

CORRECTED VERSION

SELECT COMMITTEE ON TRAIN SERVICES

Inquiry into the factors leading to and causes of failures in the provision of metropolitan and V/Line train services

Melbourne — 5 October 2009

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Professor G. Currie, chair of public transport, Institute of Transport Studies, Monash University.

The CHAIR — I take this opportunity to declare today's hearing open and to extend a warm welcome back to all the members of the committee and the Hansard people. Today's public hearing of the Legislative Council's Select Committee on Train Services is inquiring into matters in relation to the factors leading to and causes of failures in the provision of metropolitan and V/Line train services. I welcome Professor Graham Currie, chair of public transport, Institute of Transport Studies, Monash University — a gentleman who is known to quite a number of us, I think.

Professor Currie, all evidence taken at this hearing is protected by parliamentary privilege as provided by the Constitution Act 1975 and is further subject to the provisions of the Legislative Council standing orders. Therefore any comments you make outside the hearing may not be afforded the same privilege as they are in this public hearing. All evidence is being recorded by Hansard, and witnesses such as yourself will be provided with a proof version of the transcript over the next couple of days to have a look at. Corrections to Hansard are only to be made in respect of perhaps misspellings or confusions and obviously not to the substance of that evidence.

Professor Currie, would you like to make any opening remarks before we proceed on to some questions?

Prof. CURRIE — The only opening remarks I was going to make were to go through my written submission. May I do that now?

The CHAIR — Yes, certainly.

Prof. CURRIE — My written submission responds to your invitation to make a submission to this inquiry. It starts by asking the question 'What you are looking at?', because your remit is to examine causes of failures of rail services. I have presented some publicly available information about the punctuality and reliability of trains over the last 10 years or so, and from that I have suggested that there are two major issues the inquiry should be examining.

The first is the long-term decline in the punctuality and reliability of rail services in Victoria from about 2002, and the second is the causes of the failures in early 2009 which were considerably above previous trends. I think the key question for the committee is the causes of these declines in performance. There has been much debate in the media about this, and the rail operator Connex has been heavily blamed for much of this. From my perspective, clearly, as the chair of public transport I am very interested in these matters. I am not aware of any publicly available information that can be used to either prove or disprove that the rail operator, Connex, was the cause of this.

Here are a few facts from my own observations. The performance of both V/Line and the metropolitan railways has shown a persistent decline during the period I was analysing, and of course Connex was not responsible for V/Line's performance: V/Line is operated by the government. In addition, the decline in performance started in 2002 when half of the metropolitan railway operation was run by Bayside Trains, formerly run by National Express. I just mention this because I think to understand the facts of what is happening we have to go beyond what has been said in the media to really understand why these things are happening.

In my opinion a major problem is likely to be long-term lack of investment in railway infrastructure. In addition, I have suggested that another cause may be the pressures of increased patronage. In my written submission I presented some data on ridership growth on both V/Line and metropolitan railways, and it showed consistent correlations with poor performance in terms of punctuality and reliability.

Why would increased patronage be a factor? Railway planning knowledge tells us that one of the critical factors in the performance of railways is what is called station dwell time. There are many other factors, such as the separation times between trains, the number of passengers on trains, the size of individual cars and so forth, but none of those factors which comprise real capacity have actually changed over the last 10 years, whereas station dwell times, I believe, would have changed. I must say there is no printed or published information about this matter, but certainly the research shows very clearly that the volume of passengers and dwell times are heavily related.

In addition, railway systems, particularly older railway systems, have a finite capacity, and as the railway grows and the volume of passengers grows and as you get closer to that finite end capacity it just takes small things to make the whole railway fall apart and become less reliable. The railway is very old and vulnerable to

propagation of delays. We have many sections of the railway with single lines, which means that trains travelling in both directions have to wait for each other. If a delay occurs in one part of the network, this can propagate through to create these conflicts on single-line sections, which then propagate through later on to the rest of the network.

