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The Manager

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ELECTRONIC LODGEMENT

Dear Sir or Madam

Telstra Corporation Limited - Transcript from Investor Day

I attach a copy of the transcript from the Telstra Investor Day held on Thursday 2 November 2017, for release to the market.

Yours faithfully

Damien Coleman
Company Secretary

MR P. KOPANIDIS: Good morning everyone and welcome. My name is Peter Kopanidis. I'm Telstra's head of Investor Relations. On behalf of Telstra, I welcome you all, both here in Sydney and those joining via webcast, to our investor day for 2017. As an important symbol of respect, it is our custom at significant Telstra events to acknowledge Australia's first people. Today, therefore, I'd like to acknowledge that we meet on the traditional lands of the Gadigal People of the Eora Nation, and pay my respects to elders, both past and present.

We have a number of the Telstra executive presenting today, including our CEO, Andy Penn, and CFO, Warwick Bray. Andy will provide you with a background on all our speakers shortly. We will have two Q&A sessions today for investors and media, and we will also have some customer immersion sessions during our lunchtime break for you. With that, I'll hand over to our first speaker, our CEO, Andy Penn. Good morning, Andy.

MR A. PENN: Well, thanks very much, Peter, and good morning everyone, and welcome to our investor day. Can I firstly start by saying we do appreciate the time that you're making to be here. I'm particularly conscious that we have a long session with you this morning and we'll be covering a lot of material over the next five or six hours. Investor day for us is an opportunity to immerse you in our business and strategic direction outside of our traditional results announcements. Today, therefore, is not about providing a trading update. It's about taking you deeper into our strategy, how this is playing out across the business, and how we are progressing with regards to its implementation. We will make – we will, however, make some comments on Q1 trends through the course of the presentations this morning.

The telecommunications sector, there's no doubt that it's going through a challenging and dynamic period. We're seeing increased competition, the effects of digital disruption, regulatory developments, and, of course, the significant implications of the migration to the nbn across the whole industry. This makes the sector and Telstra more complicated to follow from an investment point of view at the moment, and we're very conscious of that, because there's a lot of moving parts, and it's why we were keen to give you some more time today. None of us, of course, can predict how the market's going to play out over the next period of time. Certainly the next two to three years in particular look as though they're going to be quite challenging.

However, we should not lose sight of the fact that we are seeing increasing demand for our services and growth in data volumes as connectivity just continues to become increasingly important. We are therefore optimistic about the long-term future of the industry and about the long-term future of Telstra, and that's why we're making the significant capital investments that we are today. Not only do they put Telstra in the best possible position to respond to these market dynamics, they also set us up very strongly in the future to deliver value and growth.

Let me turn, then, to the objectives for the day. Firstly, today will be an opportunity for you to engage with a number of team members across the broader management team. You see a lot of Warwick and myself, obviously, through our results and investor meetings, but we wanted to give you the opportunity to spend a bit of time with some of the broader team, as well. The second objective for the day is to explore more deeply our vision and our strategy within the context of the changing market dynamics about which we've already spoken. In particular, we will demonstrate how we're progressing the three pillars of our strategy: delivering

brilliant customer experiences, driving value and growth from the core, and building growth in businesses close to the core.

Fourthly, we will update you in relation to the strategic investment program of up to an additional $3 billion in CAPEX in networks and digitising the business to support the delivery of better experiences for our customers. We'll also be providing you with a deeper dive in relation to our infrastructure and telecommunications assets and how we are deploying CAPEX. We will illustrate the significant strategic value of our telecommunications infrastructure and how the assets that we transfer to the nbn are actually a relatively minor part of the whole.

The final objective for the day is to spend some time on the longer-term growth and value opportunity that will arise from the investments that we are making and the capabilities that we are building.

Let me start with a few introductions. From my leadership team here and who will be presenting this morning are, firstly, Stephen Elop. Stephen is the Group Executive, Technology, Strategy, and Innovation. Stephen joined us just over 18 months ago from Microsoft, where he was the executive vice president of the devices group, and, prior to this, of course, Stephen was the Group Chief Executive globally of Nokia.

Next – and I think you're all familiar with Brendon – is Brendon Riley, the Group Executive of Enterprise, and Brendon has been with Telstra for seven years, most of that time running the Enterprise business, but also for a period as Chief Operations Officer. Brendon is, of course, the architect with his team behind the very successful network applications services business, which is growing very strongly. Prior to Telstra, Brendon was the Chief Executive of IBM in Europe.

Vicki Brady has recently been appointed to the position of Group Executive, Consumer and Small Business. Vicki joined Telstra 18 months ago as the head of Consumer and is already making a big impact with her new expanded responsibilities. Prior to joining Telstra, Vicki was the Managing Director of consumer at Optus.

Next, Robyn Denholm. Robyn joined us as the Chief Operations Officer in January of this year when she returned to Australia after a successful 20 years in Silicon Valley. Prior to joining Telstra, Robyn was the Chief Operating Officer of Juniper Networks. Robyn is also on the board at Tesla, where she is the chairman of their audit committee, and, as an aside, I've often thought it would have to be one of the more interesting boards to be a member of at the moment. Robyn was also formerly on the board of ABB.

Mike Wright will also be speaking today, and is part of Robyn's team, and, of course, he is our very experienced Group Managing Director of Networks and a world-respected leader in mobile technology.

And, finally, Warwick Bray, who you all know very well and have spent much time with over the years.

In addition to those speaking today from the management team, also here and with whom you'll have an opportunity to connect over a break and also over lunch are Cynthia Whelan, the Group Executive, New Businesses, Joe Pollard, our Group Executive, Media and Marketing, Alex Badenoch, Group Executive of Human Resources, and David Burns, who's recently moved to Singapore, who heads up our

international business, as well as running our Network Applications and Services business.

Turning then to the agenda. Following my introductory presentation, you will hear from Stephen. You will then receive presentations from Brendon and Vicki, and at that point we will have our first Q&A session responding to the first four presentations. During lunch, we've organised some immersion sessions for you. These will provide you with an opportunity to engage in what we're doing in our brand strategy, the whole of home for consumers, and a tour of our new security operations centre here in Sydney. After lunch, Robyn and Mike are going to provide you with a deep dive on our telecommunications network assets, and finally we will hear from Warwick on our financial strategy. We will then have a further Q&A session before we close the proceedings for the day.

Let me turn then to my presentation. Two years ago, we announced our vision to become a world-class technology company that empowers people to connect. I want to reinforce the point here, that this is not about moving away from our origins of being a telecommunications company. Quite the opposite. It is, in fact, because we are a telecommunications company and because technology innovation is changing our industry that we need to build new skills in new areas. It is often said today that every business in every industry needs to be a technology company, but this concept has special meaning at Telstra. As you have heard me say before, the traditional worlds of telecommunications and computing are converging.

What I mean by this is that there is no technology innovation that is happening today that is not intended to be connected, whether it's drones, driverless cars, cloud computing, high-definition video streaming, augmented reality, or the Internet of Things. All of these applications have one thing in common: they all rely on high quality, fast, reliable, and secure telecommunications networks. And, of course, at Telstra we have a long history and deep skills in network and electrical engineering. We're a world leader and we have applied these skills to build the best network in Australia.

But to support our ongoing leadership in telecommunications, we need to build new skills in new areas, in software engineering, in data science and machine learning, because this is how networks are built today and how increasingly they will be built in the future. The second reason for the change of emphasis is that the applications and services that are driving the significant growth in data on our network are all software based. As you will hear from Stephen, whilst there has been considerable growth in data on telecommunication networks globally, the value of this demand – that this demand has generated has typically been captured at the layer of the applications and services, not by the telcos.

So our vision is not about losing sight of our traditional core business of being a telco. It is about recognising what a telco looks like in the future. As we are building these new skills, we are also very focused on driving value in today's business in mobiles, in fixed, in data and IP, and in our growing NAS business, and this is critically important, because the industry is facing a challenging and dynamic period, competition having continued to increase. Not only are we expecting the entrance of a fourth mobile operator, in the meantime we are seeing continued pressure on mobile pricing and increasing data allowances. We estimate that average data inclusions have increased another almost 100 per cent for consumer post-paid handheld plans in the last 12 months alone.

As you know, one of our critical objectives is to achieve growth in mobile services revenues, which has been under pressure from these competitive dynamics over the last two years. We did see some modest signs of growth in the second half of last year, however, we have yet to see this translate into further momentum, and mobile services revenue declined slightly in Q1. As Warwick will take you through later, consumer post-paid handheld MMCs are continuing to increase, which is positive news, on a PCP basis, but it is being more than offset by lower additional data charges and business revenues as a consequence of these higher data allowances.

In the market for fixed broadband services, there are now around 180 resellers of nbn services in Australia, and this is leading to significant downward pressure on pricing. We've continued to grow net adds in the market, but momentum has slowed, and, in response to this, we have made a number of enhancements to our fixed broadband market offers, which I will reference later. We also continue to experience the impact of digital disruption on some of our traditional business models. For example, video streaming on Foxtel and over the top communications solutions are impacting some of our traditional communication products. From a regulatory standpoint, the last fixed access determination on our wholesale prices to the industry reduced these by nine per cent.

This is in contrast to nbn wholesale prices, which are increasing about 100 per cent in the migration and are projected to increase a further 20 to 25 per cent over the next three years, according to nbn's plan. We were obviously pleased with the ACCC decision in relation to mobile roaming, because ultimately this is the right decision for the industry, and, most importantly, the right decision for customers, particularly customers in regional Australia. And there are, of course, other regulatory reviews that are underway to which we will continue to contribute our views in the interests of the best outcome for customers in Australia.

Finally, though, and most significantly, of course, is the migration to the nbn, and clearly the nbn has major implications for the whole industry, but the impact on Telstra is, of course, unique. We have taken you through the significant economic implications for the company, with our latest estimate being the loss of around $3 billion in EBITDA once the nbn is fully rolled out. As a reseller of nbn, the economics are challenging. This is because the margins after the wholesale price are extremely slim. Notwithstanding this, though, we remain very committed to the fixed market. Ultimately, it is critical that we support all of our customers with the best network experience available on the nbn and remain a leader in both fixed and mobile. So whilst the current economics are challenging, I am confident that ultimately, the dynamics will improve because, clearly, the current paradigm is unsustainable.

In the meantime, though, what I'm most concerned about is the impact for customers, and in this regard I think there are three areas of critical importance. Firstly, the service experience. Today, the time taken to activate customers on the nbn can be considerably longer than for traditional broadband services, and, of course, this is due to the extra complexity involved. We are working closely with nbn to continue to streamline both of our respective processes to ensure that this becomes a more seamless experience for customers. Vicki is going to take you through a little bit more about this in her presentation. In the meantime, it will be important that achieving the rollout schedule that has been set does not come at the expense of improving the experience of customers being activated on the nbn.

Secondly, not all customers are receiving the speeds that they are anticipating or hoping for. As I explained at the AGM, this, of course, can be for a number of

reasons. Firstly, available speeds are principally determined by the underlying technology that nbn chooses to roll out in a particular area. Whether this is fibre, cable, copper or any other form of technology, this choice has a material impact on the maximum speed that ultimately will be available to customers. Once the maximum speed available is determined by nbn's choice of technology, the customer then obviously chooses an appropriate plan from the retail service provider, or the RSP, and then the RSP must provision the right amount of capacity from nbn through the purchase of CVCs.

We continually monitor traffic and adjust our CVCs to meet demand. In fact, we installed robotic testers in our network more than 18 months ago to measure a sample of customer speeds to ensure that we are buying enough CVCs, and it is this testing that gives us the confidence that we are buying the right amount of CVCs to meet or exceed, in fact, the ACCC's recently issued guidelines on CVCs and on the nbn. There are, of course, other factors that can affect the speed the customer's experience. For example, in-home wiring, Wi-Fi configuration can play a significant role, but customers can find lots of tips from Telstra on our website on how to optimise their broadband at home.

We're also continuing to develop products and tools to help our customers with their experience in the home. Combined with Telstra's platinum service, these are all designed to deliver the best possible experience in an nbn world for our customers. If customers are still experiencing what they – sorry, if customers are still not experiencing what they had anticipated, it is quite likely to be a fault in the nbn network or some other factor, in which case they should contact us so that we can investigate and follow up accordingly.

The third and final factor affecting customers in the migration to the nbn is affordability. Due to the significant costs associated with the rollout of the nbn, wholesale broadband prices, as I mentioned, in Australia from the nbn are more than doubling over the period of the migration. nbn is currently conducting a review of its prices, and it will be important in the long-term that wholesale prices are set at levels which ensure affordability of broadband for all Australians. Notwithstanding these significant market challenges, our strategy has not changed. It is built on three fundamental pillars of delivering brilliant customer experiences, driving value and growth in our core business, and building new growth businesses close to the core.

This time last year, we made some minor modifications to the language, and we did this to make it absolutely crystal clear that the investments and the acquisitions that we are making are all about strengthening our core telecommunications business, extending our strategic differentiation, and building new capabilities and offerings up the stack in applications and services. These applications and services support our telco business and add opportunities for growth in the future. Also this time last year, we announced details of our strategic investment program, and I want to remind you of the parameters of the program, the key metrics and how we are progressing against these.

The program is phased over a three-year period to 30 June 2019. During this time, we expect to invest up to an additional $3 billion in the core business. The focus of the program is about delivering a very different and improved customer experience. More than half the investment is in building the capabilities for the networks of the future, and this includes preparing for 5G. Approximately $1 billion is expected to be invested in major digitisation program work across the business, and finally, we expect to invest a further up to $500 million in other customer experience

improvement initiatives. Robyn and Mike are going to talk more specifically about how we're delivering in networks and the digitisation program, and you will also hear from Brendon and Vicki in relation to what we are doing to improve the customer experience in the customer groups for which they are responsible.

In the meantime, let me make a couple of comments on networks. This is where the foundational investments and capabilities that are being made in SDN/NFV are critical, such as the Next Gen OSS. This is providing significant efficiencies in how we operate the network in supporting new managed security offerings. Our investments also include upgrading our optical transmission network and our new CATM1 platform, which is the foundation for the new IoT offerings that we are developing. And, of course, our preparations for the launch of 5G, where we are well advanced in relation to the market live trials on the Gold Coast in April next year. Only this week, Mike Wright successfully conducted the first 5G trial data call in Australia.

In addition, the investments in digitisation are already having an impact and enabled us to launch the Telstra programmable network. This capability enabled enterprise customers to dynamically manage their network and clouds digitally. We've also launched Liberate, our over-the-top new unified communications solution. Ultimately, we are targeting run rate benefits in excess of $500 million per annum in EBITDA terms, to be fully realised from the program by 2021. Approximately two-thirds of these benefits will be derived from revenue, and one-third in cost. This represents a return on investor capital in excess of 14 per cent, and it's consistent with our public guidelines for organic investment. As at 30 June we had invested approximately $750 million, most of which had been in the network so far. Our focus on digitisation will ramp up this financial year.

This is a detailed slide, and I don't propose to go through the detail. However, it does provide an update in relation to how we're progressing against the metrics that we communicated to you this time last year, when we provided more detail on the program. And, as you can see, across the program we're broadly on track in the progress that we are making.

So in summary, and in conjunction with the strategic program and other business initiatives we have been undertaking over the last two years, we are making progress on a number of fronts. We are becoming a more innovative company. We are simplifying the business, and we have tightened our strategy. We made the conscious decision not to pursue international mobile, we crystallised value in Autohome and we are restructuring our investment in Foxtel and improving its position by merging it with Fox Sports. We are building the new capabilities that we will need in the future, particularly in the network, and we are delivering new applications and services into the market.

This week we launched a number of new fixed broadband bundles. The $99 bundle now includes our hybrid modem with inbuilt 4G chipset and the Telstra TV 2, which is by far the best streaming device on the market with next-generation compression technology, integrated free-to-air SVOD and pay TV and a universal search capability. I'm also pleased to announce that later this month we will be introducing unlimited data on our $99 and above plans for new and existing customers, and doubling the data allowances on other broadband plans for existing customers and we will be introducing these changes over the coming weeks.

These bundles also adopt the new ACCC guidelines for communicating nbn services. We've been in discussions with the ACCC regarding these guidelines and

how to address the spirit of them retrospectively. We anticipate communicating how we're going to do that and the results of these discussions shortly. Ultimately, though, we are repositioning the brand of Telstra as a world-class technology company that empowers people to connect and you will hear more about the many initiatives that we're implementing to do so during the course of the day from the team.

In the meantime, though, I want to comment more on what we're doing about driving value for the company in the short-term, but also in the long-term. I know that the current market outlook is challenging. I know that we need to respond to the competitive dynamics and mitigate the impact of the margins on nbn. I know critically also that we need to do a lot more in relation to improving the experience that we provide our customers. All of us at Telstra from the board down are focused on these priorities every day. The economics of the company are driven by how well we execute and in this regard, I can guarantee it is what management is focused on.

Last year, our EBITDA was approximately $10.7 billion. This comprised $1.3 billion in one-off payments – nbn payments. And we also know that the implementation of the nbn takes $3 billion in EBITDA from Telstra. Clearly, therefore, the short-term drivers that you have heard Warwick talk about many times in the past are critical. He will revisit them today in his presentation, particularly also as we face the impact of increased competitive dynamics. They are continued growth in mobile contribution margins. This is obviously the single biggest driver of value for the company; the improvement in nbn reseller margins, as I mentioned before, they're obviously challenged today, but ultimately, we believe the nbn market dynamics have to improve. Maybe not in the next two to three years, but over the longer term.

In the meantime it is critical that we continue to achieve our targeted improvements in the cost to connect and the cost to serve. Delivery of our productivity in our cost our program including our accelerated and increased productivity target of $1.5 billion by 2022. Growing our NAS business, expanding the NAS EBITDA margin, growing our IP products – all to more than offset the impact of pricing pressures and the decline in legacy data revenue. And finally, of course, delivering the strategic benefits from the CAPEX program that we have promised.

We also believe, though, that there are new sources of value emerging for the future. Ultimately, therefore, our success is not only defined by what we are doing in the short-term, but also what we're doing to build growth and value for the longer term. This includes successfully growing the new businesses in which we have invested and delivering new revenue opportunities in areas such as IoT, 5G and Big Data. These are the levers that we ultimately need to pull to maximise the economic value of the company.

We use the three horizon framework when thinking about investing for growth in the future and Stephen is going to comment more on these shortly. But let me make some brief comments.

Firstly, in 5G. Each of the Gs – 2G, 3G and 4G – led to a surge in value in the telecommunications industry. Recent research by Ericsson predicts that 5G could enable a 48 per cent incremental value revenue opportunity for Australian mobile operators by 2026 with up to $13.5 billion worth of digitisation potential to tap into. This is because 5G brings a number of benefits - more efficient basic service for traditional use, video streaming in addition to new use cases. And, of course, it's

predicted that much of the value from 5G will be concentrated on the level of the applications and services which is consistent with our strategy.

In IoT, we have created the platform and we have significant opportunities which are well developed. You will hear more about this from Brendon shortly and Stephen will also take you through the scale of the opportunity. I was particularly pleased at yesterday's announcement regarding the acquisition of MTData, a leading provider of GPS and telematics for fleet management solutions. It delivers solutions that assists customers with compliance, safety, improving productivity and reducing costs. The acquisition allows Telstra with the technical capability and software expertise necessary to help fast track our enterprise connective vehicle offering as part of our growing business in the areas – sorry – in both Australia and internationally. It's an IoT solution for logistics where we are already a leading provider.

Turning to Big Data, you've heard a lot of hype and speculation about the opportunities in Big Data, however, we believe the hype is now starting to translate into material opportunities. In our core business for the reasons already mentioned, we're building significant capabilities. For example, our Next-gen OSS which is the capability that manages our network and where we experience more than six million transactions per minute. This is one of the largest Big Data and machine learning engines in the country today. It provides us with significant opportunities such as location insights where we are currently working on several projects. It enables us to match our anonymised location data with those of customers – our enterprise customers such as in retail and banking which provides significant value and insights.

