

The interconnected organisation

Your guide to
maximising digital
success.



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Moving to next level connectivity

Welcome to part one in our series to help you unlock new possibilities for your organisation. In this piece, we look at how we're in the midst of a dramatic surge in the generation, compute and consumption of data by businesses and governments, both nationally and internationally. Driven by the continuing transition of data to the cloud, greater use of video, automation and the emergence of AI, we look at how moving data securely and reliably between sites, geographies, and digital infrastructure, to bring it as close as possible to the end user, requires a new level of interconnectedness, underpinned by robust networks and services that perform fast, on-demand, and around the clock. We hope you enjoy the insights.

A handwritten signature in white ink that reads "Jarrod Nink".

Jarrod Nink
Interim CEO, Vocus

Executive summary

Doing business has always depended on making the right connections. However, these days, success requires interconnecting more devices, data and people — including employees, partners and customers — than ever. These interconnections must also be reliable, secure and fast enough for today's data-rich applications.

Meanwhile, corporate networks have evolved to include a broad, complex array of interconnections between cloud, data centre and edge workloads — and a highly distributed workforce.

All these factors make becoming a fully interconnected organisation as challenging as it is vital. This paper explores how organisations can develop their interconnectedness in Australia and beyond. We reveal what's needed for:

- Hyperscale cloud providers to secure their network infrastructure and support their global and local customers' requirements
- Multinationals to drive expansion in the region and seamlessly connect with global offices
- Australian enterprises to support their digitalisation needs and growth goals locally and overseas
- Government agencies to provide enhanced, secure and compliant citizen services.



Enhance productivity and help you retain talent by ensuring data, applications and communications tools provide a responsive, engaging employee experience



Drive innovation and efficiency with a network that supports artificial intelligence (AI), automation and other advanced technology

What is interconnectedness & how it can drive success?

In simple terms, interconnectedness is about how all the different parts of a network work together to allow communication between users, and data to flow between devices and systems, no matter where they are located. Understanding these interactions is essential to optimising connectivity and operations across an organisation and its ecosystem of partners.

Becoming an interconnected organisation can significantly improve your operations and how your teams work and communicate.

Strengthen your organisation's resilience by enhancing the availability and security of your network and digital infrastructure



Build and maintain trust by ensuring customers can easily access digital services while keeping their data secure.

The rise of interconnectedness

The need for greater digitalisation, cloud adoption and hybrid working, along with prevailing economic headwinds, continue to drive organisations to accelerate and broaden their digital transformations.

In addition, AI is fast becoming a business imperative. Enterprises are increasingly becoming AI enabled.

As a result of AI and other data-rich applications, global data creation is forecast to almost triple from 2020 to 2025. This is driving trends such as hybrid cloud and edge computing adoption, as organisations strive to manage and process data more efficiently.

Organisations not only have to support increasing complexity and data growth but also need to do so with the speed, latency, reliability and resilience that today's applications and customers require. Interconnectedness is therefore critical to every organisation's success.



"Interconnectedness enables organisations to visualise what is happening anywhere across their business in real time. As organisations increasingly adopt AI and other data-rich technologies, being able to rapidly respond to network and other infrastructure issues is vital in maximising their uptime, availability and ability to operate, transact and communicate."

Guy Congerton,
General Manager, International
(Wholesale & Infrastructure), Vocus

51%

of organisations say they are reasonably to highly advanced in their use of AI to boost productivity, according to a recent Vocus survey of IT leaders in Australia.

The global perspective

Global enterprises face big challenges in ensuring their networks offer the speed, latency, reliability and resiliency their local operations and customers need. Prime examples are global tech companies and over-the-top content providers, where delivering a seamless experience for customers accessing and consuming data is of utmost importance.

Given the varying nature of their services, global organisations are approaching these challenges in different ways. For example, hyperscale cloud providers have adopted data architectures that range from centralised — supported by ultra-high-speed networks — to highly distributed, with networks of data centres located close to local operations and customers.

While performance is critical, the security of physical infrastructure is also top of mind when designing and building international networks. To this end, Australia plays an increasingly important role as a data conduit between the United States (US) and Asia.

