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Good morning everyone, and can I start by offering my congratulations to CommsDay for hosting the inaugural Wholesale Forum.

Vocus has been a longstanding supporter of the various CommsDay events, and we're pleased to be the Gold Sponsor for what is hopefully the first of many dedicated Wholesale events.

It's an exciting time for the wholesale telecoms market in Australia – over the past year I think we've seen as many as a dozen new major fibre cable announcements and some new entrants, so clearly there's a huge appetite for more investment, more infrastructure, and more competition in the wholesale market.

While recent economic trends like high inflation and an increasing cost of capital might temper some of this activity, it's still a very encouraging sign of the good health of the industry overall.

I'd like to cover 3 areas today.

I'll start by providing an update on Vocus' $1 billion investment strategy, and how we're deploying the biggest upgrades to our network in the company's history over the next few years.

Second, I'll provide Vocus' perspective on the changing face of the wholesale market – the key trends we've seen over the past few years, and where we see them going.

And finally, I'll give some perspectives on the next frontier for wholesale – the major technology changes that will shape the market in the years to come, including our announcement yesterday about a major new product we released to market this week.

So let's start with Vocus' billion-dollar investment strategy, and how we're upgrading our network to meet the needs of the wholesale market.

Under the stewardship of our new owners Macquarie Asset Management and Aware Super, Vocus Network Services has commenced a 5-year investment program, built on 5 key pillars:

- Extend our network's geographic reach,
- Upgrade our capacity,

- Enhance our security credentials,
- Capitalise on new technologies, and
- Enrich our product suite.

So let me start with how we're extending our network's geographic reach.

First, we are in the advanced stages of Project Highclere: the final link to complete the $500 million Darwin-Jakarta-Singapore Cable system between Darwin, Port Hedland and South-East Asia.

This investment will establish a new 1,000 kilometre submarine connection between our North West Cable System and our Australia Singapore Cable.

It will unlock Darwin as a major new data hub for the Asia-Pacific, and establish Port Hedland as a new entry point for international data.

It will open up low-latency connectivity to Singapore for major resources operators in the Pilbara.

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

Second, in coming weeks we are due to break ground on Project Horizon, a new 2,000km fibre route from Geraldton to Port Hedland.

This will close the final gap in our terrestrial network, creating a figure-8 of fibre rings across Australia's east and west.

It will also be the highest-bandwidth, lowest-latency fibre backbone through Australia's primary mining region.

Contracts are signed with major suppliers, and construction partners have commenced mobilising.

Project Horizon will start with capacity of 38 Terabits per fibre pair – upgradable in future at incremental cost.

Third, we're continuing our negotiations to extend our North West Cable System north to Timor Leste and to Kupang in East Indonesia.

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 fibre tails can be delivered at incremental cost.

When combined with Project Highclere, these extensions will create new pathways between East Timor, Indonesia, Australia, and Singapore.

And the final major extension of our geographic reach is a new festoon cable system, on Australia's east coast, which we call the East Coast Cable System, very creative I know!

Key customers like OTTs, Federal and State Governments, and large Enterprises are telling us that they are exploring more long-term capacity and more redundancy on our two existing East Coast terrestrial routes, particularly after the disruptions caused by bushfires and floods.

We expect this system will initially connect the highest-demand route between Sydney and Melbourne, and will be designed to accommodate future expansion to other capitals like Brisbane in line with market appetite.

Feedback from customers has informed us that they're seeking a system which mirrors the kind of latency available on terrestrial routes to maximise the potential to use the system for redundancy.

The East Coast Cable System complements our existing coastal and inland fibre routes, and meets our customers' growing desire for dark fibre, redundancy, and resilience.

The system is being designed with as many as 24 fibre pairs – the highest subsea fibre count system we will have deployed.

So, with Project Highclere, Project Horizon, extensions of the North West Cable System, and the East Coast Cable System, we have exciting opportunities committed or under review to extend our network's reach.

The second pillar of our investment plan is upgrading our capacity.

We have an excellent fibre asset that 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 saw these routes upgraded from 10 Gigabit to 200 Gigabit technology – with a clear upgrade path to 400 Gigabits in the near future.

This is an example of the broader national network upgrades we are delivering over the next 3 years.

400 Gig services will be the new standard our customers can access across our national fibre backbone.

100 Gig will be the new standard on our regional routes.

The third pillar of our investment plan is to enhance our security credentials.

Cyber security has become a front-of-mind issue for our Enterprise, Government, and Wholesale customers.

