

EDUCATION AND HEALTH STANDING COMMITTEE

INQUIRY INTO DIGITAL INNOVATION IN SECONDARY EDUCATION



**TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
WEDNESDAY, 18 SEPTEMBER 2019**

Members

**Ms J.M. Freeman (Chair)
Mr W.R. Marmion (Deputy Chair)
Ms J. Farrer
Mr R.S. Love
Ms S.E. Winton**

Hearing commenced at 10.06 am**Ms JANE McNAMARA****Head of NBN Local WA, NBN Co, examined:****Mr SIMON JOSEPH LAWTON****Industry Consultant, Business Segment, NBN Co, examined:**

The CHAIR: On behalf of the committee, I want to thank you for agreeing to appear today to provide evidence in relation to the inquiry into digital innovation in secondary education. My name is Janine Freeman and I am the Chair of the Education and Health Standing Committee. Bill Marmion is the Deputy Chair. Shane Love, on the far end, and Ms Sabine Winton are committee members. Josie Farrer sends her apologies. It is important that you understand that any deliberate misleading of this committee may be regarded as a contempt of Parliament. That is usually for things that are more contentious than this. Your evidence is protected by parliamentary privilege. However, this privilege does not apply to anything that you might say outside today's proceedings. These are the research officers—the important people in the room really. Before we begin today, do you have any questions about your attendance that you want to ask us?

Ms McNAMARA: We have prepared an opening statement, but there are no questions from us.

The CHAIR: If you want to make your opening statement, that would be great.

Ms McNAMARA: On behalf of NBN Co, I would like to thank you and the committee for inviting us today. We welcome the opportunity to update you on progress and answer your questions. NBN has a good story to tell. Next year we will complete the build and 11.5 million homes and businesses across the nation will be connected or ready to connect to the NBN network. At this time we have more than 5.5 million premises on the network, and by 2023 we anticipate having 8.6 million connected services. In WA, the rollout is approximately 99 per cent complete, with the rollout in regional WA also sitting at 99 per cent complete. That means that more than 1.2 million households and businesses will be connected or able to connect to the NBN network by June 2020. and 92 per cent of these premises are in the fixed line footprint. For the record, three per cent are in fixed wireless areas and five per cent are covered by our satellite services. Reaching the 2020 deadline does not mean our job is done. We will keep building as suburbs and towns grow, we will rollout new technology to boost the performance of our network and we will invest to improve customer experience. We will finish the small number of premises that due to a variety of factors cannot be completed by mid-next year.

In relation to this committee's focus on regional education, I make the following points. Ninety-one per cent of non-metro Australia has access to the NBN network, with 78 per cent of these premises in the fixed line footprint. Schools are included in the rollout as a matter of course. In WA, we have approximately 647 schools in the fixed line footprint and 120 in fixed wireless or satellite areas. We are proactively supporting WA education through a number of engagements, including the WA government GCIO, the WA education department —

The CHAIR: What is the GCIO?

Mr LAWTON: It is the government CIO that heads up ICT for the Western Australian government.

Mr W.R. MARMION: Chief information officer.

Mr LAWTON: Correct.

Ms McNAMARA: The WA education department, the GovNext primes, which are —

Mr LAWTON: Atos —

Ms McNAMARA: Datacom and NEC. We are also working with Catholic Education and the Association of Independent Schools of WA. Generally, service upgrade and network expansion options exist for schools and the delivery of education services. Specifically, there is an opportunity for WA education to upgrade schools in the fixed-line footprint to either fibre to the premises or a new product Enterprise Ethernet, subject to certain conditions of course. Simon is happy to elaborate on these programs.

Finally, I would also like to mention the Connecting Australia research undertaken by AlphaBeta and commissioned by NBN Co to better understand the economic and social benefits of the NBN network, what we like to call “the NBN effect”. The research found that following the end of the rollout next year, the NBN access network is likely to contribute more than \$10 billion per year to the Australian economy. It is also estimated that 31 000 additional jobs will have been created and thousands of new businesses, up to 79 000, will have been established. AlphaBeta has discovered that women have particularly benefited from the NBN network. They estimate in connected areas that there are 20 times more self-employed women than in non-connected areas and the number of self-employed women in NBN areas is growing at twice the rate as non-connected areas.

Importantly, the Connecting Australia research also reported on how improving connectivity for Australian students across the country in metro, regional and rural areas is important to help ensure the next generation of Australians are prepared for the workforce of the future, regardless of where they live. For example, it found around 220 000 regional households with children who had below average or no internet in 2014 are now connected to the NBN access network. The NBN access network has increased average speeds experienced by 2.7 times for households with children since 2014, with even higher increases for remote households with children, at 3.3 times faster. On average, primary school students in NBN-connected areas spend 15 more minutes per weekday completing homework online compared with students in non-NBN connected areas. Young Australians in NBN-connected areas are 1.2 times more likely to use the internet for non-formal learning than young Australians in non-NBN connected areas. This is higher for young Australians in regional areas, who are 1.5 times more likely to use the internet for non-formal learning than their non-connected peers. Such findings indicate that in regional Australia the NBN network is helping our nation to make full use of the skills and entrepreneurial spirit that exist in our communities.

