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Connecting you from Land, Sea, and Space

Good afternoon everyone, it's great to be here with you all again.

Can I start by acknowledging the traditional owners of the land on which we meet, the Gadigal People of the Eora Nation, and pay my respects to their elders past and present.

I'd also like to thank Grahame Lynch and the CommsDay team for inviting me to speak today.

For those of you who were here yesterday, you would have heard Vocus' new CEO Ellie Sweeney give you an update on the progress of our $1 billion investment strategy, and the major projects we're delivering.

These projects really are going to change the landscape of the Australian telecommunications market – no other operator is

delivering new fibre infrastructure in new areas to the same scale as Vocus.

Today, I want to dive into what those projects mean for our customers:

- how they are being designed with security at their core,
- how they'll offer greater network resilience,
- how they'll enable access to new applications like AI and machine learning,
- and how they'll close the digital divide for businesses and Government agencies operating in remote locations.

Hopefully you've seen Vocus' stand in the break area where we're showing off how we can connect you via "Land, Sea, and Space', and that's exactly what I'll be speaking to you about today.

So in keeping with the theme of our stand – first I'll talk about how Vocus is connecting our customers via Land, second I'll talk about

how Vocus is connecting via Sea, and third, I'll talk you through how Vocus is connecting via Space.

Connecting you from Land - Project Horizon

So I'll kick off with how Vocus is connecting our customers via Land – and how these new connections are going to change the way they do business.

We are shortly due to break ground on Project Horizon, a new 2,000km fibre route from Perth to Port Hedland.

This epic new fibre project has been many years in the making, and it will be a critical piece of infrastructure because it delivers so much more than just new connectivity.

The resources industry is one of Vocus' key target markets, and it's remarkable just how poorly served Australia's predominant resources region is today.

The Pilbara Region has an annual economic output of more than $100 billion and is accountable for around 3% of Australia's Gross Domestic Product.

And yet this area of more than half a million square kilometres – roughly the size of Spain – is home to less than 60,000 people, a population the same as Woollahra in Sydney's Eastern Suburbs.

Measured by tonnage, Port Hedland is the largest export Port in the world – but has a population of just 15,000 people.

Perhaps most astonishing is that if you're a resources operator seeking a high-capacity fibre connection in this region, you have a choice: either buy it from the one and only telco in the region or build it yourself.

Project Horizon will change all of that.

It will deliver new competition – the first and only competitive backbone fibre connection from Perth to Port Hedland and onto Darwin.

It will deliver a dramatic uplift in capacity, being built with a starting capacity of 38 Terabits per second and offering 400 Gig wavelengths from the get-go.

It will close the final gap in our intercapital fibre network by establishing a direct link from Perth to Darwin via the North-West Cable System in Port Hedland – creating a massive new network loop in Australia's West.

And as I'll get to later in this speech, it will interconnect with the Darwin-Jakarta-Singapore Cable in Port Hedland, establishing another redundant fibre path between Perth and Singapore through the Pilbara.

These connections will be critical for providing improved network resilience for resources operators – finally providing carrier diversity and a high-bandwidth alternative to satellite backup.

Cyber security is a top-of-mind issue for all of our Enterprise and Government customers, and the resources industry is no different.

Running a mine in 2023 is as dependent on data as it is on diggers.

Resources operators face cyber risks from hackers trying to steal sensitive company data, and from malicious actors seeking to deliberately disrupt operations.

Miners are deploying increasing amounts of connected devices like IoT sensors across their operations, putting a greater focus on edge security.

They need networks that are designed with security at their core, and Project Horizon – like the rest of our national backbone – will provide segregated network access operating on separate IT systems for customers with the highest security requirements.

And as Project Horizon becomes reality, it is also helping to deliver new investment in digital infrastructure in the region.

NextDC has recently announced that its latest edge Datacentre facility will be constructed in Port Hedland – the first of its kind in the region.

Access to new datacentres under construction in Darwin and Port Hedland via high-capacity fibre will unlock applications for Australia's resources industry like artificial intelligence and machine learning.

A recent report by the Minerals Council of Australia called 'The Digital Mine' showed how AI is embedded across the resources industry, integrating real-time data and analytics to improve worker safety, enhance decision-making, and optimise processes.

The report showed how resources operators depend on high-speed connectivity to utilise AI for resources operations – which are often controlled remotely, thousands of kilometres away from the mines.

AI is being used to analyse millions of data points, helping manage and maintain equipment, and to conduct predictive modelling – with hundreds of decisions being analysed in milliseconds.

Project Horizon will open the floodgates to more AI, 'Big Data' analysis, the Internet of Things, and remote Operational Technology applications being deployed across the Pilbara.

This is where the interconnection between Project Horizon and the Darwin-Jakarta-Singapore Cable system will be so critical.

We're seeing demand from resources operators who need low-latency access to hyperscale DCs in Singapore for cloud and high-capacity compute applications, as well as domestic connectivity to Perth for remote Operational Technology management like rail controls, IoT device monitoring, and autonomous vehicle movement.