So while the next two to three years is likely to be more challenging, ultimately we believe in the long-term value of the industry. We also believe the value will grow and shift as our changing business model shifts and we leverage these new areas of opportunity. Our core business will be more defined by our customer groups, consumer, small business and enterprise, than the nature of their underlying technology, fixed or mobile. We will also see a higher proportion of value arising from the internet of things and other enterprise platforms including data analytics, software applications above the layer of the network and through content and digital advertising just as you have seen us achieve through our network applications and services business.

It's a challenging time, but it's an exciting time. Telstra has always been a leading telecommunications company. We've also always been a leader in innovation. Not just locally, but globally. We've always been at the forefront of investment at pivotal times and that is where we are now and why our vision is to be a world-class technology company that empowers people to connect. Let me now hand over to Stephen Elop who will take you through some of the global contextual dynamics that support our strategy and reinforce the opportunity. Thank you.

MR S. ELOP: Thank you, Andy, and good morning to everyone here. As Andy indicated, I intend to spend a few minutes talking a little bit about the global market context for telecommunication companies. I will tell you this that one of the things that I find most encouraging about being at Telstra and being part of this journey is that Telstra has consistently demonstrated the capability to innovate through moments of incredible disruption. Just think about the shift from 2G to 3G, the shift from 3G to 4G and beyond and now as we prepare for 5G.

Telstra has done remarkably well in taking advantage of the opportunities that those moments of disruptions present and today is no different as we stare into the next period of disruption. To help characterise, we recently undertook a comparison or peer benchmarking exercise comparing the progress that Telstra has made over the last several years with those of 16 of our peers around the world, other telecommunications companies in developed markets. And there's some very interesting elements that come out of this. First of all, particularly as we went through the 3G to 4G transition in the Australian market, relative to our 16 peers, we've established the position of being number 3 in the world in terms of the market share that we have earned and won through intense competition and a premium network.

We've done this while delivering EBITDA margins averaged over the last several years, number 1 in the industry amongst our 16 peers in developed markets. And yet, we have accomplished this, if you use ARPU as a proxy for price, by offering prices and value to our customers that are somewhat in the middle of the pack relative to our peers around the world. We've also accomplished this very much by investing wisely through the use of our CAPEX at a level that is also roughly at the median for companies like us around the world in markets like ours.

And, of course, when you put all of these numbers together, the bottom lines that emerged from this is that the free cash flow that we've delivered and the return on our invested capital is absolutely market leading. And so this says two things. After multiple years of disruptions in the telecommunications market, we've been remarkably successful in delivering great experiences to our customers that they value. But it also sets us off to say that as we head into this next period of disruption, we are very well positioned to continue that trend.

Now, that being said, we do have to stare into the trends that are ahead of us that are affecting telecommunications companies the world over. For example, the shift in consumer behaviour, it's very hard to imagine and experience now an interaction with the company, a moment in an airport, whatever it is that isn't somehow enabled by connectivity. We expect it at all times. I kid with some of my colleagues that I fly on a certain airline when I come into Australia only because it has Wi-Fi because I do not want to be disconnected on that journey. It is the case that people expect that level of connectivity and at the same time, they expect the experience that's delivered on their devices in their homes wherever it is to be second to none. That standard is being raised in terms of customer experience every day by technology innovation from various providers all around the world.

It is also true that we are all facing around the world intensifying market dynamics. Particularly as we get to the beginning of the 5G generation, it's no surprise that there's increased competition around 4G as various operators around the world who may have been behind in that trend slowly catch up to the leaders such as Telstra. We are also seeing various players around the world working to, if you like, go up the stack and even begin to include connectivity options in non-traditional products, putting pressure on telecommunications companies from above. And Australia is no different than every other market in the world where the regulatory uncertainty continues from day to day from article to article.

It's also true, and Andy made this particular point, that the value that's derived from the telecommunications market continues to move up the stack. Even at the same time that we have continued growth ahead that we believe in as it relates to our connectivity business, more of that growth is coming up the stack in terms of the applications, the platforms and the services that companies offer on top. And that is

very much at the underpinning of why we describe ourselves as a company that aspires to be a world-class technology company that empowers people to connect.

And part of the fun part of the technology industry of telecommunications, of course, is always that the technological developments continue to advance. I will spend a bit more time talking about some of the fundamental trends that every telco in the world is focused on, including what 5G represents to us and to our customers, the advent of data analytics, machine learning and artificial intelligence, not to mention IoT and a variety of other trends.

So disruption is upon us. It's not localised to Australia. It's a trend around the world. But even though there's that disruption, as Andy commented, we have to stare into some of the realities of the traditional telecommunications market. This is a graph that shows, essentially, the market size on a global basis split between developed markets and emerging markets. And you can't help but notice over the long-term that the value derived in the developed markets has been relatively flat as telecommunications operators look to capture value elsewhere. The real growth in telco around the world has been an emerging market and that has principally been because of new customers coming online that never had connectivity before, particularly in some of the largest emerging countries.

So you look at that and say, so is there value being derived or if so, where is it? And where that shows up, of course, as we've said is up the stack. The blue line across the bottom, essentially, shows a relative level of revenue derived by a basket of telecommunications operators, the previous line told the story – flat. And yet the red line shows revenue derived by the leading over the top providers who were taking advantage of the connectivity services that we provide. Quite clearly, the message is there that we as telecommunication companies have to look up the stack and into those spaces.

Where it makes sense and where we have permission to play with our sustained competitive differentiators, that is where we need to be looking and, indeed, that is where our focus lies. That flat blue line says relatively low growth for developed economies and telecommunications belies the fact that just in that blue line has been a tremendous amount of change and incremental value offered to our customers. What this diagram represents – each column is our BYO plan that we offer to our customers and we picked it deliberately because it is one of the most hotly contested, most competitive elements of our business today here in Australia.

If you compare what you got for $50 on our BYO plan four years ago with what that translated into two years ago and what you get today for $49 on our BYO plan, the value that we're offering to our customers is increasing exponentially. And it's not just about data, it's not just about calls – clearly it's very much about the premium differentiation that we invest into our networks to drive value for our customers as we go through this. Now, of course, the other side of this coin has to be the bottom row that you see here. In the two years from 2013 to 2015 and then again in the next two years we drove our costs of the network data capabilities for our mobile network down by roughly 50 per cent over each of these two timeframes.

That, of course, is one of the biggest reasons by far that 5G is an important trend because it actually enables all telecommunications companies to continue to drive that trend.

So, as Andy highlighted, there are these moments of disruption or transition in the telecommunications market. You can pretty much benchmark it to 2G, 3G, 4G and

5G and I was reflecting on this today. You see the lines at our stores and Apple stores for iPhones and so forth roughly 10 years after the iPhone went on sale for the first time and you think back to what the world was like just 10 years ago and the iPhone, a beautiful device, really popularised touch computing on a handheld form factor. And yet when it was first released it was a 2G device.

When it was first released there were no application developers building apps for the iPhone; there wasn't even the framework in place to do that. You got the apps you got with your first iPhone and it was only in the releases subsequent to that that people began to take this whole app economy more seriously. And it was an amazing transition so when you think about how these critical moments of computing history can dramatically change things the iPhone represented one of those moments, just as Windows 95 or even going all the way back to the printing press, represented one of those great moments of transition. We are staring into that again today is my hypothesis and I believe it's something that's shared by technology companies and telecommunications companies around the world.

And that very much speaks to the advent of things we call big data, data analytics, machine learning and artificial intelligence where we are all increasingly recognising the value of every piece of data at the most atomic level, where we are absolutely recognising the value of every utterance that someone issues into an Alexa or Google Assistant or whatever the case may be. Telecommunications companies are uniquely positioned to take advantage of some of these trends which is why they're such a key focus for all of us. So today we look ahead and see ourselves at the beginning of that next era and, yes, it relates in part to 5G but is also very much part of 4G as it goes to the natural end of its lifecycle.

And that is the case – look at my own home, for example. Just a few years ago if I looked at my network sniffer I know I had four or five Wi-Fi connected devices. In my home today I have over a hundred devices connected via Wi-Fi and not to mention another 50 light bulbs through some low power unlicensed factory network connected into the Wi-Fi. It's simply amazing. It's complicated and yet our job is to make it a beautiful customer experience. The world is truly changing into an age of automation and connected life.

Out of that comes three what we consider to be key trends that support and facilitate the opportunity for telecommunications companies around the world to grow going forward. The numbers I show you on these slides are the market opportunity here in Australia but, of course, on a larger scale and orders of magnitude larger. I could present the same slides for the world overall. But these are specific to Australia and are the estimates that we have from various sources about what these opportunities represent.

Data and analytics, machine learning and artificial intelligence is clearly a key one. Andy mentioned location-based services as just one example. As huge amounts of data is captured whether it's for internal use to deliver a better customer experience or to develop entirely new models for advertising, for media, for agriculture – whatever it is – there are huge opportunities in this space and we have now our first products in the market delivering against this opportunity.

We have ramped up substantially the number of people working on data and analytics, the number of data scientists we have, the size of our data lake recognising that every piece of data we have or can see can somehow, subject to privacy and regulatory requirements, be of value in our new business models as we go forward.

The second of these – and it's very much the other side of the coin of data and analytics – is the Internet of Things, the actual collection of the data itself, the sensors that are everywhere. That may be the Smart Home, it may be the hundred – or hundreds or sensors that are in modern automobiles or on equipment or on elevators or whatever it could possibly be, but the Internet of Things at all different levels of the stack represent an amazing opportunity for telecommunications companies because of our connection to the network and how we can leverage that. We're very, very proud of the fact that we have one of the world's largest Internet of Things network now working across Australia and you will see us continue to invest in that.

And then there is the core of all of this which is 5G and we often get into discussions with our peers at other companies and in the industry about "So where is the value in 5G?" And you first and foremost have to recognise that simply to keep up with the increasing use of data, of video and everything else on the network, we need more capacity, we need more speed, we need more bandwidth, we need more throughput and 5G delivers that. With the explosion of Internet of Things we need to be able to connect more devices and 5G delivers that. We need all of this to be done at lower and lower cost and 5G gives us the continued opportunity to reduce the cost of data to the spectral efficiency that it delivers.

And then in addition to that are entirely new opportunities, new use cases, that take advantage of certain properties of 5G – things like very low latency, where data can move up and back and around superfast so that applications like autonomous cars and other very high importance, high reliability applications can be delivered in the future.

So all of these represent, if you like, core opportunities for Telstra and what you will see as you hear from Vicki, as you hear from Brendon, as you hear from Robyn, is you will hear elements of this ripple through our entire strategy because there isn't an Internet of Things department at Telstra, there isn't a 5G department per se; it's about how we land that as new products and services that we represent to our consumers in many different ways.

But that being said, we do have to be mindful about where the value really is. I explode out the bar chart for Internet of Things in particular. Yes, if you go from FY16 to 23 you can see that there is some addressable market opportunity in the things, in the actual devices albeit at low margins because it's hardware. There's opportunity in connectivity and we're already capturing that as the leading network provider for Internet of Things activity in Australia today. But you see real growth in the platform, the applications and services that go up the stack.

What we recognise as Telstra and thus the world class technology aspiration is we have to continue to push up the stack. So when you hear about Internet of Things from Brendon you won't hear about the specific gadgets or sensors or the fact that we've connected them although that's important, you will hear about logistics, you will hear about freight handling, you will hear about shipping and agriculture and mining and everywhere else we can provide solutions that enable our customers to derive the value they need from their businesses. We have to move up the stack as a technology company.

If you look around the world and see what others are doing – and we spend always a lot of time talking to our peer organisations around the world – these similar patterns are evident just about everywhere. The Internet of Things, for example,

just on the news of MTData, yesterday Verizon has a major play as it relates to fleet management logistics and so forth driving Internet of Things adoption within the United States. Big Data is something that telecommunications companies around the world are investing in in different ways. And, of course, something I haven't talked too much about is media content and advertising related activities. This is arguably the area of a telecommunication operator's business that is the most specific market-to-market.

What works in one country generally doesn't work in the next country. It's not that easily translatable because of the nature of the media business in each country, because of the regulatory regime and a variety of other factors. But even in the same country comparing Verizon and AT&T is very fascinating where generally they're making big plays in media and content but they're dramatically different. Verizon is stepping up through certain acquisitions to say, "We're going to be a leading advertising platform. We're going to compete with Facebook and Google." AT&T, on the other hand, saying, "We're going to be a content provider. We're going to acquire companies like Time Warner to be a leading provider of the content itself" – very different plays and all of a sudden AT&T and Verizon are not so easy to compare. We have similar questions and challenges and opportunities here in Australia as well.

So what does this all boil down to; what does it boil down to for telecommunications companies all over the world. These two pie charts represent abstract or hypothetical interpretations of enterprise value for a telecommunications company. Today broadly if you look at the pie chart on the left and you look particularly at the dashed arrow collecting a bunch of the segments of pie around the outside, the vast majority of the enterprise value that telecommunications companies are afforded today is somehow directly related to the core business, the connectivity and things immediately adjacent to that. We have several hypotheses as an industry and certainly as Telstra as to from where the enterprise value will be derived in the future.

First, you will notice that the pie chart on the right overall is larger. We believe in the opportunity in increased value for telecommunications companies the world over. The second thing you will notice with the dashed arrow collecting up the connectivity aspects is connectivity itself is a good business. Yes, there's turbulence and competition and change and new value and inclusions – all of that – but at the same time it's a growth opportunity and we firmly believe that and pursue that with vigour at Telstra. And then the third hypothesis is that perhaps the fastest growing segments of this pie are the elements of the software, the applications, the services, the platforms, things like Internet of Things and in some markets the media opportunity that's presented that allow telecommunications companies to start at their core, take advantage of unique assets that they hold and build from there.

For example, we have an incredible asset in the data that we have as a company. How do we leverage that to enable our business customers to be more successful themselves. So there's some fast-growing opportunities that clearly are subjects of our investment and you will see represented in the presentations ahead.

I will make one final comment about Telstra in the global context and it's very much a key reason why I find myself working here at Telstra today. Telstra, in the Australian market, is uniquely positioned relative to our peers around the world. If I'm in the United States and I have a question about big data or machine learning, believe me T-Mobile is not the first company I call. And yet here in Australia Telstra

has established itself over many years as a leading technology company. Our customers come to us to help them with technology.

We create new solutions for them, we curate solutions into the market from all over the world. They trust us to do that. Telstra has a unique position as a company in Australia that's not shared by any other telecommunications company around the world and with our history of embracing disruption and driving value from that in the past I'm very proud to be part of a company that can do that again. So thank you very much and I look forward to chatting with you during Q & A.

MR KOPANIDIS: Thanks very much, Stephen. So we will have a short coffee break now. We will have about sort of 15, 20 minutes so if we can be all back by about sort of 10.25 that would be terrific and we will then hand over to Brendon to kick us off so see you back here at about 10.25. Thank you.

SESSION SUSPENDED

SESSION RESUMED

MR RILEY: Welcome back. I wanted to extend from the comments made by Andy and Stephen and talk about the enterprise division of Telstra, which I'm very, very, very proud to lead. Sometimes you have to look back to see how far you've come, and we've been on a journey which I think builds on the comments that Andy has made about our own journey as a telco and a tech company, and also builds on the point that Stephen's made about the progression and transition of the industry as a whole. We've progressively moved from being a pure telco provider to our business customers to being more of a tech co provider. We've grown in size. We're now an $8 billion division. We've grown our capabilities. And, more importantly, we've grown faster than our peers in the industry over this period.

We've worked on adjacencies, adjacencies that build on our great network and network advantage. We've acquired companies in line with the strategic framework that we've put forward, and we've been very, very successful at that, and there's been strong execution in market and also with our international business.

I'm also very proud with the advocacy scores and results we have for our business government customers here and around the world, which are at very, very strong levels. So our challenge – my challenge – is to continue to evolve this business, to give it a sense of progression and momentum going forward, and, like Stephen, I'm very, very excited by the opportunity that's ahead of us.

I think when I joined Telstra in 2011 it was pretty clear there was going to be compression on data and IP margins. There's a lot of legacy products that our business customers use that would phase out and be retired over time. So we needed to respond to that, and we started the network applications and services business. There was quite a pivotal event in the 2015 financial year, because NAS overtook connectivity in sheer size and it started to make some money from an EBITDA perspective. And you can see that we've continued on that growth trajectory for the business and also growth on margin. What doesn't get a lot of comments in commentary is we've also done a very, very good job in managing our data and IP margins, and I think if you look at our margins relative to competitors around the world, they hold up very well. And that's simply because our customers

were looking for more from us than just being a pure connectivity provider, and putting together network applications and services with connectivity has been a winning proposition in the market.

With disruption and challenge comes opportunity, and I'm a glass half full person and that's how I think about the world that is around us. There's no doubt that we've got a raft of new entrants and competitors coming not only at us, but in most industries and for most customers in Australia and around the world. It's interesting to read continually on the entry of Amazon, and that clearly represents a threat to established retailers, but it also presents a pretty amazing opportunity, not only for consumers, for small business, but also for all the supply chains and logistics industry.

One of the most fast-moving and quite remarkable transformations that I'm seeing with new tech is in mining, and the IoT network that we've lit up creates the next set of opportunities for this sector. Autonomous mine sites, transportation links, ports is an area of massive investment, and we are heavily involved with a number of the leading mining companies here in Australia on that transformation.

One of the things that I learned from some of the network challenges that we had over the past couple of years was just how important ubiquitous connectivity is to our customers to deliver the services they want to deliver to their customers. So we've really been hard at work leveraging on what you're going to hear from Mike and Robyn on the network, working hard with all of our customers to build the next generation networks and the resiliency that's required to give us that continued and expected customer service.

A lot is written about nbn. Maybe one of the things that isn't written about so much is the substantial transition of copper-based services for businesses that's underway. This financial year, 62 per cent of our business customers and government customers in Australia will transition at least one of their copper services onto nbn. Indeed, we'll transition 100,000 services this year from our traditional copper world into a fibre world. Now, there's a risk associated with that. Not so much in the fact we have to change from one network type to another, but the fact that we have to work with business and governments on their change windows. They can't just go and make massive changes on the networks and everything that sits above them, whenever it suits us or nbn. So we have to work with them, and we're getting outstanding support with nbn on that migration process. So lots of disruptions, but I think lots of opportunities for Telstra with our offerings.

We recently ran Vantage in Melbourne. That's the biggest tech event in Australia. We have the global tech ecosystem from the world join us at that event, and I'm certainly one that believes we've got to embrace the global tech ecosystem of the world. At that event we ran all of the sessions with these five better ways themes, because we see it as our role to create with our customers better ways across these five areas. The first is optimising IT, and we've seen tremendous virtualisation of the computant storage stack. Many of the businesses that you're in today will leverage cloud-based computant storage stack services. The network has to keep up with that. The network has to be virtualised and cloudified at the same rate to derive those benefits, and that's one of the big focus areas for us, is to not only cloudify and virtualise our own networks, but to provide amazing and easy connectivity solutions into things like Amazon web services and Azure.

Every customer by definition is a global customer in some form, whether that's the nature of their business or the supply chain they need to connect into or whether it's

connecting to their customer base. So we also want to be able to enable our customers to reach global markets, and it's fair to say that the share of our enterprise and government spend in Australia does not match the share of that spend for our customers when they go outside of Australia, and we've been working hard at that and making really, really good progress.

If you go into any board meeting these days in any board around Australia and you look at risk, I predict security would be in the top one or two items. Indeed, if you look at Vantage and all the pre-research we did with everyone coming into the Vantage event, over 4000 customers in Australia, security was the number one item that people wanted to talk through. So we've been hard at work building a brand new security platform. In the lunch break we're going to be pleased to give you a tour of our Security Operations Centre here, and we know we need to be doing more for business and government in Australia, not only large business but also small business, and that's what we plan to do.

Employee productivity is vital. How we consume technology at work and on the road is an incredibly important area for us, and so we want to help liberate the workforce so you can work wherever you want, whenever you want, in any environment that you want. And the final is in creating transformative innovation. We leverage Telstra Labs a lot. We do a tremendous amount of innovation with our customers. We have some very interesting innovation going at the moment with HoloLens, the virtual reality solution from Microsoft, and I look forward to updating you at the half year on some of the outcomes from that work.