Chair, we understand that we are here today to provide some more information, and we stand ready to assist you where we can and offer our ongoing support to work for the committee.

The CHAIR: Thank you very much. I just want to clarify that the inquiry is into digital innovation in secondary education both in the metropolitan area and in regional areas. There are two things you talked about which are working with the Department of Education. Do you just want to expand on how you are doing the work with the Department of Education in Western Australia in metropolitan area access and digital technologies access and regional as well?

Mr LAWTON: Yes, certainly. Fundamentally, the Department of Education has the opportunity to upgrade the infrastructure, which is a predetermined technology allocation by NBN under what we call the multi-technology mix.

The CHAIR: When you say predetermined, is that determined by legislation or is it determined by —

Mr LAWTON: It is determined by NBN under our statement of expectations in terms of our remit to deliver residential broadband.

The CHAIR: The predetermined allocation is based on NBN, but what are the parameters around that?

Ms McNAMARA: So, variety—the statement of expectations that Simon mentioned that the federal government had given us is around ensuring that no matter where you live, every home and business, we must be able to deliver a wholesale speed of 25 megabits per second down, five megabits per second up. That is the mandate that we have been given. We have been using the multi-technology mix, which is a variety of technologies, which includes a fibre-optic technology, or what we call our fixed line, fixed wireless technology and our satellite technology. I guess it is a matrix of criteria that our engineers use to determine which homes and businesses will receive which technology. Every home and business will receive one type of NBN, but that matrix of criteria includes things like maximising as much of the existing infrastructure as possible to ensure that we keep the cost to the taxpayer at a minimum. It will be how we utilise the existing infrastructure and also what is going to be at least cost to the taxpayer, so which technology can we deploy at least cost to minimise that. Usually, it is about existing infrastructure and cost. They are probably the two main ones that we use to determine which technology will be allocated to which areas.

Mr W.R. MARMION: I am an engineer, but my eight-year-old daughter knows more about it than me, and other people on the committee are not engineers, so you might just want to explain the difference between fixed line, wireless and satellite, and the difference in terms of the outcome and what it can deliver in terms of —

Mr R.S. LOVE: I think we all know that.

The CHAIR: Yes, I do know.

Mr W.R. MARMION: Or the bandwidth—how much speed you can get. What are the limitations on fixed line, wireless and satellite in terms of the bandwidth? Obviously, you have to know that for the mix.

Ms McNAMARA: Yes, absolutely. On fixed line, or that fibre-optic, we are replacing a large portion of that copper network that Telstra is responsible for—or has been responsible for. Before the technology mix got changed from fibre—over the course of federal elections and different governments coming into play, the technology mix has changed over the last 10 years or so. That fibre can reach speeds of up to 100 megabits per second down, 40 megabits per second up. That is kind of like the maximum.

Mr W.R. MARMION: Just staying on that, you have the fibre. Are you taking the fibre into the premises?

Ms McNAMARA: Not any more.

Mr W.R. MARMION: Not for schools?

Ms McNAMARA: No.

Mr W.R. MARMION: Okay.

Ms McNAMARA: Yes, but we can come back to that.

Mr W.R. MARMION: Because if you are saying that it is part of the mix, but you have not got the fibre going to the schools, is it really part of the mix?

Ms McNAMARA: The fibre to the premises technology got replaced in the technologies that we were able to use with fibre to the node, and, more recently, fibre to the kerb, but those technologies came in at different points of time, so depending on where the rollout was at would determine how the schools were impacted. Some schools would not have been in a fixed-line footprint either. In

terms of fixed wireless, that can reach up to 50 megabits per second down and 20 megabits per second up; right now, our Sky Muster satellite technology is 25 megabits per second down and five megabits per second up. It is important to note with the innovation that NBN Co is always looking to offer new products on the technologies. So, for example, we recently launched a new product on Sky Muster, which is called Sky Muster Plus, which can get above that 25 megabits per second.

The CHAIR: But that is not for streaming videos or online gaming. One of the things that we have been looking into is the application of videos and gaming for educational purposes, in terms of engaging students who are disengaged. Even though you have Sky Muster Plus, you have not broadened it to that. Is there a reason for that?

Ms McNAMARA: Well, look, I think, if we look at the percentage of schools that are not in the fixed-line footprint with NBN technology—I guess, prior to NBN, most of the school sites that are part of the Department of Education or state-based schools had an ADSL connection via Telstra.

