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Speech to Submarine Networks World, Singapore

A customer-centric investment model for new cable builds

12:00-12:20pm Thursday, 8 September 2022

Good morning everyone, and thank you to Submarine Networks World for the opportunity to speak.

It's great to be back seeing everybody in person again.

I'd like to cover 3 areas today.

First of all, I'd like to re-introduce you to Vocus. Many of you would have heard of us already, but the past twelve months have seen Vocus go through a tremendous amount of change as we commence a new period of investment that will transform our infrastructure assets.

Second, I'd like to talk you through how our customers' specific needs are driving this investment strategy, which will see us deploy close to $1 billion of capital into extending our network's reach and upgrading our capacity.

And finally, I want to discuss how this investment strategy brings together both submarine and terrestrial infrastructure, unlocking new connectivity hubs in Australia and attracting more digital investment in greenfields areas of Australia close to Asia.

So, let me begin with a re-introduction to Vocus.

Just over 12 months ago, in July 2021, Vocus was acquired by a consortium comprised of Macquarie Asset Management and Aware Super.

For those of you who don't know, Macquarie Asset Management is the largest infrastructure asset manager in the world, managing more than A$770 billion worth of assets globally.

Our other 50% shareholder, Aware Super, is Australia's second-largest superannuation fund in terms of assets managed.

Both of these owners, like Vocus, are Australian.

It goes without saying that Vocus' owners have impeccable investment credentials, and are more than capable of providing the financial support required to bring our ambitions to reality.

As I'll discuss in more detail throughout this presentation, under our new owners, major projects that have been in planning for decade or more have quickly moved into deployment stage.

Within a week of the acquisition being finalised, we had formal board approval for a $100 million submarine cable investment connecting our existing Australia Singapore Cable to our North West Cable System – a project that I'll talk about in more detail shortly.

At the same time as we're connecting these two cables, we'll also be extending the North West Cable System to provide the first submarine cable to Timor Leste, leveraging Vocus' exclusive assets in Australia's North.

In the 12 months that have followed the acquisition, we've also had formal board approval for our largest terrestrial network deployment in more than a decade – an $80 million cable from Perth to Port Hedland through Australia's major mining and resources region.

And most recently we've announced a new festoon submarine cable system, the East Coast Cable System, which will further cement our credentials in offering the best latency, redundancy, and route diversity in Australia.

These major investments in extending our network coincide with similarly major investments in upgrading the capacity on our existing infrastructure.

So, with that re-introduction to Vocus and our investment credentials, I'd like to go into a bit more detail about Vocus' customer-centric investment model for new cable builds.

Vocus is now one year into a five-year investment program totalling close to $1 billion.

It's the most ambitious investment program this company has ever undertaken.

We already operate around 25,000 kilometres of high-capacity, highly-secure terrestrial fibre today, along with two submarine cables.

The major projects we have underway will close the final gap in our national figure-8 network loop, as well as providing additional layers of redundancy both off-shore and on-shore. This of course benefit all of our customers who traverse the West of Australia.

Each of these projects is being driven by our customer's needs – what I think of as the four pillars of fibre investment:

1. Latency,
2. Diversity,
3. Resilience, and
4. Hyperscale Capacity.

First, we have now moved into the deployment stage of 'Project Highclere'.

This investment will establish a new 1,000 kilometre submarine connection between our North West Cable System in Port Hedland and our Australia Singapore Cable in the Indian Ocean.

The cable has been manufactured and loaded onto the ship, ready to drop into the Indian Ocean.

Project Highclere addresses each of the four pillars that our customers are seeking: latency, diversity, resilience, and hyperscale capacity.

It's particularly important for our growing customer base in the resources sector, which accounts for more than two-thirds of Australia's exports and more than 10% of the country's economic output.[1]

Project Highclere will reduce latency from Australia's predominant mining region, the Pilbara, to major data centres in Singapore, as well as providing new submarine connectivity to major offshore oil and gas producers which are heavily dependent on automation.

So dependent, in fact, that these offshore gas platforms can be operated remotely – making the need for reliable, low-latency, high-capacity fibre fundamental to their operation.

Highclere will also provide route diversity – both internationally and domestically – by unlocking Darwin and Port Hedland as new international entry points into Australia.

It will add yet another ring in our network, for additional redundancy in Australia's North-West.

And when combined with our terrestrial network deployments, it will provide hyperscale capacity for new datacentre investments, some of which are already underway.

[1] https://www.rba.gov.au/education/resources/snapshots/economy-composition-snapshot/

Project Highclere will provide the final piece of the puzzle in what we call the 'Darwin-Jakarta-Singapore Cable system', a $500 million system of interconnected cables between Darwin, Port Hedland, Perth, Christmas Island, Jakarta and Singapore.

