business **nbn**™

Networking as the enabler of digital transformation

Bridging the digital transformation divide

Is your network ready to support the demands of your business's digital transformation strategy?

Greater uptake and deployment of cloud-based services, data storage, analytics and other digital elements are driving new ways of working, and businesses today rely on this technology to stay agile and responsive to the needs of employees and customers.

While many businesses were already somewhere along their digital transformation journey, COVID-19 and its ongoing effects are making investment in these tools an imperative, especially as the shift towards remote work and virtual interactions is likely to continue.

However, fully realising the potential of how these transformative services and applications can help businesses stay competitive in this new landscape requires more than just vision.

An underlying communications infrastructure that is capable of supporting these new ways of working and is adaptable to changing needs is critical for business continuity and resilience.

Digital technology's contribution to Australia's GDP is predicted to grow

40%

between 2018 and 2023[1]

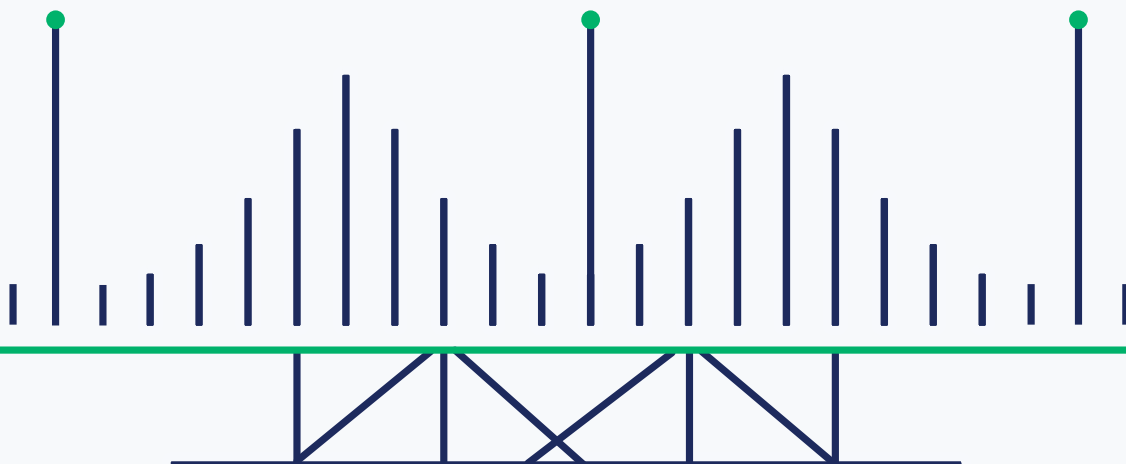Australian enterprise spend on Software as a Service (SaaS) applications is expected to grow

21%

annually through 2022[2]

Mobile technology is expected to contribute

$65 billion

to Australia's GDP by 2023[1]

Facing the challenges of transformation

Ambitious programs for digital transformation might be on the agenda for Australian businesses, yet there is still considerable work to do in order for companies to capitalise on the ICT solutions at their disposal to deliver them.

A 2019 global study from Capgemini found that despite years of effort to leverage transformation for a more efficient business, many companies are still struggling to fully realise the benefits.[3] In this current environment, businesses need to ensure they can properly set themselves up for success to realise benefits in a shorter time frame and with less cost.

When effectively applied to transformation, new infrastructure investments can make a big difference for businesses in this area. Infrastructure capability is tightly tied to operational improvements – for example, the ability to connect with branch offices in regional locations or workers at home.

Doing this reliably requires business continuity, which needs to be enabled from the network on up. Network infrastructure may have the ability to enable business features such as network redundancy, uptime guarantees from service providers, and enhanced service level agreements between wholesalers and providers, which in turn help enable enhanced service agreements between providers and their customers.