Mr LAWTON: Yes, over 800 of the 825 Department of Education sites are actually serviced by alternative carrier fibre. But in respect of your question around satellite, our obligation is the deployment of residential broadband, so Sky Muster is a residential service. It is important to note, across that multi-technology mix, we have developed wholesale products that support committed information rate and symmetric bandwidth, and have a product construct that is designed to mitigate latency and jitter and support applications, as you indicate, around high-quality video.

The CHAIR: I do not think I understood any of that.

Mr LAWTON: Apologies.

The CHAIR: You might just want to take it back, yes.

Mr LAWTON: In terms of user experience, we have specific products that have been developed to support those applications you mentioned.

[10.20 am]

Mr R.S. LOVE: Can I just go back. The remit or the requirement for NBN is purely around residential connections, so there is no specific direction to NBN to assist with education, as such, in any of the original objectives of the organisation?

Ms McNAMARA: Not if you go back to the statement of expectations from the federal government, no. I think the work that Simon is doing with GovNext, the GCIO and WA education is around the value proposition of suggesting that, while you are serviced currently by Telstra through existing services, if you do want to invest in the NBN wholesale access network, then you can do that, but it is at an investment by WA education or Catholic education or whichever body those schools fit within. So we can service them, but —

The CHAIR: But it is at a cost.

Ms McNAMARA: At a cost, absolutely.

The CHAIR: It is at a cost, and currently —

Mr R.S. LOVE: Before you jump in: the schools that are actually on the satellite service, are they limited to the same sort of download limits that residents or another ordinary connection would be? Although the nominal speeds may be quoted at a certain level, once you couple that with the restrictions on total amount of download and usage, it would disappear very quickly. Are there any allowances for schools on the Sky Muster program beyond that normal residential or business situation?

Mr LAWTON: Yes, absolutely. There are a couple of ways we address that, in terms of flexibility of construct. Schools are able to register as what we call the public-interest premise, which gives schools the ability to increase the data download available to them. In terms of our commitment to education, and the wider enterprise and government sector, we are in the process of launching a commercial-grade satellite service offering, which we refer to as a business offering, which has an increased capability with respect to download and upload. We are doing our very best to provide options to education. We understand that connectivity underpins a quality education experience, and we are working collaboratively across government and education specifically to provide those options.

Mr R.S. LOVE: Are those pricings and arrangements, if you like, done on a case-by-case basis? Is there a schedule that you can point to that would show those costs and what might be available?

Mr LAWTON: With respect to our wholesale pricing construct across the multi-technology mix, our pricing is published. It is publicly available on our website. With respect to business satellite services, that falls outside of our regulatory framework, and that pricing is determined by NBN. With respect to the opportunity that WA education has to leverage the multi-technology mix infrastructure to provide an upgrade path to either fibre to the premises or enterprise ethernet, as Jane mentioned, NBN also has the appetite to invest, and we have a framework which essentially allows the Department of Education to leverage their existing operational spend to offset the capital cost associated with any infrastructure upgrade. That engagement and that framework is something with which we are actively engaged with the Department of Education. But as they go to market for network services, which I understand will be hitting the market in the next couple of months, the ICT procurement framework within WA government, which is referred to as GovNext, is supported by three ICT vendors, being Atos, Datacom and NEC. My team is actively supporting those three organisations to scope solutions that provide a fit-for-purpose outcome to WA education.

The CHAIR: You said before that 800 of 825 public schools are currently using Telstra.

Mr LAWTON: Correct.

The CHAIR: If it is going out for tender in the next couple of months, I suppose that is with the expectation of the broader communications IT community that there will not be such a dominance of one particular provider. Is that the expectation?

Mr LAWTON: Indeed, and it is a really good point. It really talks to the value proposition around NBN. We are a wholesaler. We are an underlying wholesale infrastructure network. With an end user like WA education, it leverages the NBN for their network services. What they are doing is effectively driving a better commercial outcome through contestability and having increased choice and flexibility of a retail service provider. In terms of that value proposition, we are trying to drive that message into WA education to enable them to not only deliver a better commercial outcome, but also shorten their change cycles with regard to network services, and by effectively creating an air gap for innovation. As we are talking about connectivity underpinning digital transformation, and an education experience, again, we are committed to providing those options wherever possible.

Ms McNAMARA: Just to add to Simon's point, sometimes the confusion is around, if that spend was to be invested in NBN Co as the wholesaler, it does mean that the schools and WA education get to choose from different service providers, so you are not locked into Telstra as your provider and the maintainer of the network as well. It means that you can regularly change provider if, for example, there is better cost or better service level agreements and things like that. I guess that is one of the value propositions of using NBN Co as opposed to a private network like Telstra for the schools.

The CHAIR: I need some help here to understand this. A school like Mukinbudin operates from networks provided by CRISP Wireless, and they say that is a better service. Is that connected to the NBN or is it completely separate? You are not talking about that being the service provision are you? You are talking about the underlying wholesaler being NBN and then on top of that the provider of the particular platforms or whatever is done in the school is other providers?

