA): Transparency - fantastic. That is one of the things that we need so much more of. John Goldberg talked about the difficulty of obtaining financial models. We have done work on the Brisbane Airport Link Project by starting a model from scratch using the PDS for the original offer of equity in that project. You can't in practice get out of the government agencies and out of the private sector - you can't get that information.

In fact ASIC has guidelines that effectively says for a listed infrastructure project the proponent can't provide projections - can't provide that financial model, can't provide the projections. ASIC do not have the skills and ASX do not have the skills to interpret that type of projection that has been done by the investment bankers on behalf of the proponents of the project. It's a very technical and detailed area that requires certain skills and I don't think that our institutional framework is set up to apply - - -

MR HARRIS: (indistinct) economics and commerce as well.

MR ECONOMIDES (FAA): I suppose another way to answer your question - I have done a few projects before where there were a lot of variables, right, so I actually did a matrix, so if these are all your variables, here's the benefit cost ratio. That's what the client gets or that's what the people get. Then again, when you have got 100 or 1000 outcomes, which ones do you focus on? It's very difficult, so I'm not being critical that you can't do it. I just think it's such a difficult exercise, especially if you're not an expert in that field. Where does it leave decision-makers? It's very difficult.

MR BELL (FAA): Yes, you need to be an expert in interpreting these things I think.

MR LINDWALL: The key point really is that, to me, the government, like any person, has limited resources and there are many proposals that come before it, how to choose between one and another on a sensible basis. That's the crux of it. Cost benefit analyses, like any other analyses, can be misused but they're less likely to be misused, in my opinion, if they're transparently published because then people like yourselves can critique them.

MR ECONOMIDES (FAA): Exactly, yes.

MR LINDWALL: And publish the critiques.

MR BELL (FAA): The transparency and the range of variables that are explored in the analysis are two important things but if I can just add to that just so this sinks in. Look at the difference in evaluation of long-term projects using the given discount rate versus evaluation of short-term projects because if you don't, the governments will always choose short-term projects. It can be as simple as that.

MR LINDWALL: Having said that, what can be done about the fact that there is a lot of evidence that projects are - in fact there's a huge database of evidence from the US - systematically overestimate benefits and underestimate the costs of projects.

MR BELL (FAA): What can be done about that? I think the transparency is the issue and your benchmarking for construction costs, those sorts of things.

MR LINDWALL: For the long-term projects, what you're proposing or discussing if you like is to have two discount rates, if not more, one to discount the long-term benefits I guess and the costs also.

MR BELL (FAA): Benefits and costs. You'd be discounting the net - - -

MR LINDWALL: So you might have one discount rate for the long-term benefits in the first 10 years and another one for the next nine years or something?

MR BELL (FAA): Yes, you could do that; you could do that. That's one framework. The other is just to ensure that you're not biasing things by having too high a discount rate that you're applying across all projects. I probably spent too much time - - -

MR HARRIS: No, we jumped on to that. We need to go back to your submission. You have put in a submission which discusses pricing arrangements - - -

MR BELL (FAA): Road pricing, yes.

MR HARRIS: - - - in relation to roads, which as you know we're dealing with. You make a statement in your submission that you can't see that any of The Henry Review and our draft report or other submissions deals with a fundamental practical issue around price signalling for the value of the transport network.

MR BELL (FAA): Yes.

MR HARRIS: We, I guess, in principal would say that's precisely why we are proposing the institutional structure reforms that we have, so can you help me a bit more with this?

MR BELL (FAA): I'm just coming from our perspective in terms of what we experience with projects and models.

MR HARRIS: Yes.

MR BELL (FAA): My ex-boss who was the head of Bankers Trust Australia for quite a while, so a well-known respected banker Rob Ferguson, said to me when I tried to explain what was going on here with these systems, particularly - I mean, we were prompted to make our submission purely because of what we saw in IPA's submission because we thought, "Hang on. That doesn't gel with our experience and that doesn't gel with what we think might be the right set of prices." Okay?

He basically said that the system appears to be like driving, by looking in the rear-view mirror. I said, "Yes, my summation is if you look at the tunnelled road projects in the major capital cities, which admittedly have been mainly PPPs in recent times, then it's a bit like you're driving looking in the rear-vision mirror and you're about to encounter a very steep hill climb." You're not looking forward and there needs to be some way in which - you have addressed this question of there needs to be more benchmarking. You need to understand those basic parameters of construction costs but I've got examples here where construction costs instead of being in the tens of millions of dollars per kilometre, have jumped into the hundreds of millions of dollars and well and truly up in the hundreds of millions of dollars, like Brisbane Airport Link, $747 million per kilometre in terms of just our analysis of what that road would have cost.

MR HARRIS: What the outturn result was.

MR BELL (FAA): Yes. So we think that the system PAYGO or “pay as you go”, that method of looking at what government needs to raise as revenue out of roads versus expenditure on roads - I know you're subject to heavy lobby from the NRMA and from the trucking industry, the National Transport Commission may have been put under pressure, I don't know. I don't really understand the politics and I don't want to be a politician but it just seems to me that we're heading into a crisis if these tunnelled road projects are a sign of what it's going to cost us in our major capital cities in the future and that has an impact on your per kilometre pricing if you decide that you want to move as Dr Henry recommended to mass-distance-location pricing.

MR HARRIS: You'll notice I think that we haven't actually endorsed a particular pricing system. That's because of some recognition of the limitations, certainly with the current pay-as-you-go model and potentially, as your own submission points out, some very large pricing variations if you were to just apply this directly to an existing asset base.

MR BELL (FAA): Yes.

MR HARRIS: So it does in part link I think to the question we were previously asking Infrastructure Australia when I think you were here which is this whole question of before you move any pricing - remember we were talking about water then.

MR BELL (FAA): Efficient pricing.

MR HARRIS: The question is: have you actually looked at the efficient asset base before you decide that something is capable of being turned effectively into a revenue stream for whatever purpose, for future investment purposes or for privatisation purposes or for whatever, having looked at that and particularly looked at the efficient provision arrangements. I think in your submission you draw attention to highways in sparsely populated areas and the sort of prices that would have to be charged if you were to price for those.

MR BELL (FAA): Yes, and that introduces a whole interesting question in itself. I mean, the Pacific Highway north of Newcastle I haven't got a figure but the latest figures I've got might - I think I may have had an earlier figure in the submission you received - - -

MR HARRIS: It's still a very large difference.

MR BELL (FAA): I've added up to 16.4 billion spent or committed to be spent since 1996 and that's in dollar of the day figures, so it's just adding up without inflating them to bring them to constant real terms. That's a large amount of money when you look at the through traffic and you look at the charts, and I've got one of them here, a chart out of an RMS report. That's the peaks, the towns up the coast.

MR HARRIS: Yes.

MR BELL (FAA): The trough is sort of north of - well, Grafton through to Ballina.

MR HARRIS: That's where the dual lane divided highways are.

MR BELL (FAA): Yes, but you've only got 10,000 vehicles a day use that. So if you're going to have a pricing system that's a per kilometre basis on the Pacific Highway, do you have it based on that actual traffic flow? Do you have it based on the average traffic flow between Newcastle and the border?

MR LINDWALL: There are lots of different bases.

MR BELL (FAA): Do you have it based on the actual capacity of the roadway which is eight times higher or something? Well, eight times higher in the Grafton-Ballina section, for instance.

MR ECONOMIDES (FAA): I take it further. Do you just levy it on all the population, a flat amount next year just for having that road there whether they use it or not because the road has got to be funded whether they use it or not.

MR BELL (FAA): Yes, there's a whole lot of things that you've got to throw into the possible equation.

MR HARRIS: We have consumer service obligations which are effectively paid for from the public purse in other infrastructure areas. We could virtually do the same thing here, if you did a properly constructed model to start with.

MR BELL (FAA): Community service obligations are those little peaks, aren't they?

MR HARRIS: Yes, we do - - -

MR BELL (FAA): Using that highway is a way to get across town.

MR HARRIS: And that would go to your original point which is, or mine anyway and I think you were saying the same thing which is review your asset values before you determine that you can actually go down this path.

MR BELL (FAA): I think you gathered the background, even though it was a bit scratchy. The internal memo that I attached at the back of the submission was a quick and dirty analysis of the Pacific and Hume Highways in the context of that low internal rate of return that was brought out by the Phase Two study on High Speed Rail. Basically we looked at that and thought, "How can this be the case?" We're not engineers but the corridor is similar lengths. Maybe they're different widths but the cost of land once you get out in the country is it going to make that much difference? Construction is a bit different. Your rail has got to be flatter and straighter but we said, "Why aren't they doing a replacement value? Why aren't they attempting to value the road stock and try and figure out what's going on here, because if you valued the road stock you would basically say, "Well, the high speed rail doesn't look good because we did the roads first."

MR HARRIS: Ultimately your point about valuing the road stock is with the intention potentially of having a pricing mechanism, but it will tell you where you can and where perhaps it's just impractical as a circumstance - - -

MR BELL (FAA): Yes, and it will start to direct you towards the type of formulations you would need.

MR HARRIS: Yes. I don't think you're going to get any disagreement from us and I think your submissions are going to be quite useful for bringing out that overall concept which says, in our judgment anyway, first you need the institution to undertake these review arrangements which I don't think you can rely on the current institutions undertaking. I don't know whether it was explicit enough in your submission but that's probably because I didn't read it in detail. I always look for questions to ask you but I should go back and look. Do you comment on the institution question?

MR BELL (FAA): In a way we did obliquely, I suppose, because I think we said some of the history of our experience 12, 18 months ago where we actually took a concept for network tolling of Sydney motorways, which is not the arterial roads, it's only the existing motorway standard roads within Sydney, some of which are Transurban or whatever, Interlink Roads, that sort of thing, but the rest were government owned and very few of the government owned motorways were tolled, even though there might have been different tolling arrangements in the past. We looked at that and we came out with this sort of locational premium in terms of the density as an alternative to a cordon charge or an area charging sort of arrangement as you got to the denser parts of the city. We didn't have any success at all with

Transport for New South Wales, I can say.

MR HARRIS: No. No, I can - - -

MR BELL (FAA): In fact we couldn't even get the data that we needed to model it more accurately for them.

MR HARRIS: We might leave it there if we can. I appreciate all the effort you went to with your submission. There was quite a lot of detail in there and quite useful for our final report, I think, so thank you very much.

MR BELL (FAA): Thank you.

MR ECONOMIDES (FAA): Thank you.

MR HARRIS: Jennifer, I think. We're trying to keep roughly to time. Business Council of Australia. I don't know whether you have had to do these before, Jennifer, but you get to provide your name and serial number so we can track you on the record afterwards.

MS WESTACOTT (BCA): Sure. Jen Westacott, chief executive, Business Council of Australia; and Matt Garbutt, policy director, Business Council of Australia.

MR HARRIS: Do you want to do a quick opening pitch?

MS WESTACOTT (BCA): Yes. Perhaps this is a kind of quick way of just summarising what's in our supplementary submission. I think just generally we think the report makes a very important contribution to shaping the agenda for infrastructure provision and reform. We support the bulk of the recommendations. As you know, we have had three major reports ourselves that have made similar sorts of recommendations. I guess for us the report points out very clearly that there are no sort of quick fixes to the infrastructure challenge in Australia and that it really does require good policy settings, good planning and development of infrastructure projects, and all of the points of emphasis you make on the criticality of delivery.

Some things that we would suggest would be we think the report should give a greater recognition that the private sector is already providing much infrastructure which is both publicly and privately used and that the private sector could be and should be called upon to do the bulk of the heavy lifting and infrastructure provision in the future. I will come back to that.

We think there should be more priority given to policies that grow private investment in what is traditionally considered public infrastructure and this could be done through a number of ways: the development of regulated infrastructure markets that enable more private investment instead of the provision by government whilst of course safeguarding the interests of consumers, governments designing public infrastructure investments for investment by the private sector either up-front in a shared way or over time as the project matures, and explicit recommendation in support of unsolicited proposal processes so that private sector can put forward some good ideas to government.

We think there's a greater need in the report to lay out the future infrastructure challenge in the context of growing the economy and growing the population, so we predicted in 2013 that infrastructure spending would remain above 4 per cent of GDP for the next 10 years (indistinct) Commission's view on the size of the infrastructure task. We also feel that it's important for the Commission to highlight this in respect of what we describe as the investment cliff. As the major private resource projects move in to the production phase, how do we fill that gap in terms of investment? By creating that pipeline of public projects.

Perhaps we have misread this but one of the implications in some sections of the report is that the key problem is one of excessive investment in infrastructure, particularly poor projects. I guess that's not the view of the Business Council which we think perhaps really needs clarification. If that's how people have interpreted that, it's important to clarify it.

We agree that the infrastructure deficit is poorly defined and we believe, therefore, it's crucial for Infrastructure Australia to complete its current audit, but we do not believe there's evidence of too much investment in infrastructure. It may well be the wrong projects but we think there is still a deficit and that we need more investment, not less. We think it's right for the Commission to highlight cases of poorly directed investment but we also think that it needs to recognise the flip side, which is that many good projects don't proceed due to bureaucratic delay or local opposition.

We think the final report needs to come to some hard landings on the funding and financing tools that governments should utilise as this was a key reason for government commissioning the study and, as you know, we have made a number of recommendations, but some suggestions would be the report could make clear recommendations about which funding sources to prioritise. It could make clear recommendations about which financing mechanisms need to be developed, eg, to enable superannuation funds to access project debts, your own questions about the bond market, et cetera.

We think the report should provide greater clarity around the position on recycling capital given the federal and state governments are discussing this at COAG. We support, as you know, recycling capital as we think it provides the community with assurances that funds will go into new and better infrastructure and you have highlighted the importance, quite rightly, of rigorous project selection processes to invest in the right projects.

We agree and we don't see why that should prevent recycling from being adopted, so I guess we want to see a stronger statement that recycling is a good thing if it's directed to the right projects, that governments should not be sitting on mature assets, so where the sale of those assets, if deployed correctly to the right projects, perhaps with more dedicated infrastructure funds, can be of great benefit to the community overall, so we wanted to see greater clarity of that.

We would strongly recommend that you go further in your support for privatisation. Draft recommendation 2.1 makes a strong statement in support of ports and electricity privatisation, but we believe there are other infrastructure sectors - water, communications, road and rail - where regulatory and enabling frameworks could in fact make those assets suitable for privatisation with the sufficient safeguards in place.

We strongly support your reforms on road pricing and suggest your final report provides guidance for governments across Australia on how to bring the community along by identifying champions that can promote the policy, identifying how those funds could be held by government, the accountability for them, and so on.

We think the report's recommendations on better project selection and procurement are good. Draft recommendation 7.1 is very wide-ranging and we suggest that could be split up. It lists a number of areas requiring good governance in the provision and delivery of public infrastructure but could go further and describe what are the characteristics of good governance in each of these areas, eg, what is good risk allocation, what are the good processes for selecting private partners, and what are the types of skills that public officials need.

We think you could add a recommendation that infrastructure projects should be linked to long-term strategic growth plans for metropolitan regional areas. As you know, we have a strong view that the report could argue for the use of standards that could improve infrastructure decision-making processes and accountability and we have nominated three areas for standards. One is infrastructure service standards the community should expect, eg, targets for commuting times for major roads et cetera; infrastructure procurement standards, eg, time frames, processes and documentation, and infrastructure performance standards, eg, monitoring service quality and financial outcomes.

We think the report would benefit from a section and some more explicit recommendations about the use of existing infrastructure assets by reviewing regulatory or technological barriers to more efficient use, and building into project selection processes or requirement that options for the better use of existing infrastructure are considered before undertaking new infrastructure investments.

In the discussion on project costs, more advice is needed on getting right the planning approvals; bring the recommendations from the Commission's recent study on benchmarking major development, assessment requirements into this report, so that there's one report that government has as a roadmap for streamlining the planning and environmental approval processes. Similarly on workplace relations, to make recommendations on how the workplace relation system reforms could support higher productivity and lower cost, and in the workforce skills section we believe that the report could tie in some recommendations to remove the unnecessary regulatory burdens on 457 visas et cetera which as you know were not subject to regulatory impact statements under the previous government.

We also believe that a recommendation to better align local government spending with national and state strategic infrastructure plans would be of benefit. We think the report is a hugely important contribution. We would make these two closing points. We think that this has got to bring together once and for all the roadmap for government to get infrastructure, spending and prioritisation right, and that's why we're suggesting that some of the other work of the Commission around major project approvals be brought forward into this report, but more importantly we've had multiple inquiries into infrastructure provision and your report quite rightly maps out the right approach.

What we need now is the report to identify the very specific decisions that governments need to take in order to enable a much more streamlined efficient provision of both public and private infrastructure and particularly facilitating more private sector involvement. That's why we think you're right. Pricing recommendations are very strong but I guess what are the kind of steps to actually achieving that? I'll stop there.

MR HARRIS: That's a pretty wide-ranging agenda and I'm thinking we're at 600 pages in a draft report, Jennifer. How long do you reckon they'll allow us to get to a final? Another 100 pages? We can do it, we can do it. As you say, the major projects study was published last year with a student writing that up again in the draft but I see you're making quite a strong argument for it all being comprehensively stated in one place.

MS WESTACOTT (BCA): I think the risk is people keep wanting to find some magic pudding for all of this, and your series of reports basically point to what has to be done: good projects, a pipeline of them, better risk assignment between the public and private sector. There isn't, you know, a kind of tax treatment that will suddenly unleash a wave of spending. The money is already there. What people want is the projects clearly articulated and they want some of the risk taken out, so I think Peter, it would be useful to at least make sure that we have one consolidated document, given you've already done a lot of this work I think is the point.

MR HARRIS: Yes. You've opened up after a few comments about the notion of the private sector and its contribution, although I note the terms of reference we've given is roads and public infrastructure.

MS WESTACOTT (BCA): Sure.

MR HARRIS: But really you ask us to now consider and make, rather, a view on the size of the infrastructure task which pretty much is this deficit that so many people have talked about. You're correct in saying we have been wary of this. That was deliberate language we chose there. The difficulty with doing it is everybody's list is driven from a different perspective and we're I think a little concerned that almost all of them are partial analyses, thus we're both at risk of being insufficient in our coverage if we draw upon someone's current list or excessive if we leave the impression that all of this can be achieved in quite a rapid time frame which definitionally, given the circumstances we were discussing in funding and financing, almost everybody agrees that although there's lot of money in the private sector for the right kinds of projects, we are also doubtful, as you can see from our draft report, that all the necessary work has been done to do the preliminary development work for many of those projects and/or privatisations. We were discussing quite a lot on privatisations here this morning for that purpose.

So if you are asking us to do this, we will give that further serious thought but there is a reservation about any - how can I put it - absolute determination in this area. I don't think I've got a question at the end of this. It's more of an observation for why we have been a little cautious. We haven't, however, tried to construct the report in any way which discourages governments from reviewing infrastructure needs themselves on a sector by sector basis. If that isn't transparent then we'll need to make that more transparent.