However, most companies still haven't been able to put these measures in place. Just 39% of businesses surveyed by Capgemini believe they have the required digital capabilities to empower their transformation, while only 35% of respondents think they have the right leadership to deliver on their transformation agendas – down from 45% in 2012.[3]

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There are also gaps between implementation of a technology and desired utilisation, with just 38% of global organisations saying their employees can collaborate digitally with other employees, which is well down from 70% in 2012.[3]

There are myriad potential reasons for this shortfall. A particular SaaS application might be able to meet a business requirement, but without the right infrastructure it may not perform as smoothly or effectively as it should over the network. Or the business may want to transform discrete business functions with a managed service, then realise it lacks the enterprise-scale bandwidth to integrate that service correctly.

As a digital-first mindset becomes critical to shaping the new normal in a post-COVID world, organisations that can elevate their digital capabilities at scale could gain a competitive advantage.

With plans powered by business **nbn**™ from a service provider, businesses can have confidence that their service providers have access to a range of wholesale features such as prioritised data classes to separate mission-critical data from non-critical data, various network performance levels to help address jitter and latency, and, on **nbn**™ Enterprise Ethernet, wholesale symmetrical speed tier options up to nearly 1 Gbps.^#*

However, a network solution cannot be set and forget – infrastructure and application decisions must be considered in the long term and be adaptable to changing business needs.

^ Not all providers offer plans based on the full range of wholesale business **nbn**™ products, product features and services. Availability of wholesale business **nbn**™ products, product features and services depends on an end customer's access technology and area. Ask your preferred provider if they offer plans based on these wholesale business **nbn**™ products, product features and services in your area.

An end user's experience, including the speeds actually achieved over the **nbn**™ network, depends on the **nbn**™ network technology and configuration over which services are delivered to their premises, whether they are using the internet during the busy period, and some factors outside of **nbn**'s control (like their equipment quality, software, chosen broadband plan, signal reception, or how their provider designs its network). Speeds may also be impacted by the number of concurrent users on the **nbn**™ Fixed Wireless network, including during busy periods. Sky Muster™ satellite end users may also experience latency.

* **nbn**™ Enterprise Ethernet is only available on the **nbn**™ Fixed Line network and for limited premises in the **nbn**™ Fixed Wireless and Satellite networks. Regardless of the bandwidth profile for the service an end user acquires from their service provider, it will operate at less than 1000 Mbps and no more than 952 Mbps because of normal equipment and network limitations. In addition, an end user's experience, including the speeds actually achieved over the **nbn**™ network, depends on some factors outside our control (like their equipment quality, software, and how their service provider designs its network). If an end user's service provider has not selected Class of Service High, speeds the end user experiences may be affected by contention on the **nbn**™ network, particularly in busy periods.

63%

of global organisations that have had digital transformation initiatives in place for three or more years reported seeing benefits

... much higher than the

42%

of respondents whose digital transformation initiatives are only one or two years old.[4]

Network as a transformation enabler

Robust and flexible network infrastructure is a key enabler of the technology that helps make productivity possible.

In line with network trends, companies are looking for infrastructure that can provide fast bandwidth, enable diversified network paths, support an all-IP data environment, provide high predictability for quality of service, and have the flexibility to explore increasing options for various network approaches such as software-defined networks (SDN).

An important consideration is that networks must be able to cope with the staggering data usage that digital transformation creates.

In a 2019 **nbn** commissioned analyst opinion report, leading firm Omdia (nee Ovum) explored the technology trends that are leading to increased reliance on network performance. Many of these trends are now accelerating as 2020 brings about new challenges for businesses and the wider community.
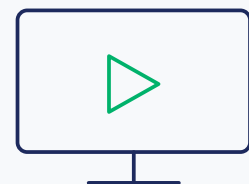
By 2021,
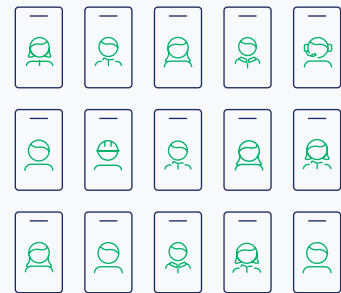
there will be 27.1 billion networked devices and connections, or