In terms of drilling down further from a business perspective in what we're focused on to bring all of that to life, the first is around product leadership, and I like to think of product leadership in two forms. Firstly, we've got to create leading products. We then have to curate leading technology, and we work with our customers to integrate that together. It's not only about what those products are, it's how we're creating those products. So not only do we have to build them, we're transforming how we create them. If you look at the security platform solution in the lunch break, that was created in less than nine months, and it was co-created with some of our leading customers here in Australia and around the world.

That was a real first for us, but it's now how we're continuing to develop all of our products going forward. In terms of how we engage with our customers, we have very much been focused from a face-to-face perspective, but increasingly our customers want to have an omni-channel experience with us, and they'll still require face-to-face teams, but increasingly they'll want to do more digitally. They want to leverage also many of our channel partners that specialise in their industry. So we're looking to accelerate our efforts in that area.

Importantly, we're also focused on some key industry white spaces, such as mining, such as broadcast services in media, agriculture. There are many, many white spaces that we're looking to continue to expand.

In international, that's a huge market opportunity for us, not only in Australia and around the world, maintaining our network leadership, but driving up the stack so that we can also aspire to the point where we're an international business, our network applications and services are just as big as the underlying core connectivity.

And I play a very, very important role in driving the digitisation of Telstra, and that includes the business segment, and this year we're focused on two things that irritate our customers the most. The first is being able to track where their orders are

in our system, and that's really, really important if you're looking to stand up a new branch or do an upgrade or drive major changes within one of your change windows. The second major irritation is being able to raise tickets of work on faults and see the status of getting those faults rectified. So we're already piloting in market with our customer a new app with tiles to do both of those things, and we will progressively be adding more and more tiles to drive customer experience. That also has a very, very important payoff in the back office, as we're able to rely on less people doing a lot of non-value-add work rather than manage some pretty old applications and systems, which we're replacing.

It has been a very, very big six months for us on the products that we're creating, and these are the major release areas that we've already gone into the market with and we had a lot of detailed discussions with these with our customers at Vantage. The first is the Telstra Programmable Network. We renamed software defined networking network function virtualisation, which is a bit of a mouthful, to the Telstra Programmable Network, and it does what it says. It's there to enable our customers to program their networks here in Australia and around the world to suit the workload, to suit the dynamics of the employee, to suit the time zone, and to be able to take advantage of all of those.

It's the cloudification of the network, and since our launch we have, I'm very pleased to say, over 120 customers that have already signed up and are actively using the Telstra Programmable Network. One of those customers is Tokai Communications in Japan. They're a network aggregator and they provide a range of network services to their customers. So we've had tremendous take up, not only here in Australia, but around the world.

The Telstra Dynamic Security Platform. We are now able to provide our customers with managed security services and offerings. You will see that and hear a little bit more about that in the lunch break. We have gone a little radical with our solution, in that that's an open-source solution, and we believe fundamentally that one of the ways that we can better flank and prevent intrusions on our world is through an open-source environment. That's a continuous-learning environment that's learning from everything that's happening around the world. That our customers can stand up their own versions of this platform in their environments. We can connect the two together. We can join forces and drive our capabilities. Currently we've got two Security Operation Centres: one here on this floor, one in Melbourne, and we're in the process of building more. We've got over 500 cyber security experts in our business, and we plan to grow that here in Australia and around the world.

Liberate is a solution we've launched which simply is fixed to mobile convergence. So if you can imagine going to the office every day with your mobile phone, and that is the only device you need. All of your work calls can be routed to the phone. They come up as work calls. It's all done in the network. It's not an over-the-top app, so it's a lot more efficient. Because it's done in the network, there's a whole range of use cases that can emerge with this. One example could be, and we've seen this with one of the major banks who have stood up Liberate in one of their branches. Calls into that branch can then be reticulated based on the skillset and the work case. So if it's a wealth management call, there will be a series of wealth management experts in the branch, and the Liberate solution can get the call to the right place. We can also do call recording, which is increasingly important from a compliance perspective.

And then, finally, on IoT, and this is a very, very important environment for us, a very, very important growth opportunity for us going forward, and we've lit up what I

think is the biggest contiguous IoT network in the world. It's bigger than our mobile network, and it does create some enormous market opportunities for us, and we're very excited about it.

There's three major opportunities that we're focused on currently. The first is smart metering. We already have a significant share of the smart metering market in Australia, and we continue to build that out with utilities and governments. Location of Things, we have more location data than pretty well anybody else in the country. Being able to work with our customers on location data is vital. The new sensors that we're able to attach to things makes a huge difference. We're working with Pilorus, which is a supply chain and logistics company here in Australia. They shipped about their 2 millionth litre of milk to China, and through the Location of Things and connected devices that they were able to attach onto all of the litres of milk, they've been able to shrink the ship times in and out of China from weeks into hours.

And then ntelligent transport. We see intelligent transport as one of the single biggest IoT market offerings. We already have a strong share in automotive vehicles, including Toyota and Tesla and many other leading manufacturers. But we're very excited about transportation and logistics for all of the reasons that I've articulated before in terms of what we're all after as consumers, being able to get anything delivered pretty well at any time of the day. So we see there's going to be a huge set of developments. Andy's already mentioned our acquisition of MTData, and we see that as a leading platform in Australia and around the world, and we're going to work with MTData to build and scale that not only here, but around the world, to be a leading large transport and logistics platform.

International remains vital to not only our growth, but also to our relevance as a global operator, and we continue to look at the world through these five hubs: EMEA, largely through our headquarters in London, North Asia, South Asia, North America, and Australia out. We've retained our number 1 position in Asia for high capacity low latency networks. With our Telstra Programmable Network offerings, we're announcing new take up and use cases of our networks across Asia and around the world. We're looking to further aggressively expand up the stack with all of those offerings that I just announced and spoke to. They're all global offerings, they're all channel-ready offerings.

And, importantly, we want to continue to build out our services capabilities, and we recently acquired Company85 in the UK, which is the leading telco-oriented services provider in the market with customers which includes the Bank of England and London City Airport. We also signed recently one of our largest global collaboration deals with Springer, which covers 58 sites across 28 countries. So a lot of exciting developments in international.

One of the ways that we've been able to drive our transformation has been through acquisition, and we've been very structured and very disciplined in how we've been doing our acquisitions. You can see on the left our largest single acquisition was Pacnet. We will continue to look for infrastructure acquisitions that make sense with our strategy and meet our investment guidelines. The acquisitions have enabled us to go faster. They've enabled us to diversity our talent base. They've helped us shift more towards an agile, software-driven part of Telstra. It has made us, I think, more relevant to customers, in terms of the solutions that they're looking for. And we've been very disciplined financially in all of these acquisitions. They're all green, they're all ahead of business case, and they will all meet or exceed our investment criteria.

The three most recent acquisitions are Company85, which I just mentioned, in the UK, Cognevo, which is a New Zealand security analytics start-up, and then MTData, which we finalised yesterday, just in time for today.

So that's it from me. I want to just say also how excited I am to be at Telstra at this item. I think it's an incredibly exciting opportunity. I think if I go back to when I joined Telstra in 2011 and I was in Operations and I was working at Mike at that stage on the rollout of 4G, and you could just sort of feel and see what was coming, and I have that exact same feeling now with what we're doing with the core network, what's coming with 5G, the opportunities, the use cases and, I think increasingly, the globalisation of our enterprise difference. So a very exciting time to be here, and with that, I'm going to pass over to Vicki Brady.

MS V. BRADY: Thanks, Brendon, for that, and good morning, everyone. This is my first opportunity to present as the Group Executive of Consumer and Small Business, and I feel just incredibly privileged to get to lead the consumer and small business team. And to echo Brendon's thoughts there, it is an incredibly exciting time to be part of Telstra as we build the momentum on our journey to transform our business. So today I'd like to outline where we're at on that journey and share some thoughts on a few key areas. I want to cover, firstly, some of the structural shifts that are happening in the market that Andy referenced earlier today. I also want to talk a little bit about our strategic plan for consumer and small business to ensure we build on our leadership position and continue to grow our business. And then, finally, I do want to dig in a little bit and talk about some of the examples of how we're executing on that plan today in the market.

But firstly, just a quick snapshot of consumer and small business. The consumer and small business division encompasses more than 20,000 people: Telstra people, licensees and partners working across our sales and service channels, our products area, our customer experience teams, our strategy and operations teams. And we work every day to support our millions of consumer and small business customers. In addition to those people, we have built a number of unique and really valuable assets that underpin our consumer and small business unit. Last year, under Joe Pollard's leadership, we relaunched the Telstra brand into the marketplace, and we use a guiding principle every day in guiding the things that we do, and it's absolutely all about creating better ways to empower everyone to thrive in a connected world.

That relaunch of the brand has extended our market leadership, and today our brand consideration for consumer customers sits 10 to 15 percentage points higher than our nearest competitor, and in the small business market we sit with a lead of more than 20 percentage points on brand consideration.

At the same time as we've built strength in the Telstra brand, we've also been building and maturing two other of the brands that we control: the Belong brand and the Boost Mobile brand. In the consumer market we've got relationships with more than 8 million consumers and relationships with around 63 per cent of Australian households. Importantly, in regional Australia, we have relationships with two in every three customers. In small business, we serve almost 1 million small business customers, and that represents around 65 per cent of Australia's small businesses.

Another clear and compelling part of our strategy and our brand is undoubtedly our network leadership, and later today you're going to hear more from Robyn and Mike on how we're extending that leadership. It remains critical to consumer and small

business customers and is actually the number 1 factor still today when customers are considering who to choose as their mobile provider. We also have an incredibly strong physical presence right across the country, through both cities and regional communities, when you look at our network of more than 350 Telstra stores, more than 80 Telstra business centres, as well as the reach of our contact centres and our digital sales and service channels, which are key elements in the experience that we deliver for our customers.

Before I talk about our strategy, I do want to touch on the structural shifts that are happening in the consumer and small business markets today here in Australia. It is undoubtedly a significant period of change. After a little over 20 years in the telecommunications market here in Australia, I can honestly say it is one of the biggest moments of change from the very early days when the market deregulated. What are we seeing? So firstly, we expect there to be further bifurcation in the marketplace, and that will result in growth of the price-sensitive segment in the Australian market. As we've talked about previously, we estimate that that price-sensitive segment could grow to account for 25 to 30 per cent of the mobile market by 2020. With that in mind, we've got a strong plan to maintain and grow across that full spectrum of value segments, from the very premium to the price-sensitive customers.

In the fixed market, we're already seeing intensifying competition in the transition to nbn, with more than 180 resellers active in the market today. We expect this aggressive competition to continue over the next couple of years, as the number of customers able to access the nbn is expected to almost double to 11.2 million premises passed by the end of FY19. We remain very focused on continuing to gain our fair share of new nbn connections during this key transition period. In addition, we're also addressing our costs base by significantly reducing both our cost to serve and our cost to connect customers.

We believe the dynamics that are at play in the fixed market mean that the mobile market is increasingly the source of value driving further competition in the mobile market. As a result, we believe there is an opportunity for fixed and mobile bundling to become a feature in the Australian market. As technologies become increasingly integrated and customers expect them to work seamlessly across access technologies, we believe we are well positioned to deliver Australian consumers and small businesses more-for-more propositions. There are some great examples around the world of some of our global peers that have done this exceptionally well. If you take KPN Compleet in the Netherlands, this is not about discounting services; this is absolutely about providing customers with more benefits, the more products and services that they have with us.

So keeping in mind that market context and the combination of unique assets that we have as Telstra, I do want to talk about our plan for consumer and small business. It is a strong and very considered plan that has an incredible team right at the heart of it. I'm genuinely excited about the year ahead and how we're going to deliver on this for both Australian consumers and small businesses. As you can see our plan is built around three keys areas. Firstly, how we're going to look to shape the market here in Australia; second, how we plan to outperform in key segments of the market and finally, how we reset our cost base. So let me provide you an overview of each of these areas before I dive in and provide some more detail around some of them.

In terms of shaping the market, as the market leader, we have an opportunity to shape this market and help deliver greater differentiation and ultimately, growth for

our business. We've identified three key areas of focus to do this. First is through the execution of our multi-brand strategy to allow us to address different segments of the market. At the premium end of the market, we clearly have the Telstra brand. And we are focused on further strengthening its premium position through our key differentiators of network, world-class products, exclusive content, quality devices and quality service. In a more price sensitive segment, we have taken our Belong brand into the mobile category as well as maximising on our Boost Mobile brand in the younger segments of the market.

The second is maintaining our leadership position in nbn and this is by securing our share through the transition period and this requires us to provide the best service and connectivity experience on nbn including data and content offered and device integration. In the longer term, we know we must ensure we have sustainable economics in our fixed business. To further support that short-term objective of securing our share through this transition period, as Andy mentioned earlier this morning, later this month we will start giving almost all of our home broadband customers a permanent data boost and we will introduce a range of home broadband bundled plans with unlimited data included.

For almost of all our existing customers, this means a minimum of a doubling of their data inclusion and for our customers who are spending $99 or more with us, the gifting of unlimited data without the need for them to change to the current in market plans.

With more than a third of our home broadband customers now connected to the nbn network and millions more set to transition over the next couple of years, we expect data demand to continue to grow especially as Australians embrace entertainment streaming. In the past year alone if we look at our fixed broadband customers, we've seen their data usage grow by more than 40 per cent on our fixed network.

The third way we're looking at shaping the market ties back to a number of the topics you've heard spoken about this morning. First, the internet of things and secondly, ramping up our focus on network applications and services in the small business base. I'm going to go into these in a whole lot more detail shortly because we see them as incredible growth opportunities for our business.

In terms of outperforming in key segments, we have absolutely an opportunity to leverage our unique assets to ensure we outperform the rest of the market. From our research we know delivering a superior network experience continues to be of primary importance for our customers. And as I said, Robyn and Mike are going to speak more today about leveraging and extending that leadership. If I look at it today, our leadership in mobile, in fixed, in internet of things, and received experience for our customers, remains just critically important.

Our plan to grow in key segments are very much based on a shift to a whole of customer focus. We increasingly see both consumer and small business customers looking for their provider to package up products and services, so that they just work together, taking away the effort from our customers. We know by meeting these needs, we have an opportunity to grow our share of wallet with our customers through our whole of household and whole of business propositions. As I mentioned earlier, this means propositions that offer more for more. More benefits, whether they be extra data, more inclusions or better integrated technology, part of one eco system that delivers for our customers.

We're also pursuing growth opportunity in local markets and less traditional segments where we can tailor our offerings and marketing to geographic and community levels. One example of this is to communities where they speak languages other than English at home. Today, the LOTE segment here in Australia represents approximately three and a half billion dollars of the consumer telco spend in this financial year. To grow our share, we're increasing our presence in these communities and aim to have 50 non-Telstra branded stores in high profile LOTE locations up and running by Christmas. Right now, we have 28 of these 50 stores in operation.

Delivering exceptional customer experience also remains an absolute priority for us. This is absolutely an area I'm going to go into in more detail later in this session. Our focus areas right now are undoubtedly the experience on nbn, providing personalised interactions to our customers and ensuring we always have digital service experiences available for customers that are simple and effortless.

And finally, resetting our cost base. It is an important part of our plan and it is about fundamentally resetting and reshaping our cost base. We know we need to significantly reduce both our cost to serve and our cost to connect for our fixed broadband customers by 2022. Key facets of this plan are leveraging our company wide digitisation and network optimisation programs, including increasing the automation in the processing of transactions and simplifying our product portfolio and service model. These initiatives are captured in a company-wide productivity program that Warwick will speak more about later today.

So let me now dive into some of the key elements of our strategy and share some examples of how we are executing on these in market.

As I spoke about earlier, we see the market will increasingly bifurcate as competition intensifies. An important part of our strategy to win in this environment is leveraging our multiple brands to compete in different segments of the market. The divide between the price sensitive segments of the market and the rest of the market is a very important one. There needs to be a very clear difference between what a price sensitive customer gets for what they are willing to pay and what others in the market get for paying that bit more.

Starting with Telstra, the Telstra brand stands for network superiority, trust, premium content and a growing range of NAS services for our small business customers. We know it's critical, via the Telstra brand, we continue to deliver clear points of differentiation that really matter for our customers. At the very premium end of the market, we are focused on delivering more platinum levels of service, more sophisticated solutions and a wider range of benefits such as media content and loyalty rewards.

Our Belong brand targets the price savvy segment with simple, strong data offers with no overages and no surprises. We started the business from the ground up which means it's an entirely digital, low-cost agile business. To date, the business has acquired 150,000 fixed broadband customers with about half of them on the nbn. In late September, we expanded Belong into the mobile market continuing to extend its appeal and growth into the more price sensitive end of the market. While it's very early days, we are very pleased with the initial traction of the long mobile which is – has achieved more than 1000 activations per week since launch. Over the coming months, we will expand Belong's retail footprint and build on its early momentum in the mobile market.

Whilst we've seen some early strong results from Belong mobile, more broadly in the mobile post-paid handheld market, this year we have the unusual event of the launch an iPhone 8 and an iPhone 10 two months apart. iPhone 8 demand was below previous releases, however, iPhone 10 pre-orders are very strong. And aggregating iPhone 10 and iPhone 8 demand, it is above previous iPhone launches. In addition, we continue to see our customers willing to sign up to higher minimum monthly commitments in order to access the latest devices, higher data inclusions and access to great content. The demand for iPhone 10 is expected to be such that stock is likely to be constrained which could push the timing of some of our acquisition, recontracting and hardware events later than prior years.

At the same time, we're continuing to develop our third brand, Boost Mobile, which offers a lifestyle based proposition with great connectivity and targeted content such as sport and music. It serves the youth market, particularly school leavers, university students and those starting their first jobs. And it gives us an important presence in a segment that Telstra is not as prevalent. We have all of our brands on show today, so over the lunch break, I would encourage you to spend some time and immerse yourselves in what our various brands stand for to our customers.

I now want to move to talk about our whole of household propositions. Of the unique things that Telstra has, one of the most important ones is our existing customer relationships. They are incredibly valuable relationships for us. To really understand our customer base, we invest in listening to what they want from us and narrowing that down into a clear set of compelling things that we need to deliver on.

We distilled this down and we call it our better ways. They're our better ways how we can create ideas and products to empower everyone to thrive. For consumer customers, there are five better ways. They form the basis of how we take our products and services to market and provide integrated solutions for our customers. You can see on the slide how we deliver on these better ways in very tangible propositions for our customers. If I touch on superior connectivity first, both in and outside the home. It's about faster, consistent broadband speeds supported by our very successful hybrid modem delivering a seamless in-home experience and access to more than one million Telstra Air Wi-Fi hotspots.

We also provide our customers the best loyalty rewards for their whole household. This includes the Telstra Data Bank which we launched recently in pre-paid. It also includes money can't buy experiences provided through Telstra Thanks and our device protection and replacement programs. Providing the best entertainment experiences in and outside the home is also something only Telstra can provide. This includes the exclusive and shareable content, the new Telstra TV for home and mobile which was launched last month and our great portfolio of Australia's favourite sporting content such as AFL, NRL and Netball.

We're seeing huge demand for video content from our customers, both fixed and mobile. On mobile, we've seen data usage for video grow by 40 per cent in the past 12 months with video now accounting for 40 per cent of the data usage on our mobile network.

Our customers also tell us that connected technology that puts them in control and gives them peace of mind is important which is why we've provided solutions such as Telstra Protect, a service to give customers a really secure connection, and our Smart Home dashboard which gives customers control over their connected devices in their home at their fingertips. We wrap this all up with expert advice and support that is easy to access when customers need it most, increasingly through smart

digital channels like T.com and our Telstra 24x7 app. Increasingly, you will see our whole of household proposition will be based on compelling reasons for customers to take additional services with us or what I have referred to as our more for more offers.

In our plan for shaping the consumer market, we've identified two key adjacent areas of growth: the Internet of Things, and other digital entertainment. As Stephen referenced earlier this morning, we expect – or current forecasts show that domestic IoT revenue by FY23 is expected to be around $6.6 billion. Of that spend, a little over a billion dollars is expected to be spent by Australian consumers. The Smart Home category, which include our elements such as appliances, automation, and security, is expected to represent the majority of that IoT spend by consumers. With the average household estimated by that point in time to have more than 30 devices connected in their home.