Ms McNAMARA: CRISP Wireless—right now the state government is investing in some of the shires. A few shires in the wheatbelt are investing in private solutions that provide a wireless network, or a mesh-type network via a wireless technology that is completely separate to NBN and Telstra. They are a private network that are the retailer and the wholesaler as well. They have built the network and are selling plans.

The CHAIR: So they are in the air whereas you are on the ground?

Ms McNAMARA: Yes, kind of—it is just that with NBN we are responsible for building the network and maintaining and operating it, and then you buy a plan from 150 providers; whereas CRISP Wireless will build the network and will also sell you a plan at a cost. They have a huge amount of investment in maintaining a network, but also providing you with a service. Where we are separate is that we will build the infrastructure and maintain and operate it, but we have providers that then buy capacity from our network and sell you a plan, or Mukinbudin a plan. The RSPs are not then responsible, or your Telstras or Optuses are not maintaining or investing in our network; they are just buying capacity from us to sell it to you. CRISP is very separate; it is completely nothing to do with NBN.

The CHAIR: Okay, but why would they choose to do that? Obviously it is a competitor, but from an NBN point of view, why would they not have come to seek that solution from NBN? My understanding is that the purpose of NBN was to have a basis of service to our community.

Mr LAWTON: Fundamentally, any end user across residential, business enterprise or government does not have to use the NBN. With respect to a service such as CRISP Wireless, if the school believes that it is adequately serviced by that infrastructure, it has the choice to pursue that option. Again, we are working around a wholesale product construct that is fit for purpose and supports the operational requirements of our end customers, including WA education. Should they deem the allocated technology under our access methodology as inappropriate, we are flexible with providing those end users with options. We have an appetite to invest and provide them with fibre options where possible or our new direct fibre product, which currently support speeds up to one gigabit per second symmetrical. Every user's requirements across every vertical sector is unique. We are having active discussions across the different market sectors and trying to make sure that our products align with operational requirements.

[10.30 am]

Mr W.R. MARMION: Basically, you are putting in the infrastructure. Connectivity is the key for a school and how much they can download. Unfortunately, when all the kids are at school they want to download at the same time. But the benefit of that is that when they are at home, they are downloading at different times. If you are putting in a network infrastructure to, say a school, there are obviously some benefits if a school is close to where you have a lot of whip on your fibre, whereas an outer metro school—let us talk just metropolitan area and forget about the country—might be at the end of the line. If that school said they wanted to get fibre, they might say—tell me if I am wrong—that it is going to cost you a far bit because there is a lot of bandwidth close to the CBD but as they get further out, to get the same capacity for a school in the outer metro to one right in the CBD, it will cost more because they have to upgrade a lot of the fibre to get there. Is that correct? Would that be the situation?

Mr LAWTON: In simple terms, yes, that is a fairly accurate comment. I would attest that for any site or customer that is located within our fixed-line footprint—when I say “fixed-line footprint”, I am talking about fibre to the premises, fibre to the basement, fibre to the node, fibre to the kerb, or a hybrid fibre coaxial infrastructure—that is an upgradable infrastructure platform to FTTP or Enterprise Ethernet. Talking specifically around the relevance of Sky Muster and fixed wireless, those allocated technologies are not upgradable to a fixed-line infrastructure. We look at economies of scale whereby it makes commercial sense for us to upgrade a school to a higher capacity infrastructure. Again, as long as that school sits within our fixed-line footprint, they have the opportunity to upgrade. The costings and commercial framework for that is on a case-by-case and site-by-site basis.

Mr W.R. MARMION: If you were an outer metro school and let us say, for argument’s sake, it was more expensive to upgrade, there would be a spin-off benefit to NBN in terms of households around that area and all of a sudden in the evening or in the morning when the kids are doing homework—or are playing games, probably—the customers will be able to get better speeds.

Mr LAWTON: Yes, I would agree with your comment that end users in any market sector upgrading NBN infrastructure will extend the NBN fibre network further into the region. I would also make the comment that the NBN deployment of fixed-line technology, particularly into rural and regional areas, is the first time in Australia’s history that residential and business customers in those areas truly now have a viable option other than the longstanding incumbent in Australia.

Mr W.R. MARMION: I hope you do not think we are being critical; we think it is terrific. However, we have been to some schools in the country and if you are lucky enough to have a school where the kids are really engaged and they want to do lots of downloads of information, when they are all doing it at the same time it is a barrier for their operations.

The CHAIR: One of the comments we heard was that when they do NAPLAN, that basically means that the rest of the school has to get off the computers or limit their computer use. If they upgraded to NBN as the infrastructure and then got a provider, would that be the same? You are saying that they would have better speeds and capacity if they went with NBN? Help me out here—I am not clear on it.