The legal, reputational, and financial risks of cyber security breaches are at an all-time high.

Global geopolitical risk is also playing a growing role for our international customers, who see Australia as a secure route for traffic in the Indo-Pacific region.

Vocus serves our customers who have the highest security requirements on a physically segregated network, with independent hardware and operating systems to keep secure traffic separate from regular commercial traffic.

This network is operated exclusively by security-cleared staff working in our 24x7 secure operations command centre.

Vocus continues to invest in our Security posture: our ISO Accreditations, uplifting our ASD8 Maturity and Data Loss Prevention, establishing a secure NOC in compliance with the most rigorous security requirements, hardening our policies, processes, assurance, and remediation.

This year we have doubled our investment in security, and we anticipate we will double it again next year as we continue to introduce new technology, software and highly skilled people.

With the ‘Security of Critical Infrastructure’ and systems of national significance legislation now in force, we see security as a vital part of our business as we add more products and services to our secure, segregated network.

The fourth pillar of our investment plan is to capitalise on new technologies.

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

And I'll discuss these in greater detail when I turn to the next frontier in wholesale, later in this speech.

The fifth and final pillar of our investment plan is enriching our products.

Before Vocus commenced our turnaround strategy in 2018, we were operating a myriad of legacy networks and products that were complex to integrate and challenging to operationalise.

Over the past four years we've rationalised legacy networks, retired products, and decommissioned old systems.

We focus on what we do best: Our core product is connectivity.

We've built an increasingly digitised experience that automates key network functions and gives our customers control.

Speed is everything, and we've built a reputation for market leading delivery of new services using pre-provisioned capacity.

We're using bots for process automation and quality assurance.

We've delivered ENNI on a programmable network. We're productising spectrum sharing and long-haul dark fibre services.

And we're constantly adding more services to our secure, segregated VAS network environment.

And we're delivering all of this on a sovereign network that is Australian-backed and locally operated by security-cleared staff.

In summary, Vocus Network Services is well underway on a 5-year investment program, which will see us extend our geographic reach, upgrade our capacity, enhance our security credentials, capitalise new technologies, and enrich our product suite.

Now I'd like to turn to the second section of my presentation today: the key trends changing the face of the wholesale market.

The first trend I'll highlight is the growth we're seeing in dark fibre, a foundational product in wholesale.

We've seen the arrival of several new entrants over the past few years, and the market for dark fibre has grown significantly.

We've seen growth of more than 57% for our dark fibre services in operation since 2019, a compound annual growth rate of 16%.

But the growth we're seeing is more than just services – it's growth in physical fibre counts as well.

Customer requirements have driven a shift in fibre counts across datacentre lead-ins, building lead-ins, and backhaul cable.

Today we are commonly installing 720 fibre-core counts into datacentres, allowing us to get plenty of fibre in during the initial install, and setting ourselves up for future growth.

As well as higher fibre counts, we often install multiple lead-in paths to provide diversity and accommodate both dark fibre and managed services.

For some of our larger clients going from datacentre to datacentre, we are installing more than 3,400 diverse core counts.

It’s a similar growth story with building lead-ins, which commonly we will look to provide 288 fibre cores where possible, depending on the number of potential users in the building, significantly more than the minimum 72 fibre cores commonly provided in 2019.

Backhaul fibre cables have also grown. Back in 2019 it was common to see 24 or 48 fibre counts in backhaul cables, today, we’ll typically install 96 fibre core counts.

Quite a dramatic increase in just four years.

The next major trend in the wholesale market is the growth of wholesale NBN services – and this includes some results that should cause NBN to reconsider its proposed changes to pricing.

Between FY20 and FY23, we saw 25Mbps NBN services increase by 90%, a compound annual growth rate of 40%.

In that same period, we saw 50Mbps services almost double – increasing by 94% since 2020 with a compound annual growth rate of 39%

But while the 100Mbps speed tier saw growth, it wasn’t nearly on the same scale as the 25 or 50Mbps products.

100Mbps services in operation grew by 28% between FY20 and FY23, a compound annual growth rate of 13%.

I think this data shows that affordability is a real issue for NBN services, and that consumers are not yet showing a willingness to pay a premium for speeds above 50Mbps.

Quite the opposite – they continue to show a preference for lower speed, more affordable services.

NBN's current proposal to change its pricing mix would make these lower speed tiers less affordable, while bringing down the price of higher-speed, higher-price tiers.

The final trend I want to talk about is wavelength services.