We launched the Telstra Smart Home in February 2017, offering customers the ability to do things, such as monitor their home when they're away, check on their kids, that they're leaving or arriving home safely from school, manage their energy usage and keep an eye on their pets. Interestingly, the most popular use case right now is the last one, keeping an eye on pets. In a telco world first, we launched our integrated Google Home and Smart Home bundle in the first quarter of this financial year. This means we're also now able to provide great assistance to our customers with a disability or mobility impairment via things like voice control of lights and thermostats.

In the second area of digital entertainment, the market is estimated to grow to more than $3 billion by 2021. Our focus in this area is to continue to provide the most compelling media experiences that connect our customers to their passions. We do this providing leading platforms, such as Telstra TV and Foxtel Now, and leading content, such as AFL, NRL, Netball, and SVOD services. Telstra TV is a key differentiator for us, and, again, at the break you get the chance to experience our new Telstra TV 2 in our home immersion experience.

I now want to turn to our whole of business proposition for our small business customers. We are the market leader in small business, and that is again built on incredibly valuable relationships with Australian small businesses. We spend a lot of time to make sure we understand their needs and how we can best enable them to achieve their business outcomes. This has resulted in six better ways for our small business customers. Again, these form the basis for which we bring products, services, and solutions to market for these customers. Three of these are very specific to the small business segment and have close alignment to a number that Brendon spoke about for our enterprise customers.

I first want to touch on the ones, though, that are aligned more closely with our consumer better ways. The first of these is we know how incredibly important it is for our small business customers to be able to provide the best service and support. We create communities to help small businesses thrive. We have expanding access to channels of expert personalised and professional support for our small business customers. We're also very focused on providing business-grade connectivity for customers, delivering solutions that are as secure and seamless as possible via a modem that provides mobile backup at standard, because we know keeping our small business customers connected is so critically important.

We know also that rewarding our small business customers with loyalty offers really matters to them, such as our five-gigabyte bonus to our customers when they have

multiple products and services with us. The three better ways that are specific to small business customers rely on us providing simple and straightforward network applications and services. So let's take a look at this on our next slide.

Technology has fundamentally changed the way businesses operate. I know we all feel it every day, and it creates an enormous opportunity for small businesses. Much of the technology and solutions that just five years ago were purely the domain of large enterprises are now accessible to small businesses, able for them to leverage to deliver their business outcomes better.

In line with our vision to be a world-class technology company, we're aiming to become the trusted ICT partner for Australian small businesses. Helping them bring the best technology and solutions together to support them to thrive. We've prioritised our solutions to best meet the three key needs of our small business customers. The first is we're helping them mobilise their workforce and be more productive through a suite of solutions, such as lease plans for smartphones and tablets, Office 365, cloud storage, and apps through our Telstra Apps Marketplace.

We also know, the same as it is for enterprise customers, small businesses are very concerned about electronic and cyber security. So we're helping them to secure their business, and providing that through our network security, mobile device management, and cloud backup service for lease devices. We're also helping small business with another key challenge for them, and that is finding new customers and reaching new markets. We're doing this by getting them online with Telstra Online Essentials, selling online with eCommerce solutions, such as Neto, and offering connectivity to their customers through Telstra Air Merchant, which will launch in the fourth quarter of this financial year. Critical to our success in this space is making these NAS offerings modular and scalable through a per cent pricing model and very simple plans.

I now want to touch on customer experience, and where else to start but nbn. Improving the service experience for our customers on nbn is one of our highest priorities in customer experience, and there are four areas we're focused on here.

The first area is how we transform our current service model. We've already made some good progress here. In September, we launched the ability for our customers to be able to track their orders and change their appointment on our 24x7 app.

The second area of focus is really setting clear expectations. It can be confusing for our customers as they face the transition to nbn. How are we doing it? Some of our areas of focus here are making sure we're very clear up front what customers can expect on their first bill post-transition, setting expectations around the speeds they can expect on their broadband service once they migrate, and reducing the total number of communications we provide through that connection process, again, keeping it as simple and clear as possible.

In what can become a complex process, another important area of focus is how we make things really simple for our customers. We've introduced things like self-install kits and simplified our fees for our customers. Of particular focus have been some of our more vulnerable customers. For our seniors and our medical priority assist customers, we're helping them to take the complexity and confusion out of the nbn transition by providing a dedicated team of connection managers who are there to provide step-by-step support through that connection process. Since launching in October, the team have answered more than 7000 calls from these customers.

The fourth piece in our nbn plan is reducing the connection timeframe. One of the exciting things that we're doing here to reduce connection timeframes is providing our customers with our hybrid modem. It allows to get them up and running immediately on our mobile broadband service while they wait for their nbn service to be activated. Another initiative that's underway is improving the management of customer appointments, and I know Robyn is likely to reference this today. For our customers, this means better information about their job and less rescheduling of appointments, reducing their effort through that process.

More broadly on customer experience, we're also focused on a few other areas. Through our 20,000-strong frontline teams in our stores, business centres, contact centres, and digital teams, we have millions of human-to-human conversations with our customers every week. Each one of these conversations is an opportunity for us to have a personalised experience. We know that when we connect with customers, when we speak their language, when we take the time to understand them or their business, we can build trust, which is important for us to have an ongoing growing relationship with them. We're currently rolling out a cultural program across our channels. It's known as the Telstra Branded Experience. It's a development program to help enable our frontline teams to have whole of customer conversations built around truly exploring our customer needs and providing them with a complete solution.

We're also investing in the analytics and tools to support how our frontline teams can make real-time data-based recommendations to customers about the products and services that are most likely to meet their needs.

With a growing number of conversations and interactions taking place through our digital channel, we continue to further improve the service experience via both Telstra.com and our 24x7 app. This includes enabling customers to get things done with fewer steps, spending less time re-entering their personal details, in a way that is effortless and easy. For example, on Telstra.com we now offer a two-click process for an existing customer to be able to migrate their service to nbn, from what was previously a 15-step process. We're now extending that two-step process to more of our products that our customers can purchase online with us.

Last month we also introduced artificial intelligence into our digital service channels for the first time, with the introduction of Codi. Codi is our online virtual assistant. It's part of our digitisation program of work. Codi responds to queries through our live chat service on Telstra.com, My Account and on 24x7 app. At this stage, Codi is online to answer simple questions regarding our prepaid products, 24 hours a day, seven days a week. That allows our agents to deal with the more complex queries from our customers and provide that extra time and attention to the customers who need it most. Even though it's early days, Codi is already providing fast, consistent and high-quality responses to our customers on some of the most common questions in relation to our prepaid product.

So I hope today I've been able to give you a clear sense of how well positioned we are. We have a strong plan of how we will compete, grow and lead in the consumer and small business markets here in Australia, and I want you to walk away with a clear sense that our plan is built around, firstly, shaping the market in Australia, secondly, outperforming in key segments, and finally, resetting our underlying cost base. So I want to thank you for your time and now hand back to PK for Q& A. Thank you.

MR KOPANIDIS: Thanks, Vicki, very, very much. So if Andy and Stephen and Brendon could join the Q & A, that would be terrific. So we've got two microphones either side of the room here. If you could perhaps introduce yourself and, if possible, please limit yourself to three questions at one time, that would be terrific. First question, Sameer, go for it.

MR S. CHOPRA: Morning. Sameer Chopra from Bank of America Merrill Lynch. I had a couple of questions for you, Brendon, given it's an exciting, growing business. Perhaps you could give us a sense around how the Q1 has tracked for yourself as well, because we've heard about how mobiles and fixed internet is going. I was wondering if you could talk about how the NAS business has tracked through Q1. Second question was around margins. Margins increased significantly for NAS into last year. I was wondering how is that tracking this year, and what have you done to increase margins? And then the final one was just around the connectivity space in your neck of the woods. How is competitive intensity in that space now? Thanks.

MR RILEY: Yes, thanks, Sameer, for those questions. So firstly, on the first quarter, I mean, we've said consistently we want to drive growth that's faster than the market, and we're continuing to see that in the NAS business. With respect to our margins, our objective is to get it to 15 per cent EBITDA business, and I'm still confident we're tracking well towards that outcome. The only thing I would say is it's not necessarily perfectly linear, because it is a services business and sometimes you get big contracts with major milestones that can have a certain impact on the cost or the revenue side, but I'm happy with how the business is performing and how it's tracking.

On the core connectivity business, yes, I mean, we've definitely seen more competitive pressure on that, as we've seen in the consumer fixed world. One of the things that enables us, I think, to compete very well is our network applications and services business and our ability to take on and manage some pretty large transformation projects and initiatives. A good – maybe a good case study in point would be McDonald's. So McDonald's was a competitive tender to upgrade 850 stores around Australia to fibre, and that's obviously important because as you take your kids there for their burgers, what do they want to do? They want to connect to all of their wonderful Telstra devices on Wi-Fi, and also McDonald's are looking increasingly to make it much more of a digital experience.

So we were successful in that bid. It was very competitive. But, again, our ability to do largescale projects, a lot of the – obviously, the wonderful Wi-Fi network that we are able to leverage on for McDonald's that was already in place. All of the assets that we have meant that we were able to secure that business, and we're very, very proud of that. So hopefully that answers some of your questions.

MR CHOPRA: Thank you.

MR KOPANIDIS: Next question is from Kane.

MR K. HANNAN: Morning, guys. It's Kane Hannan from Goldman Sachs. Just a couple of questions for Vicki in terms of the mobile business. Could you just confirm whether you are seeing overall growth in terms of the post-paid handset or whether the consumer growth is being offset by the business declines. And then just in terms of the early days Belong performance, 1,000 activations per week. Give us a sense of what share of these are coming from existing Telstra subscribers, and which of the two plans has been the most popular so far.

MS BRADY: I might start with the Belong question first, and then Warwick may want to comment on the other part of the question. So firstly, on Belong, one of the things we do monitor closely is where are Belong acquiring customers from, and the very positive news there is around 90 per cent of the customers Belong acquire don't come from Telstra. So it has a very distinct position that is different and a long way apart from what the Telstra brand stands for. So that cannibalisation is very limited. So we do keep a close eye on it, but as I said, the brands are so differently positioned in the market, it gives us plenty of space to compete in different segments.

MR PENN: Just on your question on mobiles, so as I mentioned, we saw some improvement in mobile services revenues in the second half of 2017. Q1 was a bit softer, slightly down. That's a function of MMCs continuing to grow, offset by lower data averages and data charges. And that's really just against the background of increased data allowances, and we launched some new plans into market, Vicki, in Q1 which would have - - -

MS BRADY: That's right.

MR PENN: ..was in response to some of the competitive dynamic. I think the point I would say is that there's no doubt that mobile market is competitive. What will be telling will be this next quarter, because, obviously, we've got a lot of new handsets coming into the market. Vicki has already mentioned the 8 and the X from an iPhone perspective, but we also have new devices from Samsung. The Pixel 2 launched a few days ago.

MS BRADY: That's right, yes.

MR PENN: And that's been pretty strong in terms of demand. And exactly to Vicki's point earlier, customers are – that's moving customers to higher plan sizes and to higher MMCs. And so we need to see how that whole dynamic plays out. So Q1 was probably not quite where we wanted it to be, but nonetheless I think we will see how Q2 plays out, and there is positive momentum in SIO growth, and as Vicki said, there is good demand around Apple. I think some of the global supply is a bit constrained on the X. That's not an issue unique to Telstra; that's a global issue. But we'll see how that period plays out.

MR KOPANIDIS: Next question, Eric.

MR E. PAN: Hi. Eric Pan from JP Morgan. Just a little bit on the nbn costs you've talked about trying to manage it a little bit better but you're offering – you're increasing your data limit to unlimited for $99 plans and above and then doubling the rest. Now, how should we expect that to impact your margins and then is there a chance for you guys to offload some of your capacity needs to your mobile network if you have a hybrid modem out there?

MR PENN: I think on the bundles and the changes to bundles in our $99 plan, Vicki, the current daily allowance is what?

MS BRADY: Two terabytes.

MR PENN: Two terabytes so at a practical level our average consumer uses 150 gigabytes and even in the top decile they're up at about 900 gigabytes per month so I don't think that in and of itself is actually going to necessarily make a big difference

to the overall data usage. We are bestowing, as Vicki said – remind me, Vicki, how we're doing that.

MS BRADY: Yes, so for most of our existing customers it will mean a doubling of their data allowance. If they are spending over $99 with us they will get gifted unlimited so as Andy said we're already seeing data growth on the network as I referenced. The point about unlimited and doubling data is really about giving customers peace of mind and we think that's incredibly important through this period of transition to nbn so we want to make sure our existing customers know how valued they are, that they've got a great proposition from us through that transition period because, as I've said, we absolutely want to make sure we secure our share of customers as they move to nbn.

MR PENN: And I think it's important that we continue to demonstrate the premium in the product and - - -

MS BRADY: Yes.

MR PENN: - - - and so the inclusion of the hybrid modem I think is going to be very cool, the Telstra TV which you will get a chance to have a look at lunchtime is going to be very cool. But I don't anticipate the increased data allowance is going to make a material difference to CVCs. As I said – and Mike and Robyn will talk about this later in terms of exactly how we manage our CVCs because it has become obviously an important topic – we know exactly what we're buying, exactly what it is POI by POI and we're very comfortable with our position particularly relative to the ACCCs recent guidelines on that front.

I think on the mobile to fixed debate – and again I think we will come back to it with Robyn and Mike and we've asked Robyn and Mike to really sort of lay out exactly the different dynamics between how fixed and mobile networks work and data capacities etcetera – I think the fundamental point that we would make is that what's most important is that customers get the connectivity that they want where they want it and when they want it. And, of course, customers are increasingly using mobile technology but they're increasingly using data on fixed as well so the most important thing for us they get what they want where they want.

Obviously technology innovation will continue to progress and there's no doubt some customers will want a mobile only service as opposed to a fixed service but ultimately mobile can't replace fixed. Ultimately – and Mike will take you through the reasons for that just because the amount of capacity you would need to build into a mobile network would lead you down the path of tens of billions of dollars of investment nationally. But I think the most important thing is we actually deliver the right connectivity to our customers when they want it and where they want it and both technologies will be important.

MR PAN: Right. And maybe just one more on bundling. You talked about eventually bundling fixed and wireless. What about the potential bundling of content? How has the Foxtel free offer on mobile fared so far?

MS BRADY: Yes. So, I mean, including content in our proposition is really a key differentiator for us already today. As you call out – I mean, we've brought Foxtel now in and I've got to say the response from our customers has been incredibly positive. I mean, I think it's well known to our customers Foxtel has the best array of content in the marketplace. They've been able to get that access through Foxtel

now when they sign up to our mobile plans. It has been really well received by customers.

MR PAN: Thank you.

MR KOPANIDIS: Eric.

MR C. WONG-PAN: Craig, actually.

MR KOPANIDIS: I'm sorry.

MR C. WONG-PAN: Craig Wong-Pan from Deutsche Bank. One question for Vicki and then one question for Steven. So, Vicki, on the – you talked about the Belong mobile brand and I guess that's sort of 10 per cent of our customers have been existing Telstra customers. What do you expect or what are you assuming around going forward around that number? Does that change materially from that? And then a question for Steven – just on the Telco's versus other providers like OTT providers, you had that great chart of the opportunity that Telco's have had versus others and I guess the vast difference there. What makes you think that telcos, as well as Telstra in particular, can kind of capture the new services, 5G, whatever it is?

MS BRADY: Okay. So I'll talk to Belong first. As I spoke about, definitely, as we look forward, the Belong and the Telstra brand will continue to sit at very different ends of the spectrum in the marketplace. The one thing we're very focused on is making sure – I talked about bifurcation of the markets, so that, for price sensitive customers, they are very clear on what they get for what they're prepared to pay, versus those prepared to pay a bit more, you will see us increasingly make that divide even clearer. So we're reasonably confident that, through executing that strategy and just how far apart the two brands sit in terms of the segments they address, we've set ourselves thresholds around keeping a close eye on the movement of customers from Telstra into Belong, but we don't see a material shift from where it's trending today in the next little while.

MR ELOP: And, with respect to your question about telcos and how do we compete, at the heart of our strategy analysis when we look at opportunities, one of the things we look at very closely is the degree to which we have a sustainable competitive advantage as we push out from the core of our business. So, in the area of Internet of Things or Big Data analysis and all of those, let me give you a specific example. If you think about a particular company that might own the rights to a tollway; a pay for roadway in Australia; that company knows absolutely everything about every car going on to and off of that tollway; when they entered, how fast they drove, how they progressed and where they exited; they have all of that data.

We are the only company that can tell them about all the cars that chose not to go on the tollway and that used the side streets instead, and therefore we can have a conversation about a service to help them understand the movement of vehicles not only on the road but around the roads and everything else in-between. It's a very simple example, but it highlights that we look at those opportunities where we have unique assets; in this particular case, some sense of anonymised location data that we can use, mashed up against the data that another company might have, to create value that didn't exist before. So why does a telco like Telstra have that opportunity? Because we're in that position in the market with some unique assets.

The same thing is true in Internet of Things more broadly across the country; very much taking advantage of our existing network infrastructure to build a very advanced IoT network that's even larger than our core mobile network gives us the opportunity to have a conversation, as Brendon said, with the mining company about everything that's happening on the vehicles in the mine, the mine itself, the transportation quarter to the ports, the ports and the ships beyond. We have unique capabilities that is very difficult for anyone else to replicate, and we hold ourselves true to that principle. Looking for those growth opportunities isn't about doing generally random things. It's about things that build on the differentiators that we have.

MR PENN: And can I supplement the point because I wanted to draw together both what Stephen said and what Brendon said in his presentations, that – and it goes exactly to the point about why our strategy is what our strategy is because, by investing in these capabilities, in the technologies above the layer of the network, there are both incremental growth opportunities for us as Stephen just highlighted, but also it is about how do we protect and add value to our core connectivity, and McDonald's is the classic example of that.

The reason we won the business with McDonald's was not only because we provide the best connectivity, but we could also provide the business solutions, the applications and services, the capability to really help McDonald's bring to life the connectivity – what they really wanted to do was to provide great connectivity for their customers, but also, as Brendon said, bring that digital experience into the store in the way in which they engaged with their customers, and it's critical for both; it's critical to protect and to expand the value of our core connectivity but also creating new opportunities up the stack as well, as Stephen highlighted.

MR KOPANIDIS: Next question comes from CommsDay, Petroc.

MR P. WILTON: Hi. Andy, the ACCC has shown a great amount of interest and engagement with the telco sector in recent times. Roaming, of course, went your way. There's a huge slew of recommendations coming out of their draft telco market sector report, and last night Rod Sims got up on stage and went, "You know what? I think we should rethink spectrum competition limits". How do you see regulatory headwinds shaping up for Telstra in the medium term, particularly in mobile?

MR PENN: Well, thanks, Petroc. I think the first thing I would say is that the ACCC roaming decision went the way of customers, not necessarily Telstra because absolutely it's the right decision for customers, particularly customers in regional rural Australia, and I think also the reason it's the right decision for the industry – I mean, of course we have a vested interest; I'm not suggesting we don't, but the reason it's the right decision for the industry is what it does is it continues to promote and support and industry where making investments is critical to the overall differentiation of competition, and that is what actually brings better solutions for customers. If, as telcos, we all have incentive to invest, to invest in capability, to invest in new technologies, to try and do that to differentiate and provide the best experience for customers, that's the best income for customers.

And I – as you look through many of the ACCC's recommendations, as you say, in that report a lot of them actually go to supporting that thesis, as well as, of course, a lot of them go to supporting many of the points that we've made in relation to how do we get a better experience for customers in the transition to the nbn. And so I'm not sure that the ACCC is more or less interested in the sector right now. I think there's

a number of things that have sort of happened at the same time, which is the ACCC roaming decision, which was actually one that was kicked off more than a year ago. It's just that we've had the final decision now.

And, of course, then the ACMA announced the spectrum process only a few days ago obviously, and then also the results of the market study, so I think the ACCC has always had a keen interest in supporting the industry and making sure it's a competitive industry, but I think the roaming decision is a good one because it – and some of the recommendations because it does show that they come from a philosophical point of view about creating a win-win for everybody for – obviously for the competitors but also for – ultimately, for the consumers, which is how the system is going to actually deliver the best outcome.