I put it that these constraints are symptomatic of long-term lack of investment to try to do something about this, really because governments have not seen it as a priority to do something about it. They have had other concerns on their mind and have really funded a railway to maintain itself at its existing level of reliability into the future, rather than trying to get to a new level of reliability.

Early 2009, however, stands out as a particularly poor point in the performance of the railway. It appears that abnormally high temperatures in January and February caused track buckling and a failure of air-conditioning systems in the railway system. It is entirely possible to design railways to do something about that, and there are plenty that have been. The question is why we are not in that area. As I understand it, this is yet another example of where we have not decided to design a railway that would perform under those high temperatures. If we wanted to do something about that, we could, but it is a question of putting our dollars in the right place.

At the time there was much discussion in the media about the failure of the railway operator, but in my opinion it really was a failure of infrastructure and our long-term historical decisions that have gone into funding what is there. I completely agree that at the time the railway operator withdrew services, particularly those without any air conditioning. Railways have a duty of care for the people they carry. In particular, with up to 1000 people per train it is possible that there will be an older person or somebody with respiratory problems, and you have a duty of care to carry them in safety.

There are elements of duty of care which were not well managed in January and February. In particular the media that was available was about blaming either the operator or governments. At the same time the media had a duty of care to inform people about what was happening. I believe that could have been done better. I might look at correlations with the bushfires that occurred and the way the media went out of its way to try to inform people about the problems rather than blaming someone. That was not the case with the metropolitan railway.

Another observation from my experience in Melbourne — I have been here 21 years — is that Victorian railways have always failed in January and February. There have always been failures as the temperatures have grown, but because it is a holiday period we have not noticed them quite as much.

To summarise, I think there are two major long-term issues the committee should concern itself with. The long-term decline in performance and the significant problems that occurred in January are one issue. Although much comment has gone on in blaming the rail franchisee, Connex, I think the problems go beyond that. I might say that if they do go beyond that, these problems are likely to be experienced again next January and so forth. Growth in real demand has had an impact on this. Removing trains from service because of air-conditioning failures was appropriate.

An important lesson to be learnt from all of this is that we need to substantially invest in our infrastructure if we want it to perform in these contexts. I think rail system failures are going to continue to occur. I would lastly just like to point out that I think we have very poor information available on these issues. The railways cost billions of tax dollars every year and are a major issue in the performance and economic efficiency of the city. I would like to have seen more information available about why failures occurred and what people could do about them.

I will close by saying this committee is a great idea. I do not know who put it together, but it was very fortuitous, and I look forward to hearing what you find out about what is really happening with our railways.

The CHAIR — Thank you, Professor Currie.

Mr LEANE — I have a couple of questions on your verbal submission. You spoke about increased patronage, which does affect dwell times. I do not think anyone would say that increased patronage is a bad thing. There has been some success in increasing patronage which has affected the reliability of the timetable. Do you see there being an opportunity for that to be alleviated with the new trains — 30-odd new trains — being introduced next year and obviously a new timetable?

Prof. CURRIE — With the 30 new trains there are many aspects. The additional number of trains will help, because it will increase the capacity of the railway, so there will be more seats effectively to get people on it, and that will help with crowding. However, track capacity is finite and fitting those trains in is going to be hard. Also, putting more trains in puts pressure on the railway system. Until you can expand the number of lines it would tend to put pressure on the system in terms of its reliability.

Another aspect of the new trains is that they could be designed to better cater for dwell time delays. You can have larger doors, more doors and doors in the right place. You can manage boarding and alighting at stations. In Asia frequently we have separate boarding and alighting points to try to reduce conflicts on boarding. There are many opportunities with these new trains. I completely agree with the idea of enhancing capacity by expanding the service, but I do not think that is going to get us out of the problem. I think it is a helpful addition.

Mr LEANE — One other thing you mentioned was that rail failures will continue to occur and that in a perfect system you are always going to have things outside the control of the operator of the system. Is that fair to say?