“We’re seeing organisations increasingly building network infrastructure avoiding mitigating perceived high-risk areas of Asia, due to geopolitical and security concerns, and routing capacity further south to Australia, and then up to Asia. Australia is seen as a safe and stable environment for infrastructure investment, with new submarine cables systems being recently announced with links to Australia, New Zealand, the Pacific Islands, South America and the USA.”

– Guy Congerton.

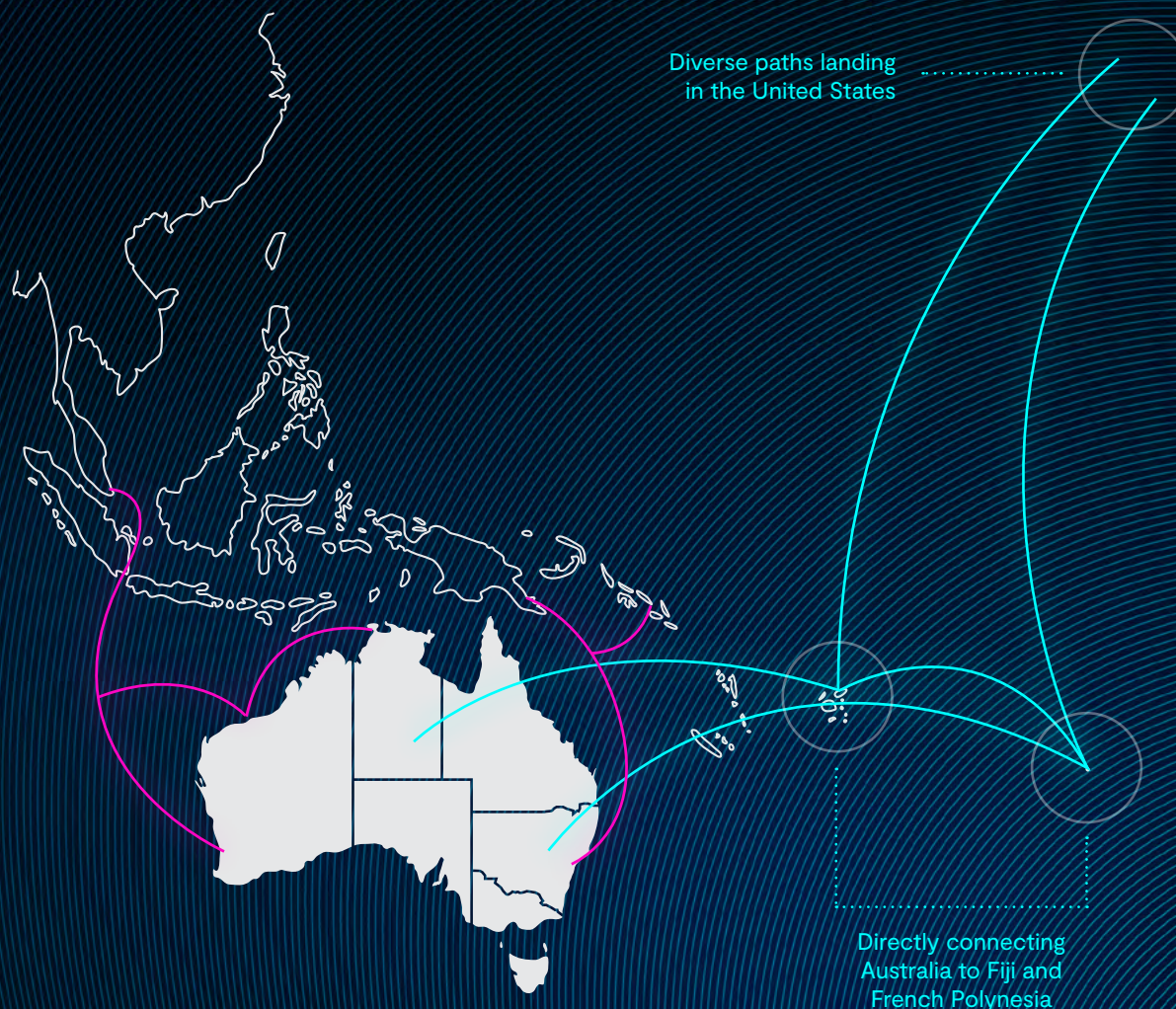


Partnering with Google to deliver a new submarine cable system

Google has selected Vocus as its partner to deliver a new submarine cable system connecting Australia to the US — improving the reliability and resilience of digital infrastructure for Australia and the Pacific region.