Mr LAWTON: It really depends on the access technology that the individual school has been delivered by NBN.

The CHAIR: By NBN?

Mr LAWTON: Absolutely. If it has been connected to NBN—what that access technology is. At a wholesale product construct, we have developed wholesale products that, in turn, our retailers productise. Each of our access technologies has a maximum wholesale speed that is technically supported. As an example, a fibre-to-the-premise connection will run an asymmetric internet service over one gigabit per second down and 400 megabits per second up; where a Sky Muster satellite service will support 25 megabits per second down and five megabits per second up. For a school that has been allocated a Sky Muster technology, that may or may not be fit for purpose depending on their operational requirement and they may need to be seeking alternative options to align with their operational requirements.

The CHAIR: But if a school is connected to the NBN—let us talk about a metropolitan school, because I do think one of our metropolitan schools may have said this. If they have a situation where they have got NAPLAN, but they have also —

Mr W.R. MARMION: Which is online.

The CHAIR: Yes, it is online. But then they also want to run something else. How does the infrastructure and the service provider ensure that you suddenly do not see the revolving circle of death?

Mr LAWTON: It really comes down to a capacity allocation issue. It is also important to note that, again, we are a wholesaler, so we are providing the underlying infrastructure.

The CHAIR: But you are saying that the underlying infrastructure could mean that that would not happen.

Mr LAWTON: The point that I would make is that user experience on the NBN, particularly with respect to internet services, is controlled by the retailer, not by NBN as the wholesaler.

The CHAIR: Let us say that the retailer bought every bit of capacity that you could provide. Would that be a problem in schools?

Mr LAWTON: No.

The CHAIR: If the retailer bought the capacity and therefore the education department bought the capacity or—my next question is: if the federal government said, “Actually, as part of our agreement with NBN, schooling is part and parcel of that”, would that mean that the delivery of service had to come into that like it would into housing? What would that increase in terms of your responsibilities to schools?

Mr LAWTON: The comment I would make is that it would increase the available bandwidth to schools that is available for schools that sit and reside within our fixed-line footprint. So, of the 825 WA education department schools, 647 of those sit within our fixed-line footprint and have an upgrade path to support higher speeds.

Ms S.E. WINTON: Which comes at a cost.

Mr LAWTON: Which comes at a capital cost, but I would also make the point that NBN have an appetite to invest in providing schools with that upgrade path, potentially at no cost, where it makes commercial sense for NBN to do so.

The CHAIR: If the federal government said to you that actually it was one of the priorities of its—what was the agreement you had at the beginning?

Ms McNAMARA: The statement of expectations.

The CHAIR: Do they ever change their statement of expectations, or is that a fixed document?

Ms McNAMARA: No. I have seen it updated over the 11 years that we have been in existence; yes, it has been.

The CHAIR: If they updated their statement of expectations to say, “Actually, NBN should be critical in terms of our education infrastructure”—if that is to schools, what about universities? Does the statement of expectations have any sort of expectation around delivery of that infrastructure into universities?

Ms McNAMARA: A lot of universities will have their own private fibre network, and NBN does not overbuild what we call adequately served sites, because that would be a waste of our money. So, a lot of universities actually—and other sites that you would expect—will have their own private fibre network.

Mr W.R. MARMION: BHP and Rio.

Ms McNAMARA: Exactly right.

Mr LAWTON: Absolutely. But that is not to say that there is not a value proposition in those end-users considering NBN as a viable infrastructure play. Again, the point that I would make is that that contestability drives a better commercial outcome. For a case in point, the Department of Training and Workforce Development are currently undertaking a market activity under GovNext-ICT for the procurement of network services. Our response through those GovNext-ICT primes is to position Enterprise Ethernet into those site locations.

The CHAIR: When you say Enterprise Ethernet, is that the blue cable that we stick into our—so everyone will just have a blue cable instead of just, you know, being able to walk around with their laptops?

Mr LAWTON: Indeed. Enterprise Ethernet is an NBN wholesale product name, which is a direct fibre product, supporting speeds of one gigabit per second synchronous.

The CHAIR: On your website, NBN says that you could provide flexibility to schools and opportunities beside learning and broadening knowledge through videoconferencing and expanding the classroom into the cloud, but that is only if you get the delivery. At the moment you do not have the delivery because Telstra has the delivery into those schools. Is it infrastructure of schools or schools not knowing what is available?

[10.40 am]

Ms McNAMARA: I think there are two points, and I will answer one then I might pass it to Simon. My understanding—I could be incorrect, so I will say that up-front—is that a lot of the WA education or the state schools are not able to seek their own services for internet or connectivity because they are bound by a Department of Education contract. There is that part of it where they would probably, potentially still be utilising their Telstra services without being able to order an NBN service because the requirements of that tender or that procurement process means that the Department of Education negotiates the connectivity for all schools through that process. I think there will be some schools I know that have looked to NBN for a solution but may not be able to order the service because they are captured as part of an agreement that the Department of Education—like most departments, like police would order services or negotiate that procurement for all stations and things like that. I just thought that was important to note as I think that there is a requirement there that they go through that process. In terms of the technology, I will leave that one to you.