MS WESTACOTT (BCA): Look, I accept that it's a very difficult thing and there will be 10 different views about it but a couple of suggestions I would make. I know your terms of reference take you here but if we remove the concept that there's public and private infrastructure, then that's one way of saying there's an infrastructure challenge and it's not about saying governments ought to be spending this amount of money on something.

One suggestion would be that we look at high performing economies and at least look at the range of investment infrastructure coming from both public and private sources. That might be one way of saying that if we accept the view that infrastructure is a critical element of productivity gain then what do we think are the kind of best of breed examples without necessarily saying, "That's the target." But the other point we make is that if you have these standards at a community level, we don't seem to know in Australia what the tipping points are and, therefore, from a kind of fiscal planning point of view we seem to be playing catch-up as opposed to saying, "Look, when certain things happen in terms of commuting times or population growth then our spending based on best of breed examples across the world ought to be reaching these levels," leaving aside who actually is the source of the funding if that makes sense.

We need governments and we need the private sector to be thinking long-term fiscal strategies about - one is the kind of level of provision we ought to be making. I accept that to kind of try and denominate these numbers, what's the size of the deficit, may not be easy to do but I do feel the community wants some confidence that we're keeping pace and that there are certain triggers or tipping points for investment.

MR LINDWALL: What's more important, the amount spent on infrastructure or the actual infrastructure you get?

MS WESTACOTT (BCA): I think you can't answer that question if you haven't got a sense of some standards that need to be achieved. Clearly you want infrastructure to be of high quality and that goes back to my point about you want certainly public infrastructure to be linked to some kind of standards or certainly to metropolitan regional strategic plans, otherwise you don't know if you're solving for growth or solving some major problems that already exist, so I think it's a complex combination of two. I know that's not particularly helpful but I don't think it's easy to say, "We've just got to get the right projects."

I think there's certainly enough money there in the private sector for projects. You want them to be the right projects. You want them to be linked to metropolitan regional strategic plans. You want them to be as efficient as possible but if all that means there's hardly any then I'm not sure that - - -

MR LINDWALL: There's a range of projects, I guess.

MS WESTACOTT (BCA): Sure.

MR LINDWALL: There's ones that you wonder why the private sector doesn't do it automatically and without any government involvement whatsoever. There's others on the other spectrum which could only proceed fully government involved and most are in the spectrum somewhere in between, so you certainly have to look at the barriers that stop the projects proceeding and to that extent user charges of course are very important, otherwise they have to get funding by government directly through taxation which is fine in some cases.

So to the extent, as we've discussed and you've mentioned here, we can encourage a greater use of user charging that gives more scope for the private sector to come into the market and I think you make a very good point also that the regulations can stop good projects proceeding. I think we should mention that too. The project selections are the vital part and you don't want bad projects selected. Nor do you want good ones not selected.

MS WESTACOTT (BCA): I think that's why your points about cost benefit analysis - we have made the same points, but a cost-benefit analysis has to be in a context. What is the context for some of these things in terms of major strategic national imperatives or state or regional imperatives? How do you judge one project over the other? A cost-benefit analysis as we have said in work we have done on this has to be future looking.

MR LINDWALL: So do you think we should target a specific level of GDP as an investment in infrastructure from the public sector?

MS WESTACOTT (BCA): We think it is a useful question to ask, or certainly if you say, "What's the level of GDP that you would spend overall?" where that is sourced from is probably not as important as what should we be investing to keep pace with certain growth targets and certain changes in population configuration, because there is no sense that the community has of the predictability of the provision; that we are keeping pace with growth. That is why I think the community is kind of frustrated with the infrastructure challenge because there is no sense in which (a) there is a kind of pipeline of projects; (b) that it is linked to strategic priorities; (c) that it is enabling private sector investment to be easily made and (d) that that actually is keeping pace with maintaining good living standards.

MR LINDWALL: None of your members would have a consistent investment in capital every year, would they? I mean, it would be volatile because you get lumpy capital which of course is long-lived. I agree that a government is obviously much bigger than an individual company so it has more scope for smoothing I guess.

MS WESTACOTT (BCA): They certainly have very clear targets about returns to shareholders and shareholder value and return on capital, so those lead indicators drive them to have periods of capital deepening and periods of efficiency. What are the lead indicators on the infrastructure side that trigger governments to make certain decisions about their level of investment and the level of investment opportunity they need to create?

MR LINDWALL: But you can see hypothetically some sort of - and I am not saying it is this way, but some sort of smoothing. In one year it would be a bit more and in another year a bit less.

MS WESTACOTT (BCA): Yes. This is why we are talking about rolling infrastructure plans because, you know, the community needs to know that something will happen and there is a bit of a sense of a stop-start kind of approach, as opposed to a sense in which there is - I mean, we have called them 15-year plans - a rolling set of plans. You might reprioritise project A and project B but project A and B don't completely disappear off the list. Does that make sense? I think people in Sydney particularly with multiple transport plans under the previous Labor government could not see what is the most important project for Sydney.

Now, you may say it is behind two years or we are now accelerating this one for these strategic reasons. People want to see a rolling set of projects linked to some kind of strategic context and that things just don't disappear off lists.

MR HARRIS: But our fear, Jennifer, is - we are worried about how the project gets on to the list. A terminology I was using the other day and I have used internally was that these just pop up.

MS WESTACOTT (BCA): Yes. I agree with that.

MR HARRIS: Projects pop up. There is an announcement, a desperate attempt to justify the announcement, a seeking of funds, a review of the initial estimates because they were done hastily and didn't actually match reality. I am describing the bulk of very large high profile infrastructure projects in the last decade or so. There have been some marvellous exceptions but they are not the rule. That is why we are afraid of lists and that is why we are afraid of mandating particular selections; whereas we are trying to suggest that the transparency of the development of all these ideas before they pop up would be a great thing.

In other words, you could have a lot of things apparently in the early stages of the pipeline if this was just done on a transparent series of published analyses and updates, and they would fall away as time went on, so there was never a perfect 15-year list but there was always quite a transparent series of options that were under consideration which, inter alia, the private sector might express interest in by the unsolicited proposals arrangements which I think you have outlined are a good idea; or the public sector could take them up in particular circumstances.

We will never stop democracy allowing politicians, as they will, to promise things to electors but we would like to see everything that is promised go back to the start and appear in the pipeline and undertake the same form of analysis so that people could draw upon it.

With the standards arrangement, it has been raised and we did consider - and I know there are some European countries, for example, that do actually draw upon this from a regulated asset base perspective: what do we need to do to replace the asset base? I think Germany runs a system like that but even under that arrangement, you are not guaranteed a result. You can improve transparency of, if you like, opportunity but you can't guarantee a result.

We would like to look at this question I think of standards. We know today the Locomotive Association has published estimates of speed down various road corridors. They are relatively transparent and they are certainly served up to politicians in quite an effective way, and we know crush arrangements on public transport are published. There are standards. The implication of publishing them in the form that I think you are suggesting might well be - and they will be funded, and we are bothered by that because it may be that in particular circumstances the benefit-cost simply doesn't stack up.

MS WESTACOTT (BCA): All these things have to run together, don't they?

MR HARRIS: Yes.

MS WESTACOTT (BCA): You start by saying, "What's the strategic context in which public infrastructure now exists?" Your kind of point is well made about random lists of things that don't relate to the strategic context, so our starting point is: what is the strategic context for long-term infrastructure plans? Everything must be subject of a serious cost-benefit analysis and things will move in prioritorisation as community expectations - as the financial viability of projects chop and change.

Similarly, if you start with our assumption that everything is potentially funded by the private sector, either up-front or over time, then some of that kind of rigidity about the community's expectation that the public will provide for all of this I think can be alleviated, so if you say, "We are planning for this region", good strategic planning throws up the infrastructure projects that the community ought to invest in more broadly.

MR HARRIS: So a crucial bit of your presentation is a strategic plan that provides the framework in which ideas, should they pop up, either need to fit or I guess the alternative is you junk the strategic plan. We have had that experience. I certainly know about it in Victoria. I don't know whether it is common across other jurisdictions but I have a suspicion that it might be but, nevertheless, your starting point - at least there is a clear starting point. Yours is a strategic plan followed by assessment against a benchmark set of standards for the provision of services, which leads you to projects that might actually include with them alternatives.

We heard this morning about ICT being solutions to a better, efficient operation of infrastructure, rather than just building it. A cost-benefit analysis leads to consideration of other transparency devices and proposals therefore from either the public sector or the private sector for funding.

MS WESTACOTT (BCA): Exactly, something like the 30-year plan for Adelaide. I know that because I was involved in doing it. It threw up the state's infrastructure plan initially that said, "If you are going to develop along these corridors" - and the basic urban rationale was that you would concentrate development in five key corridors. Then it threw up straightaway the major strategic priorities. That is a sensible way of doing that but then of course everything must go through a cost-benefit analysis and that is about timing and who will pay, but it generated a series of rolling projects that the private sector could have looked at and said, "Well, actually that one lends itself to a much better PPP model," but if you don't start with some kind of strategic context and some set of standards, then I think you inevitably get your ad hoc list that you are talking about, which we would say is absolutely spot on. This has been a really poor feature of infrastructure planning prioritorisation in Australia.

MR LINDWALL: There's a lot of other things we should discuss. There is limited time of course. You touched on capital recycling. You know in our report basically how we described it. I think we have seen it more as a means for building community support for the privatisations which are economically efficient but are you saying there is something more to it than that?

MS WESTACOTT (BCA): We just thought it was ambivalent and what we would be arguing is that recycling mature assets from the public to the private sector is a vital part of planning and providing for infrastructure. What the community wants is greater certainty that assets sold for one purpose will be hypothecated into another, and I think you make a point somewhere in the report about infrastructure funds, so maybe what we need is greater transparency of where funds are recycled they are hypothecated into some kind of dedicated fund that can then be deployed to projects that are less mature and less likely to draw private sector investment.

This concept of assets moving as they mature from public to private ownership or starting as PPPs is just something that should be, in our view, just the normal way infrastructure is provided rather than it constantly being these kind of bursts of privatisation that we get which the community I think quite rightly says, "Hang on, where did that come from?" versus, no, all assets can ultimately move from public to private depending on their maturity. We think that's just commonsense. Then I guess the kind of community confidence that needs to be built is that those funds will be deployed to high value assets that are going to benefit the community and that those funds are not going to be able to be provided from other places.

MR LINDWALL: How do you guard against the problem of privatising assets which are brownfield generally and the risk profile is relatively known and predictable, and then a whole lot of new greenfield projects which have much higher risk levels - I mean, I don't think you're proposing that we systematically sell off cash cows to invest in speculative investments.

MS WESTACOTT (BCA): No, of course not, but there are assets that once they reach certain levels of maturity can be held by the private sector which then frees up funds for assets that are less mature where there is less appetite for private sector investment, but if it's seen as just not a stop-start approach - and we just thought the report needed to be much clearer about recycling and, you know, this is in our view an important part of the infrastructure debate and that you're recycling assets, you're not going into these, as I say, bursts of privatisation, which I think the community gets very anxious about.

MR HARRIS: A wariness about recycling is that it's deeply ill-defined.

MS WESTACOTT (BCA): Yes, sure.

MR HARRIS: So people have in one breath said recycling and hypothecation. If it's recycling within a sector or a mode of transport, it effectively says, "I must keep selling road projects in order to fund the next road project. If I have only road projects with poor benefit cost ratios, inter alia, then I won't sell any road projects." There's a lot of lack of definition around what recycling actually is.

MS WESTACOTT (BCA): Yes, I agree with that.

MR HARRIS: We would always go with - and the report has been actually quite explicit but we will probably be even more brutally explicit given some of the public comments - that you should privatise when you have appropriately assured yourselves that the risks involved in transferring to the private sector are going to be managed by mechanisms including, for example, the pricing structures that must necessarily follow.

Thus where we have gone in the draft report is to areas where we think the work has been done sufficiently to demonstrate in parts of the electricity sector and ports that that work is available and that therefore state governments should be able to confidently take models down from the shelf and apply them to that process. It's less clear to us in water, for example, that that work has been done.

We're certainly soliciting further comment, for example, in that range but we have treated privatisation as we believe it should be, as an efficiency device, which then can be - the process can be utilised for further public purposes and that will be a judgment primarily made by governments, but recycling certainly seems to have an appeal to the community and therefore perhaps is quite a viable way of supporting that, but the efficiency device will be, I think, pretty explicit and really no-one has resiled from that and I can't believe the Business Council is resiling from that at all.

MS WESTACOTT (BCA): No, absolutely not, but I think it would be helpful to be, therefore, quite explicit then about what are the triggers for recycling or privatisation and what are the risk mitigation strategies, because we agree with you but ask a different question which is why would governments hold mature assets and therefore hold funds that would otherwise be deployed to infrastructure community wants when the private sector is capable of taking ownership and operation of that asset within the kind of safeguards the community is expecting around pricing and so on. I think it's about maybe making it more explicit about the conditions. I agree with you, you don't want like for like hypothecation, but the community does want to know that those moneys are not just going to be lost in translation.

MR HARRIS: Dissipated.

MS WESTACOTT (BCA): I think the report would benefit from a bit more, I think, articulation of the detail there.

MR HARRIS: Okay. I have two what might seem subsidiary points but at least one of them is quite important. In the road pricing arrangements area we did talk about a fund as being a name with some institutions - for example, in New Zealand - that we could draw upon as examples, but it was a name for a new institutional entity that would incorporate users directly in terms of the governance arrangement and allow them to be involved in funding allocation first before it went on to questions of pricing, so a building of confidence.

In that model we didn't really talk about whether it was jurisdictionally based or whether it should be national and there are clearly differing views in submissions to us. Does the Business Council see a preferred way of dealing with this here?

MS WESTACOTT (BCA): We certainly support the idea of the institutional arrangements. The question is how would a fund operate nationally in terms of if those moneys are going to be pooled to fund projects - - -

MR HARRIS: Where would, therefore, the proceeds from any future pricing arrangement feed to?

MS WESTACOTT (BCA): Yes. How would it work, I guess?

MR HARRIS: Yes.

MS WESTACOTT (BCA): Are you going to have the same Commonwealth-state tensions if the Commonwealth holds the funding? The second question is, will a Commonwealth fund incentivise the states to implement proper pricing arrangements? We don't have a great history of the Commonwealth being a fund holder, I guess is our view on many parts of public policy, so I think it would be good to maybe in the final report put two options and - - -

MR HARRIS: Strengths and weaknesses.

MS WESTACOTT (BCA): - - - the strengths and weaknesses of both because my concern about the Commonwealth fund, which looks like the easiest path, is the endless kind of competition from the states and, you know, it's like the GST distribution, "We collected all that money and why don't we have access to exactly the amount of money we collected?"

MR HARRIS: Yes.

MS WESTACOTT (BCA): So are you going to get into some complex distributional formula versus state based funds where you're incentivising the states to actually do the pricing arrangements and then saying, "The proceeds of that are able to be deployed to your infrastructure challenge."

MR HARRIS: And with users directly involved in allocation decisions rather than just being - - -

MS WESTACOTT (BCA): I think that part of your recommendation is absolutely spot on.

MR HARRIS: Okay, so that's good. We might well give some thought to that.

MS WESTACOTT (BCA): We can do some more thinking about that.

MR HARRIS: The second area relates to benchmarking, which I know from most people's perspectives sounds dull and boring - as I said, subsidiary - but in fact we think is one of the greater transparency devices that could possibly be used and we know the history in the UK of them using benchmarking to influence both the prices that contractors start admitting that that's their view but they're very confident that they're correct and they have influenced the nature of market responses with benchmarking, but also with an understanding of how expensive projects actually are.

As you know, one of our terms of reference is, "Why is it so expensive to build infrastructure in Australia?" and part of the answer I think we're already indicating is, "When you build in urban areas and land prices rise faster than just about everything else except health costs in this country" - and that's a fine-run contest between the two - "it's an expensive place to build stuff to start with."

So we're quite interested in benchmarking and we need better advice on who because it isn't sufficient to say "and there shall be benchmarking" in our view. We need to attribute an owner to this, and moreover an owner that is able to both extract information on a reliable and continuous basis, which we hope will come from this transparency pipeline that we have talked about, but then publish it without fear or favour and therefore potentially affect contractors' views, which in part is what the UK says they have managed to influence by doing this, and via that mechanism potentially create the opportunity for savings for jurisdictions, which is a complex way of saying - but that's the full picture - benchmarking is actually crucial, transparency is essential, independence of ability to implement this is essential.

We don't appear to have an institution available to us. We have tossed up in the debate this morning with a number of parties. We were talking about Infrastructure Australia versus, say, the Bureau of Statistics versus, say, the Bureau of Transport and Economics. I don't want to put you on the spot by saying it's a pick between them but we would be very interested in your view of this either today across the table or subsequently.

MS WESTACOTT (BCA): Sure. Just two comments to make about benchmarking and I'll come back to you on who. I think the what is very important to answer the who, so what are we benchmarking? One thing we've always said is that we need to be benchmarking or auditing, perhaps they're different things, where we're deploying our infrastructure spend and are we employing it to most productive uses? Are we changing the productive capacity for the economy? I think you can benchmark that compared to other jurisdictions. Are we spending money in the right place? Are we lifting productive capacity through infrastructure investment? We have always called for the Productivity Commission to perform that role. It's one thing for Infrastructure Australia to be the planner/prioritiser but who actually goes and checks in quite an independent way: did we actually spend money on the things that lifted productive capacity?

The second part of benchmarking which I think is the bit that you're more interested in, the second part of the what which we've struggled with is we say projects cost a lot. I think we need to understand what are the component parts of that cost. What's controllable and what's not controllable because you're benchmarking in order to say, "We need to have a policy setting or do something about that in order to make our costs more competitive." So we would obviously point to labour costs, labour productivity, work practices, the cost of environmental approvals.

We have done a lot of work on that, as you know, but I do think that it would be useful for the report to deconstruct what is it we think we're going to benchmark when we breakdown project costs and project productivity, because I think that might be instructive in who should do it, because the bit that I think is the mystery to everyone is the work practices/work productivity issue, so we understand labour cost. We understand broadly the cost of the regulatory impost. I don't think we have a real clarity on the labour productivity/work practices area. That's certainly an area that we have sought to understand because it does drive that overall lack of productivity, so we will come back to you on the what but I think the what is vital to answer the who.

MR HARRIS: Yes. We have asked a number of parties for data because as you know at the aggregate level of productivity it's very hard to discern.

MS WESTACOTT (BCA): Exactly.

MR HARRIS: At the micro level firms often don't publish the consequences of their efforts to improve productivity. They merely, as it were, enjoy them.

MS WESTACOTT (BCA): Yes, exactly.

MR HARRIS: You can't expect them to run the public interest argument for that, although we might like that. So we have actually asked for what we might call microdata, a firm based productivity improvement level. So we've asked individuals for it but since you've offered generously to help in other areas, I might as well stick that on your list too.

MS WESTACOTT (BCA): Yes.

MR HARRIS: We will be seeking it and we've been trying to make it more transparent, that if we can't find productivity enhancement in the aggregate data, we will try and find it in the microdata.

MS WESTACOTT (BCA): Yes, and I think it has got to be central or kind of specific there, because you're not going to be comparing like with like but it has got to kind have that, "What can you control?" element to it.