The South Pacific Connect initiative will deliver a subsea cable ring connecting three diverse Australian landings to Fiji and French Polynesia, both of which will then connect directly to the US via diverse paths. The initiative also includes installing branching units across the system to enable other Pacific nations to connect in the future.

- Submarine cable investment with Google
- Submarine cable built by Vocus



Top 5 considerations for optimising connectivity

Understanding the importance of interconnectedness is one thing, but achieving it is quite another. There's much to consider, as enterprises and government agencies need to:

- Ensure connections have the bandwidth and latency required by their applications and users
- Design networks with redundancy to minimise downtime, enhance fault tolerance and maximise resilience
- Build in network security to protect widely distributed data, physical infrastructure and users against threats
- Consider the location of cloud and data centre workloads to support users anywhere and comply with data sovereignty and other regulations
- Support cloud and edge connectivity to optimise the performance of key applications.

Taking a user-centric approach to network design can help enterprises prioritise these considerations. However, organisations cannot view interconnectedness in isolation from other information and communications technology (ICT) needs.



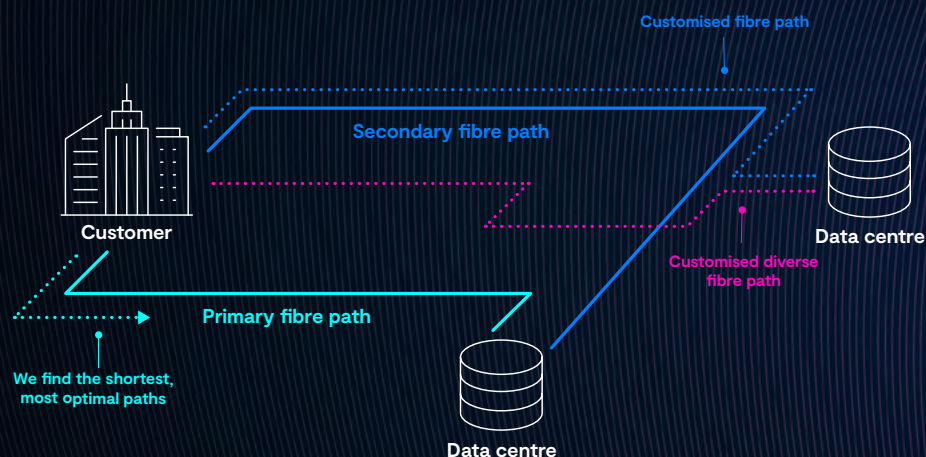
"Interconnectedness should be a key part of your ICT modernisation strategy, which might incorporate software- and infrastructure-as-a-service, software-defined networking, ubiquitous security and interconnected data centres, as well as physical network infrastructure."

Jason Yu,
Strategy & Technology Consultant,
ICT Industry

Turbocharging Tesseract client's key connections

Australian cybersecurity and managed IT services provider Tesseract needed to help a client migrate all its data and workloads to a new data centre. The customer's wide area network infrastructure was also congested.

Tesseract designed a solution with Vocus' help. This included building a temporary dark fibre link that connected the client's head office with a data centre being decommissioned, along with a link to the Vocus data centre where the data was being migrated.



"By giving our client this speed and a redundant design, they could have confidence they'd be able to access their files even if one of the links was unavailable. We were able to immediately go to 10Gbps, with the capacity to go much faster in the future."

Paul Cosgrove,
Senior Account Manager,
Tesseract

Key interconnected technologies

Leading organisations are driving interconnectedness by migrating from legacy vendor-specific network technologies to internet protocol (IP) networks. This enables them to adopt a modern software-defined networking architecture and manage complex connectivity requirements on a single platform. They are also deploying AI solutions to automate mundane network management and monitoring tasks, which frees up IT staff to focus on higher-value work.