I think, in relation to spectrum specifically – I know that Mike's probably going to touch on it; I know that Warwick's going to talk about spectrum later – the ACCC already has a role to play in relation to setting spectrum limits. We have a strategy in relation to our approach to spectrum, but I might wait for Warwick, who might talk about that later.

MR WILTON: So you have no immediate concerns around regulatory headwinds in – at the moment?

MR PENN: Look, I think we operate in a highly regulated industry, and, of course, sometimes regulatory decisions go against us. The last FAD decision, which I mentioned, basically meant that we had to reduce our wholesale prices nine percentage points below the cost of us providing wholesale broadband access, which, as I mentioned, is a contrast to actually what the industry is paying for access to the nbn right now, so we do have, obviously, times when regulatory decisions go against us and then times when we think that they support the right outcome, so I can't predict how, obviously, all of the regulatory decisions will play out for us, but we do have a high degree of engagement with the regulators.

We play a critical role in proactively inputting to their inquiries, into their reviews of the industry, and I think in the round we are positive about the future, and we don't see any major regulatory headwinds, but there are always things that, as I say, go against you.

MR WILTON: Thank you very much.

MR KOPANIDIS: Hi, Nick.

MR N. HARRIS: Hi. Nick Harris from Morgans. The first question for Vicki, please. Just really interested in Belong. I think we've got a pretty good understanding of how you've segmented the Telstra and the Belong brand. Perhaps could you put some commentary around the cost to serve differential between the two? I guess, more specifically, should we expect the EBITDA of a Belong subscriber to be in the ballpark of Telstra because it should be a lower operating cost?

MS BRADY: So I don't think we disclose directly the operating costs of Belong. Of course, as I referenced, it has been built and set up very differently. It was born as a digital business. It does offer – if you look at the offers and products in market, it is a much simpler offering to the more holistic Telstra offering in market, so it has fundamentals of its business that, yes, give it a lower cost to serve than we have through our main Telstra business. I don't think we've ever disclosed, though, what

those relativities look like, but obviously they play a key part in us being able to compete in that price sensitive market in a way that makes economic sense for us.

MR HARRIS: Thank you, and just a question for Stephen: I think you made the comment the cost to deliver data over a mobile network has dropped about 45 per cent every two years for the last four years. I don't suppose you want to make any comments on 5G and what you think that might do for the cost of data?

MR ELOP: I won't put it in the numbers. Mike will talk a little bit more about this, but it absolutely continues the trend and is necessary to continue the trend as we see the increase. Part of that is because of the absolute throughput improvements, but also the spectral efficiency and how much more efficient we can be using a particular slice of Spectrum, and also things we can do uniquely with Spectrum in the 5G specifications that are coming into focus that we can't even do with 4G. So we look at it – and some of my remarks earlier – as a necessary element just to stay ahead of the growth curves and cost curves that we want to achieve now, and then in addition to that there are new use cases and things possible with 5G that are not nearly as possible in the 4G environment. So we're very much looking forward to 5G helping to facilitate what we have to do in the future.

MR HARRIS: Thank you.

MR KOPANIDIS: Fraser.

MR F. McLEISH: Fraser McLeish from Credit Suisse. Just to Vicki, that 25 to 30 per cent of the market you put in the low-cost – price sensitive segment, can you just confirm that that's by subscribers or by revenue.

MS BRADY: I think we've looked at it by subscribers, but I can double-check that. I'm pretty sure that's how our analysis has worked – I'm getting nods from my team up the back, so yes, it is based on subscribers.

MR McLEISH: Okay, great. And then, Stephen, just on this Ericsson number of 48 per cent, I think it is, uplift to telco revenues by 2026 from 5G, I mean, how realistic do you think that those sort of forecasts are? Because if they're right, I mean, there's massive growth in this sector in a few years' time.

MR PENN: Yeah, I think it was in mine but, I mean, Stephen's as well qualified a responder as I am, so you might want to add Stephen. But, I mean, the only thing I would say is that if you look past – back past all of the previous transformations or changes in technology from 2G to 3G, from 3G to 4G, there has been a significant boost in telco revenues following that, and I think if you look at the breadth of services and capabilities that 5G will potentially bring to bear, I've got no doubt it's going to drive value in the industry. I think – question how much of that will actually be captured at the layer of the application as opposed to purely within the plan.

But I think what you're seeing and what we're seeing, obviously, in just the current mobile dynamics, is minimum monthly contributions is continuing to step up and step up and step up. The data overage obviously is reducing as a consequence, but the fundamental underlying point is demand for connectivity is only going to grow and our opportunity is to continue to be front and centre of that with the best network, with the best telecommunication plans, and also playing at the layer of the applications and services so that we can capture value at both parts. Stephen, do you want to - - -

MR ELOP: And just to add to that, the Ericsson material very much takes a relatively broad view of what 5G enables. So if you'll remember my chart that had three bar graphs on it, in some sense, all of those are enabled by 5G, so you start to add up all of those components and broadly call it 5G. That's why my third category was called 5G connectivity. IoT with the billions of devices that are going to be connected, it absolutely requires 5G for that to become possible. So a lot of it is intermixed and you have to add to some of the parts.

MR McLEISH: Thanks.

MR KOPANIDIS: Raymond.

MR R. TONG: Morning. Raymond Tong from Evans and Partners. Just a question for Vicki first. Just in terms of the Q1 revenue trends a slight decline, could you give a sense for the trends across the different business segments versus small business in your space, please.

MS BRADY: Yeah. I think Warwick is likely to reference a bit more later on, but, as we keep saying particularly in the consumer segment, for post-paid handheld, we're seeing absolutely lifting minimum monthly commitments. So that continues as a very positive trend, and I'm really encouraged by the new devices in market. We see that sort of lift again with the new devices that are appearing now. So that's positive. As Andy has referenced, though we do see data overage come down as those minimum monthly commitments come up, so it is a balancing act in consumer at the moment. For small business, we have different – we're at a different place in small business. We still have customers that have older plans with more data overage charges on them, and so we're still in that transition. So there is a little bit more pressure in the small business part of our mobile business in terms of some of those ARPU trends.

MR PENN: And I think, Vicki –looking at Warwick here, I think I'm right in saying, to the extent that it's slightly down in the Q1 at the ARPU level, I think that it's about one-third sort of consumer, two-thirds business. That's about the mix.

MR TONG: Thanks, and a question for Brendon and Stephen. Just in terms of the 5G strategy and opportunities looking ahead in the next five to 10 years, what do you think are the figures EBITDA opportunities for the use cases that you've mentioned and who do you think, I suppose, will be the biggest competitors in those spaces?

MR RILEY: Yes, so, look, I'm – we're very, very excited by IoT. I just, again, think of 2G as sort of connecting human beings to talk to one another, and then we're sort of into 3G, which is again less – more talk and – more text and a little bit less talk, and then 4G was really a proliferation of data, particularly video. And 5G is going to be about connected things, and – so those three use cases that I put up are the ones that we are most intensely focused on right now, and I think that we're focused on those because we believe that they are going to be three of the biggest drivers of growth in our solution spaces.

We're working very, very hard on all of the key industry segments, so agriculture is something that we're also working hard on. There's a lot more that we're working with with Vicki on and around small business and then into the home. So that's a very, very important market. Stephen gave a great example of his house. My house is maybe not quite at the exalted levels of his in terms of connected things, but it's on the way. So what I think is important is we're really trying to create more

of a platform-type business model with IoT. So that's what's behind the acquisition of MTData. That's how we're working with Mike and Robyn, is to be thinking of – essentially that IoT network that was announced as a national platform, and then our ability to put the industry-specific keynote platforms on top of it. But I think the ones I've mentioned, plus a few more, will be the major drivers of our growth in the next sort of two to three years.

MR ELOP: If I can add to that, I'll just take a slightly different dimension to it and say two things. First of all, very much as we entered into the 3G space, there's much we don't – know we don't know as it relates to 5G and the use cases that it's going to enable. Already we're seeing some new ideas emerge, things that even a year ago we weren't talking about in terms of how this technology can be applied, because the very availability of it leads to creativity and entrepreneurship developing new solutions and new cases. So that's my first point. The second point is I think it's very insightful that you asked Brendon the question before asking Vicki the question.

Even though we don't understand all the implications and the opportunities that 5G will present, our bias tends towards the enterprise in terms of where those first use cases will really land, and it's because of IoT, it's because of Big Data, it's because of the ability to more clearly commercialise those, whereas in the consumer space you tend to think more about keeping up with the video growth and the streaming growth and things like that, which is interesting and valuable, but, in terms of the new use cases and things like that, we tend to think more on the enterprise side before we think about the consumer side. We still have a long way to go with IoT in the home.

MS BRADY: Absolutely.

MR ELOP: But, nonetheless, on the enterprise, there's just this burgeoning collection of ideas that are landing on us that we're very excited about.

MR TONG: Thanks, ta.

MR KOPANIDIS: And the last question's from Ian Martin.

MR I. MARTIN: Thank you. Vicki, it's very interesting to see the introduction of AI into prepaid. Can you just expand on what your expectations are, what your outlook is for that. Is it material enough that it's going to have some impact on margins and business performance? Is it – and is that just about cost out and resource control, or is there some potential to use AI for value add? And, Brendon, it's interesting that AI is being introduced into consumer side. Is there some prospect to – for it to be rolled out to add some value in enterprise? Particularly, is there some prospect to marry it up to IoT and maybe Big Data, generate some value?

MS BRADY: Okay. What a great question! So AI, we're at the very early stage of deploying that, as I said, to our prepaid customers for simple queries at the moment. We see huge application for it. So firstly, in those interactions directly with customers, very simple interactions. It isn't just about cost. It actually improves the experience for the customer too, because it means it speeds up simple queries, and so that's a big driver for us as well. We're absolutely looking at expanding it more beyond prepaid.

We thought prepaid was the right place to start, because there are repetitive, simple queries that we get in the prepaid environment that suit themselves very well for the

early stages of deploying AI. We're also taking that capability and now working to apply it to support our frontline teams, because one of the challenges our teams have when it comes to serving customers is how do they get information quickly that can help them assist the customer? So we're also taking the technology and learnings and deploying it into better enabling our teams.

To the question of costs and productivity, we have a big productivity program, and I spoke about needing to rebase our cost structure, and absolutely AI is factored in there as one of those great things that can deliver productivity benefits and customer experience improvements at the same time. So we're at the early stage, but see a lot further application of AI in consumer and small business.

MR RILEY: Yes, great question Ian. For us, we've been deploying the AI and robotics actually behind the scenes more so than in front of the customer. So if you look at – we do about 100,000 IP orders a year, and that's been really the big focus from the digitalisation program first up for us. And typically, a customer will have multiple locations, multiple links, multiple devices. And if you do the factorial multiplication, you're into a lot of different permutations. So what has typically happened in the past is those orders have come in and they're all broken down manually and put into a whole range of different systems, and then if you're trying to track them, you need an army of people in the back office to be able to tell anyone what's going on. So what we're actually doing is using AI and robotics to do that disaggregation and re-aggregation behind the scenes so that we're able to better populate a GUI. As we simplify some of those back office systems, obviously we can consolidate and collaborate. So that's actually how we've been leveraging it.

In terms of IoT, I would say that is one of the – I'd say we're probably more in the R&D stage with the Telstra Labs team under Stephen, with Robyn and Mike's team, on – again, if you think of IoT like as a platforms business, where we have a series of platforms, we're clearly going to need to have a set of AI capabilities within those platforms, simply because we're not going to be talking about 100 routers out on a network. We're going to be talking about hundreds of thousands of low-power devices. So it's just not possible for the human being to be able to cater for it. Robyn and Mike will talk about the Next-gen OSS, which is code for a gigantic AI engine which runs all of these networks. We're going to be leveraging very, very heavily from that. So what a lot of our customers say is, "Look, we just want to see what you can see on the network. Can you give us that pane so we can do it?" That's what Next-gen OSS will do initially, and then we'll build on more analytics and more robotic capabilities for our customers.

MR MARTIN: So it sounds like it's quite material an impact, but hard to draw out as a standalone driver of benefit, whether it's resource or revenue opportunities.

MR RILEY: Yes, I think it will build – probably if you were here two years ago, when we were talking about IoT, you were probably asking similar questions, and I think it will build out – the analytics and the robotics will build out and be more powerful and more tangible, and we'll be able to give you more specific examples with economic benefits. I mean, I can tell you on the IP digitalisation process, in terms of what we're implementing – and I just happen to remember this number – we'll need 328 less people doing completely non-value-add work by the end of the financial year just through the implementation of the AI and robotics just on that process.

MR PENN: I think for me, what I would say is that where it's going to make a massive difference is actually on the customer experience, and if we can continue to

drive that and drive a brilliant customer experience, then we're going to get more share, better retention, better margins. Whether that turns up in revenue growth, whether it turns up in cost reduction, better retention, I don't ultimately know. But this is why – this is a fantastic opportunity to spend time with you today, because I know we've got a lot of challenges to face over the next two to three years: increased competition and the migration of the nbn. We're not shying away from those challenges, and there's a lot of tough stuff that we need to work through in the competitive dynamics. But at the same time, we really want to showcase with you what have we been talking about over the last two years about becoming a technology company.

It's actually about building some of these capabilities behind the scenes. So building more software engineering capability. We've got more than 70 data scientists in the company now, more than 500 cyber security experts, more than 100 software teams operating on Agile. We've got the IoT platform launched, the Next-gen OSS that Brendon is talking about, which is probably one of the biggest data and machine learning engines in the country, as I mentioned before. These capabilities give us the foundations to just leverage so many different use cases and opportunities, and whether they're about providing a better customer experience through engaging with customers or new growth opportunities as well or supporting enterprise customers, I think this is what we're trying to give you a little bit of a lens into. And what's exciting is I think we're now starting to see some of those use cases in a very practical, real life way, which is – hence some of the things we're sharing with you today.

MR MARTIN: All right. Thanks.

MR KOPANIDIS: So that concludes our first Q & A session. I'll ask my colleague from Enterprise Marketing Andy McFarlane to join us on stage and give us some background on what's planned for lunch.

SESSION SUSPENDED

SESSION RESUMED

MR P. KOPANIDIS: Take two. Hopefully you found those sessions interesting and informative. Thank you for joining us for the afternoon session. The next session is on infrastructure, and we'll have Robyn Denholm and Mike Wright to take us through the next presentation, and there will be a second round of Q&A to follow, as well.

MS R. DENHOLM: Thank you. Well, good afternoon, everyone. What we wanted to do today was to actually give you an update on the transformation initiative. It's a very important one for Telstra, as you heard this morning, in terms of the – those networks of the future, and also digitisation. Before I start, I just wanted to actually make one point very clear around our CAPEX. So obviously we have an elevated amount of CAPEX on these programs. We are very conscious of the fact that we've got to make every single dollar count, and, as we go through the presentation, what you'll see is that all of our CAPEX is either supporting current revenue streams or expanding our revenue streams to the point that Brendon and Vicki talked about earlier.

We're also very focused on using CAPEX to drive cost reduction in terms of the network cost. So you saw the trend on Stephen's slide around costs of bit per traffic. That's one of the things that we're really focused on as we get into the next

generation of networks. We're also really focused on driving the cost to serve and the cost to connect. Vicki talked about the cost to serve, and I will also talk about how our cost to connect and cost to serve parameters will change as we move forward. But all of those are supported by the CAPEX that we're spending, and so we'll talk through that – and I should say investing, not spending, because I know the difference between spending and investment is the return that we get, and so we're very focused on delivering that.

So before we start on the update on the transformation, I just want to ground us all in terms of the fantastic assets we have as a company across the board. I'm going to start with people. You've heard in the introduction that Andy did before – I've been in the technology industry more than 25 years and I've worked with some of the world's best engineers, both in terms of telecommunications, but also in terms of technology and automation, and we have some phenomenal people within Telstra, particularly in the engineering areas around our networks, but also increasingly in the data science area and security area and also in the work that we're doing on some of the automation spaces, as well.

If you look at some of the other assets that we have as a company, the optical transport – or transmission network that we have is a very strategic asset. Mike will actually deep dive a little bit into that to just explain why that's important, a huge fibre asset that we have that is different to the nbn. It actually takes all of our traffic, irrespective of the different types of access technologies, whether it's mobile, fixed, nbn, or even our enterprise networks, and actually transports that around the country, and we're making some foundational investments in there as we'll go through in a minute.

In terms of mobile sites, we have over 9000 mobile sites across the country. They're not all towers. They're sites. They're both small cells, but also large cells, and more than 50 per cent of those sites are owned by Telstra.

In terms of spectrum, we've made investments in spectrum. Warwick will actually talk about that in his discussion later on in terms of investing in spectrum $3.4 billion worth of spectrum over the last 15 years. Obviously as we move into 5G, there are other investments that we need to make in terms of spectrum.

Exchanges and data centres are also a key critical asset that we have. We've already announced previously that we have more than 5300 exchanges. As we work through Network of the Future, one of the things that we're working through is to rationalise some of those exchanges, given the different technologies and the fact that you don't have to have as much near-field communications as you did in the copper era, so we'll actually be able to take out about 2500 exchanges as we move forward. There are obviously opportunities to monetise that. The other key important part of some of our other exchanges is that, as we get into 5G, distributed compute and some of the use cases for enterprise actually will make use of some of those exchanges in a very different way to what we use them today.

Ducts, pits, and pipes – I never thought I'd actually be on stage talking about these assets, but they're a very strategic asset for us. We have more than 500,000 kilometres of ducts, pits, and pipes around the country, and it's not just that we lease them to nbn as you've heard through the commentary. We actually do, but they're shared assets. We actually have other infrastructure in those assets, but we also leverage them and get a rental return. If those assets had to be replicated today across the country, they would cost billions of dollars to actually replicate. So I just wanted to make sure we had that grounding.

I also really look at the underlying trends in our industry, and it's very different to many other industries around the world. We actually have an insatiable demand for the core tenets of what we do each and every day. If we look forward a few years, we will have more than 5X the amount of data traffic on our networks that we do today. There was a very good question earlier on about CAPEX and capacity. If we did nothing to our networks, we would have to add five times the capacity to support that. With the CAPEX investments that we're making, we'll actually take advantage of new technology and new technical ways to actually reduce the amount of intensity of CAPEX capacity or cost per bit, as I mentioned before.

If you also look at devices, and these are just the traditional devices that we've all grown to know and love around handsets, we believe that there'll be more than four times the number connected in five years, and that's not to talk about the billions of devices globally that will be on the IoT areas. Everything has to be always on. We know firsthand that the minute anything happens in the network, we know about it, and that we actually have to build in resiliency and redundancy into our networks from the ground up, and that's what we've been doing.

In terms of mobile, all of you know the video explosion that's been happening over the last couple of years. If you look forward, the Tokyo Olympic Games are dubbed to be the 4K phenomena in terms of video traffic. We're preparing ourselves for how much video is going to be on these networks as we move forward, and that's not just obviously on the fixed network. We all love our Foxtel at home, but we also increasingly want to see things on the go on our mobile devices, as well.

We'll also have millions of people across the country on nbn, and Mike will go through in a minute how our network changes after the nbn in terms of those dynamics.

And then you heard this morning the excitement that we have around the new technologies. 5G will be an important inflection point in the network. We're going to go through that. IoT is particularly a big opportunity not just for Telstra, but for Australia. One of the key things with IoT, it's really automating a lot of the industrial processes and a lot of the industrial and enterprise processes, as well, and for us as a country with our relatively-high labour costs, we believe that industry in particular is going to take advantage of IoT, assuming that they have the platform and the technology available, and we mean to provide that to all businesses around Australia.

And then SDN and NFV. I love those two terms, because basically what they mean is that we're able to automate the functions within the network, so actually use technology to run the network more, and also then serve up new offerings to our customers much faster, and what that means is time to market. Today it can take months, if not many months, to actually bring new products to market, just because of the way our networks have to be configured. With an SDN environment, what you can do is actually iterate on product offerings much faster.

So, with that, I'm going to hand it to Mike, and actually go through the Network of the Future, and then I'll come back and talk about digitisation.