As with all of our investments, it's a customer-centric project. Highclere is self-funded thanks to a long-term anchor tenant in the resources sector, and will have numerous beneficiaries as our existing customers will get the access they want to new diverse routes.

Project Highclere is closely entwined with our second major network deployment: Project Horizon.

This will establish a new 2,000km fibre route from Perth to Port Hedland, creating the first competitive fibre backbone through Australia's largest mining region.

By building both Project Highclere and Project Horizon to Port Hedland, and ultimately connecting both systems back to Perth, again we'll address our customer's 'four pillars' requirements for greater latency, diversity, resilience, and hyperscale capacity.

It will provide a new low-latency route to Singapore for resources operators in the Pilbara – which are also increasingly dependent on automation.

It will provide hyperscale capacity, starting at 38 Terabits per fibre pair and offering 400Gig wavelengths– upgradable in future at incremental cost.

And it will provide diversity and resilience by closing the final gap in our terrestrial network, giving Vocus on-shore and off-shore routes from Perth to Indonesia and Singapore, as well as establishing a figure-8 of redundant fibre rings across Australia's east and west.

It gives us an offshore protected ring from Perth on the Australia Singapore Cable, then to Port Hedland via Project Highclere, back to Perth via Project Horizon.

And it gives us a new terrestrial protected ring from Perth on Project Horizon to Port Hedland, then onto Darwin via the North West Cable System, and back to Perth via our existing fibre backbone. This is important as Darwin hots up as a landing region for new subsea cables into Australia.

Importantly, it also adds competitive diversity – today, there is only one fibre network operator north of Geraldton, meaning that an area much bigger than Texas is currently subject to a transmission market monopoly.

We saw a living example of the importance of route diversity late last year.

In mid 2021, our Australia-Singapore Cable was taken offline when a ship is alleged to have dropped and dragged its anchor through a Cable Protection Zone off Perth, taking out ASC as well as other cables in the vicinity.

Miraculously, a cable repair ship was situated just kilometres away from where the break occurred, and repairs were completed in record time.

But submarine cable operators aren't usually so lucky when a major break occurs, so in future the combined Horizon/Highclere system will provide Vocus with an alternative inland route should we ever need to re-route traffic, and another protected route via Highclere to Darwin should a break ever occur on Horizon.

It's a 'belt and braces' network design – with an extra set of braces.

Again, it's a customer-centric investment.

The network has been designed in collaboration with our customers in the resources sector to achieve both a least-cost build and the fastest speed to market.

And it will have multiple customer benefits across all of the segments we serve – Enterprise, Government, Wholesale and International.

Like Project Highclere, Horizon has also moved from planning stage to deployment stage.

The West Australian Department of Jobs, Science, Technology and Innovation has granted us Major Project status.

Our field technicians have completed physical surveys of the route, and we have issued contracts to our construction partners and fibre supplier.

With Projects Highclere and Horizon both underway, we are reviewing other build opportunities.

While Australia's east coast is easily the most well-served part of the country for when it comes to fibre access, we are still seeing customer demand for more investment based on the four pillars of latency, diversity, resilience, and Hyperscale capacity.

When it comes to latency, we've seen that a terrestrial fibre build is around 1.4-times longer than the straight-line distance between the capital cities on this route.

So a festoon cable system can shave valuable milliseconds between Australia's three most populous capitals along the east coast.

It also meets the need for diversity and resilience.

Key customers like OTTs, Federal and State Governments, and large Enterprises are telling us that they need more redundancy, even though we already operate two East Coast fibre routes – particularly after the disruptions caused by natural disasters like bushfires and floods over the past few years.

We've also seen a surge in capacity requirements on the east coast due to the OTTs and hyperscale datacentre investments.

And while we are making major capacity upgrades to our terrestrial networks, we still see a clear customer-centric investment case for an offshore route as well.

To meet this demand, we have commenced planning and design work on what we call the 'East Coast Cable System'.

This new submarine cable system between Melbourne, Sydney and Brisbane would complement our existing coastal and inland fibre routes.

The East Coast Cable System is being designed as a 1,600 kilometre system with as many as 24 fibre pairs – the highest subsea fibre count system we will have deployed.

Our network has proven to be incredibly resilient through bushfires and floods, and this submarine system will seek to respond to our customers' growing desire for dark fibre, redundancy, and resilience.

Finally, our negotiations to extend our North West Cable System north to Timor Leste and to Kupang in East Indonesia are continuing.

A key advantage for Vocus is that we are already more than halfway to both of these new locations – the North West Cable System has multiple fibre pairs available, meaning these new connections can be delivered at incremental cost. This is important as we seek to make a return on relatively small

incremental costs rather than entirely new greenfield builds, leveraging the scale of the existing Vocus fibre network infrastructure.