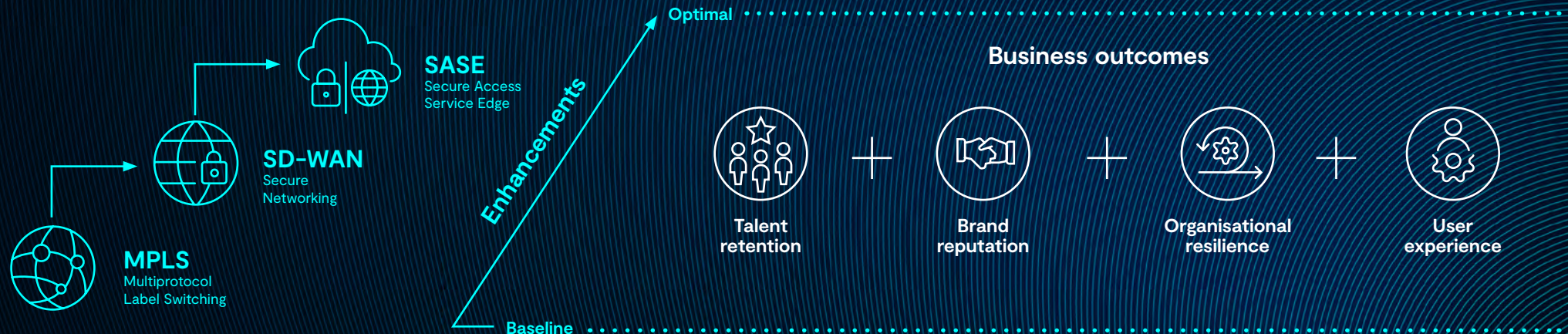
Taking this approach further, a Secure Access Service Edge (SASE) solution combines network and security capabilities on a unified cloud platform. This enables organisations to deploy zero-trust and other advanced security measures across all data, devices and users.

However, such a transformation requires considerable planning and funding. This may not be easy for many organisations given budgetary

constraints. It's therefore essential to start the journey with a comprehensive assessment of existing connectivity technology, which may identify opportunities to drive efficiency.

"A detailed evaluation of existing infrastructure combined with a cost-benefit analysis of new technologies may yield surprising results. For example, legacy networking technologies may have hidden costs, such as complex security and network management requirements. Moving to an IP-based network and a SASE platform can provide a network and security architecture that can deliver cost and operational efficiencies, while also delivering much improved connectivity and security to the business."

