

**Andrew Wildblood,
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Speech to IMARC Conference Sydney
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SLIDE 1: TITLE SLIDE

Good afternoon everyone, and thank you to IMARC for the opportunity to speak.

I'd like to cover 3 areas today.

SLIDE 2: AGENDA

First, I'd like to set the scene by discussing the connectivity landscape facing in Australian resources operators today – and why Australia's resources industry has been held back by a lack of digital infrastructure.

Second, I'll talk to you about how Vocus is making the biggest investments in our company's history to address this – and how in the next two years, Vocus will provide connectivity across Australia from land, sea, and space – providing the coverage, capacity, redundancy, and security that resources operators desperately need.

And finally, I'll talk about what this will mean for resources operators – how the arrival of competitive, high-capacity infrastructure will enable digitisation, automation, and mobility – and how this will play a key role in reducing emissions and meeting environmental, social and governance objectives.

So, let me begin with the state of play of connectivity available to resources operators today.

SLIDE 3: DIGITAL DESERT

It's fitting that today's opening session was titled 'Reimagining Mining', because we're all seeing how the most progressive resources operators are the ones bridging the gap between the best people capability and the best digital assets.

These digital assets are no longer just ruggedised devices or end user terminals, they are 10-kilometre-long conveyor belts, 400-tonne haul trucks, and natural gas well-heads.

And a foundational pillar in supporting these digital assets is secure, ubiquitous connectivity.

But despite the massive contribution that the resources industry makes to the Australian economy, digital connectivity available to our primary resources geographies remains lacking.

The Pilbara region is a great example.

Industry and communities alike are hampered by a lack of competition and connectivity.

It's hard to believe this, but there is only one national telco operating fibre north of Geraldton, an area four times bigger than Texas.

As a result, geographically-dispersed and remote industries – such as the resources sector – have been forced into compromises with their connectivity, even when it plays such a critical role in their operations.

It means paying monopoly prices to access aging fibre infrastructure, which can be prone to outages and service disruptions.

Or it means living with the limitations of satellite, which is typically low-bandwidth and high-latency, but is often the only commercially viable technology available in remote locations.

Or in many cases, it means the resources industry has had to resort to building their own networks – requiring substantial investment in both infrastructure and expertise, which is a distraction from your core business.

Australian resources operators – and the broader ecosystem in the sector – have a firm grasp of the benefits of digitisation.

Digitisation supports the acceleration of an operator's Environmental, Social and Governance agenda.

It drives more intelligent, efficient operations.

And it plays a pivotal role in engaging the workforce to solve for some of the biggest challenges the industry faces.

But in many cases, the benefits of digitisation have not been achieved because of the widespread availability of high-capacity communications infrastructure – they've been achieved *despite the lack of it*.

I am here today to inform you that the era of the single provider and ageing infrastructure is rapidly coming to an end.

The competitive landscape is on the verge of being completely up-ended – and these vital resources geographies will not be digital deserts for much longer.

SLIDE 4: Connecting you from Land, Sea, and Space

Which brings me to my second point: Vocus is currently deploying the most substantial investments in our company's history to address this – and in the next two years, Vocus will provide the connectivity that resources operators desperately need from land, sea, and space.

Vocus is currently delivering a \$1 billion investment strategy, built on the four pillars of coverage, capacity, redundancy, and security – all critical considerations for the resources industry.

And these four pillars are central to the major projects we're delivering through Australia's primary resources region.

First, just a few weeks from now Vocus is due to break ground on Project Horizon – the largest telecommunications infrastructure project being deployed in the Pilbara.

And it is on-track to be completed and operational by the end of 2023.

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

Project Horizon is the result of many years of painstaking planning and design, and our contractors are now mobilising to bring it to life.

It 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.

And as I mentioned a moment ago, it's built on our four pillars of coverage, capacity, redundancy, and security.

It will provide coverage by closing the final gap in our national terrestrial network, which will connect all mainland capitals.

It will provide hyperscale capacity, starting at 38 Terabits per fibre pair and offering 400Gig wavelengths – a dramatic increase from the standard 10Gig services typically available on existing networks today.

It will provide multiple layers of redundancy, by establishing a figure-8 of fibre rings across Australia's east and west via our existing North West Cable System from Port Hedland to Darwin, as well as an offshore ring via Perth when combined with our next major infrastructure project, which I'll get to in a moment.

And it will be built with security as a core feature of its design.

Like many of you in this room, over the past few years we've seen our business increasingly viewed by Government as "critical infrastructure", with all of the regulatory obligations and oversight that entails.