MR HARRIS: Okay. Paul, anything?

MR LINDWALL: I was going to ask about corridors because as you know corridors are reserved effectively or not, as the case may be and sometimes they're not used wisely in the meantime and then later on it becomes not credible to use them to what they were originally allocated to. Have you got any suggestions or thoughts about that?

MS WESTACOTT (BCA): Yes. I think this goes back to my strategic planning kind of context, that if you say that infrastructure or public infrastructure particularly, public unity infrastructure, ought to be a creature of good strategic planning - it ought follow automatically - then having a sense about where growth will occur and the major corridors that will accommodate growth is a starting point. That will give you a better sense of what the reservation regime ought to be and the buffering areas, because that's the bit that's often done very poorly, so people say, "Here's a rail corridor," but they have to get the action. You have to buffer these things with residential uses. So I think that's one kind of strategic context.

The second is the right instrument to reserve and, thirdly, the accountability and transparency. We're constantly updating that but something like the high speed rail which people say, "That's not affordable now," that's probably true but the idea that you would not be thinking about corridor reservation for something we're failing to at least identify corridors and having competing land uses that then take out more efficient options is a missed opportunity for government. We've got too many examples where you've got existing infrastructure now which is extremely hard to scale up because insufficient corridors have been buffered on either side of it, or you've got very expensive options that are having to be used such as tunnelling because insufficient corridors were set aside in the first place.

So again the state governments have very powerful metropolitan planning tools that they should use to say, "Here's the corridor that we're going to be growing and here are the land use requirements and here are the reservation arrangements," and then those have got to be reviewed so that they're relevant and you're not reserving land that isn't going to be utilised but to me this is a really important thing and something we haven't done very well for a while.

MR HARRIS: That's very useful. One final quick thing, if I could, it was also argued in our report, the draft report, that cost benefit analysis can be published. Some governments have been very reluctant to publish their analyses claiming commercial in confidence. I think we made some polite comments about the nature of that. Would it possible for me to get you on the record expressing any kind of support for this?

MS WESTACOTT (BCA): I think they should be public. We think that the default is to publish them, not to seek reasons not to publish them.

MR HARRIS: That will be fine.

MS WESTACOTT (BCA): The community has to understand for two reasons. The cost benefit analysis, as you know, is both a very important tool for the initial investment decision but I think what people forget is a very good cost benefit analysis ought to tell you about implementation. It ought to tell you about decision points along the way, about where you'd review. There are too many kind of legendary examples to go into about where a good cost benefit analysis would now be pointing people, "Now we've got a decision to make. Do we do this or do that?" I do not understand why the default position was not to publish them. It should be to publish them and I think the more transparency on both the initial decision and then the key implementation milestones, the community is better served by that and I think some of your concerns about poor spending get exposure - - -

MR HARRIS: Exposure would help us resolve this, yes.

MS WESTACOTT (BCA): Yes.

MR HARRIS: That's very good. Thank you very much for your efforts throughout this process and for your continued ability to help us out. I appreciate that very much.

MS WESTACOTT (BCA): Thank you.

MR HARRIS: Now I think we have Heavy Vehicle Charging and Michael Lambert who's sitting waiting breathlessly at the back there. Michael, can you identify yourself for the record?

MR LAMBERT (HVCIR): Certainly. Michael Lambert, chair of the Heavy Vehicle Charging and Investment Reform Board. I have beside me Meena Naidu who is the project director of the same project.

MR HARRIS: Welcome Michael and Meena. Do you want to run through any base points to start with?

MR LAMBERT (HVCIR): Yes, if I could.

MR HARRIS: Away you go.

MR LAMBERT (HVCIR): Thank you for the opportunity to speak today. Our focus is on the road sector generally but more particularly it's on the heavy vehicle use of roads and that reflects the nature of our particular remit from government. It is the largest sector of public infrastructure in terms of asset value and also in terms of annual expenditure but paradoxically it's the most ill-developed sector of public infrastructure. It hasn't got a utility pricing. It hasn't got utility planning. It hasn't got interaction between customers and service providers, so it is very much under-developed in any market sense, much more so than other sectors of the public infrastructure area.

I personally support the broad thrust of your draft report, particularly with, say, recommendation 7.1 on Governments' Principles and Approach. It is very much in line with our approach to the reform structure. The principles underline our recommendations on reform of road pricing and road supply. We did notice a number of submissions from various parties on road sector. They all had a consistent view that the current system in terms of the heavy vehicle side is not working. A number of them, such as the AAA said there should be a more broad approach to pricing and most of the submissions that dwelt on the roads area said a particularly important issue was the fact that there wasn't involvement by industry in the planning process - lack of participation in planning.

They had varying degrees of views on charging and I will come back and discuss them. There was general support, that supply side reform is required; less support about what was required on the charging side. We say basically that we must try to do a comprehensive reform on the supply side - by that I mean planning, funding, the service delivery aspects. Those are the supply side, and we also have the demand side which effectively is the pricing mechanisms, the way we set the charges to reflect the cost et cetera.

We believe both sides need to be involved. We're seeking a market based approach to problems with the current PayGo system, which is the heavy vehicle system, but they're self-reinforced. Effectively what happens is that you get information being provided to users about the cost they're imposing on a road or road system which gives them feedback. Then they may start to think about, "What sort of trucks should be used on this road? Should we try and economise on more efficient trucks that have lower impacts on that road?" That's a feedback loop, but you have a feedback loop through from demand side to plans. You get information on usage of roads - where is the usage, what is the bulk of that usage - which feeds back into planning on the demand side for future growth in use of those road systems.

We think you can't really say, "We would like to see reform on the supply side but with pricing it's too hard. The two interact and our cost benefit analysis demonstrates that there was significant interaction between the supply and the demand side in generating the economic benefits that we estimated - economic benefit is about $30 billion from the reform.

With respect to the state of play, we had brought to COAG a report last year. Previous to that the transport and infrastructure ministers have endorsed the principles that we have developed. We have done a lot of consultation. On 2 May a report will go to COAG from the senior officials seeking a way forward on our reforms. Then on 23 May the transport ministers, infrastructure ministers will consider a detailed report from us on the implementation plan taking the reforms forward.

At the same time we're working on what we call a "no regrets type action" so we're undertaking the assessment of road asset conditions and developing up a road asset register across all jurisdictions. We're looking to put in place information about road planning, annual plans across the board, and also trying to put into place some initial supply side planning processes.

We notice that a number of the submissions and a number of commentators have raised some issues, so I just want to dwell on three issues particularly. One is the issue of partial versus full market performance. The second is this issue of - and I think you raised this, Peter - national versus jurisdictional funds and, thirdly, the issue of pricing reform, what are the underlying issues or concerns that may be underlying the issue of pricing or charging reforms. On the first one, we are proceeding down the route of a partial market. By definition roads are designed for traffic in general. They're not designed for light vehicles or just for heavy vehicles. There's a few exceptions but they're very rare. Roads are designed for traffic in total.

Our remit is to look at heavy vehicles for a very simple reason, that we have in place already a PayGo system which is a heavy vehicle charging system which charges for use of heavy vehicles on our roads. That system is broken or it's getting towards a stage of it will be terminally broken in a few years' time.

It doesn't work at the present moment. It hasn't got a supply side function. It has no funding that flows to the roads. The money that's generated doesn't go back into roads. There's a series of problems with the current system so therefore we have a remit to reform or seek to provide recommendations to government about reforming the approach, which is a partial market approach.

An approach we are proposing is to create what we call heavy vehicle road funds and we're recommending that they be put into place at a jurisdictional level. They would act as a sort of a conduit between the road providers, the industry and the economic regulator. They would try and create a conduit which basically links between the partial market and the full market. Road providers will develop a plan in consultation with industry about heavy vehicle road expenditure in the next five years. Coordinators will pool that together, aggregate that for all of the road providers because you would have 80 per cent of the roads in any jurisdiction are local, so you aggregate it for local government roads as well as for state roads and national roads.

They are to undertake full consultation with the industry at that point in time. They would then develop a pricing proposal which goes to the economic regulator and the economic regulator would determine whether in fact that is something to be supported or needs some modifications. That leads on to an expenditure program which is then used to set charges to fund that program and then the revenue flows through from the charges into the fund and are distributed to the road providers to fund the approved heavy vehicle road program.

That's the mechanism we have developed, but we do have a second mechanism which is more of a whole of market approach which we have flagged with ministers and we have said basically, "It's something you can consider," and that's the corporatisation model. We have said basically you could corporatise your road providers, create them as full corporatised entities with a responsibility for the maintaining and developing of roads with a dedicated funding source from heavy vehicles and by a dedicated funding source from the state government or territory government for light vehicles, a regular source designed to basically maintain and develop the road system over time.

That wouldn't say the governments don't have an involvement. They would. They would set the broad transport strategy for the long term, but within that strategy the road provider would determine where the road money would go, how the roads would be maintained and how the roads would be developed. We put that forward as an option for governments to consider but with our main focus being on the road fund. We do believe we have an approach that while partial, does link to the full market, and there is a first best approach which governments could adopt at the jurisdictional level. Some governments may go that route. Others may not.

On the second issue, the national versus jurisdictional, we very much agree with the comments of the last speaker. We very much support a jurisdictional based approach. The reason for that is the current system is very much about national average charges, so the charge is the fuel based charge so it doesn't matter where you are, what road you are on, the same cost effectively is imposed. We believe the charging system needs to be much more granular. It needs to reflect the cost of the road system. It therefore should be at jurisdictional level and then by road types within jurisdictions.

The other problem, of course, is if you have a national fund, how do you allocate the funds back? With our approach, you're basically allocating back to fund the road program which has been approved by the economic regulator. We would recommend a jurisdictional based approach. There is a conflict there between being cost reflective and creating boundary issues. You need some degree of coordination across boundaries, but we think that the boundary issue is a less important issue than the cost reflective issue.

I should also add that while we support a jurisdictional based approach, we don't necessarily support a jurisdictional based approach and economic regulation. I personally would say I feel that there's strong merit in a national economic regulator for a number of reasons, not least of which is it enables a benchmarking to occur across jurisdictions in terms of road provision costs which could get lost in a jurisdictional based approach.

The third issue is charging reform and there's a lot of issues. Some organisations say the current system is not broken, it's perfectly adequate with fuel costs. Some say technology is a problem and needs to be looked at and then some say there are privacy issues with technology. Then some say there will be price shocks and you need to have a more nationally averaged system to avoid price shocks.

We think there are major problems with a fuel based approach. It is not cost reflective. The fact of a heavy vehicle, double B, on the Hume Highway having the same cost impact as a rural road in outer Queensland is ludicrous. There are different cost impacts and fuel doesn't capture that. More particularly, and this is worldwide trend, the movement towards greater fuel efficiency and the movement of technology towards different alternative energy sources - electric vehicles, for example - means there is a lot of pressure on governments around the world to move away from fuel based charging. You see that in Europe. You see that in the United States as well - in a number of jurisdictions in the United States.

We think that the fuel based approach in principle is not cost reflective and has major problems in terms of a number of major trends, including fuel efficiency. Furthermore, there is a limited life for the road user charge in Australia. Once it gets to its 38.1 cents excise cap, it ceases to be an ongoing funding source and that is probably five to seven years away.

The second is the issue of technology. We agree that if you have a disaggregated system, you need to have some sort of technology. We are looking at some sort of mass distance charging and therefore you need some form of in-vehicle telematics system. They do currently exist. All the major trucking companies have them in their vehicles' GPS systems. They are in place in Europe in quite a few jurisdictions. They are in place in New Zealand on an opt-in basis. They are in place in Singapore and in place in Oregon, New Mexico and other parts of the United States.

Yes, you still need to test the technology. It may or may not work in outback Northern Territory. We need to test it and we need to ensure that we have a system - that if we do have technology in place, it is an open system so they basically can talk to each other; that we don't have propriety systems that don't talk to each other. There is a serious bit of work required to assess technology and we acknowledge that. We would work with industry on that.

The third issue is price shocks. The issue there, it has been said and I think it is true, is that you could get significant price shocks in more remote areas, rural, country road areas when you apply a cost reflective charging system. In a sense that is a problem at the moment but we are not recognising it as a problem. The costs are there; the price is not reflecting the costs, so we ought to bring out in a more transparent way that there are significant costs imposed by heavy vehicles on particular types of roads.

It may be in certain cases that there is a community desire and a community case for some degree of mitigation of the price impact. In those areas we have said that governments can consider community service obligations whereby you cap the price impact and there is some very transparent funding provided by budget or by council to basically meet the difference between the actual charge and the actual cost.

We think each of those three issues I have mentioned - the partial versus full, the national jurisdiction and the charging reform - all do have reasonably sound solutions. In summary then, the benefits we see of the reform is that it will create transparency for projects with a regulator. It allows for a customer-service provider relationship between the industry on the one hand and the road providers on the other. It enables cost reflective pricing to be brought into place and it improves access by heavy vehicles because fundamentally money will flow if there is a charge in place but if a charge is not in place, if it is not allowed, you don't allow access and there won't be any revenue stream. If there is an incentive in place to provide access, that money will flow through to the road providers, including local government which at the present moment don't have any road funding for heavy vehicle costs. That is broadly the approach.

MR HARRIS: Just on partial versus total, there are two levels of thinking that are quite important to this. The first is your own point that roads are actually designed for multiple users. Thus if the assets are to trend ultimately towards more of a pricing system and less of a taxing system, you should logically have an institution that owns both, rather than just one. I don't say you couldn't construct a national heavy vehicle investment fund or a jurisdictional based heavy vehicle investment fund and give it the ability to deal with this issue on an allocation of current public sector revenue basis, but I'm not sure you could do that when it came to actually trading off road price for tax. I think you can with a rebate system potentially but ultimately you would get to the point where there was almost no-one on diesel who wasn't getting a rebate of some very substantial kind and the question would be asked, "Why are you keeping on running this tax regime on diesel?" The answer would be because light vehicles aren't on that and they will all swap to diesel and that will alter the taxing arrangements and cause the treasury immense problems.

Thus there is some logic for starting this thing out the way you would like to finish it up in 10 or 20 years' time which is as a collective funding entity. Do you see a flaw in at least the logic of that? I am not talking about the practicality of implementation which I think is a different matter but do you see a flaw in the logic of that?

MR LAMBERT (HVCIR): In terms of a comprehensive - - -

MR HARRIS: A comprehensive institutional basis; in other words, we may be moving at different paces on pricing and/or allocation but you would start out with an institution that was capable of absorbing both heavy and light vehicles.

MR LAMBERT (HVCIR): No, I don't. I don't see that there is any in-principle logical error with that. The issue is that we have a remit to reform PayGo which is by definition partial. Therefore what we have done is design something which has a fund which interacts between itself and the road providers which are the owners of the assets. That is our way of trying to leap between the partial market and full market. You have heavy vehicle funding for a portion of the road but you need light vehicle funding as well, so you would need to have a dialogue occurring. That does create some issues. The corporatisation model that we mentioned makes use of a road fund.

MR HARRIS: I worry about the use of corporatisations culture. The existing culture of these institutions has not supported any of this reform for ever. How can we possibly corporatise it, which will give it the protections of Corporations Law without amending its culture.

MR LAMBERT (HVCIR): I think you need culture to change. My view is that going down the route of a partial market approach would inevitably change the culture, not just in terms of the segment of the business they do for heavy vehicles but the whole culture. I think you saw that with the AAA as well. I mean, they were talking for light vehicle users predominantly but they are wanting to see a greater involvement in prioritorisation and input.

MR HARRIS: Precisely, they want to be part of the allocation decision and the switch potentially on here is one where, as you pointed out, the largest infrastructure investment area in the country has no pricing system in practice, notwithstanding the fact we have for PayGo no pricing system in practice because it is tax-sourced where there is no choice about consumption ultimately of the road. You can choose to consume the fuel or not but you can't choose to consume the road or not and certainly no decision making the involves you in allocation.

I guess the logic behind a proposition which said, "Try to make this comprehensive rather than partial," is to say, "Bring both sets of users in." Initially they can have an opinion on allocation and as they learn the judgments that are made in allocation - they will learn something from the roads authorities and the roads authorities will learn something from them - this will introduce further the ability for those parties to determine revised pricing solutions, where heavy vehicle may move far more rapidly than light vehicles because they are able to see the benefits earlier because of your process. Your process has actually firmed up the idea that the trade-off here is one which says, "I have more say on where the investment goes, as long as I am contributing to the price directly, rather than indirectly."

MR LAMBERT (HVCIR): The issue I think, Peter, is that the major problem at the moment is that with heavy vehicles where charging occurs, revenue is generated and it goes into the consolidated funds. It doesn't go into road fund. Our reform would see charges being applied, the money goes into the road fund and distribute it to the road providers. I can't see at this stage a corresponding model that would allow that to occur for light vehicles unless there is a complete hypothecation of the fuel charges. Obviously it's a major issue for the government to consider.

MR HARRIS: That's correct, but you can establish the institution and intend for this to take place with one - I can't see any reason actually, Michael, why the year 4's current out year's allocation for road funds couldn't go to any institution that you commit to set up today, which gave you four years before that money was hypothecated and plenty of time to plan for that. It could happen earlier if you could find the split for heavy vehicles from light vehicles but creating an institution which enabled both ultimately to proceed in the circumstances where at some future point, the new pricing system was able to take over from the current taxing system - - -

MR LAMBERT (HVCIR): Yes.

MR HARRIS: - - - and provide an effective substitute such that you were choosing which roads you consume and at what time you consume them versus choosing how much fuel you buy.

MR LAMBERT (HVCIR): Well, I would note that that is in place in New Zealand and is the system proposed for the UK, to have a comprehensive road pricing approach.

MR HARRIS: I am not trying to undermine your initiative, just trying to place it into a potential different environment.

MR LAMBERT (HVCIR): I understand but as you would appreciate from COAG and the transport infrastructure ministers, it's very much focused on heavy vehicles and I can't beyond that.

MR HARRIS: And thus you will stick with you remit.

MR LAMBERT (HVCIR): Yes.

MR HARRIS: I am just querying where there was a logic for in the thinking but I think we have determined that.

MS NAIDU (HVCIR): I guess there's an element of pragmatism in terms of the approach that we have taken about a general cultural acceptance. We talk a lot about the broader community accepting a move to the commercially driven world but there is also an element of government also having to move into that space and I guess from our perspective, this reform is quite well advanced in terms of development and engagement with the industry and with governments about how it would work and the peculiarities around it, recognising all the issues and comprises that are there, but it does give governments, as well as the broader community, an opportunity to actually see how it will work and absolutely if we could get governments on the future funding, yes, there's an opportunity to bring it all together and to run both worlds but I'm just not quite sure that governments are there yet. This gives them an opportunity to see what's in it for them, as well as what's in it for industry and potentially the broader community.

MR HARRIS: I understand but our perspective is really at a reform infrastructure across Australia. So it's not even just roads, it's the entirety of the infrastructure arrangements, thus, we I think we would like to put this into a form where - I don't think anyone is going to ask us to do this again any time within the next five years and that's being optimistic, so let's try and get a structure right that's got some potential to deal with it.