- Jason Yu



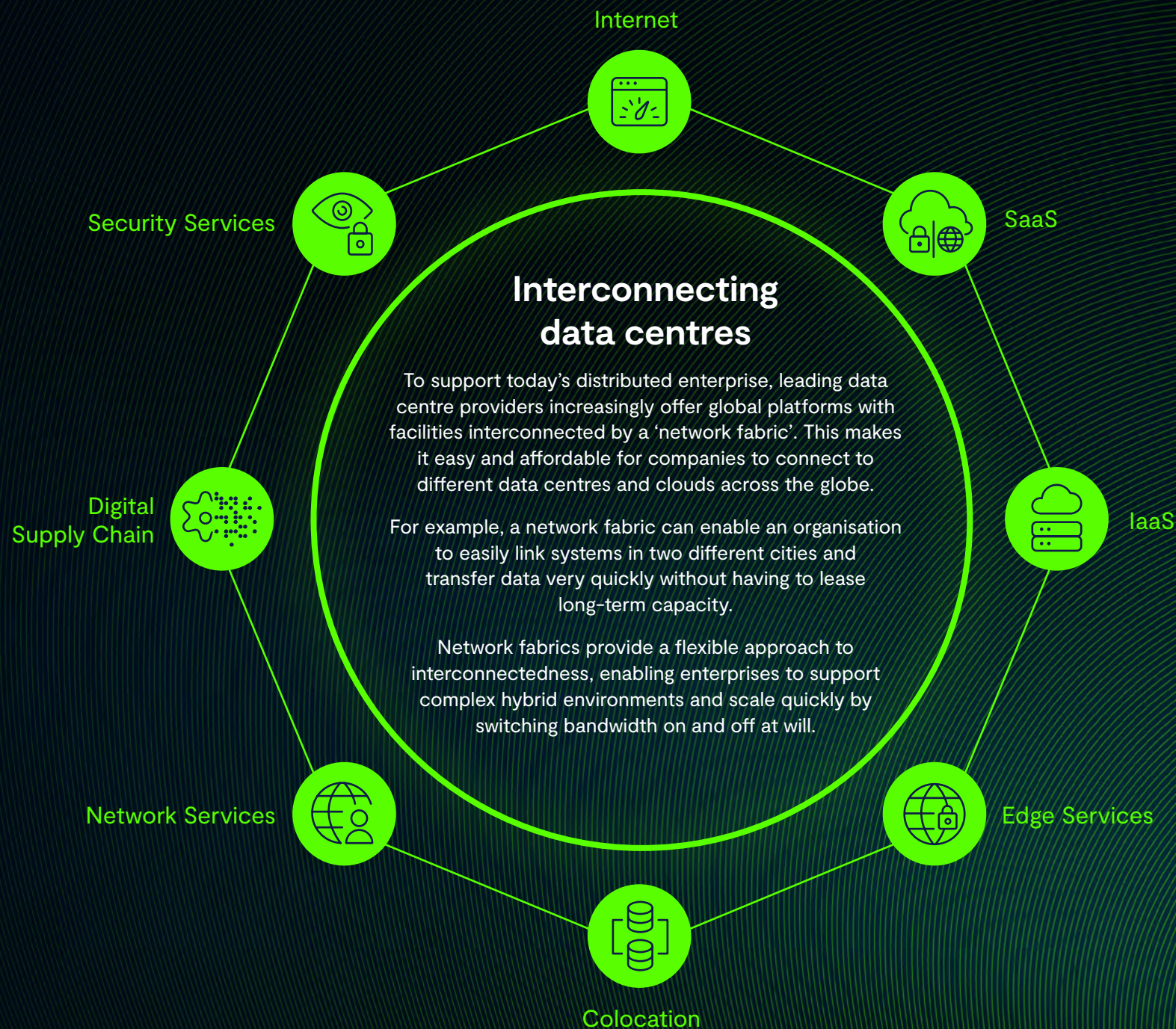
Best practices for strong interconnected networks

Achieving a successful network transformation is not just about adopting the latest technologies. It also involves embracing best practice. For example, leading organisations:

- Plan for the future by designing networks to be agile and scalable, while allowing for emerging technologies such as 5G
- Ensure cybersecurity and compliance issues like data sovereignty are top of mind at a board level and throughout the organisation
- Understand the importance of resilience for connectivity infrastructure and, more broadly, business continuity planning
- Recognise what to outsource to service providers, tapping into expertise and network infrastructure that can deliver results while optimising costs.

“It’s easy to underestimate the expertise needed to design, deploy, support and train staff in modern connectivity solutions. An experienced managed service provider can do some or all of this for you, mitigating risk and maximising the likelihood of a transformation project being completed on schedule and on budget.” – Jason Yu