Mr LAWTON: Every school in Western Australia has an allocation of NBN technology under our multi-technology access mix. That technology will be in and in place across all schools by the middle of next year, so it will be complete in terms of construction activity. That infrastructure will be delivered and then the schools can choose to use or not use that NBN infrastructure, subject to alternative options available at a site-by-site basis, such as CRISP Wireless or alternative carrier options.

The CHAIR: So, the alternative carrier options might be that they just keep using the Telstra fixed line?

Mr LAWTON: They may have other carrier options available such as Vocus, Optus or TPG as an example.

Mr R.S. LOVE: Pardon me, has Telstra not sold their fixed line to the NBN? So, there is no Telstra fixed line; you now own the old copper network.

Mr LAWTON: We have acquired the copper asset of Telstra; we have not acquired their fibre-optic infrastructure.

Ms McNAMARA: And not in fixed wireless and satellite footprints. Telstra has a universal service obligation with the federal government to maintain that ADSL network for any home or business that falls outside of an NBN Co fixed-line footprint. Any school that falls into one of our fixed wireless or satellite footprints will still be able to access their connection through that Telstra ADSL network.

Ms S.E. WINTON: You are suggesting that by next year all schools will have that access —

The CHAIR: But will they be connected?

Ms S.E. WINTON: What I was going to ask then is: you are saying that there will be alternative providers available. It sounds to me, though, that those come at different costs—correct?

Mr LAWTON: Correct.

Ms S.E. WINTON: Then would I be right in suggesting that it comes down to the school's capacity to actually pay for various options?

Ms McNAMARA: I think it would be dependent on the Department of Education's budget for connectivity for all of those schools.

Mr LAWTON: Yes, absolutely, and the operational requirements in terms of what services they are looking to deploy to support their communications requirements. Absolutely.

Ms McNAMARA: I do not have a big enough understanding of whether the schools independently pay for their connectivity, or whether that goes back through the Department of Education through an overall procurement process.

Mr R.S. LOVE: What we learnt from the schools we visited, as far as I understand, is that they have an allocation that is delivered by the department for bandwidth. Potentially they could perhaps buy more bandwidth from NBN, but there seems to be some concern about the security of that once they leave their provider at the moment and move towards just buying NBN as such. Also, the cost was highlighted as being a significant burden on their discretionary budget, which is not that huge. Although the NBN technically is there, they are not generally going beyond the allowance that the department is already providing as a standard allocation, if you like. Do you have any experience of government schools that are purchasing and upgrading themselves at the moment to a new technology or to buy significant amounts of bandwidth et cetera? Do you know of any government schools that have done that?

Mr LAWTON: I would have to take that question on notice to give you specific examples. That would be something we would need to look at further.

The CHAIR: That would be good. Can you clarify for me that when you say that next year all schools that are in your digital footprint will have NBN to the kerb, to the node or to the premises, depending on where they are in the footprint, it is whether they plug it in, really. The infrastructure could be there and they could never use NBN. You could have put the NBN infrastructure there—the federal government has paid for the NBN infrastructure; the taxpayer has paid for the NBN infrastructure—but it does not need to get used.

Ms McNAMARA: You are absolutely right: by June next year, every home and business, bar a tiny portion that need some additional work, will be able to place an order with their phone and internet provider to connect to the NBN. The infrastructure will all be there across the state —

The CHAIR: But they do not have to.

Ms McNAMARA: No. There are two parts to that, and there are different rules, is probably the best way to describe it. If you are a school in a fixed line NBN footprint getting that fibre to the node, fibre to the premise, fibre to the kerb —

The CHAIR: Sorry for interrupting—what determines fibre to the node, fibre to the premise, fibre to the kerb? Is that just where they are in the footprint? It is sort of random.

Ms McNAMARA: Yes, existing infrastructure, cost, density—all those things. With those footprints, there is an 18-month period of time once we finish—we kind of break the build into jigsaw pieces. They look like little jigsaw pieces, and when we finish a jigsaw piece, we hit a magic button. That goes live, and it goes green, and if you are in that little piece —

The CHAIR: It is like being at the stock exchange!

Ms McNAMARA: Yes, it is magic—that is right, the big button. As soon as that is done, any home or business in that footprint can call their phone and internet provider and connect to the NBN. Eighteen months after that goes green, that existing ADSL service is switched off. That is kind of the requirement. If you want fixed phone and internet, you must move to the NBN, otherwise that existing way that you have been receiving telecommunications, phone and internet will be switched off. However, that rule changes if you fall into an area where we are delivering fixed wireless and satellite technology. That 18 months does not apply.