MR LINDWALL: Correct me if I'm wrong but for heavy vehicles, the main impact on roads is the axle weight, except for bridges, where it's the entire weight of the heavy vehicle. You could envisage that there are two systems, there's the high impact, low volume of heavy vehicles and the high volume and low impact by cars. Let's say you build a four-lane highway, currently it would be built to handle heavy vehicles across all four lanes, although in theory you could only just use one lane for the heavy vehicles and the other three lanes or all four lanes for light vehicles. It would be less expensive that way. Would your model fit with that, I guess?

MR LAMBERT (HVCIR): Well, I think our model would encourage some degree of innovation in terms of how you most effectively can use the resources. For example, in Germany on the major highways, they have dedicated heavy vehicle lanes with a different pavement strength to the other lanes and that would be quite an efficient way - this is the major national roads and arterial roads - to economise on the actual construction and maintenance costs, because the heavy vehicles are the main drivers of the pavement strength and therefore of maintenance costs, so if you could focus on a dedicated lane, that would obviously be of benefit.

I would have thought when you have got interaction between the road providers on the one hand and the road industry on the other and the road industry is there to fund the actual costs, they will be looking at ways you can more effectively deliver.

MR LINDWALL: **T**he German system, while we are on Germany, how is it metered or charged compared to New Zealand and the proposed one in the UK?

MR LAMBERT (HVCIR): Well, the heavy vehicles there are all metered, as they are in most of the other western European countries, and they are on the basis of mass distance, not location, mass distance charging, so it all also reflects the environmental nature of the vehicles because in Europe, there's two major motivators: one is the environmental motivator to discourage environmentally inefficient trucks and the second is the fact that you have got this free ride of trucks going across national borders, so it's a way of trying to address that issue as well.

MR LINDWALL: Finally, on behalf of community service obligations, there are two ways of approaching it. One would be that your user charges are on average are a little bit higher and you cross-subsidise through CSOs that way or, alternatively, they are set at the right level and you use the CSOs directly from tax sources. Which do you have a preference for?

MR LAMBERT (HVCIR): In principle, I think the latter as offers explicit government funding. It makes it more transparent and clearer than a cross-subsidy. Clearly what we have got at the moment is a very nationally based cross-subsidy.

MR LINDWALL: Indeed, yes.

MR HARRIS: Now, you mentioned, Michael, you were considering whether you need to mandate in-vehicle technologies. You would certainly need to ensure that there was some kind of technological acceptability of in-vehicle identification systems across jurisdictions. You have a jurisdictional structure.

MR LAMBERT (HVCIR): Yes.

MR HARRIS: I am presuming your government counterparties are all conscious and supportive of whatever it takes effectively to have agreements that in-vehicle identification systems are communicated across jurisdictions, so we won't end up with the problem that we did end up with the initial toll roads, of different propriety system is being mandated in different jurisdictions and toll roads being unable to talk to each other.

MR LAMBERT (HVCIR): We are certainly approaching this on the basis that we would have a nationally consistent use of technology. We would want to have technology that's not simply described as one set of technology.

MR HARRIS: No.

MR LAMBERT (HVCIR): They will have access systems but they apply across borders. There is no difference of technology between jurisdictions.

MR HARRIS: So I am going to take it that that is in the reports to COAG or the Australian Transport Council, is clear-cut, one or the other, for our report. The second thing that's important in that then is heavy vehicles as they are imported. So the federal transport department has standards for heavy vehicles when they are imported. I don't think it deals with this, presumably it should.

MS NAIDU (HVCIR):   Yes. So one of the reasons, I guess, that we are taking the approach of not mandating the technology in the vehicle at this stage is it does need to go through that AVR process if it is going to be in the vehicle. We are taking the approach of looking at all the options for technology, including talking to manufacturers of heavy vehicles to look at what they are proposing for their in-vehicle technology. One of the reasons that we are taking the approach of not going to a dynamic mass model is because of the need for some AVR prescriptions on electronic control stability requirements attached to that technology.

So we have focused mainly on location, where we think that that's a more open approach, where you can utilise existing technology or potentially look at low tech or even a paper based approach. But over the time frame that we are looking at this reform, if an AVR is required, we can put that in place and we are talking with the trucking manufacturing companies about how that might work. So we don't expect it to be the case, we think it's a matter of you have got your heavy vehicle and then you - it's almost more like a mobile phone service, you pick your service provider and they will provide the technology that suits your business and suits the way that you want to interact with the system and then you work through them.

MR HARRIS: That sounds fine. I understood that the smaller transport companies were somewhat resistant to this on the basis that it would require yet another in-vehicle identification system versus the ones that they inherit when they buy the vehicle. If, in practice, your descriptor of this had been the equivalent of a mobile phone service that effectively uses your identifier, regardless of the proprietary technology in the vehicle but uses your identifier to locate simply where you are, and as you pass between two points, the fact that you did pass between those two points for charging then that shouldn't be an issue in practice.

But it's an area where, while I'm not trying to actually offer advice on how you implement your initiative, it's going to come up in implementation of the generic initiative in due course that almost all light vehicles will end up with in-vehicle identification systems by some period in the current decade just simply because of their need for GPS locaters for mapping systems. So adaptation of existing in-vehicle technology is probably a preferable way.

MR LAMBERT: Yes.

MR HARRIS: If I understand it correctly, you haven't found a problem in this area. Although people presume there will be problems, you haven't actually found one.

MR LAMBERT (HVCI): We have a technology project which is a significant part of our work program which will be mostly evaluating different sorts of technology, a range of technology, in different sorts of locations and then look at how we actually collect information for charging purposes and that will involve ourselves with manufacturers. It will also involve ourselves with the industry.

MS NAIDU (HVCI): I think a lot of people too have looked at some of the technology and the associated costs that has been adopted in other parts of the world, as well as within Australia for other purposes and have assumed that it's the same technology that will be used or the same kind of in-vehicle unit. The reality is, form must follow function and part of the work that we are doing is to find out exactly is an appropriate form. We are only interested in location data. It's pretty simple, it's not overly complex and so we don't believe we are going to require an overly complex system. You are absolutely right, for us it is important to utilise what's already there, and we don't believe that there is a reason why that should not be possible.

MR LINDWALL: Given that, but ultimately wouldn't it be best to have some sort of per axle weight measurement charge so that the efficient allocation across axles might be preferred to have more axles rather than less. It's not in your current charging schedule, but might it not be best to announce, say, in 10 years time you're proposing to go this way so that there is some credible pre-commitment to push the charging in a different direction perhaps?

MS NAIDU (HVCI): Dynamic mass technology is still emerging in terms of how it can be used and it's not used elsewhere. Our approach is to look at mass in terms of vehicle class and, given the size of the fleet and the impact on the road and the costs associated and the benefits, we think that that is an appropriate level at which to operate. I think the cost of dynamic mass technology would need to drop quite considerably and we need to have more confidence about its robustness before we could really move in that direction.

As I said, it would also need some specific ADRs which are coming in to be in place for us to explore that, so I don't see a problem with us transitioning from where we're at into a more dynamic framework, if that is where we choose to go in the future. There is absolutely nothing to break it down further. As long as you have got the road maps down in the first place, then it's really just changing the technology. In 10 years or 15 years time, which is possibly more than a realistic timeframe, the technology would need to be updated anyway, it's continuously evolving.

MR HARRIS: Of course, but you are not moving anything out of adaptation technology at the moment?

MR LAMBERT (HVCI): No. We just want to keep it simple to start with and then allow it to evolve. I have no doubt the cost of technology will - and it's capability will improve over time. At the same time, using static approach, which is the prescribed maximum weight for that vehicle, gives big incentives for avoiding empty return journeys, which is what you're seeing in New Zealand.

MR HARRIS: Exactly, and the incentives are therefore set up that once you adapt these and people say, "Well, I'm paying exactly the same price for an empty movement as a full movement," then there will be rationale over time to move to a - - -

MR LAMBERT (HVCI): You can see that's occurring in New Zealand where it is quite strong.

MR HARRIS: Yes. Okay, I don't have anything else.

MR LINDWALL: No.

MR HARRIS: Thank you, Michael. Thank you very much. Okay, thank you. I think we are going to have a cup of tea now.

MR HARRIS: Gentlemen, could you identify yourselves please for the record?

MR SENIOR (CP): Yes, certainly.

MR HOPMAN (CP): My name is John Hopman and I'm from Hopman Consulting Services Pty Ltd and I think that's probably what you need from me.

MR HARRIS: Yes, that's all we need.

MR SENIOR (CP): Rob Senior, a director of Certain Planning.

MR HARRIS: Okay, thanks, Rob. Do you guys want to do any opening remarks or should we go straight to questions?

MR SENIOR (CP): If we could just for a few moments?

MR HARRIS: Yes, sure.

MR SENIOR (CP): That would be really good. Firstly, John and I wish to thank you both for giving us the opportunity to participate. We read through the draft report with interest and our particular focus centres on chapters 4 and 7 which is value capture, governance and the structure of organisations. In terms of amplifying comments in addition to our supplementation, I'd just like to make a couple of points about value capture funding and productivity and John to discuss a few matters about the strengthening of governance.

In terms of value capture, it would seem that the focus on the application of value capture seems to be subordinate to the general trend for agencies to focus on process matters and, therefore, not entering into the realm of what you call innovation, performance measure, entrepreneurial play that readily leads to value capture. We've had a number of experiences of that at the New South Wales level. In terms of funding, such revenues from value capture, which you could describe as unscheduled, will enable in part the follow-on funding of other infrastructure projects as distinct from grants from the federal government and as distinct from the source of public financing.

Seemingly, the prevalence of revenue creation as an imposed objective or performance measure is minimal. In terms of productivity it is true that invariably innovation gets hammered out on the anvil of necessity, opportunity or curiosity; they are the three scenarios. It would seem appropriate, particularly with regards to the national fiscal constraints faced that it has got to go from basically opportunity to necessity. Understanding of applied productivity is seemingly quite limited as with the realisation of opportunity cost or benefits forgone. The majority of operatives within many of the relevant agencies would appear to hold preference for a fair weather arrangement, low hanging fruit and a cruisy, hassle-free mode. We've got many examples of how that has come about.

Multifunctional agencies have many challenges in undertaking lateral coordination because of a mix of responsibilities but seemingly the preference is to be confined to the respective silo focus. I'll leave it to John to make a few opening comments on governance.

MR HARRIS: Thank you.

MR HOPMAN (CP): I'd just like to clarify that the issue we're generally focusing on is airspace development.

MR HARRIS: Yes.

MR HOPMAN (CP): That's the space above transport corridors. So we've made some previous submissions and the response has been initially encouraging. However, when push came to shove in terms of making a determination, the issue was generally that the agency responsible for building infrastructure and managing the infrastructure over which proposed airspace development could be made tended to identify that they had other priorities which generally were the completion of the infrastructure and, therefore, consideration of productivity improvement by use of the airspace was not in their interest.

An example of this was our submission to use the space above the light rail stabling facility at Rozelle and at the end of the day it was determined that our submission could not be progressed further because we didn't own any land. The issue was this is not about us providing land and developing of our own priorities and arrangements but they were issues that this is an opportunity for government to use the lazy assets above the facility to develop opportunities for increasing housing - we'll talk a little bit about the difficulties of New South Wales housing, you probably know about those anyway - but an opportunity for that.

The other issue that came up was owning of land as a determinant was really contrary to the fact that the Crown Casino which was developing in Barangaroo at the time also had no ownership of the land but the development there was seen as an opportunity which was different to airspace development for some reason.

MR HARRIS: Yes.

MR HOPMAN (CP): The next issue I'd like to talk about is analysis and quantifying the objectives of transport development. We sent and provided you with a submission of the New South Wales long-term transport master plan which talks about the objectives that are provided or proposed in developing that plan. In terms of any issue with regard to infrastructure, the most important part is the planning phase. If you get the planning right then generally everybody will be able to be productive and provide their best outcome.

This particular objective states that, "Support for economic growth and productivity" - that's the objective - "and by providing a transport system that responds directly to customer needs is more efficient, increases freight efficiency, improves the connectivity and accessibility of people to other people, opportunities, goods and services." In my study and experience with providing strategic planning, the most important issue is to get the objectives right. The objectives should be that clearly stated they should provide an opportunity to provide the productivity, they should provide a clear statement as to what you expect to achieve and there should be some measurability and accountability within the objective so that the agency can actually develop a strategy and that strategy is based on identifying from the objectives the key performance indicators, taking those key performance indicators and looking at the options that might be available in corridors and selecting out of a number of options which pop up out of the corridors the best possible solution.

Only that way can you actually get a fundamentally sound strategy. Without that and without measuring or being able to measure how the strategy develops and whether it's performing to its optimum arrangement then that way you can have an opportunity to make sure that you've achieved your strategic objectives. So we believe that there needs to be some education and maybe a cultural shift in the way that the public sector looks at their strategic development, so that they can make observations and support the activities of productivity but not just by suggesting that they will but providing some measurable and accountable outcomes that they can perform to and they can be judged upon. It seems there's reluctance for providing that and therefore there's also a difficulty in getting the right outcomes that they should out of their lazy assets. I think that's probably sufficient in terms of identifying what we believe are issues that are relating to the planning of any airspace development.

MR HARRIS: I will try and put this question into context which I think is relevant to what I read in your submissions. We will just concentrate on airspace development as a concept. The way we are recommending infrastructure projects are developed in future is that a concept is first published and not much more than a concept. Then development work is subsequently published. Assessment and evaluation is published. Updates on design are published. Ultimately then and then only do you go to tender or some selection if you're looking for private funding, or to public funding if you think that all of that development work has shown you that this thing is really not relevant to private finance.

In a model for airspace development it would say you would see every one of those opportunities in that transparent pipeline from concept through to publication of evaluation and you would have the opportunity under that set of circumstances to put forward a proposition which says, "I see you're rebuilding this facility for housing trains and I have the proposition in mind that says you could probably pay for three-quarters of that by me adding residential development above it."

You could put forward that proposition under the state's unsolicited bid proposals. In other words, they didn't solicit a bid but you identified an opportunity because they published and made transparent the fact that they were considering this. Would that address a substantial part of your concerns here based on the history of your own proposal, or is there something more that we need to say in that area that would be of value to this idea of enhancing utilisation of assets, lazy assets as you call them?

MR HOPMAN (CP): I would think that there is something that you can do more. The idea that was originally floated by the commission of inquiry, the senate assembly, said that we should have a coordinating authority which should be UrbanGrowth, and the response from the government was, "No, we don't necessarily think that UrbanGrowth should be the coordinating authority. We believe it should be Transport, because they own the corridor, and Planning to support them."

That is like letting the fox into the chicken house because Transport is only interested in running their trains and developing the infrastructure. There needs to be some coordinating authority which sits over all of these developments and says, "Look, here are a number of places that you can actually make a successful development of airspace development." Things like Bondi Junction and Hurstville and St Leonards station, Chatswood station, all of those places have been very successful. Also in Melbourne they have had success building over top of these infrastructures.

It is up to this coordination authority to identify where it's possible, so when the corridor is being developed, or even - it doesn't necessarily have to be developed but if there is an opportunity now that exists, then it should be contemplated by the people who own the asset that here is an opportunity to make a development to generate revenue to put towards transport for the future, building of facilities that are in the future. That way we think it will make a better opportunity for people to get involved.

Once they have published a list, then it's the opportunity for people who are out there who might be interested in developing that space to make a submission, but at least it's out there and it's agreed and everybody can have a shot at it.

MR HARRIS: Okay. I see that. Paul?

MR LINDWALL: Is there something about the public sector ethos of risk aversion or relative probative rules that you think discourages the type of innovation you're talking about?

MR SENIOR (CP): With the recent Rozelle experience - and it followed on fairly closely after Barangaroo which in itself was an unsolicited proposal and the government did a pressure test. I have been involved with ICAC on previous assessment of unsolicited proposals so I understand the working that goes behind it to make sure that there's no conflict of interest and arm's length, but with Rozelle - and once the submission went in, I couldn't make it but John was called in to speak with Premier and Cabinet department and John actually heard a member from one of the departments ostensibly saying, "This is not in our interest. This is not our business. We don't want to know about it." Subsequent to that we got notified, "Sorry, ground rules have changed. From now on you have to own the land." My sense is that that's a measure of convenience to maintain low-hanging fruit, fair-weather arrangement, hassle-free environment.

MR LINDWALL: Right.

MR HOPMAN (CP): Peter, just to add to your issue about should there be an opportunity to identify all these sites, we put in our submission attachment 8. There's a whole heap of opportunities there. They're big spaces of land and you can build over that. They're transport bus interchanges. They're motorways. You can build over motorways.

The last one was the Leichhardt bus depot which is a fabulous site. It's really large and at present it has got great views of Anzac Bridge and the Harbour Bridge and views into the city and the people who are enjoying the views are the bus drivers and the buses. We feel there's a better use from that land and if you have a look at the Google Map we provided to you, you will see that there's heaps of space on that particular lot of land that you can utilise. It looks like a very lazy asset now which has got a great big paved area and just a few buses on it.

MR HARRIS: I think I did note this and given that I live in Melbourne, I know something of what you're saying about the utilisation of air rights. I know some of the technical difficulties too but I don't think you're underestimating technical difficulties. You're saying I don’t even get to consider the opportunity.

MR HOPMAN (CP): That's right.

MR HARRIS: All right. Look, I'm sorry I'm going to have to rush you but I have to try and keep to time. Is there something that we haven't covered that you would really like to draw out?

MR SENIOR (CP): There is. For us I have to declare a very small oversight in our supplementary submission and it's to do with attachment 8 which has suggested matters that the Productivity Commission might like to raise with the state government and it settles on the last page, page 5 of 5, the last sticky note. It flags the second-last paragraph, that in the last six lines "principles that can be generally applied" also in theory warrants a query.

MR HARRIS: "Principles that can be generally applied".

MR SENIOR (CP): Yes, combined with what's the status of options.

MR HARRIS: All right. Thanks very much for putting that on the record too. As I said, I apologise - - -

MR SENIOR (CP): It's okay.

MR HARRIS: We have 16 groups we are getting through today between 9.00 and 6.00, which is a record.

MR HOPMAN (CP): Thank you, gentlemen.

MR SENIOR (CP): Thank you.

MR HARRIS: Thank you very much

MR HARRIS: I think we're up to about the 13th group, University of Technology, Sydney and Gerard de Valence. Thank you very much. For the record could you identify yourself, please.

MR DE VALENCE (UTS): My name is Gerard de Valence from the University of Technology.

MR HARRIS: Do you have any basic comments you would like to put in place since you were - I think you were our submission number 5 or something, or you were a very early submitter in our process and you have subsequently persisted throughout.

MR DE VALENCE (UTS): It was unintended really.

MR HARRIS: Unintended?

MR DE VALENCE (UTS): I had other deadlines.

MR HARRIS: I see. The speed was unintended.

MR DE VALENCE (UTS): Yes. I think you will have gathered my interest is more at the level of procurement strategy, the approach you take to manage projects, particularly where you have got a large number of projects to cover a variety of characteristics and challenges. The way we develop the appropriate strategies to deliver each project so that once you've made the decision to go on a project that's got the greatest likelihood of being successful. So there's a lot of minutia in all this stuff, which is why you ended up two volumes in the draft report.