Prof. CURRIE — With the infrastructure we have now and the infrastructure we can build before next year failures will still continue to occur. It is possible to design railway infrastructure to be completely failure free; however, the investment to do so would be of national scale. The government has the difficult problem of dealing with balancing its investment in infrastructure investment and its investment in expansion. It is a hard call. I do not have any real answers for you other than to say we could have completely designed a railway not to fail in January. I think it was possibly even reasonable to accept some degree of failure. Temperatures have been increasing consistently over the long term. To have four or five days of those sorts of temperatures is extremely unusual and rare. Do we really put billions of dollars into a one-off occasion like that? These are the challenges of governments, which I commit myself to try to help you with, but I do not know if I know all the answers.

Mr LEANE — You did make reference a few times to failures in the rail system. Regarding my previous question about things outside the control of the operator, failures in the system could be caused by copper theft — someone stealing the cables or something like that. Would you agree it would be pretty hard to have a system that is infallible?

Prof. CURRIE — It is possible, because we know that the Asian railways — Singapore and Hong Kong — are extremely reliable; they are built for purpose. Our problem is that ours is not built for that purpose, and retrofitting it, given its scale, would be a major problem.

Mr BARBER — In your analysis you are pointing to an overall correlation between increased ridership and declining reliability. You seem to suggest that loading times might have been the cause and effect. Have you done any analysis looking at how ridership at particular times of the day on particular lines at particular points and on particular days correlates directly to lack of punctuality during those same windows to narrow down your cause and effect, if you like? Or have you measured dwell times to see that they are in fact the cause during that time? All you have got here is a correlation.

Prof. CURRIE — I have. You are quite correct. In fact I would like very much to do the type of work you are referring to. The simple answer is no.

Ms HUPPERT — Professor Currie, I want to pick up on something you mentioned in an answer to Mr Leane's question relating to the new trains, which was fitting trains onto the system. We heard a lot of evidence last time we met about underutilisation of the current system and how we do not need to build new railway lines but we need to use the loop more or new stations more, but you seem to be indicating that fitting new trains onto the system as it currently is is going to be an issue.

Prof. CURRIE — Yes. There has been a debate about investment in a metro going forward. Of course this is a gigantic piece of investment, so it is appropriate that we question it. I do think we are reaching a finite capacity. I do think there is something in the proposition by people who are debating this that there might be ways of increasing the capacity, but I do not think there is anything substantial in it. I really do think we are at a point where we need to go to a next level with this, so I feel that investment in a metro system is an appropriate next step. It is a big step for the city, and we should be scrutinising this, I think.

Why do I think that? The scale of change which a metro would make to the city would be substantial. I think it is a very efficient investment compared to road investment in the city centre. My own work has suggested one new railway tunnel would have the impact of something like 24 or 25 freeway lanes equivalent. None of us is going to build five more West Gate Freeways to try to get to the city. It is a very efficient way forward.

One interesting picture about the supremely reliable railways around the world in the major cities is that they are largely built for purpose. Singapore and Hong Kong have been built to be large-capacity carriers. Our metropolitan railway is a railway of history and has slowly developed over time and been put under pressure. We still have mixed operations on it with freight trains on it. We are trying to use it for so many things, whereas to build a completely new system built for capacity would have a lot of advantages, although it would be expensive.

My view is we need to go to that next level. I think the city is growing in such a way that it would be a fundamentally positive picture of the city. Australia's growth in the last five years has been concentrated on our major city centres. Effectively our railways are full to the city centre. There is not a lot of opportunity to increase road capacity to get people there, so I think it is an important part of the future of the economy.

Ms HUPPERT — So what you are talking about really is the type of metro system that has been foreshadowed in the Victorian transport plan then — putting a tunnel under the city and separating out the railway lines to avoid the conflicts around the loop; that type of issue.