MR M. WRIGHT: Thanks, Robyn. I stood up here this time last year, really, and gave this slide. Well, it wasn't exactly this slide. It's had a few artistic reinterpretations, but, essentially, this is the same slide we talked to a year ago, and we talked about our incremental network investment, and the power of that

incremental investment is not just that it's incremental, but it's combined with our foundational investments that we would have been investing otherwise on demand and capacity, and, putting the two together, we've got a catalyst that allows ourselves to propel some future technology, which is where we intend to get the benefit from.

So last year I said we'd do four things. We said we would manage transition to the nbn for our ADSL customers and their experience. We said we would manage the scale and reliability of the network. We said we would maintain our wireless network superiority, and then we laid the foundations of the vision for the future we named Network 2020, which was going to leverage this technology wave, and by investing early, we were going to be able to reach of those investments more quickly and build on them. And all of those were built on the foundation of the technology and the assets we own. So to start the journey and take you through the read out of, really, where we are on that journey.

Firstly, as Robyn said, we have a large amount of infrastructure, which is our optical asset. Now, optical fibre – most of its costs is digging and putting it into the ground. So anywhere between the capital cities and across Australia, most of that fibre is direct buried with our bulldozers 1.2 metres below the ground. As it comes into the city, it finds its ways into the ducts and pits and pipes that Robyn talked about, and those assets are used for carrying traffic across the core of our network, so, if a bit of content lands in Sydney and needs to be watched in Perth, it has to be shipped across our core network, so anything that transits our network at all has to be carried. All that heavy lifting is done at the centre of that network, and those interstate links are generally, and almost always between capital cities, at least triplicated because we know, once one gets cut, it's not long before the second one will get cut.

So the triple redundancy is at the heart of the core of our network, and what we've been doing with part of that investment is actually upgrading that technology to Next Generation optical. So essentially the fibre itself is a passive asset, but then you shine laser down the end of it with the electronics, and it's those electronics that we're modernising, and we're taking the basic capacity of our fibre up to 8.8 terabits per second per fibre pair or, between capital cities, we can see scale to 75 to 100 terabits per second, so essentially we're laying the foundations for that future growth and that demand explosion that's going to come from video.

But, at the same time, this foundational optical network is coming with the inbuilt SDN capability, which means this will move from a static route-based optical connectivity to a world where we'll be able to program it, so it will be able to self-heal when it gets cut and increasingly we'll build dynamic products and services with it where we can switch capacity between, say, at night time to a stadium to live feed a game that's produced off site, and then, another time of the day, to be used as back up for another service. So there's a lot in the future of optical network including the back haul from that 121 nbn POIs, which are going to concentrate all of that traffic into our network, as well as the future of our five year network evolution where we need to put more capacity into our base stations and use that optical for some of the new ways that 5G will backhaul from the towers.

So you don't come to one of these without Mike having a technical drawing, and, essentially, this is trying to articulate the sort of before and after, the pre-nbn, post-nbn view of the world. So, if you look at the left-hand side of the network, essentially all networks are built the same. They start with the access piece, the piece from the edge of the network where the homes are or the buildings are and the infrastructure

comes in, and it's aggregated, and I like to compare that to basically collecting milk from farms; you pick it up at the very edge of the network, and you bring it into a location where it's added together and packaged up before it's shipped up to bigger towns and eventually on to the big highway.

So the edge of our network is the access network. Then we go through an aggregation process where all the traffic is concentrated. Then it comes in through the edge of the network into the core, which is, if you like, the interstate transit hub. Every bit of traffic goes from the edge, it either goes through the network to the content we're getting or it goes in and then back out to wherever else we're talking to. That world is changing under the nbn. You can see the assets there, the PSTN copper and the PSTN exchanges on the edge of the core, disappear. The ADSL that used to run over the copper gets removed, and the cable and broadband and Pay TV, the HFC cable, comes out of the edge of the network.

And, on the right-hand side, you see we're left with this 3G, 4G, 5G access network, any enterprise and IP networks, like the ones that Brendon referred to for McDonald's, and then the nbn network. What that also does to our network, it makes it all IP, and being all IP, we now have a foundational network for the network of the future because it now becomes far more programmable, and we are transforming the core of that network, as Robyn said, from one that is made essentially of plumbed together elements and boxes to one that is essentially a distributed data centre across two and a-half thousand exchanges around our network where those functions that used to live in boxes now become software. Once they become software, they become easy to reconfigure, less people, less complexity, more capability to create new products and services very, very quickly and more programmable, so we'll effectively deconstruct the network functions into software elements, so the network as a service, and that's very important because at the intersecting layer where that network will become our new IT digitised layer that interfaces to our customers and services, and they will consume those network elements in a software way, in a far simpler and more agile way than the traditional way that networks are consumed.

And you can see, foundationally, we're reusing that fibre, reusing the ducts, reusing the exchanges – although around half of them won't be needed any more; the rest of them will become data centres – reusing the towers for 5G and reusing, obviously, things like spectrum, so a significant transition and very much into that Next Generation network architecture we talked about last year. So a bit of progress on what we said. I said we'd manage nbn transition. We said we'd hit 85 per cent of customers with reasonable streaming; we've actually achieved 90. We've managed that in a period of growth of total ADSL traffic; in fact, streaming video has gone up 150 per cent year on year since this time last year.

We've also introduced new products and services which help the customer. The hybrid modem is not only a great product from the point of view you can walk out working and survive if your service is cut; our new modems are embedded with the latest technology and Wi-Fi, so the Wi-Fi goes further to the edge of the house. We're embedding software inside those modems that give us telemetry and help us and our customers better understand what's going in their own house. So for example, the new modems run with software that tell us the state of the Wi-Fi, and, in fact, self-configures its own Wi-Fi if it sees interference from next door. We have built in speed test robots, which tell us if the customer is getting the line speed, which should help when they ring front of house, which should take costs out of our business, so we're not always trying to guess what's going on. We're getting more telemetry out of the actual modem itself.

The new Telstra TV2, which you've probably just seen, is a wonderful and beautiful product, but to an engineer, the wonderful and beautiful bit inside that box is the compressed HEVC video codec, which needs 30 to 40 per cent fewer bits for the same quality. What does that mean? It means a customer can live on a longer ADSL line that can deliver a lower speed and effectively get the equivalent of 30 or 40 per cent higher speed, which means they can watch their videos in higher quality, and it puts less pressure on our network.

And, as we move into the transition to the nbn, a lot of the work we do is really around managing capacity and the CVC network capacity on our network. Now, that's a process we've set up that we do weekly. So every week we're measuring the traffic on the CVC interfaces, we're applying our own statistical analysis to it and working out what we need to buy for the next week. That goes into the network that week, and then the next week we do the same process. Now, we could do that alone and be quite confident in the capacity we're provisioning in the network. What we have done is, by putting robots inside the gateways and some physical robots, we can now measure the experience end to end; we know actually what customers are getting. And it's that same methodology we've been doing for the last 18 months that we're going to use and apply to the new standards set by the ACCC, and, indeed, we already know from the tests we've done that we're delivering at least or better than the standards that the ACCC have defined for customer experience, so that was one of the sections of what we said we'd do last year.

The other one was mobile superiority. We continue to expand the footprint to 99 per cent of the population; that's 1.4 million square kilometres of 4G. We upgraded the network to what's effectively LTE Advanced, which is the double the speed for 90 per cent of the population. We were the world's first operator to implement Gigabit LTE and our Nighthawk modem. Interesting and exciting to see that the rest of the world, starting probably the middle of the year around August – since then, we've seen about 39 other network operators follow suit, and we've seen a great explosion in availability of devices, handsets and the like. And why do we do this? We do it to increase the efficiency of the network. We don't necessarily do it so one person can get a high speed. We do it so lots of users can get a good speed, and that actually lowers the cost per bit, and it's the heart of why we're able to lower the cost per bit that Stephen mentioned earlier today, producing next generation more efficient technology.

Last year I also mentioned the use of basically converting to IP, and, as I said earlier, the nbn and the transition of our network takes us to the world of IP. That IP transition has given us Voice over LTE, Voice over Wi-Fi, Video over LTE, all as simple network software upgrades, and now Rich Communication Suite, and indeed some of the new products and services you heard today for enterprise are all built on that IMS capability that's at the heart of our network. And, finally, there's a lot of excitement about the Internet of Things. Now, we've talked about the Internet of Things for a long time, and we would still be talking about the Internet of Things, because if you don't have coverage, you don't have one.

So the beauty of what we've been able to do in a software update is activate 3 million square kilometres of Cat 1 coverage in one go. Now, there are two category standards for the Internet of Things that are popular. One is called Category 1, which is more for high speed, higher speed and capability, such as voice calling. There is another category called narrow-band IoT which is more for very low speeds, small data rates. We're going to support both and in fact, this month we'll

start the software updates for our network to roll out the narrow-band IoT standard, as well. So we've managed to maintain that wireless momentum.

And, of course, a very, very popular topic is the topic of 5G. Now, these things don't just turn up overnight. This is a long journey, and it's a journey that started a number of years ago. We did our world's – our Australian first 5G trial in September 2016. We've been working on standards, because our experience tells us that the size of Australia and the distances that Australia has to cover often gets left out of standards. So, indeed, three or four standards have already been changed because of our input around those waves. We've been looking at the propagation of the frequencies in Australia, working with chipset manufacturers, getting our network platform built ready for trialling. So next year on the Gold Coast, we're building a test platform, which is essentially an upgraded 4G network and a 5G network, where we'll test and evaluate 5G use cases. So that's very exciting, and it's also exciting from the point of view that 5G architecture and SDN NFV and virtualisation is at the heart of what we're doing for network 2020. 5G trials on the Gold Coast next year.

We got a bit ahead of ourselves, because last week we did Australia's first and the world's first 26 gigahertz millimetre wave trial, and that's particularly important, because 5G is going to use two frequency bands: a 3.6 band, which is fairly well-known to us. It's not that dissimilar to the 4G spectrum. And then there's new, very high-speed millimetre waveband, which is actually somewhat unknown in terms of mobile use cases. So the ability to get out and test it is very, very important, and we'll use those technologies, and essentially, as we see the way 5G will evolve, is we we'll glue the 3.6 gigahertz spectrum on the top of 4G, they call that non-standalone, and that's – the most obvious use case for that is enhanced mobile broadband. In other words, taking 4G to where 4G can't go. When it runs out, we need to be ready to pick up the load that it's generating and growing with into the world of 5G. The other interesting use cases, the ideas of using these very high frequency short-distance spectrums with massive capacity to create areas of industrial internet, high-speed throughput with low latency with compute on the edge of our network that you could run factories, mines, automated campuses and a whole range of different use cases. These are the use cases we're going to have to work with our own customers to develop and evolve and mature, and there's one other use case that is mentioned in some markets of the world, the idea of using that very high amount of spectrum very near to the end users is to use – so essentially take 5G and create what I would call – not a mobile network, but a cordless access network, or almost fibre to the X, because essentially you need to build a large number of base stations close to the end users, and in some markets, and particularly one US operator, are looking at that as a potential use case for 5G. So there was all of those unfolding. We don't necessarily think that suits the Australian environment, but a whole lot of people have got different opinions.

So that's the evolution story for 5G, and, as I just wrap it up, pretty well what we've delivered in the last 12 months we're very, very pleased and happy with. We've developed from what was a blueprint to actually a blueprint as to how we'll evolve our capabilities of our staff, how we will work in the future, how we will develop our software capabilities towards the future, but we've also laid this foundation with a new software, the coverage expansions, the optical capacity, the built-in resiliency that these new technologies have, their ability to recover very, very quickly, the automation that it delivers, and the telemetry we're now extracting from both the applications in our devices and what's in our home gateway, it's actually been put into a next generation OSS so that the engineers can look at that very, very quickly to understand how to adjust the network, but ultimately to hand our customers a better services, because now – when they ring us today, we don't know what's going

on in their home. When they ring us in the future, we'll have insights as to what's really happening. That will take cost out for us, and will give our customers a wonderful experience in the future.

And finally, as part of this evolution of our network, and as we no longer need to use these exchanges, we are progressively learning how to bypass the actual change in fibre so that we can actually re-route a lot of the infrastructure that's currently inside the exchange, which will free that site up and take basically – firstly, takes the cost away from us that would be sitting on our books, and there's potential in the future of that actually becoming a source of income. Thank you, Robyn.

MS DENHOLM: Thank you. So, as you heard from Mike, focus on the Networks of the Future is take advantage of the new technologies that are out there, actually bring them in so that we can use that to drive revenue growth, but also to take out cost. Digitisation is very similar. So what we're doing on digitisation is we're not just transforming how we do IT within Telstra. What you heard today from both Brendon and Vicki are examples of how we're actually taking digital techniques and actually applying them to real live business problems. And what the focus of that is across the company is to actually held with our internal productivity to actually help us then serve our customers much, much better, and also to give our customers a better experience, a better digital experience, if they want it, or actually help us to enable them through people interaction, but enable those people within the company to actually help serve those customers.

And so the key four themes of digitisation, just like Networks of the Future, is around helping our customers better serve themselves, obviously getting a better experience, but also taking out costs, and then also making sure our people are armed with better tools and better capabilities, including AI, so that they can actually help serve the customer. And then making sure that we're using the best digital techniques internally to drive our efficiency of our IT assets across the board. And fundamentally, the other key part of the program is changing how we work inside of Telstra, making sure that we're much faster, that we bring out not just the technologies, but we're able to monetise that through the offerings that we have in the market much, much sooner.

So I wanted to just use a couple of case studies. Across the board, across the whole company, we have more than 200 initiatives in progress today, and so I have three here. You heard a few others in the other business unit areas, but what I wanted to do was focus on the ones that we're using within the service organisation, because one of my remits is actually the customer service teams that actually have all the field tests.

So the first thing – I'll go from the bottom up. So the next generation OSS we talked a lot about before. We have been building on that platform. So we first put it in place last year to actually help us with some of our resiliency issues, so make sure that we knew what was going on in the network, to Mike's earlier point, where and what was happening in the network, and then, if there was an issue, actually have alarms coming back, and people would actually take those alarms and do something with it.

Now what we're doing is actually using an AI engine to automatically take some of that data and do something with it in the network – obviously supervised initially, but, as we get confidence with it, do it automatically. The next phase of what we're doing, we're actually in pilot right now, is, rather than having to do truck rolls, which is a person going out to a customer, we can actually know what's going on in the

network, fix that remotely without having to send the truck rolls, and then the customer didn't know that they had an issue before, they – it was fixed, and they never knew about it. So, to me, that's a huge opportunity for us as we move forward here. So that's the first level. Alarming – using technology to actually have insights into our network, look at hotspots, proactively fix things, and actually work through eliminating truck rolls. We do something like 6 million – 6 to 7 million truck rolls a year. Each truck roll costs about $100. So even if we can reduce it by 10 per cent or 20 per cent or 50 per cent, that is a huge impact on our cost structure, and it also helps our customer experience.

The next level is, okay, we do have a problem, we haven't proactively been able to fix it, we have to – we get a call in. So this second area around get help, we've especially put it together for assurance calls around nbn. So what happens with those is they come in, we need to get to the heart of the issue very quickly. How do we do that? We arm the agents that are on the phones with telemetry coming from our OSS on what's happening in the network at that point in time. Is the modem on? We can check. Before we would ask the customer, "Is your modem on," and they would maybe know what a modem is and maybe be able to tell us that it was on. Now we can actually check in the network, is the modem on, yes it is. Is there five other steps, and they can do it through an automated fashion instead of actually having to send a truck out to the customer.

And then the third area around promise is, if we can't fix it remotely, we have to send a truck, we're arming our field force with the best available telemetry before they get to the customer. We're also enabling our customers to interact with the tech online, so they know where the tech is, and they can actually schedule or reschedule their appointments depending on what's going on. But it will be like Uber for your tech. You will know where the tech is before they arrive. They will also be able to tell you how long it is before they get there, so that you can actually work through the window of time that you have as a customer to actually interact with Telstra.

So all three of these initiatives are very real. They're in deployment in some areas. Promise is actually in pilot in Tasmania right now. Next generation OSS is in and working, and we're continuing to build on top of it, and Get Help is also in deployment, as well. Three examples of over 200 that are working across the company delivering results for us today.

So I wanted to conclude with where I started off. We're investing in the company a significant amount of money, as you all know, in terms of driving the best possible customer experience across many different facets. We're investing in revenue growth, and we're also investing in efficiencies and cost structure with the capital that we're spending. And so, with that, and to talk a lot more about the financials, I'm going to hand over to Warwick. So thank you.

MR W. BRAY: Thank you, Robyn, and thank you, Mike, and good afternoon. In this update I will provide a financial view of our transition to becoming a world class technology company that empowers people to connect, and this financial view will accompany the strategies that you've heard today. I will provide some views on recent financial movements, the implications for our economics in the medium term, 2019/20, and also the conclusion of the nbn. Also talk to our capital efficiency and policies.

So achieving growth for our major products is, of course, important for the short and long-term success. We've heard from Andy, Stephen, Vicki, Brendon, Robyn and

Mike about our strategies to achieve this, including, in consumer and small business, multi-brand, nbn leadership, local market execution and whole of customer approach, and in Enterprise, our Telstra programmable network, our internet of things layers, Telstra dynamic security and our leading position in NAS. In network, we've heard about the network of the future, 5G and digitisation.

And to complement this strategic view, I will make some financial comments on our largest products, beginning with mobile, which went through a period of rapid growth from 2010 to 2015, some decline, and then it has been stable for the 18 months ending June 2017. Positive indicators for future growth are minimum monthly commitment increases through plan updates and continued growth in machine to machine. Post the conclusion of nbn, we would expect positive momentum from 5G and internet of things that you've heard about today from Robyn and Brendon. In the balance is mobile broadband. We're optimistic about the long-term future with connected tablets and cellular Wi-Fi, but first we need to stabilise that category.

Counteracting those positive indicators is that competition remains strong, we do have a further competitor, and negative potential mix effects from BYO offerings. We're also taking a very proactive approach here to disruption and recently launched Belong Mobile as a fighter or challenger brand, who is competing for a market share in the price-sensitive data-led segment of the mobile market. In Q1 in this financial year in what remains an intensely competitive market, mobile services revenue declined slightly on PCP. We achieved continuing growth in post-paid handheld SIOs, but at a lower rate than in the PCP. However, this was offset by a modest decline in ARPU versus the PCP in the June quarter.

Turning to fixed and nbn reseller. As we indicated at the full year, the economics of reselling the nbn are tough for us and for the industry. We've taken approximately a 50 per cent share on the nbn, but there's pressure on ARPU combined with the rising CVC/AVC costs. Our profitability on nbn in the future will depend on our ability to differentiate through initiatives such as Telstra TV 2, the hybrid modem and mesh Wi-Fi, industry dynamics, especially price competition and nbn CVC/AVC costs, our ability to further reduce cost to serve and cost to connect. Cost to connect came down 18 per cent in FY17 and 40 per cent in FY16. Our assumption in the estimated $3 billion annual recurring impact of the nbn to our EBITDA is that nbn resale is not very profitable. If industry dynamics improve, then this is positive option value.

On the journey to nbn, the rate at which we hold legacy fixed revenues is important, including fixed voice SIOs. In Q1 this financial year, fixed trading conditions remained tough. Q1 fixed broadband SIOs grew, but at a slower rate than PCP, while fixed revenue declines have accelerated, especially due to further declines in voice and wholesale as a consequence of the nbn migration.

Turning to NAS and data and IP, our domestic NAS business has grown by over 30 per cent in FY17, or 14 per cent without commercial works. The EBITDA margin has grown from three per cent in FY15 to nine per cent in FY17. Our aspirations for the domestic NAS business continue to be growth in excess of the market growth of 10 per cent per annum, margin expansion towards the mid-teens, growth in NAS EBITDA dollars to offset the decline in data and IP, as was achieved in FY17, and to complement our data and IP offering. In the FY19 to '20 years, the development of our nbn commercial works business will have some impact. There are strong aspirations for our commercial works business, but this will, of course, depend on major contract wins.