MR HARRIS: Yes.

MR DE VALANCE (UTS): I appreciate that but also I think there's an important role for the bigger picture, trying to think about the framework under which you deliver projects, particularly large projects and particularly large complex projects, because they are really where the issues are.

MR HARRIS: So in your original submission to us you talked about reference class forecasting or a process like that and you were suggesting we draw upon database of public infrastructure projects for this purpose and so in our draft report, you will notice we run very strongly down this path of benchmarking and we are looking for an entity which could - and I think if you have been earlier, you would have heard me ask a number of participants this - where we are somewhat torn between Infrastructure Australia and other parties as a potential benchmarking authority and we are somewhat torn because the party that does this job would need to be both deeply accessible to and respected by all jurisdictions but also by private sector entities as well and would have to have the capability of sustaining this benchmarking process and database, not unlike the kind that you were suggesting, over time and publishing it, such that they were available not just for jurisdictions to consider for their next bid or benchmarking for the cost benefit analysis but also, frankly, for parties in the private sector who were considering bidding for propositions.

Do you have a view on whether Infrastructure Australia is likely to be capable of taking up such a task or do you see any of the other entities that I have mentioned, Bureau of Transport Economics or the ABS or anybody else like that? Do you have any other better ideas on who could hold a database like this?

MR DE VALANCE (UTS): I think the choice is between Infrastructure Australia and the APCC. I think the APCC has a kind of institutional presence that Infrastructure Australia doesn't have. Infrastructure Australia is really a policy advisory group and I think it has an important role and I mentioned elsewhere things like their priorities and stuff like that and they have done a bit of data gathering and benchmarking but they don't have powers to compel people to give them data. They don't have a strong track record of this, they tend to hire a lot of consultants to do their reports and so on rather than internal resources, so you could expand Infrastructure Australia to take on the role and they probably would be good at it.

But on the other hand, if you think about APCC and the standing committee as well, really they are the clients. They are the people who have got most to gain from all of this and they have actually got the projects. They are the people that are actually delivering most of these projects. They could compel data in a way that an independent body can't unless you build it into contracts and it would be very easy, I think, to expand the role of either the standards committee or APCC or both, because they overlap so much anyway.

MR HARRIS: The problems with committees is that they are not really sustainable entities. Longevity would be important for this.

MR DE VALANCE (UTS): Essentially, transport infrastructure will be there forever.

MR HARRIS: Yes, it has but I used to be on it. As an internal officer, I wouldn't have trusted me with the responsibility of publishing this data.

MR DE VALANCE (UTS): No, I am not suggesting it would be you. I am suggesting it would be some organisation that reported to you, some other organisation.

MR HARRIS: So you think they could set up an entity which in other words would be a purpose built entity that worked to that authority body?

MR DE VALANCE (UTS): That's what I'm suggesting.

MR HARRIS: I see.

MR DE VALANCE (UTS): It has to be resourced. Wherever this particular task ends up it has to be resourced. The question is what is the most useful line of reporting that we have. We want to have its most influence. It's going to have its most influence directly with clients.

MR HARRIS: The second thing before I go on with the report is specialist procurement agencies.

MR DE VALANCE (UTS): Yes.

MR HARRIS: I am, I guess, a natural distruster of specialist - it's like regulators, there is scope for capture. Then again, expertise in procurement, particularly the big and complex project, procurement costs are a large issue for everybody, for both governments and for submitters and bidders for those projects, and there are strong suggestions that a specialist procurement agency would be able to take more risks with design of tenders. Do you tend to think that's correct or not?

MR DE VALANCE (UTS): Yes and no, if I can give you the economist's answer there. On the one hand, I totally agree less is more when it comes to government agencies. That's true but what I have put forward is a view that there are different categories of projects, so a lot of projects which are pretty straightforward and then there's complicated and complex projects. A lot of these projects are very controversial. Some aren't large in dollar terms but they are pretty straightforward and they usually get committed pretty well. They don't require a lot of expertise beyond contract avenues and going to tender.

The real issues are in complicated and complex projects and because we have a limited amount of project management expertise, particularly with large complex projects, in Australia, the question is how do we get the most use out of that and how do we train up people to work on these very large complex projects? It doesn't happen by accident, so we need to deal with these related issues. The first is there is a need for the stuff you're talking about. How do you develop proposals and designs and come up with the contracting strategies? How do you develop the procurement process so that it's involving the designers and the contractors and the suppliers in a way that makes the projects as efficient as possible and then lastly, how do you get your project teams together and keep them together, so that they can carry the project through from its early stages through to delivery and operation, because if your key project team is changing around, you are losing enormous amounts of hard-won knowledge and it makes the whole thing much more difficult to do well.

MR HARRIS: Can you argue then for the specialist?

MR DE VALANCE (UTS): But not for everything.

MR LINDWALL: For complicated projects.

MR DE VALANCE (UTS): Yes, only for the projects which require the resources for them to be delivered. The other stuff can go out to the clients agencies or it could - yes, even complicated projects. Most complicated projects, the reason they are complicated is not because they are inherently difficult to manage, it's because there are particular circumstances about that project: access to the site, specialist technology, issues with the ground conditions or the use of the site when it's completed. That's manageable stuff. We are actually good at that kind of thing. It's the generally complex projects which are hard to define, difficult to come up with completed scope and definition or characteristics and tend to evolve over their initiation phase very extensively. They are the ones that we need to be putting resources into.

MR HARRIS: Sounds to me like a particular type of communication is being looked at. In our report we did talk about a proposal about the government spending more on procurement agencies, if you like, spending more time up front in doing the scoping projects rather than leaving it to the tenderers. Do you think that's worthy of consideration or are procurement agencies trying to outsource everything or too much now?

MR DE VALANCE (UTS): Yes, that's the issue, isn't it? It's do they actually do this or do they just get other people to write reports for them, because there's a big difference between the two. One of the underlying problems that you are dealing with when you are trying to come to grips with the construction industry is that the industry as a whole is incredibly good at dressing up self-interest as public interest and you see this in a lot of submissions you have. There's a lot of rent seeking in the submissions, in my opinion.

So having independence is really important, particularly if you want to develop transparency in the process. Transparency is important because that helps prevent bad decisions being made, it increases the accountability. But if you are going to have transparency, then you need independence as well, so it comes back to this thing about resourcing in some way some agency or some group that would be able to do this.

It doesn't have to be large though. We're not talking about an organisation of hundreds or thousands. We're talking about a small group. It's a bit like the Reserve Bank. If you think about the way that they operate, the actual core policy-making group is very small. There are lots of other arms where they do operational stuff, if you think about - they're independent and they make decisions. That seems like a pretty good model to me.

MR LINDWALL: It is if you can print money too.

MR DE VALENCE (UTS): Yes, apart from that.

MR LINDWALL: Some of the concerns, you've seen it in the past where, say, PPP contracts are not disclosed because of so-called commercial-in-confidence.

MR DE VALENCE (UTS): Yes.

MR LINDWALL: Are those concerns of commercial-in-confidence overstated? Can you compare it to overseas regimes?

MR DE VALENCE (UTS): Yes, I can. There's a lot of variety internationally. In places like France and Canada, for example, the client agency meets design costs from tenderers. They have to disclose those costs. They discriminate between internal and external costs in tendering. What that means of course is that your process of negotiation and developing your tender documents is very public because it has been paid for.

MR LINDWALL: Yes.

MR DE VALENCE (UTS): So it immediately puts it out there. Places like Germany you never get a single proposal for a big infrastructure project. There's always two or three that are put forward and they're put forward with cost benefit plans and they're debated in public before a decision is made, so on that model I deeply agree. I think one of the real issues in Australia is that we only ever get presented with one proposal. We very rarely get the analysis that supports the proposal either which makes it very hard to discuss the virtue or lack of.

MR LINDWALL: So how do you encourage multiple proposals for a particular infrastructure project?

MR DE VALENCE (UTS): I think that's something that Infrastructure Australia could do in fact. I think the proposals can be developed by tenderers or by client groups but I think they should be put out into the public domain for a period of preferably something like three months and hearings like this held, inquiries, and all the data should be released. The feasibility studies, the cost benefit planning and the analysis, they should all be in the public domain and there should be a discussion about the different types of projects and the sort of costs and benefits associated with them, and then a decision gets made on the back of that. While the final project may not be exactly like any of the proposals, what you're likely to get is the project that actually is viable because the non-viable ones will fall over in that process and you're likely to avoid projects that have very high costs and very low benefits as well.

MR LINDWALL: I think in your submission you wrote that there's a lot more scope to improve the efficiency of the existing infrastructure stock.

MR DE VALENCE (UTS): Yes.

MR LINDWALL: So how do we create the incentives so that governments don't go for the big ribbon-cutting opportunities rather than improving fairly low spends which could massively improve efficiency?

MR DE VALENCE (UTS): Yes, you've got to get the financials in place for that sort of stuff. It is about incentives. It's the area where the federal government could get a lot of bang for its bucks for money it spends. From the state government's point of view, there's often more economic benefit in new projects, certainly more political benefit in new projects. They don't seem all that keen to engage in that process very thoroughly but I think the federal government could put incentives there that would make an enormous amount of difference.

A lot of that is technology driven, so there's a bigger picture issue about how does Australia develop a suite of technologies that might be able to be harnessed for this, and more importantly - like in Europe now, lorry registrations are built on miles driven, so every lorry has a GPS tracker and every three months I think they download the data and the lorries get charged on the number of kilometres they've been driven across the continent. That sort of stuff seems extremely straightforward to me. I don't see why we're not rolling that kind of stuff out.

We have vehicle tracking systems on all our major highways now. It's not like the technology is new or even particularly difficult. It's just a question of how do we implement it. It might be easier for a federal government based scheme to provide incentives for the state governments to roll that stuff out, so reducing your car registration/truck registration income on the basis of increasing disbursements based on kilometres travelled through a federal government maintained monitoring network, for example, would be a really easy way to go and I think would probably be not terribly controversial, or maybe not.

MR HARRIS: No, I think there's always controversy.

MR DE VALENCE (UTS): There's always controversy. That's true.

MR HARRIS: There will always be controversy. Innovation?

MR DE VALENCE (UTS): Yes.

MR HARRIS: The general tone of submissions to us, without a lot of evidence, is that we're slow innovators in Australia in construction. Do you think that's - - -

MR DE VALENCE (UTS): There's no evidence for that at all, to be honest. There's just no evidence for that at all.

MR HARRIS: It's just a general tone of, you know - adaptations are available. For example, this building information management system, the concept of BIM, and it's ready adaptation and adoption in Europe but its relative absence in Australia. It has been suggested, for example, we should mandate this in future construction contracts. We investigated this at some hearings. Parts of the hearings in Melbourne were devoted to this.

It appears that BIM is more of a concept than a thing, so it's quite hard to mandate a concept, but that notwithstanding, it also seems to have notable advantages for firms and yet there's no interest, they don't appear to take it up that readily. But that's about the level to which evidence goes and we wouldn't necessarily say that's a sufficient level of evidence to be able to mandate anything. We might observe that these technologies are around but you would have thought in a circumstance where there has been a continuing concern for some time about the high cost of building infrastructure in Australia that if there were technological adaptations available, they would have been readily introduced and yet circumstances seem to be - there's a suggestion - no more than that, this tone - that they're not. You don't agree with this or you don't know why it isn't the case or - - -

MR DE VALENCE (UTS): All the big companies are using it. It's a major challenge for the small and medium size firms, particularly a civil engineering contractor that owns a bulldozer and a backhoe and he calls himself an engineer/engineering contractor. He wouldn't know a BIM if it fell on him. But all the big companies have got it and they use it extensively. They've been doing it for a number of years. Queensland mandated it some time ago. New South Wales is rolling it out slowly. It is going to happen over the next few years and slowly but surely the medium sized firms in the industry will start using it more as well.

It's becoming increasingly easier to use. It's not quite as it was, forbiddingly difficult, even three or four years ago but as time goes on, software develops, but the question really is whether BIM is truly an innovation or not. It takes what we do off paper and puts it into computers. Like spreadsheets took what we do off calculating machines and put them into computers but they still add up pretty much the same way. The slide rule was pretty good. Back in my day we could use slide rules to calculate stuff.

MR HARRIS: I'd understood one of its great advantages was transferring to subcontractors and back again, so that - - -

MR DE VALENCE (UTS): That assumes the subcontractor knows how to use the stuff.

MR HARRIS: That's true but then there's a resistance to adaptation or adoption in that "know how to use it" suggests "and don't care", whereas if it is a productivity-enhancing tool you would expect that this would be something that a main contractor would say, "Well, I expect my subcontractors to know, because otherwise they can no longer remain in the game."

MR DE VALENCE (UTS): Again, you know, on a major project, big projects with the larger firms, I suspect everyone - it's all going electronic. As you go down the scale, it becomes more erratic and patchier and there are a lot of people who say they use BIM, what they mean is they get the files and print them out. It's not quite the same thing.

MR LINDWALL: No.

MR DE VALENCE (UTS): That's what a quantity surveyor would do, for example. That's what most quantity surveyors would do, because that's just the way they work. It's not a criticism, it's just that it's highly - while BIM could make a significant improvement in the way the industry coordinates information and shares information, there's not much evidence that BIM is going to be a transformational technology.

MR HARRIS: All right.

MR DE VALENCE (UTS): It doesn't mean it's not important. Just on this though, what's notable in all your submissions, no-one is talking about standardisation and industrialisation and prefab.

MR HARRIS: Prefab did come up a bit, but standardisation, I agree, given that if you (indistinct) and not infrastructure but just any other contracted terms type industry, yes, standardisation is a continuous theme and it is unusual.

MR DE VALENCE (UTS): Yes.

MR HARRIS: I know for large PPPs there has been quite a lot of effort put in about standard contractual documentation.

MR DE VALENCE (UTS): Yes.

MR HARRIS: But standardisation of terms, I would normally have expected to see it raised by somebody. I guess you can say it implies that it has already been addressed, but perhaps on the other hand it is just not valued.

MR DE VALENCE (UTS): You didn't get any submissions from component manufacturer people which is very striking as well, the cement guys and stuff like that. Australia has actually got a fairly good industry in pre-cast cement. Most of our high-rise stuff now is - there's a lot of off-site things that goes into it. Our rate of building for high-rise buildings is pretty much world class, give or take, you know. We are very good at this sort of stuff. One would think, if we had a significant pipeline and major projects coming up in infrastructure, one way to try to improve the efficiency with which we dealt with those projects would be to standardise as many of the components as possible, including structural stuff.

MR HARRIS: Exactly.

MR LINDWALL: Some of our submitters have said there's a large infrastructure deficit. Do you have any comment about that?

MR DE VALENCE (UTS): That's just hand-wringing. I mean, look, in my not very generous opinion, most of your submissions were either rent seeking or hand-wringing. You could always have more infrastructure, like we could have more air quality and we could have more sunshine, I mean, it's true, but there's not much evidence of a chronic shortage of infrastructure in Australia. There's definitely issues in areas like transport and water and power, but they are specific issues to those sectors. It's not something that across the country as a whole we've been failing to do.

If the mining companies have problems getting their product offshore, that's because they haven't invested in their infrastructure. They're mining companies. It's not like they've got any shortage of resources. There are questions about health coming up in the next couple of decades and the sort of infrastructure we should be rolling out for the health system, but that's a very complex set of policy issues there. I think transport is a big area. That's why I believe that some kind of specialist transport agency probably is on the cards. If we are going to spend enormous amounts of money on road or rail projects over the next couple of decades and airports, then we really do need to manage that very actively, and I think a specialist agency would be pretty useful in that area.

MR HARRIS: That's great. Thank you very much.

MR DE VALENCE (UTS): Thank you.

MR HARRIS: I think next is Consult Australia. If you could identify yourselves for the purposes of the record.

MR CARTLEDGE (CA): I'm Jonathan Cartledge.

MS MOTTO (CA): Megan Motto, CEO.

MR HARRIS: Thanks very much. Megan or Jonathan, do either of you want to make some opening remarks?

MS MOTTO (CA): No. It has been a very long day for you, I'm sure, and we are happy to take questions.

MR HARRIS: That's what I like. In your shortened summary version, I think, the one you provided, the correspondence, you talk about draft recommendations 7.2 and 4.1 that you strongly support "with the exception being that revenue generated in the user-pays model" - we are talking effectively road infrastructure here - "should be hypothecated transport in its broader sense, not restricted to roads". I think I understand the concept that you are driving at, but how far wider than roads would you see this hypothecated model applying?

MS MOTTO (CA): Certainly, if it's a funding associated with transportation systems, then we would suggest that it would be across the various forms of transportation, passenger and freight transportation. The issue here for us is not one of choosing winners in the system, but in having the analysis done by the independent bodies, such as Infrastructure Australia, to understand the cost benefit analysis associated with different projects in different circumstances, and for it to be a robust enough system that the projects with the best CBA should get the funding, rather than a particular mode per se.

MR HARRIS: Okay. The difficulty with that then becomes if you are raising prices in order to price road access, convincing current road users that they would be better off if you spend money in, for example, the public transport system. The logic applies today and appears to be resisted. What's going to change to see the logic more accepted tomorrow under a hypothecated model?

MS MOTTO (CA): I think as we understand the cost of congestion, for example, that we will have a more sophisticated debate with the Australian public regarding user-pays systems, and the fact that choosing one form is obviously a trade off against another. One of the reasons that we have a systematic response to road use at the moment in terms of a high degree of road use is because we don't have credible alternatives in terms of public transportation systems and the connectivity of the bus and rail networks, for example, and timetabling of those networks to sufficiently support passenger carriage.

So once the Australian community understands the detail of the trade-off that they are making, ie, that this money will go into a bus or rail network that will shorten your commute by X amount of hours or minutes, then it can be a more, as I said, sophisticated debate in terms of understanding the trade off.

MR HARRIS: I see. The third thing I had was calling qualitative tender documentation. Given advice to on this, we understand tender documentation has improved significantly in recent years in terms of the documentation, as in the quality and comprehensiveness and readability and not having to pay lawyers a squillion dollars and not re-inventing the wheel every time you go back out to markets, but were you referring to that, or were you referring more to this ultimate question about whether there is enough flexibility in tendering processes to match unique circumstances of each individual infrastructure project?

MS MOTTO (CA): I would suggest we have got a long way to go in both actually. In terms of the tender documentation, one of the issues that consultants often come across is, they receive a comprehensive, as you suggested, stack of tender documents, but they are unable to rely on many of those documents in order to make their assessments; so if they are unable to rely on the documentation that they have been given, but yet they are being held liable for the quality of advice that they are being giving based on those documents, they will have to go and do their own investigatory analysis. So there certainly is still a problem with the quality of documentation and the consultant's ability to rely on that documentation.

MR HARRIS: That's risk aversion by state entities?

MS MOTTO (CA): Yes, and excessive risk aversion at the end of the day, because there is some risk that the lawyers sit with the client of any project, and risk management is not about risk transfer. Risk transfer is one element of risk management and, unfortunately, in public infrastructure in Australia it has become the default position, rather than one element of the risk matrix, if you like, decision-making matrix.