Prof. CURRIE — That is correct. I must say when this was first debated I was of the view that we would have a separate metro system which would be more like an underground system like in London or Hong Kong. What I mean by that is that it would operate its own right of way and would not operate in conjunction with the rest of the railways. What is envisioned in the Victorian transport plan is actually a metro system which does operate with the rest of the system. It would have vulnerabilities. For example, we have single-line sections on the Cranbourne line. So the metro system will actually run trains which would run with the Cranbourne line, so it would be sensitive to that. However, since a metro system was first suggested a lot has happened, and that has been only in the last five years or so, particularly with the growth in demand. The new challenge has been capacity.

The package of measures included in the Victorian transport plan in the west — I forget what they are calling it these days; there is a package of measures which is now funded by the commonwealth — is a very clever way of trying to deal with the problems in the west. I think that probably is the major problem. There is a way forward where you could have a separate metro, or there is a way forward where you could integrate the railway. We have a choice.

Ms HUPPERT — It is a cost issue to a large degree, is it not?

Prof. CURRIE — The costs here are gigantic. It is very important, I think, that the government and parties from all sides are aware of this and the scrutiny of it.

Mr O'DONOHUE — Professor, just to tease that issue out further, do you want to make some comments about timetabling and signalling, because previous evidence we have had has indicated there are significant efficiencies yet to be achieved through proper timetabling, improved signalling and the like?

Prof. CURRIE — I have not seen any evidence of this. One of the factors that affects railway capacity is that you have safety in separating trains from each other. The train performance changes over time for lots of reasons, not just technology and ridership; in addition, things like disability access can affect capacity in city stations. Of course our signalling systems, which are mighty expensive pieces of infrastructure, are built once, and then all of a sudden you get these new demands on them and they are not necessarily that effective for today's situation. There are signalling systems you can adjust; they are very new and expensive. I think we could probably improve performance by adjusting our signalling, but I am not aware that we are going to deal with the capacity problems we have here. We need a 50 per cent growth in our railway capacity at least. That is gigantic growth from where we are now. We are not going to get it from doing small things, in my opinion.

Mr BARBER — I think you told us just before that it was appropriate, from the point of view of duty of care, to cancel those trains with the failed air conditioners. Connex told us something of a different story. It is more or less telling a story of progressive fault-finding processed by the union during a particular time. It made

the claim that 90 per cent of those trains on some of the days you are referring to would not have been cancelled if, in its approach, the union had played ball with the agreed fault management protocol. So what is the difference between what you are telling us and what it is telling us?

Prof. CURRIE — You would have better information than me.

Mr BARBER — From its testimony.

Prof. CURRIE — Yes, okay. There did seem to be disputes going on at the time. To be honest my recollections from history are that part of what happens in January and February is often related to disputes between the union and the operator. All I can say is I think there is a duty of care still. Connex would have better information about that than me. I cannot really comment on this additional information because I am not really aware of the situation. It is one of the many examples of where unfortunately the public is not actually aware of the facts of what is really happening in the railway. I do not think the railway should be part of a dispute and that passengers should be victims of the system.

Mr BARBER — But when you say it could happen again next January and February, personally I do not think that is acceptable. It shut down one of our major economic growth engines for several days. I do not think we can just have the city rebooted every time there is a problem that we do not get to know the answer to. The purpose of this inquiry is to get the answers and possibly put some heat on the government to fix it before next January. So are you saying you cannot really shed any light on that particular aspect?

Prof. CURRIE — On that history, you know, I am an academic doing my research at university. I do not deal with the unions, and I am not aware of the debate within the organisation. I perceive that in the long term, 10 years, disputes between the union and the companies have improved a great deal. They used to be endemic. But at that point there seemed to be a breakdown. I was aware that in the media there was a lot of discussion about who was to blame in all of this. Again, it was a part of the blame game — the media blaming the government, the media blaming the operator and the operator blaming the union. It did not seem to me like a very constructive way forward in all of that. At the end it seems to me that passengers were the last people to be considered in the whole thing, whereas significant issues were happening on the railway and there was a danger of people being left behind. It seemed like no-one was really on top of what was happening.