And with our other network projects enabling Darwin to become a datacentre hub in Australia's North, new submarine cables from Timor Leste and Kupang have the potential to provide low-latency access to OTT and cloud services based in Australia – reducing the requirement to traverse multiple other cables systems to reach regional datacentre hubs in Singapore or Tokyo.

So now I've provided an overview of our major infrastructure projects, I'll go to my third point: how our customers are seeking a combination of both submarine *and* terrestrial routes to meet their network requirements.

While these new cable builds will play a major role in our future growth, they will go hand in hand with substantial investments in upgrading our existing terrestrial infrastructure.

We have an excellent fibre asset that is scalable and can be augmented for many years to come.

Our existing fibre network can be upgraded to provide 50 times more capacity than currently provisioned, at incremental cost.

The first stage of our upgrade plan was completed last year, when we added 25 times more capacity between Adelaide, Darwin and Brisbane under a contract with the Northern Territory Government.

The ‘Terabit Territory’ project has seen these fibre routes upgraded from 10 Gigabit to 200 Gigabit technology – with a clear upgrade path to double this capacity again to 400 Gigabits in the near future.

The Northern Territory’s funding contribution to the ‘Terabit Territory’ rollout was conditional on a new international cable route connecting Darwin – which is exactly what Project Highclere and the Timor Leste Cable will deliver.

And since the completion of the Terabit Territory upgrades and the announcement of the Darwin-Jakarta-Singapore Cable system, we’ve already seen the announcement of a hyperscale datacentre in Darwin to be constructed by our partner NEXTDC.

And it won’t stop there. The combination of substantially-upgraded terrestrial capacity with new international submarine connectivity is driving competitive benefits too.

We’ve seen several other prospective submarine cable operators seeking to land cables in Darwin as part of broader systems throughout south-east Asia and across to the US.

With a datacentre moratorium in Singapore, Darwin ticks all the boxes for an alternative hub for the region: relatively close proximity to South-East Asia to allow for low-latency transmission, a stable political and regulatory

environment, and abundant renewable energy at a time when power prices can have a serious impact on business cases.

Terabit Territory is just one example of the broader terrestrial network upgrades we are delivering over the next 3 years in combination with our new submarine cable systems.

We're delivering a 13-times capacity uplift on our regional routes in Australia's eastern states.

We're delivering a 5-times capacity upgrade on our Sydney-Melbourne-Adelaide route and our Sydney to Brisbane intercapital route.

When these upgrades are complete, 400 Gig services will be the new standard our customers can access across our national fibre backbone – up from 100 Gig today.

100 Gig will be the new standard on our regional routes, up from 10 Gig today.

And these terrestrial upgrades will be augmented with new subsea routes on the east coast.

And our metro fibre will be upgraded in all capital cities.

As with our submarine cable investments, our terrestrial network upgrades are being driven by our customers' needs.

And I'd like to highlight one particular group of customers here, which in my view has the potential to reshape the market for both submarine capacity and terrestrial fibre.

We are on the cusp of the most significant telecoms technology shift in decades – the launch of Low Earth Orbit Satellite systems.

LEOs offer speed, latency, and throughput comparable to fixed line and fixed wireless technologies.

They will provide a generational leap in regional and remote connectivity, and provide a new last-mile solution where trenching fibre is economically unviable.

Companies such as Starlink, OneWeb, Amazon Kuiper, and TeleSat are all delivering global LEO constellations today, with plans to offer services in the Australian market.

Some have already launched trial services and are demonstrating speeds beyond anything else available in market.

And Vocus is investing in our fibre to provide the foundational infrastructure enabling these services.

While LEO satellites offer exceptional broadband speeds thanks to new technology in the sky, this is only made possible by appropriately scaled backhaul on the ground and internationally by subsea cable.

With 16 ground stations built by Vocus and operational in Australia today, our specialist technicians have more experience than any other operator.

Going forward, LEOs will play a significant role in regional backhaul demand and also in our go-to-market proposition.

So I'll conclude by reiterating my three key points today.

First, Vocus is in an enviable position with ample capacity to invest in our network thanks to the solid financial backing of the world's largest asset manager, Macquarie Asset Management, and Australia's second-largest super fund Asset manager, Aware Super.

Second, we're leveraging this strong financial position by undertaking a customer-centric investment program – the largest in our company's history – deploying close to $1 billion in Project Highclere, Project Horizon, the East Coast Cable System, and North West Cable System extensions to Timor Leste and Kupang.

And finally, we're applying that customer-centric investment approach to our terrestrial infrastructure, with the ability to increase capacity on our existing network by up to 50-times what we currently have provisioned – at incremental cost.

Thank you for listening, and I hope you enjoy the rest of the conference.