Making the right connections

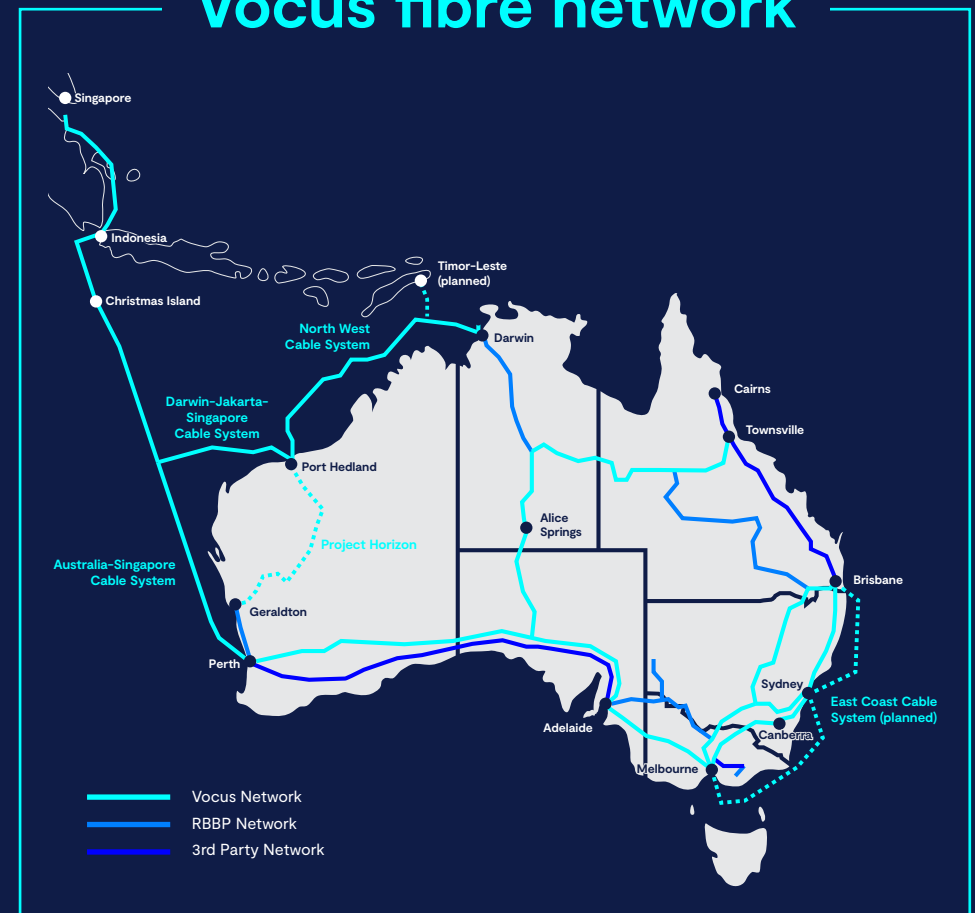
A strong Australian network partner can help design, deploy and support your interconnectivity requirements. Such a partner should offer:

- a broad portfolio of connectivity solutions, including terrestrial and subsea fibre, 4G and 5G, satellite and long-term evolution (LTE) connectivity
- Comprehensive networks, a commitment to further network investments and the ability to build custom connections
- The expertise and local knowledge needed to plan and deliver solutions on budget and on time
- Local customer service for when you need instant access to support and expertise
- Managed services that offer comprehensive network and cost visibility
- An ecosystem of partners with complementary areas of expertise who can collaborate on innovative solutions both onshore and globally
- A proven record as a trusted partner, particularly in data security and sovereignty.

With such a partner, global and Australian enterprises can make the right interconnections to drive expansion, innovation, efficiency, resilience and engagement with employees and customers.

“Global enterprises can underestimate Australia’s size, the distances between sites and the remoteness of some locations. A local telecommunications partner should help enterprises navigate these traps by providing accurate connectivity costings and tailored solutions with the optimal mix of technologies.” – Jason Yu

Vocus fibre network



Acknowledgment

We thank the industry experts and Vocus experts for contribution to this paper.



Guy Congerton
General Manager, International
(Wholesale & Infrastructure), Vocus

Guy has been in the telco industry for more than 25 years, spanning across global, regional and local markets, in the enterprise, system integrator, outsourcing and wholesale segments, affording him a broad perspective of past and current trends that drive the telco industry landscape.



Jason Yu
Strategy & Technology Consultant, ICT Industry

Jason is a Technology Executive specializing in Digital Business Transformation in Asia Pacific. He guides industries through transformation journeys, specializing in Cloud, Software Defined Networking, and Cybersecurity. He navigates clients through emerging technologies like AI, 5G, Edge Computing, and SASE. Jason holds engineering and business degrees from Swinburne University, Melbourne.

About Vocus

Vocus is Australia's leading specialist fibre and technology solutions provider, connecting wholesale, enterprise and government customers nationally through our extensive network solutions on land, sea and from space, and to the world via our diverse, high-capacity links to major global gateways.

Our network is backed by a world-class team of experts and partners, local account management and delivery teams, and 24x7 Australia-based support. We achieve success through our national scale, smarter solutions, fast turnaround times and excellent service, and offer truly integrated end-to-end connectivity solutions across data networks, internet, cloud, data centres, unified communications and much more.