Mr VINEY — We had an outbreak of truth then, Professor Currie, because Mr Barber said the purpose of inquiry was about putting heat on the government. I actually thought it was about getting to the truth of the matter about the public transport system; but anyway. You should have told us.

Mr BARBER — We are back to ‘The buck stops here’ semantic hair splitting.

Mr VINEY — No, it is like referring to Ted and Brumby.

Mr DRUM — Thank you, Professor. I am sorry for being a little bit late. However, I would like to go back to our evidence of two weeks ago. We had experts from two different organisations not just saying there was extra capacity within the current system but saying that there was up to 100 per cent additional capacity within the current system. These experts, using the international experience and comparing our current infrastructure system, were simply saying that if you ran it better, you could find 100 per cent capacity and even more than 100 per cent. You are saying today that it is about at capacity or near capacity right now. It is a huge disparity.

Prof. CURRIE — Yes, it is.

Mr DRUM — This committee needs to try to work out what we believe.

Prof. CURRIE — I cannot comment on other people’s work. I can just tell you my impressions, and I have. Certainly if it is possible, it is very important to investigate that and go to the next level of that, to technically review it and get it independently assessed. Because if it is possible to do that — I do not know what they are going to try to do — and if there is any operational way to fix capacity, we should be investigating that.

Mr DRUM — On Mr Barber’s question about the system going into meltdown in the extreme heat, again Professor Paul Mees at our inquiry a fortnight ago effectively had some substantial evidence, again from the air-conditioning operators, going through the actual specifications of the fluid that is effectively used to keep these air conditioners in service. Their operating range is up to 52 degrees centigrade, and yet we are being told

by the operators, when it suits them to tell us, that they do not work over 33 or 35. Again, Professor Mees told this inquiry that 80 per cent or — as Mr Barber says — on some days up to 90 per cent were simply union-based faults that simply were not real faults. He more or less said that we can look forward to this coming summer with total confidence because the union dispute has been put to bed. Do you have any views on that?

Prof. CURRIE — Again I am glad to tell you that you have better information than I have. I did try to find more information about this at the time; I found it out from colleagues who used to be involved in maintenance and so forth. They did tell me of significant temperature barriers to the performance of air-conditioning systems, so that seems to conflict with what you are saying. However, here is one key fact for January: air-conditioning units were only part of it. The other side of it was track buckling. Track buckling, to solve the problem, requires deep pinning of the infrastructure. We have not got very much of that, and to get it will take many, many years, if not 5 to 10 years, so if we get track buckling in January, we will have the same problem.

Mr DRUM — We understand that.

Mr VINEY — In part of my life prior to politics I did quality management consulting. Are you familiar with total quality management on some of the quality issues?

Prof. CURRIE — Yes.

Mr VINEY — I think your evidence was that to get the next level of improvement, if you like, needs a big-step improvement rather than the continuous small-step improvements and that at the capacity levels we are at, even if you can find some improvements out of timetabling and signalling, they are going to be small-step improvements in terms of capacity.

Prof. CURRIE — That is correct.

Mr VINEY — And what is required is a big-step improvement to actually lift to that.

Prof. CURRIE — I think there are two issues here. There is reliability, which is a central concern, and then there is capacity and expansion of the railway. There are links between them, but with capacity I particularly would like to see us go to the next level with something like a metro system, because that would be a step above where we are now.

As to reliability, to some extent we could do the same. I think we have a choice between the two, to be honest. We could invest in a railway to make sure we never ever fail in January for a few days — and that might be a very big investment — or we could maybe use that investment to increase our capacity. And if I was to be honest, I would probably want to go for the capacity, because railways are a wonderful piece of infrastructure. They are very sustainable; they are part of economic growth. The congestion problems we have in our cities at the moment are a very important part of the economy. The railways are doing a wonderful job, and not having them available to work better and provide this capacity is a big problem. So of the two I would go for capacity growth, to be honest, rather than a few days when they are not working. Why can't we have both? I think that is a long-term investment problem — almost historical. That would be my view about why we have never had that. I do not know if I am answering your question, though.