Wavelength is a very popular product within the Vocus Wholesale product suite.

Our customers want this dedicated capacity to form the basis of their backbone networks.

We have seen positive compound annual growth in services across all three speed tiers, being 1Gig, 10Gig, and 100Gig.

But the largest growth rate is in 100Gig, which has grown at a compound annual rate of 34% between FY19 and FY23.

Back in FY19, 61% of our wavelength services were 10Gig, and only 22% were 100Gig.

Today, 100Gig services account for 31% - an almost 50% increase since 2019.

Meanwhile, 1Gig services reduced from 17% of total services to 11% as the market moved up to 10Gig and 100Gig.

This growth in wavelength capacity has been enabled by the raft of capacity upgrades across our national backbone I mentioned earlier.

So with that overview of the key trends we're seeing in the wholesale market, this brings me to the third and final section of today's presentation: the next frontier for the wholesale market.

These are the new and emerging technology trends that I predict will shape the wholesale market over the next decade, as demand for capacity, reach, redundancy, and diversity all reach new highs.

The insatiable demand for capacity can't be overstated.

Just last month, two university research labs set a new world record for data transmission using a single light source and optical chip.

Data was transmitted at a rate of 1.84 Petabits per second across 223 wavelength channels for a distance of close to 8 kilometres.

That's almost double the capacity of global internet traffic.

The researchers who conducted the experiment claim the technology has a pathway to 100 Petabits per second.

It's just one example of the technology we're seeing on the next frontier of the wholesale market.

Another 'next frontier' which Vocus is well positioned to capitalise on is LEO satellites, which we see as a complementary technology to terrestrial and submarine fibre networks.

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 deploying 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.

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.

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

LEOs will also be a game changer for redundancy, particularly in remote areas where alternative fibre may not be available.

Another product on the next frontier for Vocus is long haul dark fibre, or a derivative involving spectrum sharing.

The best example of this is one I mentioned earlier – the East Coast Cable System, our festoon submarine cable system planned initially

for the busiest route of Sydney to Melbourne, and expending to other capitals in response to demand.

We believe dark fibre will become increasingly commonplace as new systems are built with far higher numbers of fibre-pairs.

Ten years ago cable systems were designed with 2 or 4 fibre pairs – it's now common to talk to vendors about 24 fibre pairs, which is what we're designing in the East Coast Cable System.

It's not unreasonable to expect future cable systems to have 36 or more fibre pairs.

These advances in fibre technology will make long haul dark fibre a commercial reality.

Next, managed wavelength services. Again, while this product is not new, the constant demand for higher-capacity wavelengths means this product will remain on the next frontier in higher capacities.

Managed wavelength gives buyers certainty of supply in a cost-effective manner as they grow and shift to higher bandwidth services.

And on that note, I am pleased to announce that Vocus is now providing 400Gbps wavelength services on our network between Sydney, Melbourne, and Canberra.

We have just increased the capacity on these key routes five-fold.

The faster speed on a single port will reduce the cost of cabling requirements at locations such as data centre cross connects.

The 400Gbps services will be available at multiple data centres in Sydney, Canberra, and Melbourne.

It will be particularly useful for data-centre to data-centre connectivity, where extremely large volumes of data are traversing intercapital links and for customers' core network transmission, data replication, data storage connectivity and disaster recovery requirements.

Vocus is forging ahead in implementing the latest advancements in Wavelength Division Multiplexing technology, allowing us to achieve higher capacity from our existing fibre.

Vocus's new multi-Terabit Intercapital DWDM system uses two spectrum bands, C-band and L-band, to deliver rates of up to 800Gbps per wavelength, depending on distance.

Existing long-haul systems in Australia typically are only using C-band, and by introducing L-band, Vocus has doubled the capacity on each of our existing fibre pairs.

And this is just the beginning.

We are already working to bring 400Gbps services to the Melbourne-Adelaide section of our network early next year, and extending this new capacity and performance to more customers in more parts of Australia.

So, I'll conclude with a brief recap of my key points today.

First, Vocus is rolling out our $1 billion investment strategy, deploying the biggest upgrades to our network in the company's history on routes where customers are needing high speed connectivity.

Second, there are key trends changing the face of the wholesale market, including massive growth in wavelength and fark fibre, including long haul dark fibre technologies.

And finally, Vocus is looking to the next frontier for wholesale – including the commercial launch of 400Gbps services on our network from this week, as well as investing early in new technologies to meet the market's future connectivity needs.

Thank you, and I hope you enjoy the rest of the Forum.