I'm excited to see what our customers in the resources sector will do with Project Horizon when the system is online next year.

Challenge Networks

The second way Vocus is connecting our customers on Land is through our acquisition of Challenge Networks.

Challenge Networks designs, deploys, and operates private 4G and 5G networks for customers that require secure, reliable, high-capacity wireless coverage to support Operational Technology use-cases.

Private mobile networks are engineered to provide perfect coverage for their target site, are dimensioned according to a pre-defined number of devices and can prioritise traffic based on defined criteria.

And critically for our Enterprise and Government customers, they can be designed and deployed to meet the most rigorous security requirements, integrated with the rest of the customer's Operational Technology network.

The technology is ideal for sectors such as resources, public safety, defence, utilities and renewable energy.

And Challenge, like Vocus, has some serious delivery credentials.

They were the first to deploy Autonomous Haulage systems using private LTE.

They delivered the first private LTE networks for gold mines, and oil and gas.

They delivered the first and largest underground mine LTE network in world.

And today they operate more than 20 private LTE network deployments, both above and below ground.

But Challenge has experience well beyond just the resources sector.

Challenge has provided design and deployment services for major telecoms operators throughout the Pacific Islands, including Vanuatu, PNG, Samoa, Vanuatu, Tonga, Tuvalu, Fiji, and Kiribati *[pronounced "Kiri-bas"]*.

With the Australian Government's focus on improving telecoms access in the region, and Vocus' experience in deploying submarine cables such as the Coral Sea Cable System, Vocus and Challenge will made a formidable partnership in deploying new telco infrastructure in the Pacific.

400G national backbone

The third way we're connecting our customers on land is through major upgrades to our national fibre backbone.

At the CommsDay Wholesale Summit last November, we announced that we had made 400Gbps wavelength services available on our network between Sydney, Melbourne, and Canberra.

We are just weeks away from finalising 400 Gig upgrades on the Melbourne to Adelaide section of our network, again utilising our existing fibre assets to deliver a dramatic increase in capacity.

All equipment has now been installed, and we are in the final stages of commissioning before services are officially available later this month.

And we aren't stopping there.

Planning is already underway for the next 400 Gig capacity increases on our Sydney to Brisbane and Adelaide to Perth routes.

So with Project Horizon, Challenge Networks, and major capacity upgrades to our national fibre backbone, that's how Vocus is connecting you by land.

Connecting you from Sea

Which brings me to the second part of my presentation – how Vocus is connecting you via Sea.

We are in the final stages of deploying 'Project Highclere': a new 1,000-kilometre submarine connection between our North-West Cable System and our Australia Singapore Cable, ASC.

This connection will complete the Darwin-Jakarta-Singapore Cable system, or DJSC.

Over the past year or two we've seen a few press releases about companies planning to connect cables to Darwin – Vocus is actually delivering one.

Just to provide some living proof that this project is well and truly underway, here's one of the friendly locals coming to inspect how

the cable lay is coming along – a massive whale shark that swam alongside the cable laying ship, the *Il De Ré* (pronounced "ILL-DE-RAY"), in the Indian Ocean a couple of weeks ago.

Thankfully whale sharks only eat plankton so the cable itself didn't get any bite marks on it.

Darwin-Jakarta-Singapore Cable system (DJSC)

When this connection is online, the Darwin-Jakarta-Singapore Cable system will be the first international cable into Darwin.

Well, technically it's the first international *fibre* cable into Darwin.

The first international cable into Darwin was copper, and it connected Australia to the world – a link between East Java and Darwin that connected to the Overland Telegraph in 1871, more than 150 years ago.

The DJSC will carry more traffic in its first second of operation than the Overland Telegraph carried in its lifetime.

When the DJSC comes online in the next few months, it will be another historic moment for Australia's connectivity to the world.

The DJSC will establish Darwin and Port Hedland as Australia's fourth and fifth landing points for international data, after Sydney, Perth, and Maroochydore.

At a time where Governments are strengthening their posture on critical infrastructure in the face of heightened security risk and geo-political tensions, these additional landing points provide Australia with much-needed resilience for our international connectivity.

The DJSC also adds another redundant ring in our national fibre backbone, allowing us to re-route traffic through Darwin should there ever be a disruption on the Australia Singapore Cable off the coast of Perth.

Having redundant fibre paths to ensure maximum network uptime is a key part of our offering for customers with the most stringent security and network uptime requirements.

Along with these redundancy benefits, the DJSC will also play a key role in meeting the Northern Territory Government's ambition to attract Datacentre investments to Australia's North.

Darwin is Australia's closest capital city to Asia, and this new system will open up a new low-latency route to Singapore.

Singapore has only recently ended its moratorium on new datacentre builds, and even now has constrained approvals for new DCs due to the demand they put on the country's electricity grid.