The CHAIR — In terms of the Melbourne system compared to other systems around the world that you might have observed in respect of the high number of grade crossings and the constraint that that places on reliability, service capacity and so forth, I wonder if you have any observations on that.

Prof. CURRIE — Yes. I think we have something like 196 at-grade crossings. They are an unfortunate piece of our history. Sydney does not have any. They less affect the railway than they do the road network, in my opinion, so I am not as worried about them from a railway operator point of view as others might be. However, it is an unfortunate interaction between congestion on the road and the fact that the railways, particularly at high volume, will be closing roads, so I see it more as a road management problem than as a railway management problem. I think there are some minor examples where they do affect the railway, but the major effect of at-grade crossings is on road congestion.

The CHAIR — Although to put more services on the lines it becomes a constraint on the railway, would you agree, unless you are prepared to compromise on the road?

Prof. CURRIE — Unless you are prepared to compromise on the road, yes.

Mr BARBER — I think you made the overarching statement at the beginning that many or most of these failures were due to long-term investment. How would you separate out those failures that are to do with long-term investment versus those that may be to do with short-term management ability?

Prof. CURRIE — It is a difficult technical or answer I have to give you. It needs to be studied by people who are very good at things like total quality management and understanding the performance of railways.

We will have a railway operator joining us soon which is from a supremely reliable railway — Mass Transit Railway in Hong Kong. Its observations should be very interesting. It is part of a management system of this. It might be necessary to have an independent view of these sorts of things. It is a very technical area. Finding experts in it is very hard. There are only a certain number of groups, in my opinion, worldwide that can actually tell you some of the answers to these questions.

I have a really good suggestion actually. There is an international railway benchmarking group called CoMET run by Imperial College London. At the moment the CityRail in Sydney is a member of the CoMET group. It does benchmarking and performance of railways amongst all its various railways. It is a confidential benchmarking exercise that is not made public, so things are a bit more open, if you like. I would have thought it would be a great idea for Melbourne to be part of that. Benchmarking is a really great way of trying to understand the facts of what is happening in all of this and understanding where one guy is doing better in performance than you are as a comparison. I think it would be a very constructive thing for Melbourne to join that system.

Mr BARBER — What I am asking is: trains get cancelled and delayed all the time — there are about 2000 a month in Melbourne — and if the reason given for them is passenger behaviour, wheelchair loading, mechanical faults or interaction with V/Line trains, how do you separate out all those causes into those that you can rightly blame on long-term investment, and therefore suggest that they need a long-term solution, from those that really are in the hands of those who are managing the railways on a daily basis or over the period of a franchise and make them responsible for fixing those causes?

Prof. CURRIE — You do it by analysing facts and by understanding what influences what within the real infrastructure in the operations. I think that is a technical issue. You would always have to model the various factors.

I think franchising gets in the way of this, to be honest. I think having a separate rail operator almost as an adversarial relationship with government and acting in taking a lot of flak means that there are these natural barriers to finding a lot of things out. That is why I think having better information would be useful. But I think ultimately you need to have solid railway expertise behind making a call on these decisions. It is not an easy answer to the question, I am afraid

Mr BARBER — So in terms of us just trying to get a feeling for which of these things could be fixed by next January, which could be fixed easily or by the new incoming operator and which would take these billions of dollars that you are referring to, you are saying there is not enough data available at the moment for you to tell us the answer to that question.

Prof. CURRIE — That is right. You need experienced railway engineers to come and review the whole system independently. I would worry that those from the engineering industry who are experts at this are not the type of people who would make a submission to your committee, because their entire livelihood depends on getting contracts from government. It is a fact. You might get some, but you might get the wrong ones who have got various concerns.