At the same time, we've also seen how cyber security has gone from being an issue left with the technical experts, to an issue that is front and centre for the Board of Directors.

So when we design a major new piece of network infrastructure like Project Horizon, security is not an afterthought – it's foundational.

Our national fibre backbone is built to serve customers with the most stringent security requirements, including physically segregated network elements to provide separate lanes for secure traffic.

We call this our VAS network, for Vocus Advanced Services.

And we've made this network available to customers in the resources sector with the most demanding requirements for network security and redundancy.

The four pillars of coverage, capacity, redundancy, and security also underpin our second major project, what we call Project Highclere.

This \$100 million 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.

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.

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

This project is particularly important for our resources customers.

It meets the requirement for coverage, providing new submarine connectivity to major offshore oil and gas platforms which are heavily dependent on automation.

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

It meets the requirement for capacity, delivering 40 Terabits of connectivity between Australia and Asia, reducing latency from the Pilbara to the Asia-Pacific data centre hub of Singapore.

It will also interconnect with substantial capacity upgrades our existing terrestrial infrastructure.

When Project Highclere completes the link between Singapore and Darwin, it will connect to our domestic routes between Darwin, Adelaide and Brisbane which were recently upgraded with 25 times more capacity.

This project, called 'Terabit Territory', saw these 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.

And it won't stop there. The combination of 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.

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.

Combined with these terrestrial network upgrades, Project Highclere meets the requirement for redundancy, providing international and domestic route diversity by unlocking both Darwin and Port Hedland as new international data entry points into Australia.

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

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

In 2021, our Australia-Singapore Cable between Perth and Singapore was taken offline when a ship 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 offshore route via Highclere should a break ever occur on terrestrial fibre.

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

Project Highclere 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 as with all of our network investments, it will be built with security at its core, offering secure traffic segregated from standard internet services for customers with the most demanding security requirements.

The topic of my speech today is 'Connecting you from Land, Sea, and Space', so now I've covered off Land with Project Horizon and Sea with Project Highclere, I'd like to talk about how we're connecting resources operators from Space.

We know the resources industry needs more than just fibre to provide for their connectivity requirements, and there will always be remote areas of Australia where fibre simply won't be economic to deploy.

Mines have historically had to rely on satellite connectivity, which typically doesn't allow for mission-critical services due to high latencies and low available bandwidth.

Thankfully, we are on the cusp of the most significant telecoms technology shift in decades – the launch of Low Earth Orbit satellite systems, or LEOs.

SLIDE 5: LEOs

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.

One has already launched services, and they're delivering speeds beyond anything else available in market.

And Vocus is investing in our fibre to provide the foundational infrastructure that enables 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 in LEOs than any other operator.

Going forward, LEOs will play an integral role in connectivity for resources operators.

Not only will they provide fast, low-latency connectivity in places beyond the reach of fibre, they'll also provide redundancy to mining

operations already served by fibre or microwave backhaul – ensuring maximum uptime for critical operations.

So while we can connect you from Land, Sea, and Space; there's one more area we know resources operators depend on connectivity for, and that's mobility on their mining sites.

SLIDE 6: Private LTE

Today, I am pleased to announce that Vocus is now partnering with Challenge Networks to provide private LTE networks for the resources industry.

Just as Vocus is a specialist fibre and network solutions provider, Challenge Networks is a specialist Enterprise mobile and fixed wireless network provider, with unparalleled experience in the resources sector.

We see the intersection of fibre, LEO satellites, and private Enterprise LTE as the holy grail for resources operators solving their Operational Technology challenges.

It comes back to the four pillars of coverage, capacity, redundancy, and security – enabling any mining operation anywhere in Australia to access the connectivity they need, both on-site and to major Australian and international data centres.

Challenge has already delivered major operational technology private LTE networks for Beach Energy in South Australia and Goldfields Australia in WA, and both networks are already under expansion.

These solutions provide resources operators with control, capability and customisation features required to deploy IoT and mission-critical applications over LTE.

Private LTE provides a level of control that commercial mobile networks cannot.

Specific uplink and downlink performance requirements. Traffic control. IoT system integration. Custom cell designs.

When you're running a mission-critical Operational Technology network, there are certain things you can't compromise on by relying on a commercial mobile network.

It's that level of specialisation that Vocus and Challenge networks are bringing to market together.

SLIDE 7: From Digging to Digitisation

And that brings me to my third point today: for mining and resources operators seeking to maximise their potential, digitisation is the new digging.