As DC operators look for alternatives, Darwin ticks all the right boxes – a stable regulatory environment, a competitive telecoms market, renewable energy – and now, a low-latency connection to existing DCs in Singapore.

I spoke earlier about Project Horizon and what it will deliver for our resources customers in the Pilbara.

The DJSC dovetails perfectly with Project Horizon, as it will provide those customers with low-latency connectivity to Datacentres in Singapore, and redundant fibre routes both on-shore and off-shore.

I mentioned earlier how we see AI driving bandwidth demand, particularly for the resources industry. But it's equally applicable across financial services, Government, and our other target markets.

I see this as a key demand driver for high-capacity connections from Port Hedland and Darwin onto Singapore as AI usage surges.

A recent report by Morgan Stanley called 'How is AI Set to Change the Tech Landscape' looked into the costs of building the infrastructure required for the 'AI Age'.

This report predicted that "an increase in energy and bandwidth costs" will be one of the key operational costs faced by users as AI workloads grow.

With Singapore already feeling the impact of energy costs and tightening controls around datacentre construction, an increase in

processing and bandwidth demand driven by Artificial Intelligence uptake will make these fibre assets a critical enabling technology for AI use in Australia – and throughout the Asia-Pac region.

Another key benefit of this massive capacity upgrade in Darwin is the applications for Defence.

The Top End is already seeing substantial investment from Defence – just last week the Government announced almost $4 billion to upgrade Defence sites across Australia's North.

But for the modern Defence force operating in the cyber domain, connectivity is as critical as boots on the ground.

And it's not just fibre – with Challenge Networks we'll have the capability to deploy secure, private LTE and 5G networks for Defence customers, where public networks are simply not an option for Operational Technology requirements.

Connecting you from Space

And that brings me to the third part of my presentation today – how Vocus is connecting you from Space.

Late last year Vocus became the first major telco to begin offering LEO satellite services with Starlink.

Like Project Horizon, and like the DJSC, Vocus is delivering – we are delivering services for customers today, and these satellites are completely changing the game for remote service delivery.

I'd like to play a short video we put together showing how Vocus and Starlink are lighting up the sky.

A few people have asked me if that was done with CGI – no, it was shot with actual drones in regional Western Australia.

We have been blown away by the interest we've received for our LEO Satellite products.

It's a breakthrough technology that changes what's possible in remote areas – and even areas close to the city.

The best example is our deployment for Northern Beaches Council here in Sydney, which has connected 37 sites with Vocus Satellite – Starlink.

Despite being located only kilometres from the CBD, Northern Beaches Council still struggled with unreliable fixed and mobile connections, particularly at a number of community facilities such as childcare centres and surf lifesaving clubs.

The council has also experienced a number of extreme weather events which resulted in persistent connectivity issues on their fixed and mobile services.

LEOs really shine in remote areas where connectivity is expensive, and competition has historically been poor.

More than a third of our Vocus Starlink sites in operation are in the resources industry.

Every day we see new use cases for LEOs that we hadn't considered before, because this level of bandwidth was simply never available in such remote locations before.

They're being used for health and safety applications, so train drivers working in remote depots without fixed infrastructure can remain connected to control centres.

They're being used by agriculture operators to remotely check if fences need maintenance, to track to locations of livestock, and monitor water trough levels across vast properties.

They're being used to keep staff entertained with streaming video on very remote sites, where resources operators have struggled to retain staff.

They're being used by airlines to maintain connectivity at remote air strips, where traditional satellites had offered slow and limited connectivity.

It’s also the ultimate redundancy technology as our customers seek additional resilience in their networks – LEOs provide instant redundancy anywhere in Australia.

Combined with our new private LTE and 5G capability in Challenge Networks, Vocus has the ability to stand up private mobile networks, backhauled via an Enterprise-grade Starlink connection, even in the most remote locations beyond the reach of microwave and fibre.

Connecting you from land, sea, and space

So to conclude, this is how we’re connecting our customers via Land, Sea, and Space.

On land we’re delivering Project Horizon, the first competitive fibre through the Pilbara, as well as Challenge Networks and major upgrades to our national fibre backbone.

At Sea we’re delivering project Highclere, the final link to establish the Darwin-Jakarta-Singapore Cable system and enabling low-latency connectivity from Australia’s North to Asia.

From Space we're delivering high-bandwidth, low-cost connectivity with LEO satellites, unlocking use cases which couldn't be imagined as recently as twelve months ago.

And what we're delivering is so much more than just connectivity.

We're seeing how our customers are using our networks to deploy Artificial Intelligence applications to optimise operations and get the edge over their competitors.

We're seeing how our customers are hardening their cyber defences and are focussing on the security of their network as part of that.

We're seeing how ubiquitous access to business-grade connections on Starlink is changing what our customers thought possible in remote areas, where fixed and mobile infrastructure was never going to be an economically viable solution.

Thank you for your time today, and I hope you enjoy the rest of the conference.