MR HARRIS: And flexibility?

MS MOTTO (CA): In terms of flexibility we see invariably many instances where tenderers are being asked to put forward an innovative solution but the innovation goes insofar as it fits a defined box. Now, one of the things that we would suggest with early consultant engagement, for example, and more time and resources spent on design up-front is that the options for achieving the goals are more fully expanded upon and investigated by consultants as opposed to a pre-defined outcome being asked and then deliver it in the smartest way.

So innovation is not coming up high enough in the hierarchy of decision-making as opposed to, "We have already decided we want a road running from point A to point B, going through point C, now design it the best way that you can." So we would say both those circumstances is correct. In addition, some of the highly innovative tenders that go in would then require some alteration to tender documentation or the contract brief in its pure form and as non-conforming tenders it's pretty difficult to get to the top of the pile when you're providing such innovative solutions.

MR LINDWALL: I've heard of not only the issues relating to excessive risk aversion, but also probative rules that are applied in some of the procurement agencies. Can you comment on that perhaps?

MS MOTTO (CA): We'd suggest that the pendulum has swung a little too far in terms of the risk aversion of probity officers and probity advice being treated as stricter law legal advice, and there is something to be said for understanding that there's many ways to achieve the same goal and in some circumstances, for example, sole sourcing is an appropriate procurement methodology as well as open source tendering. So there's certainly situations whereby we would say innovative solutions are discarded because of overly risk averse probity officers, for example.

MR LINDWALL: Could it also be that the skills of the procurement agents are not up to scratch perhaps?

MS MOTTO (CA): Look, there is no doubt that there is a massive loss of skills coming out of the procuring agencies. Partly that's because of the ebb and flow and the volatile nature of the infrastructure markets, so for example at the moment we have seen in the last three or four years in the consulting sector alone where we've seen massive lay-offs and the cost associated with those are significant costs associated with those lay-offs and if the infrastructure spend that's been promised comes to market, then we're going to be spending all of that money all over again, ramping up our workforces, particularly for the private sector which is now the contingent workforce primarily of the public sector in delivering these projects.

Partially it's because of demographic change with the baby boomers that came through the systems of public works agencies and cadetships now retiring en masse and partially it's because those of them that are still in the system get pinched by the private sector to tender back to government, but all of those factors mean that there is a loss of skills. We've also seen in the last decade at least perhaps too more of a siloing of skill sets so that you've got project management skill sets that operate independently of the economics skill sets and financial skill sets, independent of the engineering skill sets et cetera.

So that siloing approach means that the procurement professional, which is a broad professional that understands many of those elements of project delivery, no longer exists in the system and so we would suggest that both an education and training, ie, a upskilling project is needed but also that the experiential learning of procurement officers coming through the system is sorely lacking and needs to be looked at as well.

MR LINDWALL: So perhaps, as we discussed earlier, a specialist procurement agency for complicated projects might give scope for smoothing out the demands for their services.

MS MOTTO (CA): We would suggest that centralising that sort of procurement decision-making is probably not in the best interests of projects at hand. The reason that we would say that is because I think institutionally those sorts of procurement decision-making processes really do in fact happen best at the ground level where local knowledge is applied to bespoke projects and every project in the infrastructure game is a prototype.

What we suggested is a centre for procurement excellence and the reason that we feel that this is necessary is because of the loss of those procurement skill sets. What we have is the perfect storm of people making risk averse decisions because they don't have what we would call the procurement confidence, ie, the confidence to not need to turn to external legal advice or follow the letter of the law of external legal advisers but to make commercial decisions about what is appropriate risk management on projects, but also to provide some governance frameworks for decision-making, more guidance materials to people with less experience so that they can feel confident in making risk decisions on contracts, on projects, so that they are not in fear of being pulled up in front of a senate estimates or an audit committee or the media, God forbid, at some point in the future, being asked why they made the decisions that they did. So some sort of sensibility in terms of the guidance material that's given to procurement officers, as well as a facility for upskilling those procurement officers both on the theory and the skill, on the experiential practice.

MR LINDWALL: On Infrastructure Australia, do you have any thoughts that you would care to share about its role and the current reforms that are in parliament for example, that you're generally supportive of them?

MR CARTLEDGE (CA): Yes, we put in a fairly detailed submission in relation to the particular reforms proposed under the amendment bill. Our concern with those reforms were that where they would compromise the independence or transparency of the advice provided by IA and that was really independent, transparent and expert advice is what we see as fundamental for these agencies in their role with government and whether that's a federal agency or a state agency, equally it applies across the board.

Where the amendments allow for increased politicisation of the information provided by Infrastructure Australia to the minister or they impose new requirements on Infrastructure Australia in terms of when and how they might publish that advice, we see that as compromising their role to date. We think that the agency should be free to provide regular advice free from political interference of any type and to that extent we're also concerned with the ability of the minister to exclude particular modes or classes of infrastructure for consideration in the advice provided.

We felt that that was unnecessary and that if you're applying true independent cost benefit analysis then that would apply across all classes of projects and should be focused on the very best value for money for the taxpayer at the end of the day, and so they are the concerns that we outlined. We thought that the restructuring of Infrastructure Australia to be a more independent agency statutorily, with a board and chief executive was a positive symbolic move but should be supported by the continuation of its ability to provide that independent advice as it saw fit to the government going forward against any class of infrastructure. So that's really where we saw the changes having impact.

I think overall Infrastructure Australia will continue to provide a really valuable contribution to the public debate and awareness of the importance of good cost benefit analysis to support infrastructure prioritisation and continue to provide a really good model for states to look to in terms of how they might implement similar governance and institutional changes at state level, which is something that we advocate in Victoria, for example, or South Australia or WA where you just don't have that kind of independent advice to the governments in terms of how they might prioritise infrastructure going forward, and that's a major deficiency in terms of providing business confidence in the pipeline.

MR LINDWALL: Did you have anything?

MR HARRIS: I've just got an observation to make more than anything which I wanted to read into the record on your behalf because I was quite taken with your comment on risk allocation where you say, "Consult Australia strongly welcomes the Commission's finding that risk management is most efficient when a risk is allocated to the party or parties best able to manage them," which we all know and it's almost become a slogan nowadays rather than anything else because in your next sentence you then say, "In practice, however, this rarely occurs. In our experience risk is allocated according to bargaining power rather than ability to manage risk."

I presume there is possibly some observations you'd like to make on that but I did want to note it because I did think it has been consistent with quite a lot of the commentary that has come to us from contractors, I think - allocation according to bargaining power rather than ability to manage risk.

MS MOTTO (CA): The first step to managing risk is embracing risk and understanding it and if you outsource it from the onset it actually negates your ability to ever embrace or understand the risk that you're taking as a client.

MR HARRIS: Anyway, it's a continuing problem and ultimately can only be exposed I think by this greater flexibility in actual allocation from first the party calling for tenders and then the parties in their subcontracting arrangements. I just need greater clarity around that whole issue.

MR LINDWALL: I know that you didn't raise this in your - or I don't think you did, about workplace or industrial relations issues in the construction sector in particular. You may have seen our draft recommendations on that. Do you have any comments about the direction we have headed and the types of recommendations we have made and what are the key issues as far as you're concerned about the current industrial relations framework and bargaining ability?

MS MOTTO (CA): I think just more broadly we haven't made specific reference to that in our submission, but broadly we would indicate that we certainly do need a strong cop on the beat for the building and construction sector; that trend analysis would tell us that it has not been free from its share of problems in an industrial relations sense and a commonsense approach I think has been applied.

MR HARRIS: That's great. Thank you very much for your contribution here today and for your written advice. It's genuinely appreciated.

MS MOTTO (CA): Thank you very much.

MR LINDWALL: Thank you very much.

MR HARRIS: Now I think we have Dr Philip Laird from Wollongong University to talk about rail issues. For the record, could you identify yourself.

DR LAIRD: Yes. My name is Philip Laird and I drew on the university's resources but they're my own personal opinions.

MR HARRIS: That's fine. Do you want to make some opening comments?

DR LAIRD: Yes, very, very few, Mr Chairman. I think you have been given a real hard, difficult task and a very short time to do it, so I'm supportive of a recommendation from others that you should perhaps be looking at another inquiry into road pricing and I would like to see it broadened to land transport pricing and funding.

The submission, as you noted, focuses on rail. I give some examples of major rail projects that have done very well. My favourite is Perth to Mandurah railway, built in 48 months for a tenth of the unit cost of Epping to Parramatta. I also think Alice Springs-Darwin has good points but also lessons that perhaps we shouldn't build too cheaply. A little bit more money there would have been better in the long term.

I see problems on several fronts for rail. Firstly, urban rail. It's just not keeping up with the population growth. If we go back nine years ago, there was a prime minister's task force on infrastructure set up and the message was a soothing, "Look, there's no infrastructure crisis." I think our population then was under 20 million, now it's more and more. The system is beginning to creak a bit. So urban rail is one thing, if we don't address it, then we're going to get more and more congestion in our major cities and it's really going to cost us as a nation.

The second one - your two-volume report had lots of things to cover but I don't think I saw the condition of our grain lines in it. Correct me if I'm wrong. Here we are, you know, the Australian Financial Review, 2 April this year, "Australia slumps in world trade index some nine spots down from 16th to 23rd." One of the reasons is we can't get some of our stuff across to our ports and out to the world. Incidentally, New Zealand is number 4 and we have slipped to 23. So grain is one.

The submission goes into some detail about our interstate rail links and on five key indicators we are falling behind Canada. We are often told, "Look, we're only a small population, 23 and a half million people. Give us a break," but in our three eastern states, which are the main problem, we have I think over 17 million people. Western Canada, comprising British Columbia, Alberta, Saskatchewan and Manitoba, has 12 million people and they can run not one substandard interstate rail line, but two class 1 railways.

Where do we go? I can't help, coming from Wollongong, looking at infrastructure called the Maldon-Dombarton Rail Link. They started work on it 31 years ago and it's still to be finished, despite the fact that in those intervening 31 years there's a lot more trains on the existing Sydney-Wollongong line and it makes it very, very hard to find an extra path for a new freight train or a new passenger train. To quote from ABC TV 2012, 7.30 Report, Arthur Rorris, secretary, South Coast Labour Council, "This must be the most studied piece of half-completed infrastructure on the planet." High-speed rail - you know, we have had a major study in the 80s, the 90s, the beginning of the last decade and now and during this time Taiwan, with its 23 million people - albeit a much smaller area but the same population as us - could build 300 kilometres of high-speed rail. We can't even start. As a distinguished engineer said, "It's like trying to climb Mount Everest without ever leaving base camp."

One other thing, my primary submission mentioned a New South Wales freight strategy as a draft. That has progressed to a final one released last December, but I have to say the Victorian one, in my view, was better than the New South Wales one and the Queensland freight strategy, also released last December, was much, much better than the New South Wales one.

MR HARRIS: So let's investigate a little the reasons for this. Underinvestment in rail has been a perennial problem in Australia for multiple decades. Governments do tend to put capital towards rail projects on a sort of occasional basis but nothing like the persistent investment in other parts of land transport infrastructure. So what is the rationale for this? You have been an expert in this field for a fair while now.

DR LAIRD: We're basically talking about post-World War II and coming out of World War II I think we had a really large - I mean, our roads were very, very basic. Admittedly the Hume Highway was actually tarsealed from Sydney to Melbourne, but it was a basic two-lane road going from town to town and through the towns, flood-prone, windy, steep, and it had to be rebuilt and indeed it was rebuilt and it was totally reconstructed thanks mainly to federal funding. It started in 74 and it took until 2013 to finally reconstruct the lot. So there is a large road backlog and when you get more and more vehicles coming onto the roads in large numbers, I think a government is duty-bound to try and address this road gap.

We have perhaps overshot the mark. I think ABS data shows in urban cities, from the survey of motor vehicle usage, perhaps 5 or 10 per cent growth in passenger vehicles - the cars from 05-06 to 2011-12 - but urban transport has grown much more, more like 30 per cent in that intervening time, and yet governments tend to still think we have got this massive road deficit that has to be addressed, and it does, but we get an unbalanced situation where we are inclined to put far more resources into roads than railways. Then to compound the problem, we fail to price roads properly, whether it is congestion pricing in major cities like Sydney and Melbourne. We fail to recover attributable road system costs from heavy trucks, not just the maintenance of the roads but in many cases - look at the Hume, the town bypasses the concrete pavements, the climbing lanes. You wouldn't do that for 5000 cars a day. You are doing it for that plus 3000 trucks. The situation is compounded with poor road pricing.

MR HARRIS: We heard earlier from the Business Council of Australia that it would be a good idea for us to look at standards for individual infrastructure modes. For example, in rail we do have assessments of passenger crush, the peak occupation of railway carriages, but I did point out to the Business Council the difficulty of having a standard is that it implies, "When the standard is exceeded, we will then invest," but if the cost of investing is much more substantial than the benefit, then in a standard economic analysis you wouldn't undertake that investment so you could imply that you would by setting a standard.

This I think has been part of the perennial problem, has it not, with rail, that we have been at passenger crush standards for a fair while, governments can't fit additional rail services on the tracks because of signalling system deficiencies, amongst other things and as a consequence of that, those sorts of investments are much larger than relieving the standard would seem to suggest is possible. Do we not have a conundrum here that says that in some way we need to provide different values, if you like, for rail transport versus other modes, or is it simply a question that roads are unpriced and therefore if roads are priced effectively, people will move to rail because if they move to rail and we then can't invest, we are actually not helping them achieve the ultimate outcome which is moving from place to place?

DR LAIRD: I think in many cases both modes are underpriced. For example, passenger rail in New South Wales is operating - the fare box is only covering about 20 per cent of the operating costs which does two things - I mean, it is not good for state budgets but also it is taking away money that could be used for building a better rail system that would address some of these issues of overcrowding in trains where it does occur. That has perhaps been worse than Melbourne anyway, but it certainly has occurred in Melbourne and it will come again.

I mean, at the moment the petrol price is $1.50 a litre. We have seen it 10 years ago when oil prices were ramping up from $20 a barrel or less 15 years ago, up through to $50 a barrel and then to a hundred dollars a barrel. You could see real pain at the pump affecting people living in outer Sydney and outer Melbourne who went there because it was cheap to buy a house or cheaper to buy a house. Here is another example. I came up here today, this thing cost $2.50.

MR HARRIS: From Wollongong.

DR LAIRD: It's a seniors' ticket. It is an instrument of state budget destruction. My daughter paid $23 for the same thing. I could argue that maybe hers was a little too high but this is too cheap. Yet we have a change of government in New South Wales. We have had no signals from the federal government that, "Hey, this is something you should be addressing."

MR HARRIS: So because the price structures are out of line with a potential utility the consumer might get, we don't have a revenue source to support continued investment and we don't have an incentive to do so either.

DR LAIRD: That's right. The low fares here reduce the incentive to make what might be a good investment in the national interest. But the other thing that is happening is that we are falling behind many Asia Pacific countries. I mean, Shanghai 20 years ago may have had its very first line. Now, it has got I think over 500 kilometres of metro lines and over 300 stations. All we can do is talk about a metro capacity project in Melbourne, a cross-river tunnel, bus and train - you know, it's just studies and studies.

I mean, we study, these guys go out and build. It is not just Shanghai. You name a Chinese city. There is something that has gone in there. You say China is a special case. Let's look at Hong Kong. If you go there now, there is not just one project under construction, not just two but four metros and a high-speed link to mainland China. Taiwan with its 23 million people in the last 20 years has fitted out its capital Taipei with four metro lines and the second city Kaohsiung with two.

We do some good work here, like Perth to Mandurah or Victoria's Regional Fast Rail or Queensland's mainline upgrade but they shouldn't be exceptions because when we apply ourselves, we can do well.

MR LINDWALL: A lot of those projects, are they tunnelled? That is where the costs are incurred.

DR LAIRD: Yes. Vancouver got an airport link in time for the Winter Olympics. Not satisfied with that, if you go over there now, they are building another line and by 2020 there will probably be a line to the University of British Columbia. LA, the home of the motor vehicle, is getting metro lines. There are some there being built. At this rate Auckland will get a three and a half kilometre underground line before we get either the Bus and Train tunnel in Brisbane or the much-needed Metro capacity upgrade in Melbourne.

MR LINDWALL: Are there things in the other countries which have engaged in this type of metro building et cetera and rail transport that have taken a different approach to us? What are the lessons from that?

DR LAIRD: Two: firstly, Hong Kong. It is the rail plus property model where you make sure the rail system or the government sponsoring it can get some of the value added to land values. Secondly, Singapore. To own a car you have to buy a permit which may cost more than the car, plus congestion pricing, plus $2 a litre petrol; but increasingly you don't have to go to developed Asian nations or Europe or America to see better ways of doing things than here. Just go over the Tasman. We froze fuel excise inexplicably 12 or 13 years ago.

MR LINDWALL: When the GST was introduced, yes.

DR LAIRD: Roughly a year after. I mean, New Zealand has raised it in steps to a bit over 50 cents a litre, plus there is a 10-cent a litre charge that goes to accident compensation which means that the cost of third party insurance, instead of being three, four, five or six hundred is more like 200. It is more user pays, giving price signals to the person.

MR LINDWALL: Which is consistent with the direction we have gone in the draft report and also project selection I think is important.

DR LAIRD: Yes.

MR LINDWALL: I know you cited the Alice Springs to Darwin railway and it might be a good example of one where the construction cost wasn't so bad but the economics of it, it's hard to imagine that stacks up.

DR LAIRD: Well, it depends who you ask, but I think Genesee and Wyoming, who were the lucky second owners of it - - -

MR HARRIS: Second, I think.

DR LAIRD: - - - or third. They think it's surreal, chairman. They are getting 90 per cent of the Adelaide to Darwin intermodal freight. They are bringing refined diesel for Alice Spring. It goes into road tankers, goes on the flat cars. It has encouraged the reopening of old lines, plus the expansion, you know, plus new lines.

MR HARRIS: Like a lot of the story with rail lines, the initial capital cost can't really be serviceable on the volume of traffic but once it's written down as a result of the commercial value, it becomes an operational success.

DR LAIRD: I think in that case, after 10 years, I think it's - I don't think it's the right element but paradoxically, I think the inland railway Melbourne Parkes to Brisbane probably would have looked better back 20 years ago, the difference being that New South Wales didn't want it and didn't go very far, whereas Alice Springs-Darwin, you had the happy alignment and the Northern Territory government, every minister since semi-statehood in 1988 wanted it. Every leader of the opposition wanted it in Darwin and the South Australian government gave very strong support and then the federal government came along and was prepared to support it and it went through but what lessons can we learn from it as we progress through to the inland railway? Firstly, well, they had the advantage. It took many years but a corridor was identified and protected, after due consultation with indigenous landowners, and so the environmental impact assessment had been done and so it was a project ready to roll, whereas the inland railway, how are we going to ahead and again, if you want inland railways and you don't want the minimum of taxpayer support, I can't see how you can do that without looking at road price and heavy vehicles.