Putting all of our products together, we expect the composition of our EBITDA will change over the next few years, with faster growth from lower margin products, such as NAS, global connectivity, new businesses and nbn reseller, and slower growth for declining higher margin products such as mobile, data and IP and legacy fixed, partially offset from a margin perspective by growth in higher margin one-off nbn DA receipts to FY19 and recurring nbn DA. The implication of this is we expect our percentage EBITDA margin around ’18 and ’19 to be fairly stable, but to decline by the end of the nbn rollout due to this mixed effect. Here, we’re focused on increasing the dollar EBITDA of the corporation and getting individual products to appropriate percentage margins.

Turning to costs, we continue to manage costs by cost categories, including, firstly, our core sales or variable costs. These costs include mobile handsets, NAS customer premises equipment, interconnect and roaming. We manage the unit cost of each of these categories and measure our success by changes in the unit cost and on the relevant margin. For example, hardware margins for mobile and service contribution margins for NAS. This category also includes nbn access payments that we would expect to rise by approximately $2 billion by the conclusion of the nbn build.

Our second category, core fixed costs for NAS labour and corporate. NAS labour is reported in our fixed costs, although by nature it’s variable. We manage this category by unit costs and measure success by changing unit costs and on the NAS margin, which was up three points in FY17. The $466 million rise in this cost category in FY17 supported $789 million of increased NAS revenue. This cost category also includes corporate cost such as bond rate, but not corporate overhead, which is in underlying core fixed costs. A new cost which will appear in this category is Go Mobile Swap costs. This is expected to be some hundreds of millions of dollars that will be matched by an entry in other revenue.

A third category is underlying core fixed costs, where we manage costs by net productivity. In FY17 we achieved $244 million of net productivity, or a three and a half per cent net cost decline. We measure this category by net cost decline. To achieve this decline, our gross productivity must first offset inflation and reinvestment. We estimate that we required more than a six and a half per cent gross productivity to achieve the three and a half net productivity outcome in FY17. This outcome was slightly ahead of our target run rate for our more than one and a half billion dollars net productivity goal. To achieve this goal, we will need to further improve our unit costs, in particular, nbn cost to serve and cost to connect; eliminate costs associated with our legacy fixed business. We’re focused on product process improvement and productivity that results in better customer as well as cost outcomes.

In Q1 this financial year, somewhat offsetting the softening in mobile and fixed revenue, we achieved accelerated cost out. The Q1 rate of decline in underlying core fixed costs increased versus the three and a half per cent rate of decline achieved in FY17. Our productivity program has four approaches, which we outlined at investor day 12 months ago. First, improving end-to-end customer experience, focused on reducing our customers’ effort by getting it right first time, on time. Secondly, product and process simplification for providing more intuitive products, improving our processes by automating and digitising, and removing manual effort, complexity and waste and reducing the number of products and platforms that we operate. Thirdly, reducing complexity in our organisational structures. And fourthly, using supplier partnerships to reduce complexity and costs.

Our productivity program is delivering outcomes across our business. We take a coordinated whole-of-company approach, with accountabilities sitting with line mangers, and the executive leadership team is directly involved to accelerate decision-making and tackle the hard challenges required to deliver cross-company improvements. This slide shows some productivity examples from FY17, all of which achieved simultaneous improvement in both customer outcomes and productivity outcomes, which is the aim of the majority of initiatives in the program.

The first example is to improve the resolution of calls into our customer centres, we empowered our frontline agents to redesign the core scripts, focusing around the top reasons that customers called. An example of that is provisioning an international roaming pass. This redesign, coupled with intensive training, led to 20 to 30 per cent lower call handling times and $15 million in annual savings. A second example is automating repetitive tasks. We've deployed 75 bots to eliminate repetitive billing and credit tasks and have a pipeline of hundreds of processes for further automation across the organisation. An example of bots already deployed is in secondary credit checks, which are now processed by a bot, meaning customers don't have to wait in-store for an agent to complete that check.

In our field workforces, we identified an opportunity to improve start times through improved processes to get the right tools and spares into vans and increasing the emphasis on this measure. This, coupled with other field force initiatives, has led to a 13 per cent increase in jobs completed per day and 350 more customer appointments met on time per day, which is encouraging for customer satisfaction.

We also achieved capital savings from our productivity initiatives. For example, through innovative small cell design for our mobile network through repurposing existing equipment, as well as working with our vendors, we've more than doubled the coverage from each small cell. We've been scaling our use of small cells to provide infill coverage in high demand regions. The greater coverage we can get from each of these small cells, the less number of cells we need, which reduces CAPEX and associated operating costs, including rent and power.

Turning to our CAPEX, we have committed to a heightened spend on CAPEX from FY17 to '19 of 18 per cent, or up to $3 billion. Our long-term CAPEX to sales is estimated at 14 per cent, including capital savings from our productivity initiatives. We often get asked whether this long-term number could be even lower. A basis for that question is if one looks at product CAPEX to sales, for example, across mobile, NAS and nbn reseller, it could suggest a lower figure. However, we note CAPEX to sales around the telecommunications world is rising partly due to growth in data, and our estimate is a through-the-cycle figure, ie it's an average including periods of heightened CAPEX. Clearly, in any one year we would aim to come in at lower than that 14 per cent.

Turning to spectrum, where we note that there are a number of important auctions coming up based on ACMAs recently released five-year spectrum outlook. These include multiband residential spectrum this month, 3.6 gigahertz in the second half of calendar 2018, 26 gigahertz in second half calendar '19, 850 megahertz expansion and 900 megahertz in calendar 2019. Spectrum is important to our competitive position and to providing an outstanding customer experience. As the leading network operator, we need to have a strong position nationally to support our current and future services.

We have the necessary holdings in the main mobile spectrum bands to deliver superior services to our customers, and we have a coherent spectrum strategy for

the future, and we look forward to the auction of the 3.6 gigahertz and 26 gigahertz bands, which we are keen to see brought to the market as soon as practical, to deliver 5G to the Australian public and businesses as early as possible. Beyond that, we are actively engaged in local and international spectrum processes to identify future spectrum requirements and work with the relevant organisations to bring these to market in a timely and orderly fashion.

Turning to our strategic CAPEX, where we're committed to returns from that program. Today you've heard from Robyn and Mike about what we're delivering in network and digitisation, and you've heard from Brendon and Vicki about what we're doing to improve the customer experience. And as you heard from Andy, we're targeting run rate benefits from our strategic CAPEX program in excess of $500 million in EBITDA per annum, to be fully realised by 2021, and that goal has remained unchanged since August 2016.

I will make some comments now on return on invested capital, or ROIC, which from 2015 to 2017 went from 17 and a half per cent to 14.7 per cent. Similar to the mix effects on EBITDA, we would expect our ROIC to be influenced by the changing product mix, including faster growth from lower ROIC products, such as NAS, global connectivity, new businesses and nbn reseller, and slower growth or declining higher ROIC products, such as mobile, data and IP and legacy fixed. Partly offset from a ROIC perspective by growth in higher margin, one-off nbn DA receipts through FY19 and recurring nbn DA. By the end of the nbn rollout, we would expect our ROIC to be lower than today due to those mix effects, but higher than our cost of capital. And to deploy capital in line with the ROIC opportunity, manage each of our product ROICs to an optimum and also optimise corporate ROIC.

This slide makes two points. Firstly, managing efficiency of converting EBITDA to cash and EBITDA to earnings is an ongoing priority. You've heard about the capital initiatives, and Go Mobile leasing is another good example which pertains to improved working capital. On interest costs, the rate of the last three new capital market bond issues has averaged 3.9 per cent, well below the total FY17 gross borrowing costs of 5.1 per cent. Second point on this slide is around timing differences between accounting and cash earnings, and over the next few years we expect some important timing differences between our cash and accounting flows. FY19/20, we would expect that our cash flows would be lower than the accounting equivalent, due to CAPEX and spectrum being higher than D&A. That's due to the 18 per cent CAPEX to sales and the likely spectrum auctions, and also continued build-up of working capital due to nbn receipts, which are billed quarterly in arrears.

At the end of the NBN we would expect that our cash flows would be higher than the accounting equivalent due to CAPEX at 14 per cent of sales being lower than the D&A, which will reflect the heightened spend in '17 to '19 and likely spectrum auctions. Those statements are our best view at the moment, and factors such as timing of spectrum payments could, of course, change that outlook. The implication is that to understand our economic position, accounting, balance sheet and ratios and cash, it's important to consider those substantial timing differences and to consider both the cash and accounting views.

We updated our capital management framework at full year results in August 2017, and we've made no further update on that framework today. Our objectives remain maximising returns for our shareholders, maintaining our financial strength, and retaining financial flexibility. On the principles we are committed to retaining balance sheet settings consistent with an A-band credit rating. Our dividend policy is to pay ordinary dividends of 70 to 90 per cent of underlying earnings from FY18, fully

franked, and in addition, it's our intention to return in the order of 75 per cent of net one-off NBN income over time, as fully franked special dividends. I've already made some comments on CAPEX, and we will also maintain flexibility for portfolio management and to make strategic investments.

Building on the comments of Mike and Robyn, we continue to review the value of assets on our balance sheet, including infrastructure assets that you heard about earlier. These assets will continue to be a key source of competitive advantage as well as underpin the core component of our earnings. Most of our assets deliver a strategically valuable network, and as such, their composite value is greater than the sum of the individual parts. Our assets give us significant option values, and there may be opportunities to optimise. For example, with exchanges, land and buildings, accommodation requirements are reducing as electronics shrink, copper is transferred to the NBN, and we simplify our network architecture. This will enable an estimated up to 2500, or close to half of our exchange site to be potentially rationalised. Our initial view is that their market value, less remediation costs, would be more than their current written-down book value of approximately $1 billion.

Before concluding, and consistent with our recent AGM, let me reconfirm our guidance for the year. For FY18 we expect income to be in the range of $28.3 to $30.2 billion, and EBITDA to be in the range of $10.7 to $11.2 billion. Guidance for EBITDA is after absorbing incremental restructuring costs of $200 to $300 to support our increased productivity target. We expect net one-off nbn DA receipts less the net cost to connect to be in the range of $2 to $2.5 billion. We expect to spend CAPEX in the range of $4.4 to $4.8 billion, or approximately 18 per cent of sales. And we expect free cash flow to be in the range of $4.4 to $4.9 billion. As is usually the case, the basis on which we provide guidance is detailed in the footnotes.

I'll make some concluding remarks now, and when we consider our financial strategy, it's really important that we grow the businesses that we see today, such as mobile, such as NAS, EBITDA dollar growth to be offsetting data and IP, and to grow our nbn reseller businesses, global connectivity, for our new businesses to get to break even and beyond. It's also very important that we reset our cost base. To this end, we're targeting more than one and a-half billion dollars net reduction in fixed costs by FY22, and we manage those variable costs via efficiency. Capital cash and physical discipline is critical, and we're focused on efficient cash conversion and managing the timing differences between cash and accounting earnings.

When we look at the longer term, we're optimists. We believe Telstra is in an operationally and financially unique position to take advantage through the strength of our infrastructure assets, our brand, our customer base, our skills and our balance sheet. We have option value, which is important for us to capture, where appropriate. Examples include industry structure. An example here is where our $3 billion estimate of the NBN impact assumes that the nbn reseller market is not very profitable. As Andy mentioned, whilst current economics are unattractive, we're confident that ultimately, the dynamics will improve.

Secondly, in infrastructure, we continue to review the value of our assets, including our infrastructure assets. There may be opportunities here to further optimise, including, for example, potentially rationalising up to close to half our exchange sites, due to the reduced accommodation requirements. And then, thirdly, future opportunities, including 5G, Internet of Things, data analytics and, indeed, opportunities that require a deep network and low latency. Thank you. I will now

hand back to Peter to moderate Q&A and invite Mike, Robyn, and Andy back onstage.

MR KOPANIDIS: So we'll open up to Q&A. Sameer, do you want to kick us off?

MR S. CHOPRA: Great. Hi, I have two questions, and I apologise: both are going to be tough questions.

MR KOPANIDIS: I appreciate the warning.

MR CHOPRA: Robyn, I was surprised when you talked about nine screens across 1000 agents. It looks like the technology's really old, and Telstra's been spending three and a-half billion per annum as a minimum since when I can remember. I'm trying to figure out, why is the IT so creaky? Why are we doing this today? Why wasn't this done a decade ago or 15 years ago? So that's kind of my first question. The second one, one for you, Warwick, is the cost to connect is $460-ish million dollars, something like that, $450 million. That's a big number. That's a massive number. No one else in the industry is spending quite at that pace. Why is it costing us this much? Why is it costing us $450 million to connect customers? TPG is not spending $150-ish million bucks, Optus is not spending $100 million bucks on cost to connect. Why is it costing Telstra? I apologise for the two tough questions.

MS DENHOLM: I can start. I mean, I think it's a little bit strange for the newbie to be answering that question, but that's okay. When I look at the state of our current IT systems, they're not different – they're not much worse than other companies that I've seen. What I would say is we're really taking a business – from a business perspective back into the IT environment. So how do we redesign our IT business processes from a customer perspective back in, as opposed to from an IT system out to the customer; does that make sense? That's what we're really trying to do with this.

So there are different technologies, different things that a customer agent gets called about today, and so they do have to toggle between different systems and applications. But as Vicki mentioned before, what we're trying to do is not only just give it to them all in one screen, but we're actually trying to serve up the right answers for them, so that they're – so that we're taking them – we're leapfrogging ahead into the AI world. So I would say they're okay today. It's not like they don't work. They work. What we're really trying to do is transform it for the future. And as we scale in terms of different businesses and different areas, we can actually use that technology to really make sure our costs to serve and our cost to connect are really world class in terms of how low they are.

MR BRAY: Yes, thanks Sameer. I will make some – start with some comments on, look, how we're bringing the cost to connect down. And so, as I mentioned, we brought it down 40 per cent in FY16 and 16 per cent last year. Look, some of the initiatives that have been really successful are the introduction of self-install kits and the ratio of tech installed/self-installed continues to rise. Look, the second is getting our processes right the first time, and we're getting some really pleasing customer feedback on the improvements there. And then, thirdly, we really think that the – rolling our further the hybrid modem will make some effect, as well. Just in terms of the benchmark, I won't comment too much on the benchmarking, except to say that we've got a higher proportion of business customers, and that would be in that mix that you just quoted.

MR A. PENN: And can I add, as well, I mean, just – not only have we got a higher proportion of business customers, we've also got a higher proportion of regional customers. We've got a different customer base. And, as Warwick says, I mean, we're making some good inroads into reducing the cost to connect, and I think – to Robyn's point, I think the other dynamic is the sort of technology which is available today does start to make a significant difference, not just for Telstra, but I think for all traditionally-encumbered businesses. I mean, if you look at whether it's the banks, the retails, insurance companies, I mean, it's a similar dynamic.

Organisations grow up with historic legacy systems, and technology in telecommunications is particularly complex and challenging. But what's actually happening in the last two to three years is the sort of new software technologies and capabilities are becoming much more prevalent, that you can use actually to start to make a big difference. I mean, we've talked about AI and bots and some of these capabilities, but also some of the front-end languages that we can use the way in which software is developed through agile methodologies, DevOps type methodologies, they're actually enabling us to start to make some significant inroads.

MR CHOPRA: Thanks.

MR KOPANIDIS: Next question from Kane.

MR K. HANNAN: Thanks, guys. Just on the cost-out performance, so you're saying the first quarter was ahead of the 17 number, but can you just give us a sense of how it performed relative to the second half, which it was ahead of the full FY17 number, and then whether that's really pulling forward the cost-out or whether the initiatives are getting a greater degree of cost-out. And then just secondly, a bit more detail around the two and a half thousand exchanges. Is there anything different around these exchanges relative to the other ones that are left over, the smaller ones, a bit of a timeline for the closure of these changes? Does that come through of the end of the nbn? And then is the OPEX savings captured in that $3 billion nbn impact?

MR BRAY: So on the – on the last one, the OPEX – we– in a $3 billion impact there is some OPEX saving in there. On the cost-out, what we're – relative to the second half of FY17, it's pleasing relative to the second half of FY17 as well. In terms of is it adding to the – is it additive to the overall one and a half billion, I mean, it's probably too early to make any comments along those lines, but, like, we're pleasing with – we're pleased with the cost-out. What we're getting from the initiatives is what we planned from the initiatives and we're getting them at a faster pace. In terms of the timing of the exchanges, they have to – it has to lag – in many cases it has to lag the nbn, so you've got an understanding of the nbn completion profile, and so it has to lag that by a number of years.

MS DENHOLM: Yeah. And just on the – on the type of exchange, so if you go back to why we have this many exchanges, it's basically a result of the copper network, so you can only actually extend the efficiency of copper to about five kilometres radius, so you had to have an exchange, however small or big, depending on how many users were in that environment within a five-mile radius of the premise. And so as we work through the new generation of technologies, we're able to rationalise those, and they will be across all different sizes. We have a tiering of exchanges, but to Warwick's point, it will lag the copper coming out of the network, if you like, as the nbn rolls out, and you also know that the nbn isn't rolling out one five-mile radius at a time. They're actually moving through different

postcodes, and so as that transpires, we're working through the different technologies that Mike talked about in terms of bypassing exchange, so we could look at exchange closures as soon as possible in a given area.

MR KOPANIDIS: Ian Martin?

MR I. MARTIN: Thank you. I have two questions, if you don't mind. 3.6 gigahertz spectrum coming to auction next year, the initial 5G spectrum, there's – I think 125 megahertz is going to be auctioned, which is not a lot when you bear in mind Optus has about 100 in Sydney and Melbourne, and I think Telstra's got some already, and you've got the competition regulator talking about competition limits. What's the kind of practical minimum you might need to run an initial 5G service?

Secondly, on consumer margins as you move to the nbn, obviously the CVCs a key element of the rise in the nbn's wholesale charge. They're reconsidering that at the moment, and Bill Morrow mentioned to senate estimates a week or so ago that he wasn't wedded to the CVC, that it might go, but he – I think he's still talking about a trajectory getting to $52 average revenue. I just wonder even if you change structure without necessarily changing the overall price, does that create any opportunity to manage a better service or improve the margin?

MR PENN: Thank you. Do you want to talk about spectrum at the moment?

MR WRIGHT: Yeah, sure. The way we think of the 3.6 spectrum is actually – it's additive to the 4G spectrum. You almost – the way – what they call non-standalone radio works is essentially because it's a higher frequency, it won't have the same coverage that the underlying network will have.

MR MARTIN: Yes.

MR WRIGHT: So a bit like what we did with 1800 (MHz) on the top of the – when we first rolled out 4G. That will be bonded, if you like, with non-standalone radio, so the amount – I can't give you an absolute number, but the spectral efficiency of whatever amount you get will give you far more per megahertz than what we get out of the existing spectrum, but it actually is the sum of bonding the two that come out. So we need to understand really what the process is going to be before we work out exactly what we think we'll need.

MR MARTIN: Right. Good. Great.

MR PENN: And I think on the nbn – pricing the nbn, I think the composition position of the pricing is the secondary point. The primary point is the absolute level of wholesale prices, and that's ultimately going to be the thing that determines most importantly affordability for consumers over the longer term, and obviously profitability with the industry as we know is extremely challenged, but the bigger point is I think affordability of consumers, and so it will be interesting to see what comes out of the pricing review. I think as regards to the CVCs themselves, I mean, yes, on the margin that may sort of make a bit of a difference, if it's more AVC and less CVC, but I think the bigger point is actually the overall level, whether – as opposed to the composition of the pricing.

MR MARTIN: Very good. Thanks.

MR KOPANIDIS: Fraser?

MR F. McLEISH: Thanks. So just – I think one of the big issues for the industry over the next few years is going to be this potential for nbn bypass over wireless, and you guys are sort of fairly dismissive of it, and I think my understanding is, Andy, you're saying it's going to cost billions of dollars to roll out essentially a small cell network to enable it, and yet you've got – TPG reckons they can build a small cell network with pretty good coverage of metro markets for $600 million. I mean, just – what is the – what's the difference there? Why are you saying it's so expensive when they think they can do it?

MR PENN: Well, I think – and I'll sort of lean on Mike as well to add some comments as well, but, I mean, the first thing I would say is I've not been dismissive. What I'm saying is actually, again, what's most important is what's right for the customer, and there's no doubt that customers want an increasing amount of connectivity, both mobile and fixed, and we're definitely actually seeing an increase in mobile broadband access and that's important.