Vocus lives by our Purpose statement: "Building critical connections. Enabling Better Possibilities".

And it's this purpose – our reason for being – that drives so much of what we do in the resources sector.

We believe connectivity should enable potential.

We build and operate our own secure fibre network, and more importantly why we create long-term, open and trusting relationships – with our customers, with our partners, with each other.

Vocus combines great people and brilliant technology to outperform expectations – to be the challenger that delivers for businesses, government, and society.

This combination of high-capacity fibre, LEO satellites, and private LTE is fundamental to resources operators seeking to make their operations as efficient as possible through digital technologies.

The need to improve safety and worker wellbeing, enhance productivity, and meet environmental, social, and governance or ESG requirements is helping to drive more connected things and the rapid adoption of technology.

As a result, the IT landscape for the resources sector has become increasingly complex, driving the need for secure, adaptive, and resilient solutions accessible the most remote locations.

Resources operators cannot afford to have their investment in technology fail.

Workers and equipment rely on tracking, access to cloud-based applications, data flow, and communication; all of which need secure and scalable solutions powered by a resilient network backbone.

We have long-standing experience in the resources sector and work with our customers to drive change for a safer, more sustainable future.

When Minjar Gold was looking for a way to improve network coverage and connectivity across its remotely located Southern Cross operation in Western Australia, it turned to Vocus.

Minjar's operation is centred around Marvel Loch, around 400km east of Perth and 40km away from Southern Cross, the closest township.

The site had relied on a limited-capacity network through a legacy provider, and Minjar had tried every possible connectivity solution including microwave, fibre, satellite, and mobile – but nothing was able to meet their requirements.

Vocus undertook detailed planning and feasibility studies with Minjar to gain an intimate knowledge of the site's needs.

And our engineering team delivered a private network that offered a more than 10-fold improvement on their previous connectivity, boosting it from about 40Mbps to nearly 500Mbps.

The solution saw Fixed IP microwave connected to Vocus' fibre point of presence in Southern Cross, and from there, to 400km of Vocus fibre running underground to Perth.

Northern Minerals had a similar success story.

The remote Browns Range Pilot Plant is located 160 kilometres to the south east of Halls Creek, making attracting and retaining employees one of the key challenges for the business.

At the Brown Range Project, where there are about 55 people on site at any time, the internet isn't just a way for employees to stream movies and music—it's their connection to the rest of the world.

In this case, Vocus utilised NBN's Business Satellite Service (BSS) for internet access.

The company saw an immediate improvement in employee morale because they could stay connected with family and friends, as well as staying entertained when they were off the clock.

Productivity also improved, with remote systems including data historian and accounting software seeing significant improvements over the previous low-capacity connection.

As well as improving employee wellbeing and productivity, connectivity can play an important role in helping resources operators meet their environmental, social and governance targets.

Digitisation and automation can help make operations as efficient as possible, reducing emissions from flying workers in and out of remote sites, and minimising wasted fuel consumption as a result of sub-optimal logistics processes.

Low-latency connectivity to major data centre hubs in Singapore and Sydney can reduce requirements for on-site data processing, which has high energy demand and costs.

And private LTE networks can allow resources operators to utilise Internet of Things technology such as remote monitoring devices to optimise a site's efficiency, improve worker safety, and reduce carbon emissions.

Just last month, Vocus announced that we will achieve net zero emissions from our own operations in 2025.

After a year-long analysis of our energy consumption, we found that 88% of our CO2 emissions came from our data centres.

6% of emissions came from our office space, and just 6% came from the Controlled Environmental Vaults that keep our national backbone running, along with other small scale network sites.

Through a combination of absolute emissions reductions, renewable energy procurement, and a small amount of Carbon Credits, we will achieve net zero in 2025.

It comes back nicely to Vocus' purpose: "Building critical connections. Enabling Better Possibilities".

And I'm confident that by utilising connectivity and digitisation, we can help resources operators *enable better possibilities* and achieve their own emissions reduction strategies too.

So I'll conclude by briefly recapping my key points today.

First, Australia's resources industry has been held back by a lack of digital infrastructure and underdeveloped competition – particularly in key mining regions.

Second, Vocus is currently undertaking the biggest investments in our company's history to address this – providing the coverage, capacity, redundancy, and security that resources operators desperately need from Land, Sea, and Space.

And finally, the arrival of competitive, high-capacity infrastructure will enable digitisation, automation, and mobility – playing a key role in resources operators reducing their emissions and meeting their environmental, social and governance objectives.

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