The CHAIR: That makes sense.

Ms McNAMARA: Yes. Yes, there is a requirement if you want fixed phone and internet—a fixed line footprint—but we know that some people will choose mobile as a way to connect. Fixed internet might not be what they need at their home. So, for anyone who is happy to go down the mobile path and consume what they need and do what they need to do online by mobile, they will not need to move.

The CHAIR: But as of June next year, will there be any metropolitan schools that are not on a fixed line?

Mr LAWTON: That are not on a fixed line?

The CHAIR: Yes.

Mr LAWTON: Oh, metropolitan?

The CHAIR: Metropolitan.

Ms McNAMARA: We will have finished the rollout in metro Perth by June next year.

The CHAIR: So there will be no school in metro Perth that is not on a fixed line. Eighteen months after every bit of the jigsaw has become green, and every bit of the line is in, they will either have to choose to connect into the NBN, because the ADSL will not be there for them, or they connect into Ethernet.

Mr LAWTON: Or secure alternative carrier options.

The CHAIR: Secure alternative carrier options, which is another line in, like a Telstra fibre network in?

Mr LAWTON: Correct.

The CHAIR: Is Telstra putting fibre networks in everywhere?

Mr LAWTON: I could not provide speculation as to what Telstra are doing.

The CHAIR: Yes, no worries.

Mr W.R. MARMION: I am interested in your comments on how you think the education department is going about getting connectivity to the schools. Are there any issues you can think of, or any problems or suggestions as to how they might be able to do it better? You may not be able to say, but you are in a safe place here.

[10.50 am]

The CHAIR: If you wanted to, we could go in camera, so what you say does not necessarily have to be —

Mr LAWTON: I would respond to that question by restating the value proposition of NBN. We are a wholesale network. By an end user leveraging that infrastructure to procure retail services, that contestability drives great commercial outcomes.

The CHAIR: Are they open to that?

Mr LAWTON: I have engagement with the Department of Education, which has a longstanding relationship with Telstra as the incumbent provider. WA education are about to go through a market review, through GovNext. How that translates into an outcome would only be speculation. NBN is, again, keen to invest in the infrastructure, provide WA education with an upgrade path to provide the capability of delivering much faster speeds than deliverable across our multi-technology mix. We would love to see the WA education department work collaboratively with us. We would love Western Australia government in general to actively engage us in discussions on how NBN can be leveraged to drive great outcomes across Western Australia, particularly into the regional and rural areas. We stand committed to the Western Australia government and to WA education to provide those outcomes.

Mr W.R. MARMION: Can I put the question another way? Does anyone in the education department have a master plan, where all schools are, and they know the capacity links, and seeing how they might have stronger bandwidths here and there—do you think anyone is looking at it strategically in the IT section and then talking to you, having the knowledge of your bandwidths and where they go, so then they can proactively say, “Well, gee, it would be nice if we had a line out there, and a big one out there”, and work out what it might be?

Mr LAWTON: The end outcome for WA education from a strategic direction is set effectively by the GovNext vendors, so Atos, Datacom and NEC are competing for network provision for WA education. How they choose to compete—effectively, they are setting the strategy.

Mr W.R. MARMION: Once each of those are independently looking at a strategy for themselves, they come to see you and say, “To make this strategy work, this is what we need”?

Mr LAWTON: “This is what we would like to do as part of our bid for WA education.” I would state from my personal opinion that I would welcome the opportunity for a deeper level of engagement with WA education.

Ms S.E. WINTON: I always understand things better in comparative terms. I notice that your role is also in South Australia.

Mr LAWTON: Yes.

Ms S.E. WINTON: Are you able to make any comments on a comparison between what is happening in South Australia and the relationship with their Department of Education and here? Is it comparable? Are there some differences?

Mr LAWTON: No. I would say that they are unique in their respective states, but the opportunity and the operational requirements are reflective across those two states. It was reported recently in the media that South Australian education has signed an \$80 million contract to build Telstra fibre to South Australian schools. That decision has been made by the South Australian government. It is an extremely disappointing outcome from an NBN perspective. We were actively engaged across the South Australian government and actively engaged with South Australian education. We had formalised our intent to provide them with an infrastructure outcome on the NBN, which would

provide the schools with choice, with control, with greater flexibility and with better commercial outcomes. South Australian education chose to go all in with Telstra. If you can tell me why they did that, I would really like to know.

The CHAIR: What are the roadblocks, then? You said if we could tell you—we cannot tell you; we do not know the roadblocks. What are the roadblocks? What are the obstructions in this? You believe that you are the best product for that so you have got an opportunity to prove why you think it is the best product. The process is all underway. Our report will probably come out maybe even post the process. We are Parliament; we are not government. We are parliamentary members; we are not the department. What are the obstructions? What seems to be in the way?