At the same time, you need to recognise that the average mobile customer uses about three gigabytes of data per month, and the average fixed customer uses about 150 gigabytes of data per month, and the capital economics of basically providing capacity on mobile and fixed are different, and so the point is that the closer those two things converge, the closer the capital converges as well, and so therefore if you were to build a fixed network – because we often get asked the question, well, so does mobile – is that ultimately going to replace fixed, and the only point that I'm making or I'm sure Mike will make is that if you try to build a mobile network to replace a fixed network, then you're going to be looking at the same sort of quantum of capital investment. There's no doubt, however, though that I think as people – as time moves forward, we will see more and more customers wanting to access mobile broadband and may give up fixed broadband as well, but in the end what's most important is actually we respond to what customers want. Mike, come in, do you want to - - -

MR WRIGHT: Yeah. There's really – we look at the – and I don't know anything about the other alternative network designs, but as we think about network design, the capacity of the towers we owned is determined by how much spectrum we've got and where the users are in a mobile environment, and if you think to Andy's comment, if the average customer today uses three and a fixed broadband uses 150, even if you took that for a proxy about how much more spectrum you'd need on average per tower, the reality is, the way you deal with that, if you want to put more capacity in your network, you have to build lots and lots of cells, and eventually they get so close together you don't need to build tall ones, you build short ones, and they're small cells.

When you do the analysis for that, you are effectively approaching so many small cells you've almost replicated the investment of effectively the nbn. So there's always going to be users who are going to use wireless, and we know that. They've been doing that for years. So there's going to be the sort of subset of customers who are happy with their consumption and their lifestyle pattern to take advantage of the wireless side permanently, or at least when they're out of the home. But if you think also, the world doesn't stop. 150 gigabytes this year, our wonderful new Telstra TV is going to enable the 4K high dynamic range technology, so in a few years' time we expect customers to be watching these incredible depth of colour videos on big screen TVs, which is really going to drive that part up. So the two technologies have got to sort of chase each other.

MR PENN: And I think really what I'm saying, Fraser, is that we're not looking at the world through the lens of is it fixed or is it mobile. We're looking at it through the lens of what's best for the customer and how do we bring the best of two different technologies together to deliver them the right outcome and the right service.

Now, of course there's an underlying economic issue in the sense of there's margins on mobile and there's margins on fixed, but the total economic equation is obviously the EBITDA margin plus the CAPEX on both sides of the equation, and so the more data you put into the mobile network, obviously the more CAPEX you put into the – so from a free cash flow perspective, that's what you need to take into account. But there's no doubt that some customers will absolutely move from fixed to mobile. Will that be 100 per cent of customers? No. Will it be a margin of customers? Yes, definitely. Do I know how many? I'm not entirely sure. But we need to basically be there to provide them with all of the options which best suit their needs.

MR McLEISH: Can I just ask – just on that one, the – from a spectrum point of view, that millimetre wave spectrum – that will essentially enable fixed wireless bypass at scale, wouldn't it? Because there's three – you put up 3000 Megahertz available. I mean, that's multiples of the spectrum we've got at the moment.

MR PENN: Well, it's in the 26 gigahertz band. It's really - - -

MR WRIGHT: It's like going west with land; there's bigger tracts of land available, so essentially the blocks of spectrum that become available at those frequencies are very, very broad, which means, per transmitter, you can get a lot more throughput, but unfortunately at those frequencies, the signals travel very short distances. They don't like to go through windows or walls, so the typical rule of thumb would be probably a radius of maybe 100 metres would be – and even then, I think we need to experiment with the spectrum because we're not even sure then that it would cover an entire house. You may need an external antennae or some form of a system to get the signal inside if you chose to do that, and we're watching other markets who are doing that at the moment, and I guess we'll learn a lot from their early investigation and roll out of technology.

MR PENN: And I think, Fraser – I mean, just the last point I would say is that I think quite often these questions will be – these concepts will be put forward in a binary way: it's either this or it's that. I mean – and the point is it's not – I mean, we do a massive amount in small cells, Mike - - -

MS DENHOLM: Yes, today.

MR PENN: And small cells are not limited to 5G. We do a lot in small cells in 4G. I can't remember how many we've rolled out this year, but, I mean,

MR WRIGHT: --- over a hundred this year, and I can tell you that in the middle of the 1990s the entire Melbourne CBD had 2G small cells.

MR McLEISH: Yeah.

MS DENHOLM: Yeah.

MR WRIGHT: So it's not new technology, but they were used either for capacity – our latest use of small cells is more about getting an economic way of solving a coverage problem.

MR McLEISH: Yeah.

MR PENN: So small cells is absolutely part of our overall portfolio, 4G, 5G part of our overall portfolio, 3.5 gig and 26 gig will be part of the overall feature as well, and it's ultimately about providing customers with the breadth of coverage and the breadth of opportunity.

MR McLEISH: Thank you.

MR KOPANIDIS: We might go to the Conferlink line now. Eric Choi from UBS, go ahead, please.

MR E. CHOI: Thanks, guys. I just had three questions, if I could, please. The first one's just on the nbn hole, and you've obviously told us you expect the nbn costs to rise by another $2 billion, so we can sort of back solve the drag that you're expecting from last mile wholesale and data and IP losses, and if we sort of figure out that EBITDA whole looks quite small versus the revenue pools attached to those things today, so the question is, I guess, how much productivity have we assumed to keep that EBITDA hole at $3 billion, and is that mutually exclusive to that 1.5 productivity program, so that's the first question.

The second one is just on free cash flows. So you've obviously flagged free cash flow per share will exceed accounting EPS in the long term, so just wondering if there's any scope to change that dividend policy to more closely match free cash flows in the long term, especially since it seems like you'll be building up a lot of excess franking credit as well. And then just the last question – excuse my ignorance – just on the 5G rollout. Just wondering if there's any sort of first mover advantage in accessing the infrastructure, so presume you'll need to densify your network, so is there, for instance, enough infrastructure for MNOs to put up all their small cells, or is there perhaps an advantage in sort of getting into the best sites first?

MR BRAY: Yes. So on the first of those questions, the $2 billion was from FY17, and I said approximately, and the $3 billion started from, I think, FY15, so there's a timing difference where there's quite a few – hundred million difference in there, and so the equation of the $3 billion is – it's the CVC /AVC costs, then it's the lost wholesale revenues, then also in there we've included the increase in the recurring nbn DA and then some cost out, so that's how we get to the three billion. On the second of those, yeah, if – depending on the quantum, yes, if our cash – if the cash equivalent of our accounting earnings was much better, then we would have excess cash, and then we would consider how we would return that to shareholders through our capital management framework, and then – Mike.

MR WRIGHT: Yes. On the five year rollout question, it's really the question of what the early applications are going to be for 5G. As we see it initially, the supplement of capacity largely on existing towers with the 3.6 spectrum will be the primary rollout methodology, and there's room on those towers to add those antennas. We will learn from our trials whether we feel we need to do any densification to get the range of 3.6.

At this stage we don't see a large demand for a lot of small cells in that use case. The use cases that would require a lot of small cells would be an industrial internet use case, a – maybe around a mine or a heavy industry, and then there's the other bookend that we talked about before, which, as we said, is not black or white. It would depend on how much you decided, in any market of the world you wanted to

roll out any form of a fixed broadband-type network, which at this stage we're saying we don't think is necessarily for the use case for a country the size of Australia.

MR CHOI: Thanks. Can I just ask a follow-up to that first question? Can I just confirm, then, if the sort of gross margin gap that's like for like to that EBITDA whole gap of $3 billion, is that materially different or is it pretty close to that three?

MR BRAY: I'm sorry, I didn't – could you expand on that question?

MR CHOI: I'm just wondering if the loss in dollar gross margins is also equivalent to $3 billion from the nbn.

MR BRAY: I – we have some cost savings in there which would be in between the gross margin and the EBITDA.

MR CHOI: Okay. Thank you.

MR KOPANIDIS: Thanks, Eric. Eric Pan from JP Morgan.

MR PAN: Hi, guys. Just two questions from me. First, I wanted to clarify on the weaker first quarter trends in mobile. Can you – previously you talked about two-thirds of it coming from enterprise. Can you just elaborate whether that's coming from S&B or larger enterprises, and if there is a step down in the prices that you're able to charge or the magnitude of that, that 20, 30 per cent. Is it bigger? And how far of the base is there left to work through? And then the second question is on 5G-related CAPEX. You guys talked about NFV and SDN. How much of that is included in your current three additional billion over the next couple of years and then 14 per cent thereafter? And then how much more can we expect in terms of 5G-related CAPEX when the new radio spec is approved in September of next year? And what – the addition of small cell densification needs.

MR PENN: Can I maybe have a go at the CAPEX one, Warwick? I'm not sure – and on the mobile one. I will get Warwick to answer. But, I mean, we're giving a comment on the first quarter, but I don't want to sort of extrapolate that into a detailed analytical review of exactly – I mean, it's essentially slightly more business than it is consumer. It's slightly lower than we're expecting it to be. It's mainly MMC is growing and data excess is therefore, because of increased allowances, being a bit off. I'm not sure we have an enormous amount more colour to add to that, but I will let Warwick say something.

I think on the CAPEX point – I mean, bear in mind our increased CAPEX is to the period 30 June 2019, so it absolutely includes a lot of the work that we're doing around preparation for 5G and SDN, NFV and all that sort of stuff. But the actual roll out of 5G is more likely to come more beyond that period, because it's unlikely the standards, Mike, will be with us until probably the second half of calendar 2018, probably, at the earliest.

The radio access equipment is not likely to be available until coming into 2019, so by definition it's sort of a bit beyond. And, obviously, ultimately the amount of CAPEX that is involved will be a function – a bit of what we're saying – what Mike is really saying is the function of the use cases. So the more you went small cells densification, the issue there is not so much the small cells, it's actually the back-haul to the small cells that would drive a lot of CAPEX. So I think it's a bit hard to predict right now, but, Mike, happy for you to add colour to it.

MR WRIGHT: It is hard to predict, and, in fact, if we think about the way we did 4G, we used 4G as our productivity capability into the network, so we absorbed a lot of traffic growth by effectively going and installing 4G on top of 3G, and, in fact, we did so with very little increase in capital. So depending on how 5G arrives and how quickly some of those new use cases will determine, if you like, the profile at which the rollout occurs. And it is a bit early to say that. There's no doubt there will be some early adopters, but we would probably see those use cases in specific areas as opposed to broad areas, and then as 5G matures we will see that ramp up in later years.

MR PENN: And I think in terms of some – I know Fraser asked about early mover advantage, or I think there was a question earlier on – yes, early mover advantage. I'm not sure if we responded to that. I mean, I think, realistically, 5G radio access equipment is going to be available to all operators, and I suspect all operators are going to follow – are going to pursue 5G strategies. Telstra has always been a leader and, in fact, I think we strategically got ahead in 3G, we strategically got ahead in 4G as well, and we took that decision.

My instinct is most operators are going to be in the market with 5G relatively early, so I don't think, in that sense, there's so much an early mover advantage, I think where the strategic differentiation will come is in the actual 5G strategy, how you use 5G, how you deploy it, what use cases you use, to Mike's point, and how you use the technology. I think that will be the thing that differentiates success as opposed to I don't really see any operators choosing, perhaps, not to sort of launch 5G.

MR WRIGHT: And to that, I think Brendan made some good points earlier, the value of 5G is tied to the value of the applications that go up the stack as well, so having that early engagement with customers will help us work with them to bring to life some of the early use cases.

MR PENN: Did you want to comment any more on mobile?

MR BRAY: My only addition on mobiles is the question of which part of business it was consistent across, small business, medium and up to large, there weren't any particular hotspots.

MR PAN: And in terms of just how much of the base needs to be worked through?

MR BRAY: Look, it was more – look, it was more of an out-of-bundle issue than an MMC issue, which is encouraging.

MR PAN: Okay, thank you.

MR KOPANDIS: Raymond, go ahead.

MR TONG: Thanks. Just in terms of your infrastructure assets, you've identified half your exchanges as potential you can monetise down the track. I suppose when you think through in five or six years' time, when the nbn is done, are there any other strategic assets that you've got at the moment, or infrastructure assets that you think may not be core down the track?

MS DENHOLM: Well, there's a lot – there will be a lot of scrap copper that will come out of this. So, yes, but we're taking a very in-depth review of all of the assets. I mean, I think it's the other way, I actually think, apart from the exchanges,

what we have in the set of assets that we have is actually some things that we can use to continue to differentiate on the network side as well, particularly we talked a little bit about some of the enterprise IoT use cases. Having the ability to have distributed compute in the network with the SDN/NFV already there at that point, will actually be a huge asset for us, where I'm not sure that all of our competitors will have the same reach on that front.

MR WRIGHT: So that's where the value is. In the residual exchanges, they're the ones that have been converted into distributed data centres that will have some centralisation and then some distribution of the network.

MR PENN: And I know that we identified that a number of those exchanges won't be required in the long term, but the actual – the more significant point of wanting to actually share with you the presentation that Mike and Robyn went through in terms of painting a picture of a telecommunications infrastructure and then how it operationalises and then also how it changes in a post-nbn world, is because we believe that the strategic value of our telecommunications infrastructure is very, very significant.

MS DENHOLM: Yes.

MR PENN: And it is growing in significance – as, again, there is increasing demand for connectivity, so it is very, very extensive and we've invested heavily in it and we're upgrading it very significantly with new technologies as well, and a migration to the nbn actually doesn't really make a lot of difference in the sense that, obviously copper and HFC goes and the reason that nbn are paying us up to $1 billion a year for access to very extensive infrastructure is because it is extremely valuable and it would cost them an enormous amount of money to replicate it - - -

MS DENHOLM: Yes, yes.

MR PENN: - - - and to build it, and I think, yes, that was what Bill Morrow was briefly trying to highlight was that, obviously, part of his input costs is actually paying for access to that infrastructure and the reason it's done that way is because that is a lot cheaper than nbn actually building all of that infrastructure themselves. It would cost an enormous amount more to do that and so that really highlights the strategic value of it. Now, yes, there are going to be opportunities where we've got infrastructure with excess to requirements which we can optimise, but I think the bigger point is to demonstrate the strategic value of it and, as indeed we did through the process of the – looking at whether we could monetise the nbn payment; that was more about demonstrating the value of the - - -

MS DENHOLM: Underlying - - -

MR PENN: - - - infrastructure, or as much about demonstrating the value of the infrastructure as it was about the capital management that it grows off. Obviously, we weren't able to proceed with that, but, nonetheless, again that demonstrated through an independent process, how significantly valuable those assets are, and I think they're only going to increase in importance.

MR WRIGHT: And, indeed, the five-year discussion we've had here today talks about stitching together the value of the optical for back-haul and for cloud RAN, the ducts to run the fibres to if you do need to build any more small cells, the use of the exchanges that have been virtualised for distributed compute, and the spectrum

assets. I mean, you're really tying all those together to build something and build something better than the sum of the parts.

MR TONG: All right. Thank you.

MR KOPANIDIS: Last question from Nick Harris.

MR HARRIS: Thanks. Just to follow up on the exchanges, Warwick, I think you said the book value of those exchanges was about $1 billion. Just is that for the 5000 – the total exchanges, or the ones that you split off that may be non-core?

MR BRAY: That was for the relevant exchanges. That was for the ones that were split off. And so were we able to monetise them, the equation would be what we could sell them for or monetise them for, less – there will be some remediation costs. Compare that to the book value.

MR HARRIS: And when were they last revalued? Like, has that been sitting on the books for a long time?

MR BRAY: Yes, we haven't had a revaluation upwards for a long time.

MR PENN: They're historic costs .....

MR BRAY: Yes, yes.

MR WRIGHT: Yes.

MR HARRIS: Thank you. And just the last question on that - - -

MR PENN: That actually – in that sense, the billion would come from improvements. If you sort of think about the nature of the asset, we haven't been building new exchanges for a long - - -

MS DENHOLM: For quite a while.

MR PENN: - - - while. You obviously have to improve and upgrade and invest in the exchanges. $1 billion is a historic cost accounting number, and it would arise from the – wouldn't really take into account the value of the land, as such. It's just more the building upgrades.

MR HARRIS: Thank you. That's what I was trying to understand. And just – would you still need them – those exchanges potentially for mobile phone towers, or can you run them on top of – if you repurpose them for something else or rent them out or turn them into whatever they end up being?

MR WRIGHT: Some of them would currently have some mobile towers on them, and it's not unusual to either relocate them or just split off some of the land in the corner and retain that bit of land to run the tower.

MS DENHOLM: And that's why in the presentation we also talked about being able to bypass the exchange with the fibre that we might have running in there at the moment.

MR BRAY: And it's not just mobile phone towers. It's also – there may be some data and IP and all sorts of other services that would still be required. The point is that we can bypass them or put them in a smaller pit.

MR HARRIS: Yes. You might need five per cent of the footprint – I'm making up a number, but for example.

MR WRIGHT: It will vary. In some cases, we can do it on the footpath, and other cases, exactly, we need a – might be a bigger bit of IP infrastructure, as Warwick said, that would relocate. And that – the very important element of this is the timing, because once the copper is all gone, the exchanges are gone, we're left with the residual assets that we want to keep, and then what we want to do is build some very clever ways, and that's why we've started now, to do the bypass at the lowest possible cost. Because that will expose the maximum value out of it.

MR HARRIS: Great. Thank you very much.

MR KOPANIDIS: That concludes the second Q & A session and the day. I will hand over to Andy to make some closing comments.

MR PENN: Well, thank you very much, Peter, and, look, thank you to everybody for being here today and for investing, which what I know has been a large amount of time in us, and it is a big investment, so we do appreciate it. As I said in my introduction this morning, it's a dynamic market. It's a dynamic market because there's a lot happening obviously externally, but it's dynamic obviously because there's a lot happening from a technology standpoint, and we really did want to invest the time with you today to try and sort of give you the opportunity to get a little bit beneath the surface of what we're doing.

We are clearly doing through a more challenging period with increased competition, digital disruption, regulatory developments and of course the migration to the nbn, and I want to sort of just reiterate that we are very focused therefore on the key drivers of value in the immediate term around the mobiles business continuing to inform – looking to improve the nbn margins in the areas that we can control by reducing the cost to connect and the cost to serve, dealing with – rather delivering on our productivity commitments of one and a half billion by 2022, growing the NAS business, expanding the NAS margin and our IP business to offset the legacy data business and ultimately to deliver the benefits from our strategic investments, but we are also on a journey to become a world-class technology company that empowers people to connect.

As I said this morning, that's not because we've lost sight of the fact that we're a telecommunications company; it's because we are a telecommunications company that we're investing in the new skills that we need to build for the future. As I said, every industry is going through technology change, but never more so as is in the case of telecommunications, and this is about building the capabilities. This is about what a telco looks like in the future, and at the same time, we're also building and opening – building capabilities that are opening up new areas of opportunity, new areas of potential growth. I can't give you the economic models on all of them. I can't necessarily even scale the size of the market on all of them. And as Stephen said in one of his responses, there's some areas that we don't even know that are going to emerge in the future as well.

But the one thing I have a very high degree of confidence of and the whole team does is that the demand for the underlying connectivity for the technology innovation

that we are building is going to place Telstra in a tremendously strong position as we go through this period, and Telstra has always had a history of being at the forefront of innovation, at the forefront of investment, and it's at times like this where we're going through periods of technological change that you have a choice. You have a choice of either sort of battening down the hatches or you have a choice of being bold, making the investments that are going to set the company up for success in the long term.

So we're not losing sight of the short term. We're doing everything that we can to mitigate the impacts of the nbn and competition and we will continue to do that, but at the same time, we're going to continue to invest and make sure we build the capabilities that will actually ensure the long-term success and give the company the most potential opportunities in the future. So thank you again, everybody, for being here today. Thank you to the management team who put a lot of work to prepare all the presentations for you. We've tried to give you a bit of a deep dive on the business, but I can assure you there's a lot more complexity and a lot more happening than we're able even to give you a window into today. But we appreciate your continued support and wish you well for the rest of the year and we'll probably catch up with you next I guess at our half-year results announcement in February. So thank you.

SESSION CONCLUDED