MR HARRIS: Fair enough. Do you have anything else?

MR LINDWALL: I don't think so, no.

MR HARRIS: Is there anything we have missed that you would like to draw attention to before we - - -

DR LAIRD: No, just to thank you for the attention to detail in your draft and to wish you well writing the final report.

MR HARRIS: With your opening comments, maybe we will get another one. I think Infrastructure Partners Australia wants to have another two years of road pricing.

DR LAIRD: Yes, that's right. There is a lot to do. If I could just add on that, New Zealand has had mass distance pricing, a successful use, since the late 70s and it's still too - you know, you look at the number of high performance vehicles that have been allowed on the road, for example, veterans or super quads, you think, well, okay, you are going to have this high performance vehicle. We will share some of the productivity gains with the road agency and for safety reasons, you will have the technography and GPS and by the way, it's mass distance pricing. As a nation, we have even shied away from that.

MR HARRIS: We will deal with that in the final report, I think. Thank you very much.

MR HARRIS: Now I think we have buildingSMART Australasia. Come on down, as they say on the game shows. Perhaps you can identify yourselves when you are settled for the record.

MR MITCHELL (BSA): My name is John Mitchell. I am the project director of the National BIM Initiative.

MR EASTLEY (BSA): My name is Wayne Eastley. I am the chairman of buildingSMART Australasia Inc.

MR HARRIS: John or Wayne, do you want to make some opening remarks?

MR MITCHELL (BSA): We would like to make a brief summary of our paper we submitted to you earlier.

MR HARRIS: Yes.

MR MITCHELL (BSA): First, we very much welcome this opportunity to talk with you today: buildingSMART Australasia is part of an international network advocating the use of BIM technology for building and infrastructure development. We are an organisation that is as the author of the sole building body standard in the world and I say standard. We congratulate the Commission on its draft report. It's a document which has received some prominence and we are really pleased with that, that it has been considered as a component of the design and construction of economic and social infrastructure.

We seek a change to your recommendations regarding BIM in your final report. We believe you should explicitly recommend that the Australian government partner with industry to implement the recommendations of our report. That recommendation will both accelerate the adoption of BIM in Australia to facilitate a reduction in cost of public infrastructure projects and secondly, it will assist the Australian industry to increase its competitiveness in a growing globally digitally enabled construction sector. Thank you.

MR HARRIS: A little earlier, we had a representation I think from the University of Technology, Sydney, from Gerard de Valance and I asked him about BIM and why it hadn't readily been taken up across industry, because we had had these representations saying we should do something about mandating the development and application of standards. I think it would be fair to say he was a little unconvinced as to whether or not we needed to move actively in that area. He thought that the large end of the construction sector - I am putting words in his mouth now, which may be unfair of me but just for your reaction - the large end of the construction sector was probably pretty much across this and that it would be generally adopted in due course, so you have obviously got a different perspective. You see either far less adoption or far more opportunity or some combination. Could you explain that a bit further?

MR MITCHELL (BSA):   I will respond in one part, which will focus on the sort of international picture, and I will let Wayne talk to another perspective as it applies to Australia. Our industry, the top of our industry, the top 5 per cent probably of our industry, have been very proactive in the adoption of BIM and we would compete well in that international context but what we don't have in Australia is a concerted government approach. We have no concerted policy that says this is good or bad and this is one of our main concerns. Historically, Finland and the Nordic countries have been the leaders of the adoption of BIM, along with GSA, the big government organisation in the US.

Increasingly, other nations around the world are adopting BIM and the best case at the moment of that process is the UK, where the government has taken all the work that's preceded it in other national contexts and they have made a very strong setting by saying, "Well, we think that technology is excellent. We're not going to be too concerned about the application of that technology but what we are concerned about is the government policy in respect of it and what we see is that if we take and exploit that technology, we can get a new level of operational effectiveness, better asset management. The downstream process at the end of the commissioning of the project can reap significant rewards because it's historically a factor that's never been considered. Consultants are appointed for their little set pieces in the contract development phase and BIM has a great potential in integrating the whole life cycle. We are not just operating as a single point. We are communicating information, integrated information from the very beginning of the project to the end or to a point where the user is managing that facility."

MR HARRIS: I see.

MR EASTLEY (BSA):   Mr Chairman, BIM provides significant benefits for all stakeholders, particularly for government. These benefits have outlined in a number of major reports recently. We could indeed let market forces determine the use of BIM but we would expect that it would result in disparate arrangements state by state, organisation by organisation. I would say that there would be a very close analogy between leaving it go that way and where we were in the 1980s with building regulation reform where we had each state and territory with a different set of technical standards called up by differing regulations.

We implemented the Australian Building Codes Board in order that we could move towards a consistent approach across the states and territories. We don't have total consistency but we do have a core of agreed standards and we review them from time to time to bring other matters into the core. We see that there are major projects for defence, hospitals and so forth that are requiring BIM requirements of contractors, designers and so on. They, in my view, are effectively regulation by way of standard, so it would be far better for the productivity of the industry across Australia that we have some sort of standardisation of these issues so that there is a consistent approach whether it be Commonwealth, state or territory and whether it be major project or small.

MR HARRIS: Do you have any data from overseas about the value gains that occur from the adoption of BIM? I mean, just exemplars, if you know what I mean.

MR MITCHELL (BSA): Well, again, in the UK there are some very good reports. The Ministry of Justice have been constantly reporting on their - actually they're developing prisons. It's not such a pleasant topic, I suppose, but after - - -

MR HARRIS: It's a building.

MR MITCHELL (BSA): After five projects they're reaping a capital cost saving of 20 per cent. They're saying that at the fifth project they were getting a procurement time reduction of 50 per cent and although the results are not in in the asset management phase, they're expecting 30 to 50 per cent gains again. Traditionally at the handover at asset management phase if you talk to people like Jones Lang LaSalle they will tell you a major part of the cost of commissioning that facility is re-inventing all of the data and BIM as an integrated information model from the very briefing phase to the asset management phase means that we're building more qualified data all the way along, so this is a big productivity bonus.

MR LINDWALL: In your submission you quote a survey by McGraw Hill which finds, I think, 7 per cent of BIM users report gaining the full extent of the benefits, so what do you see as the major barriers to them not gaining more of the benefits since I can see the benefits are quite - - -

MR EASTLEY (BSA): Again I would make an analogy between a building regulation and this area in that from the early 1990s it was determined that the Australian Building Codes Board would be established to have a national code. It was struck in a performance context so that it would drive innovation, or at least that was the intent. It also provided a deemed-to-satisfy provision so that if I don't want to go to the trouble of simulation, analysis and big data and all those things that could be applied to confirm the performance of a proposed structure, I could go back to the deemed-to-satisfy provision. Industry almost to a man have taken the path of least resistance and so we are still using predominantly deemed-to-satisfy provisions.

The Australian Building Codes Board is now quantifying its performance requirements such that it will allow now the application of BIM for simulations of proposed buildings to determine performance requirements and potentially, through a set of computable rules which can reflect the building regulations, to determine actual regulatory compliance. So instead of waiting two weeks, a month or whatever it is for somebody to check the design, industry itself can iterate through its design until it meets the rules, so it should dramatically shorten the time for building approvals.

MR MITCHELL (BSA): Another aspect of this statistic that the McGraw Hill study shows is wide variation across particular disciplines across the nation. Our greatest concern is that if we don't have a nationally coordinated set of protocols that apply across business and government across all states, we're going to get a technology crippled by a million different work practices and things like that.

That is a significant argument in favour of government taking a lead. We need the government to tell industry, "We believe this technology is good for us and for you. We will do our part as a government to assist you in developing these recommendations we have got here." The NBI report was canvassed by nearly 300 people, surveys in every capital city in Australia, cooperation of New Zealand government and people involved as well, so this is not an idle survey. It is a very robust and deep survey.

If we can get these nationally consistent guidelines, we will be able to exploit the full benefit of the whole process. At the moment we see that there are several government agencies independently working on this process. We heard this morning that Health Infrastructure New South Wales have done some BIM work. That is absolutely correct, but you heard as well that the Western Australian government doesn't have an official mandate.

There's an organisation called Australasian Health Infrastructure Alliance. That is all the government health agencies - asset management parts of those agencies - in Australasia. It includes New Zealand as well. They have historically been responsible for developing standardised brief for health facilities. In the past, manual processes didn't allow for a very careful analysis of that information because it's all manual hard copy stuff.

You heard today, I think, Gerard saying he thought that standardisation could be a good thing. That is exactly what some of the big health projects on the Sunshine Coast and in Adelaide are precisely doing today because BIM allows them to manage the information cleverly. We use computing to do the hard slog work of large data, much like our NICTA man this morning whose approach, by the way, we found extraordinarily complementary, open data supports innovation. The computing technology allows us to do a much better job, but that job is always compromised if we don't have the same standards.

On exactly that same basis we must align our standards so that we're internationally compatible. You probably saw in our report the European Union's move towards this area. Almost all the western economies are making very strong movements to this area. If our industry doesn't align with those international protocols, the chance of us competing favourably in South-East Asia - let's say that's our natural market - we won't have a chance. The UK government is aggressively coming out to exactly our market spot and saying, "We can do it better than anyone," so that's a further incentive for government to say, "We endorse it. We want to work with industry to quickly implement it and start reaping the benefits."

MR LINDWALL: What type of time frame do you have in mind and when is the drop dead date if it just drifts?

MR EASTLEY (BSA): We're adopting the date of 1 July 2016 in line with the UK, with the expectation that there will be lessons learned along the way in the industry preparing for that commencement day. Tasmania's government has taken through the last government's cabinet an adoption of the National BIM Initiative from 1 July - well, adopted it such that it will apply a requirement from 1 July 2016 for all major government infrastructure development to use 3D collaborative BIM with all data being open standards.

MR MITCHELL (BSA): The Department of Defence is a platinum member of our organisation. They are a very proactive organisation. They have nominated to lead the Commonwealth government agencies that have strong procurement - finance, health, a couple of others but all of the key ones - so we have a champion in Defence with clearly a business case of its own that would justify it by itself, but they are willing to provide that mechanism to combine the Commonwealth agencies. What we need is a like agreement amongst all of the states to as well adopt these policies and procedures.

MR LINDWALL: Since we always look at the costs side as well, are there any costs that you could identify for us in adopting a standardised approach? Where's the resistance coming to adopting a standard approach?

MR EASTLEY (BSA): I'd suggest that the only resistance is coming from those who haven't looked sufficiently into the technology itself and what it means. I think the classic of the six blind men from Tajikistan who happened upon the elephant and all grab a part of it and they describe it completely differently, once we take a holistic view of it we'll see that there is benefit for the economy, a benefit for those participants who actually adopt the technology.

It's worth noting another McGraw Hill report. I can't quote the actual dates but after the US government mandated or required the use of BIM, particularly for government procurements, research was undertaken of those architects that had been affected and some 70 per cent of them saw no use for BIM in their industry in the future or particularly for their business. They redid that survey a couple of years later and found that 50 per cent of architects were using it of their own volition. Once they had used it, they saw the benefit.

MR MITCHELL (BSA): I think industry wants the government to say, "Do you think this is good technology?" So that statement of principle would be a first driver of renewed interest and adoption of the technology, In some areas for the Commonwealth there is extremely little cost involved. Even internally in the procurement measures already in government, it's just reallocating task to a better outcome, a better policy development. Procurement is one of those, but procurement is an example of where government must lead because that is the area that they regulate in in engaging in contracts.

We've identified six of these key issues that are potentially holding back the adoption of BIM, so let's say procurement is largely in the Commonwealth and state government arena, BIM guidelines, BIM protocols, the government as a client - as a major client - has a role in that but industry has a big role as well. In our previous report (the National BIM Initiative), we had an implementation plan to back it up, we had very strong industry support.

We have proceeded without any other government support post putting it to the previous Commonwealth government with three of these guideline groups and we've got significant support, but without a policy statement endorsing it and without the whole of industry and without almost any official government, state or Commonwealth, acknowledgment we're actually in a rather tiny space and we're not making the progress that we should be. There's very goodwill and we are making some positive technical developments but it's a very small part of what we really need to do to implement this properly.

MR LINDWALL: I've got one more question. The various standards, if they're agreed, they don't lock in a particular software provider obviously.

MR EASTLEY (BSA): No. the intention is to go to open software. No, let's draw a distinction between the market operating to provide the tools and techniques that are required for best of breed softwares between the planners, builders and constructors that are making sure that the data that's handed to the owner is available throughout the life of the building. That comes back to the argument from NICTA this morning about open standards information. We need to be clear also that we're not talking about regulation here. We are talking about standardisation, so we're not talking about mandating the industry to use these things.

MR HARRIS: You're not saying, therefore, you'll exclude a contractor who hasn't adopted these. You're actually saying, "Let's jointly adopt this and encourage its take up by a particular date."

MR EASTLEY (BSA): Yes.

MR HARRIS: Yes.

MR EASTLEY (BSA): So we could let the market sort this out. The market won't sort it out for the extent of the use of BIM through planning, design, construction, operations and then societal need which is important to deal with some of the major issues, planning schemes, regulatory systems and so on, but what we are saying is, and this was backed up by the Built Environment Industry Innovation Council reports in 2010, that for this to work the property and construction industries need to own this. They need to sort it out for their purposes, so it's not the market operating but it is the industry operating in working out arrangements that will work for industry and their clients but taking into account the client's needs.

MR MITCHELL (BSA): There's an aspect that we see as a bad omen of future progress, and that is that we see some government projects coming out with a requirement for proprietary software: We believe that conflicts with government policy on procurement. In standard Australian construction contracts today you cannot specify a product by its brand name. You've got to specify it by its performance or, say, as meeting equal performance. So on the first count we think that's anti-competitive and, secondly, it also conflicts with the policy that NICTA also referred to this morning which is that archiving of data is based on open data standards. This could twist the sector a bit and lead to what we think would be anti-competitive behaviour.

MR HARRIS: Would you care to name the jurisdictions?

MR MITCHELL (BSA): I can. I'm not sure this is the place. I'd be pleased to provide this information to you in confidence.

MR HARRIS: If you tell it to us then we will because I think proprietary standard, the case for that would have to be extremely well demonstrated to adopt a proprietary standard - - -

MR MITCHELL (BSA): Well, proprietary software which - - -

MR HARRIS: Any proprietary. Giving somebody a monopoly is the sort of thing we tend to examine in substantial detail before we agree to it. There are a few but they're generally pretty rare and they're justified on public good grounds. So getting any single proprietor of any software product or physical product it wouldn't make a lot of difference. We don't tend to encourage creation of monopolies without pretty good justification.

MR MITCHELL (BSA): I will undertake to you to provide this data as soon as I can.

MR HARRIS: Thank you.

MR MITCHELL (BSA): Understanding that you will not publish it.

MR HARRIS: Yes, very good. I have a question about building as in building information management. We are the infrastructure inquiry. It's more than buildings. How far does building under the current concept go towards more generic infrastructure, flat stuff that lies on the ground, runways, all things like bridges, that sort of thing? Is it all applicable, because I've treated this as being a sort of concept rather than again a self-limiting device that you buy in software but it's a wider more applicable concept, is it not?

MR EASTLEY (BSA): Mr Chairman, if I could explain the genesis of this, that will assist in that regard. Coming from computer-aided design in the mid-80s, the organisations at that time saw the potential for 3D modelling which will allow clash detection and all those sort of things that we can sort out in the model of a building in the computer before we do it in practice. So it started off with basic CAD arrangements with interoperability requirements. As time has gone on, it has gone from buildings across to infrastructure. Japan has driven some of the open standards at the international stage to help recover from the tsunami. New Zealand is also pushing in this direction for enabling the recovery of Christchurch.

MR HARRIS: That's good.

MR MITCHELL (BSA): Just to complement, buildingSMART International which is the international body with funded technical resources from all the chapters around the world, currently has a high priority project to extend the standard into bridges, roads and tunnels explicitly. They've got a long way down the track in doing that and in item 6 of our report we mention the potential of the integration of the building context into its geospatial context. So the most obvious part of that is the integration with cadastre and utilities. Every project that starts does a survey of the site boundary, completely duplicating 500 surveys done before and it then goes on the most exhaustive and tedious search of all of the agencies involved to find out all the data which they have incorrectly drafted and drawn and the records are appallingly bad so it's all reinvented again.

MR LINDWALL: Yes.

MR MITCHELL (BSA): So that is the potential that we move from a building context to a precinct context, small urban, like a campus at the university, or Broadway for example, and then we move out into larger regional and city modelling processes. A complement of all of this is the CRC for Low Carbon Living, which is looking at existing tools that both the government has in the urban development agencies, and local government organisations, that are looking at sustainability over green field, brown field and grey field developments.

It's very important to understand the carbon footprint and the environmental performance and the statistical performance of the proposal against benchmarking data. So BIM, by the way, also provides a mechanism for rigorously capturing benchmarking information.

MR LINDWALL: Yes.

MR MITCHELL (BSA): It is a perfect mechanism for analysis and simulation.

MR EASTLEY (BSA): If I can supplement that, Mr Chairman, that there are other applications that need to be recognised in this space as well. As we're developing through the IPCC and others, climate models, which in Tasmania's coast has dynamically downscaled to give us 15-kilometre grids so we can project down to 2100. The IPCC is looking, I think it's now five years, that they will have a 10-kilometre grid across the globe.

So when we look at either existing infrastructure or new, so we can do 3D laser scans of an existing or we can model the new, we can take the implications from those models, marry that up or verify it from the ubiquitous sensors we're starting to put throughout the environment, marry that with the municipal planning information we hold in geospatial space, along with the infrastructure, for which standards are being developed, and add to that the buildings themselves with that structure, we can now start and say we can implement a fully digitally enabled planning scheme which can enable simulation, and this could extend to environmental assessment as well, through to building regulatory compliance.

We're shifting a major part of the analysis work to the private sector so they can do that and iterate through designs until they appear to have met the regulatory requirements, at which point an auditor can get involved to ensure that nobody has tweaked any of the parameters in the middle and then present for the regulatory authority's consideration for sign-off by the appropriately qualified and competent person.

MR HARRIS: Extraordinary. Okay, on that note thank you very much for your presentation today. We'll certainly consider it in detail for the final report.

MR LINDWALL: Yes, thank you.

MR HARRIS: We appreciate your time and effort.

MR EASTLEY (BSA):   Thank you, Mr Chairman. Well, we'll leave you with our conviction that the Commission should recommend that the Australian government partner with industry, to coordinate activities as described in the National BIM Initiative Report. We understand that the property and construction sectors will fully support government's leadership in the adoption of digital technologies and processes. It will improve efficiency, reduce waste, drive innovation and increase transparency in the delivery of infrastructure procurement. We thank you for the opportunity to address the Commission today and we invite you to a demonstration of the technology at your convenience.

MR LINDWALL: Thank you very much.

MR EASTLEY (BSA):   Thank you.

MR HARRIS: All right, now we're down to our final presenter which is John Morandini. Could you identify yourself please for the record?