Mr LAWTON: From my perspective, I would say, firstly, it is education. Education being the awareness that NBN is a viable and compelling option and that value proposition around flexibility and choice and control. Fundamentally, that would be my position.

Ms McNAMARA: And I do not think it is limited to education either. I think it is broader in terms of whether it be police or health or —

The CHAIR: No, I think he meant education as in people are unaware of the issue, not the Department of Education, but the education in —

Mr LAWTON: Yes, absolutely. So, again, we are operating in two different markets. We are operating under a statement of expectations under the federal government for the deployment of residential broadband, and we are operating in the business market, serving enterprise in government with business products. We are in an interesting position as a wholesaler because as we start competing for market share in the enterprise-in-government space for network services that are a higher revenue or higher operational spend, we are viewed as a competitive threat by our own retailers. That is also a challenge.

Mr W.R. MARMION: Just building on that because I was fascinated with what happened in South Australia because I did not know that. In the gas market in Western Australia, if you are a wholesaler and you provide the pipe, you cannot be a retailer. That is to make sure that you cannot have two bob each way. So what you are telling me is that should that policy apply—it is a commonwealth power, of course—in terms of telecommunications, if you are providing the infrastructure, then you cannot be the retailer. Is that an issue, or can you comment on that?

Mr LAWTON: I can really only comment on our position. We are a wholesaler. We are fundamentally reliant on our retailers' productising our products and taking them to market.

Mr W.R. MARMION: Is it unfair for a retailer to be a wholesaler as well?

Mr LAWTON: I do not know how to answer that question.

The CHAIR: Does Telstra buy your product?

Mr LAWTON: Yes, they do. Absolutely. Some of our retailers have extensive investments in their own infrastructure and operate at a much, much higher margin when they put their customers on their infrastructure.

The CHAIR: And that has come out in ACCC reports and things like that, has it not?

Mr LAWTON: Absolutely, and it was recently reported—I think Forrester Research recently made some comments with respect to the revenue impact that NBN was having on retailers with our activity in the enterprise-in-government space. But there are organisations of note in Australia that have chosen NBN as the underlying technology to support their operational requirements. I know we are changing topics slightly away from education, but it is worthwhile making the comment. We are talking about enterprise organisations including Woolworths, Coles and Australia Post that have

decided that they are going to baseline their entire network operations on the NBN. Why? Because of the value proposition of choice, control and contestability. So, we operate in an interesting market.

[11.00 am]

The CHAIR: We were talking about South Australia. What happens in other states? Can you tell us?

Mr LAWTON: A similar dynamic exists across other states depending on political objectives and motivations —

The CHAIR: In schools?

Mr LAWTON: Sure.

The CHAIR: In schools—so in New South Wales —

Mr LAWTON: We are actively engaged with every state with respect to education. Those discussions are progressing. They are at various levels of progression.

The CHAIR: So South Australia is the most advanced in terms of having decided how it is delivering its infrastructure into schools?

Mr LAWTON: Indeed. South Australia has recently made the decision to procure network services explicitly on Telstra infrastructure.

The CHAIR: And New South Wales, Victoria, Queensland, Tasmania and the Northern Territory have not done the same thing?

Mr LAWTON: I believe that they are all in different stages of network procurement. I cannot specifically address the time lines associated with those activities.

The CHAIR: Okay. You may not know the answer to this question, but what happens in other countries? What happens when you compare the pair to other countries? People always talk about the fact that we are slower, we are much more clunky and stuff like that. So, let us say a leading country like France, do you know what happens there in terms of its internet provision into schools? It is all right if you do not.

Mr LAWTON: I cannot provide you with specific case examples. What I would suggest to you is that Australia is very unique with respect to its geographic scale. We are a very vast country with a very spread population density, which makes it an interesting infrastructure project for NBN and it is the largest infrastructure project in Australia's history; we are talking about a \$51 billion investment. In order to meet our obligations under the federal government remit, we have chosen to address that through this multi-technology mix to achieve the objective we have been given by mid next year. Other countries, if you look at their geographic footprint, are much, much smaller. They have more significant populations in much smaller geographic areas. Australia is a very unique situation. It is a challenge. It is a very complex infrastructure project.

The CHAIR: Thank you very much. That was very informative. Sometimes the terminology is—there was an air gap. Can you tell me what an air gap is?

Mr LAWTON: An opportunity.

The CHAIR: I am going to use that in a speech somewhere. That is my new favourite phrase to use—there is an air gap.

Mr LAWTON: I try not to use any telecommunications acronyms.

The CHAIR: You try not to. Goodness me. I would hate to see when you do! Thank you very much. Do you want to add anything else?

Ms McNAMARA: If there are any follow-up questions or anything that you think you would like some more detail on or anything that does not make sense, please let us know. We would be very happy to help.

The CHAIR: Thank you.

Hearing concluded at 11.02 am