I would have to say that from my experience worldwide, what has tended to happen is you tend to get international consultants to come in independently to review the situation. I have worked in consultancies before, and we have done projects like that in places like San Francisco, the BART system. There is a way you could do it. These organisations are independent of what is going on there in trying to find the facts from the debate, if you like. I do not think you are in that game. However, I do think you have already moved us forward.

Mr DRUM — Professor, we also heard evidence recently about the fact that Melbourne suffers from having different operators within different forms of transport. Freight is different to passenger, and it is different to country, different to trams and different to buses. There is no integration, and there is no connectivity. For instance, you will drop off at the train station, and the buses will have just left 5 minutes earlier. Do you agree that that is actually impacting on the delivery of our system?

Prof. CURRIE — If I were to take an overview of the performance of our public transport system over the last decade, I would say integration was an area which is not doing very well. There are problems in getting good integration in a network this size, because it is not possible to always coordinate with buses for every train at every station. But I do feel as though we could do better than we are doing.

Do I think having one large organisation that does the whole thing would improve it? I am not too sure that it would. I think there are some benefits in having bus operators doing their thing and the rail operator doing their thing, but clearly bringing the two parties together is still a challenge. I am not convinced we have got any answers to that. I am not convinced about having a single agency running both buses and trams. We used to have this in Melbourne. We used to have a lot of bus companies run by the government and the trams and the railway run by the government as well. I am not too sure that we had success then either. In fact my general view would be that a lot of these issues about whether you franchise, whether you have competitive ownership, whether you have government ownership are distractions, in my opinion, from the real game. The real game is having quality planning and good infrastructure. I feel as though a lot of this debate about public and private sector, and nationalisation versus competition, detract from the real game and distract us.

I do not think if we had had a nationalised railway that the railways would have been any better in January and February. I know that when we had a franchised one they were not, so I do not think it matters.

I am part of an international group that run a conference on these issues, the Thredbo conference series on competition and ownership in passenger transport. It has been going for 20 years and has had a lot debate about privatisation and ways forward in this. The general conclusion from that work worldwide is that partnership approaches in the end are what are needed in this. Because we could have the adversarial approach between private sector operators trying to make profits and governments wanting to try to reduce their expenditures. In the end, whether you have it private or you have it public, you need to work together to achieve your objectives. That is my general view about that.

The CHAIR — Thank you.

Mr VINEY — Sorry, I have just a quick follow-up question.

The CHAIR — Very quick.

Mr VINEY — Just following on your point in relation to planning and infrastructure, I invite you to make some comment on the current plans in Victoria. As a government member, I would argue that with that plan we are both dealing with some integrated planning and putting some substantial investment into our infrastructure. You would expect us to say that, but what is your comment on that?

Prof. CURRIE — The current plan is the Victorian transport plan. I did not really feel it was quite as integrated as previous plans, such as Melbourne 2030. However, definitely the investment that has gone in has been very progressive. I do not think people have quite understood how progressive the investment from the commonwealth government has been. My own research suggests the commonwealth government had put about \$1 billion into public transport over the last 20 years, and for one project in Victoria we got \$4 billion out of the federal government, which was very progressive. This project was in western Melbourne.

We are getting investment. Is it a perfect plan? I do not think so. I think we have moved forward towards a metro system but we have not yet committed to the whole thing. To be honest, in my view we will not have a full solution to the capacity problem until we have. I think a real truth for all sectors of Parliament is how much is it really possible to achieve big changes in our transport challenges, and they are very big transport challenges. I do think the plan is a progressive move forward. I think it has many challenges ahead and so does the rest of government, whoever you are. I hope I can help do something better with it.

The CHAIR — Thanks, Professor Currie. As I indicated, you will receive a transcript of this morning's hearings. If there are any issues that arise, particularly, as I said, in terms of misspellings and so forth, please do not hesitate to come back to us on those. However, substantive corrections are a no-no. Thank you for your time this morning and your contribution to the committee's deliberations.

Prof. CURRIE — Good luck.

Witness withdrew.