MR MORANDINI: Yes, I'm John Morandini. I've made a submission, an individual submission. I come with over 40 years of experience across several infrastructure agencies in New South Wales and I made my submission to the inquiry in February, identifying the particular road and transport concept that can reverse the longstanding trend to ever increasing road congestion, traffic congestion in Australia's large cities; and I just wanted to highlight that matter and I'm happy to take your questions straight off if you wish, or I'm happy to talk a bit more about it.

MR HARRIS: Okay. We've heard a bit about rail earlier from Philip Laird and now we're on buses, much with a New South Wales focus. You appreciate we're a national inquiry so we're not trying to endorse particular infrastructure and issues in particular locations but we are interested in the lessons that can be drawn out of particular proposals for reform at both the national and jurisdictional, state jurisdictional level. The concept as I read your submission is very much around the idea that you can substitute a substantial bus fleet upgrade for road transport in motor vehicles. Has this proposition been considered more widely within New South Wales, for example? I'm not familiar with the project, I have to say.

MR MORANDINI: Sure. The reason I raise it is that I'm not aware of any working up of this concept into a position where it can then be compared in the project selection processes to the favoured other short-listed projects. So we go in cycles where big projects come up, we've just had a massive rail project gotten under way in Sydney for example and a commitment to a very large new road project also in Sydney. Those are all locked in and I suppose the betting is that the next massive infrastructure project in Sydney will probably be a tunnel under the harbour.

So these things roll along, maybe one a decade, sometimes more than one a decade but at no stage has the major bus propositions I've proposed been worked up. Where I'm coming from is that one of the things that I did in my career was spent a decade working on the Olympics and I worked at the planning, the implementation and operation stages of the Olympics and very largely on transport matters, so from the very outset. Now, that's a case that this particular proposition was actually taken up in the Olympic context but other than that there's been no case of it for everyday traffic right across the metropolitan area as I proposed.

If I could just talk a bit about the Olympics, there was a crossroads there a decade before the games happened as to whether Sydney would even bid. There had to be some sort of planning in place to decide that obviously. In the transport area there was talk about accelerating one of the many wish list projects forward to be ready in time for the Olympics, and the one that had a particular lot of enthusiasm behind it was a parallel rail line from the CBD of Sydney to Parramatta but actually routed through Sydney Olympic Park and obviously that would have been a multi-billion dollar project.

It was a choice between that and actually saying wait a minute, we know we're going to get double the number, double the demand on public transport during this Olympic period; we know that if we don't do something about traffic it's going to be horrendous because it's already difficult, how can you possibly load up a road system that's already struggling and causing much traffic congestion. So the alternative to just choosing the big infrastructure project was to say we should look at operating the existing infrastructure much more productively than what we do from day to day and that is the point that I am driving at here. That is actually what happened. Again it is not just looking at the public transport side of things because when you are looking at a whole city, and the Olympics did impact upon the whole city in a way that I don't think is generally appreciated - it wasn't just a matter of sorting out traffic at Homebush Bay and the city itself; it was a thing that impacted right across the city.

From that perspective roads across a whole city move 80 per cent of people. Public transport picks up most of the rest. We knew a lot had to be done about public transport but primarily the roads had to really pull their weight as well; otherwise it wasn't going to work. This is the problem with general sorting of these issues. Sometimes there is a focus on public transport but it is really leveraged off such a small percentage of the overall problem that once that project is implemented, it doesn't seem to have the impact that everyone would have loved it to have.

To get roads and public transport working well, the main component with the Olympics was about 500 kilometres of restricted parking, kerbside parking, which was a key thing. I will talk about the lessons coming out of this too, if I could. That particular initiative has some currency ongoing, not just in the Olympics, but it will take a long time to do anything special with eliminating kerbside parking. It is looped back into providing more alternative parking and more public transport anyway so in a way it worked well for the Olympics but it is a long-term proposition for general application.

The next major thing that happened in the Olympics was 24/7 train operations. That is an important initiative. It certainly produced a lot more capacity but it also isn't going to happen quickly. There is a lot of things maintenance-wise especially that would have to change for that to happen. Some foreign global cities do 24 hour operations, say, from midnight on Friday night through to midnight on Sunday night and maybe that is something we could take on board here in a foreseeable time frame which would have a significant benefit.

Working on through these Olympic themes that made the Olympic operation so successful, the next major initiative was importing thousands of buses. You know, Sydney has 2.6 million cars and you can only get a portion of those cars on the road at any one time because the roads just can't take any more so it is finely balanced anyway. Sydney has around about 4000 buses across the metro area, but during the Olympics we actually borrowed thousands more buses from regional areas of New South Wales and also a large portion of them came from interstate as well. We were able to borrow them for a window of about three weeks with school holidays, juggling things very precariously, but, anyway, it was able to happen and it had an amazing effect on the overall success because the rail system was running flat out.

Parts of the rail system were being diverted through Olympic Park, so there had to be bus replacement in places. There had to be bus routes set up to basically take the extra load of spectators moving around the city, of officials moving through the city and thousands and thousands of athletes who had to get to training venues that were actually spread out all over the city. These thousands of buses were actually a big part of the success story.

The fourth point in the Olympics was that there were much more intensive communications with the public than what we would normally have, using all available mediums to communicate with the public. That is actually a very important facet. The public responded overwhelmingly to being engaged and made us realise that that was such an important part of the city working better.

I have said, "Look, you can have communications. We can have better communications every day." Some of the other things we did during the Olympics can't happen every day, at least not quickly, but the bus proposition - and it is a major proposition. It is not a specific thing that says, "Look, we'll have a few more bus routes here and there." It is something that says, "We've got several hundred thousand cars on the road in peak hours and the road system is jammed up in those peak hours, be it morning and afternoon, Monday to Friday, or middle of the day Saturday and middle of the day Sunday. We are really jammed up."

It is a blending operation, if you look at it, because there's a lot of vehicles on the road. 80 per cent of them are cars. Do you know what percentage of them are buses in Sydney? .7 per cent - not 7 per cent - .7 per cent of the vehicle kilometres in Sydney are buses. Now, the national average, and this includes capital cities and the bush, is .8 so there are actually more buses on the road outside Sydney than there are inside Sydney. That is a pretty telling statistic and that is what we addressed during the Olympics. We upped that .7 per cent to what would pan out if it was running continuously. It is something like double that, so it might have been around about 1.5 per cent - thousands of extra buses. A scheme like that would cost, according to my estimates - and I think I am somewhere in the ballpark - something comparable to one major rail infrastructure corridor project or one motorway corridor project so we are probably talking somewhere in the range of $5 to $10 billion to put that scheme in place.

The thing about it is that instead of it largely benefiting a particular corridor, it benefits the whole metro area and that is why I say you can turn around traffic congestion definitively and that really hasn't been done in my lifetime. It has been a gradually creeping thing the whole time. That was the scheme I am just trying to highlight and hopefully somewhere along the lines it will be taken up to the point that it gets into the project selection process, because I think really our current project selection processes for new projects heavily favour new infrastructure and the track record is telling us that that isn't solving the problem. Those new infrastructure projects are not so much about solving traffic congestion and public transport capacity shortfalls. They are more about supporting renewed urban development, urban renewal and in some cases existing development. That is what they are more about and I don't think that is crystallised in most of the discussion on new infrastructure.

What I am saying is that as you have said in your report, judicious project selection is a big issue. What I am saying is very much in that sphere. If I could just refer to my notes - and the other thing is that we have got this vast pool of existing infrastructure. Everyone says we are infrastructure poor, but it's actually a vast pool of infrastructure that if it can be used more productively, it makes a very big difference. That's the key points and I have gone into some other points too.

MR HARRIS: In bus planning traditionally you have to take a lot of account of route structures. It's not just a question, therefore, of putting more buses on the road. It's a question of applying them to routes where there is capacity available. I'm not that familiar with Sydney's bus system but I'm reasonably familiar with Melbourne's and your submission was discussing middle and outer urban areas and I'm presuming, therefore, you're talking orbital routes rather than routes in and out of the CBD because if I understand it correctly - as I said, I'm not familiar with Sydney but road space in peak hours in Sydney is pretty limited for additional vehicles of any kind.

MR MORANDINI: Yes.

MR HARRIS: So until you, as it were, extract the cars, you can't add the buses, but you can't add the buses without convincing people to get out of their cars, so it's a bit of a chicken and egg. So do you think orbitals more than radials?

MR MORANDINI: Yes, orbitals. Some people call them cross-regionals. That would be the main thrust of it. Whether you're in Sydney, Melbourne or Brisbane or nearly any other city, CBDs tend to be where the city has public transport. That's where the public transport concentrates. That's where even the buses concentrate now. Nearly all our buses are zooming around in the very congested centres like the CBD and in the other district centres that we have.

That's all good. I'm not suggesting that should stop or anything, but what I'm saying is that where you have public transport rich places like the CBD, 80 per cent of the transport is public transport and only 20 per cent is cars, but you go out into the whole metro area and that's where you should look because that's where the traffic congestion is being generated from. It's 80 per cent cars and a much lesser percentage public transport and if you can start to address that position out there, you start doing some wonderful things.

That's really what happened in the Olympics. It was a bit of a light bulb moment of let's not spend our money on that big infrastructure project. Let's spend what happened to be a much lesser sum of money on doing the operations and on getting the whole metro area working better. Traffic flows during the Olympics were - it was hoped that this strategy would reduce traffic flows by 5 per cent, perhaps a little bit more, but in reality the stats that the Roads Authority here was quoting were more like 15 per cent, so we actually did a lot better than what we thought.

The point is that you can do that in the longer term. You can get this traffic shrinkage effect. It doesn't have to be 50 per cent. It doesn't have to be 15 per cent as we achieved in the Olympics. 5 per cent over - you know, if a project goes for a decade to get everything up and running, if you can say that we can bring down traffic flows 5 per cent at peak hours, that will actually work magic in places like Sydney, Melbourne and Brisbane would no longer have traffic and transport as the number one issue at the state level if that sort of situation could be replicated. I see that there's no reason that it can't be, having been through the experience of doing what was effectively a full-scale prototype during the Olympic operations.

MR LINDWALL: In the Olympics did you use dedicated bus lanes? Were there new dedicated bus lanes added for the Olympics? I guess there were.

MR MORANDINI: There were a number of arterial roads where kerbside parking was taken away and lanes were created and they were given over to - about half the kerbside lanes that were treated in that way were given over to general traffic, so there was no particular restriction on them, and another roughly 50 per cent were designated Olympic routes and on those kerbside lanes it was just accredited vehicles - I mean, there were thousands of motor vehicles accredited for officials and athletes and whatever, so those cars that were accredited, all regular public transport buses, cycling was allowed, taxis were allowed, so it was a mixed bag. It wasn't a strict creating artificial lanes.

In the Olympics the kerbside parking was very important because we had such an overlay compared to what we do day to day normally. If you just take what we do day to day normally, you don't have to have one upon another upon another sort of initiatives, so we had 24/7 trains, we had all this carparking removed off arterial roads, we had thousands of extra buses and we had all this communication. What I'm saying is that you have got the luxury when you're looking at the long-term position of maybe picking one or one and a half of those sorts of initiatives and going with it and working it up.

MR LINDWALL: I have got one more question, a quick one, about - there seems to be a vogue for light rail at the moment. Buses seem to be a lot less expensive than light rail. Why do you think that trams and light rail seem to be particularly popular? The ACT government, for example, is proposing one at the moment.

MR MORANDINI: I think it's natural. I think if we had our way we would have a high-speed rail link in now. We would have train lines whizzing around everywhere, underground if necessary. We would have lots of light rail on the surface. I think that's just natural. It's sort of a quality sorting of what is more desirable, but I think what we have got in reality is tipped up the other way. We have got 80 per cent cars and then we have got buses and rail and some light rail coming back as well. If you come from Melbourne, obviously you have kept your trams, although even in Melbourne they don't operate to anywhere near the capacities that they used to many years ago.

MR HARRIS: You're not allowed to hang off the side any more.

MR LINDWALL: That's true.

MR MORANDINI: I think that given what we have got, it's nice to try to jump to the best one first, like let's have the high-speed rail, then let's have all these rail lines around the cities, and then let's have light rail if we can. We need to sort of say, "Okay, look, we have got cars. What we should be doing is trying to manage that situation by bringing in a lot more buses right across the metro area," and that's a simple fix because it's metro-wide, it's not one or two lines. Then where the bus lines are high capacity, you might eventually then start converting those into light rail because light rail can actually - if you give it a right of way where buses used to be, it can actually shift more people. So there's that sort of approach.

I think also what's happening with light rail could be better because it would be better if we focused light rail into the very high density areas and what we are tending to do - it's a bit of a worry in my book because it's going to take a lot of funds - is we tend to be saying, "Let's do a light rail from the CBD to this university 10 kilometres out, or from Parramatta to Macquarie Park, which is another 10 kilometres," where we could spend our money very efficiently by just taking places like our CBD, Parramatta, Liverpool in the case of Sydney and having relatively confined light rail systems that are high-frequency shuttles but they go two kilometres or three kilometres out so they pick up lots of bus routes. They pick up lots of parking but they take congestion out of the centre of those district centres or CBDs. I think that's the way that light rail ought to go and it is probably not the way it is going at present, not with new projects anyway.

MR HARRIS: I think we have reached the end of our public hearing process, unless anybody needs to make an intervention from the back. As I said earlier today, the opportunity comes at 6 pm for anybody, or thereabouts. If you would like to come up - - -

MR MORANDINI: Thank you very much.

MR HARRIS: Thanks very much.

MR JENNINGS (RICSO): My name is Collin Jennings. I'm the government relations manager for RICS Oceania. I apologise for not being here this morning, due to circumstances beyond my control, but I have spoken to my colleague Roger Hogg who made his presentation. Just very quickly, we just wanted to make a couple of points in clarification, if we could, to the earlier submission, just to make sure that we have put the record straight.

MR HARRIS: Sure.

MR JENNINGS (RICSO): One of the points that Mr Hogg made to me was in regards to a question around about IP in the BCIS, so we just wanted to clarify the issue there. IP doesn't actually exist in the data itself that is collected by the client but, rather, is a creation of the subsequent process. Thus, the IP is capable of being produced in-house by the consultant on the project, and similarly if the client chooses to request the consultant to provide data to BCIS, then BCIS can produce IP from that data.

Another example is that where the consultant wishes to provide the data directly to BCIS, in this example the client must first agree to that course of action. Essentially if the client, in this case the government, instructs the consultant to send data to BCIS, the consultant also keeps the data. BCIS takes that data and creates the benchmarking tools as it already exists in the infrastructure we have already built and then can provide that back, so there isn't a clash essentially of IP because it won't exist at that initial point. We just wanted to make that clear.

MR HARRIS: You said you had another point to clarify.

MR JENNINGS (RICSO): Just very quickly, Mr Hogg is the manager of BCIS and not over questions about immigration that I think were raised in our submission.

MR HARRIS: Okay. They were more of general interest. I don't think it was going to bind you in terms of our reportage. Anyway, we acknowledge that.

MR JENNINGS (RICSO): Fantastic. The main issue, very quickly, and I don't want to hold anyone up, was to just clarify the IP issue.

MR HARRIS: The IP issue, which is useful for us because I think we did ask about that this morning.

MR JENNINGS (RICSO): Yes. Hopefully we can do that and are certainly quite happy to again send some more detailed information about that to the Commission.

MR HARRIS: Thank you very much. One more?

MR WOODWARD: One more. My name is Roger Woodward. I am a chartered accountant speaking from a purely personal perspective. There are just a couple of issues that I wanted to touch base with. One was that probably sometimes the best infrastructure is the one that you don't build.

MR HARRIS: Yes.

MR WOODWARD: Obviously that comes back to your cost benefit analysis but I think that is something that should really be emphasised.

MR HARRIS: We may quote you. You may be the last person to speak but we have actually said this without the general succinctness of "sometimes the best infrastructure is the one you don't build".

MR WOODWARD: There are a couple of other issues that flow from that and I understand they always have a political dimension. I accept that as just part of living in a democracy. I think that is where we should consider ourselves incredibly lucky, but a couple of those aspects are: when it comes to financing, I am very much a supporter of the mineral resources rent tax being part of that funding for infrastructure. How that is done I know is a political decision that will be determined in government but to me that makes a logical nexus, matching what is going out of the country to what will benefit all Australians. I think that is an area that could really be utilised much more effectively.

There are a couple of other aspects when it comes to congestion. I mean, it is just so obvious. I travelled in by train this morning. The train was empty. The cars are congested on the roads. That comes back to fiscal policy and again that is a government issue but effectively what happens through the fringe benefits tax is that you make cars and motor vehicle transport very cost effective and salary sacrificing for a car benefit through the fringe benefits tax increases the amount of congestion that you have on the road and then you go to spend money to actually increase the infrastructure to make it less congested and then you are going to impose - and I don't want to put words in your mouth - a user tax to try and reduce the amount of congestion. You have got one policy that is actually encouraging it and then another policy that is trying to - - -

MR LINDWALL: That is not atypical in public policy. You will see lots of examples of that.

MR WOODWARD: But for me that comes back to the red tape. It is a political decision. I fully understand that, but looking at it as an accountant, it is silly. Then you have the situation - - -

MR LINDWALL: Mostly we are trying to apply price in a way that ensures consumers know the cost of what they are consuming. This is actually not therefore a tax debate. There are tax sources in this debate. It is primarily a price issue.

MR WOODWARD: It is all interrelated.

MR LINDWALL: It may well be but the difference between a tax and a price, amongst other things, is that a tax can be whatever you want to make it; a price should relate to the cost of the infrastructure divided by the number of likely users.

MR WOODWARD: I look at something like the M5 with the cash-back. You have got one price that is charged and that is what is used for the modelling. Then the government hands back a rebate.

MR LINDWALL: Except the GST.

MR HARRIS: The general model that is being considered here is not a model that relates to a tax. That is what I want to try and clarify.

MR WOODWARD: What I am saying is that whenever you put a user charge, if I wanted to change the definition, to me that is a tax.

MR HARRIS: That's true, but I distinguish between user charge and price as well. User charge - I am on the public record for this in speeches I have said - is equivalent to, "If I build it, you will pay"; whereas a price is something where you have a choice about whether you pay or not. There is a big, big angle of our report on price. There is too much presumption in the commentary around this just being a substitute for a tax.

MR WOODWARD: I mean, we are incredibly luck in this country to have independent people step forward and make a recommendation. It doesn't mean the recommendation will always be accepted.

MR HARRIS: No.

MR WOODWARD: But anything you can do to simplify what is a system that obviously has weaknesses - we can debate it; we can disagree with it, but let's try and simplify what is something that has incrementally got more and more confusing. As a chartered accountant, I can sit down and ensure that your business doesn't pay fringe benefits tax but you have still got to fill out all the forms. You have still got to keep a log book. You can get a refund from the government because they want to give you a rebate because they want you to be on an equal basis to those business people who get a tax deduction.

MR HARRIS: There are those incentives created under such a system.

MR WOODWARD: That's why having independent people make recommendations that say, "This is silly. Fix it" - thank you for your time.

MR HARRIS: Thank you very much. I will otherwise declare the public hearings adjourned.

AT 5.49 PM THE INQUIRY WAS ADJOURNED ACCORDINGLY