3.6 devices per person[5]

By 2022,

82% of all internet traffic will be video –

up from 68% in 2017[5]

Although these trends and challenges manifest differently across sectors, telecommunications is critical for all of them. For example:

1

In the retail sector, many companies are pursuing aggressive digital transformation agendas, especially as COVID-19 has driven more consumers online: ecommerce in Australia increased by 80% in the two months after a pandemic was declared.[6]

This is driving investment in unified commerce and omnichannel engagement – which require real-time IT systems and quality connectivity across often expansive retail networks.[2]

2

In 2019, health and aged-care providers were exploring how to improve service delivery and in-home support using high-quality telehealth video systems managed by initiatives such as smooth biometric automation and other authentication, as well as AI-based image and event analysis.[2]

With ongoing health concerns and additional constraints put on the health sector due to COVID-19, demand for telehealth will likely continue; a behavioural change survey commissioned by **nbn** in April 2020 revealed 63% of people are open to using telehealth in the future.[7]

3

Logistics and transportation providers are building massive networks of automated and interconnected systems, with rapidly growing populations of connected Internet of Things (IoT) sensors and devices that must be continually and quickly accessible anywhere in the business.[2]

Real-time visibility that provides an end-to-end overview of supply chain performance is crucial, especially now as customer expectations and markets are shifting in unpredictable ways.

4

Government organisations are pursuing ambitious agendas around smart cities and digitally empowering citizen interactions, requiring flexible and responsive service centres.[4] Omdia has forecast that spending by government bodies on fixed and wireless communications networks will increase by 7.5% annually in coming years.[2]

Access to a fast network across Australia helps put the tools for digital transformation within reach of organisations, making it more feasible for government organisations located in remote and regional areas to offer operations and services. This is an attractive prospect as COVID-19 sees more interest from individuals and organisations in relocating away from city CBDs.

Learn more about digital transformation across industries:

Your guide to best practice telehealth set up

Why the time is right for SMBs to employ AI

How tech can streamline and simplify your retail business

For more than a decade, **nbn** has been working hard to help lift the digital capability of Australia and support digital transformation.

In recent years, **nbn** has doubled down on its commitment to empowering Australian businesses, pursuing an aggressive agenda that includes the extension of its wholesale product portfolio to help meet current and future business needs through wholesale business **nbn**™ solutions.

On plans powered by business **nbn**™ from service providers, businesses have the option to work with a provider to adjust the features used on their network solution or change their provider without changing their infrastructure. In short, businesses can commit to a network today that has built-in flexibility at the wholesale level to address future considerations.

With the initial **nbn**™ network volume rollout complete (with some complex connections ongoing), more than 11 million premises are now eligible to connect.[§] Businesses are taking advantage of this increased access, with more than 1 million businesses already connected to the network using a variety of technologies and service providers.

According to Omdia, the **nbn**™ network acts as a foundation for digital transformation activities, providing access to the wholesale bandwidth and wholesale network capability options to support the voice, video and data demands of businesses.[2#] Service providers can then build innovative packages of services and connectivity designed to support businesses on their digital transformation journeys.

By putting the two together, business **nbn**™ and service providers can offer businesses communications capabilities that can be drivers for growth – not just growth in size, but also in capability.

[§] NBN Co's initial volume build completion commitment was that all standard installation premises in Australia would be able to connect to the **nbn**™ network as at 30 June 2020. This excluded premises in future new developments which would be an ongoing activity for NBN Co beyond 30 June 2020. It also excluded a small proportion of premises defined as 'complex connections' – which includes properties that are difficult to access, culturally significant areas and heritage sites – where connection depends on factors outside of NBN Co's control such as permission from traditional owners, and where network construction to allow such premises to connect will be an ongoing activity of NBN Co beyond the build completion date.

[#] The disclaimer can be read in full on page 4.
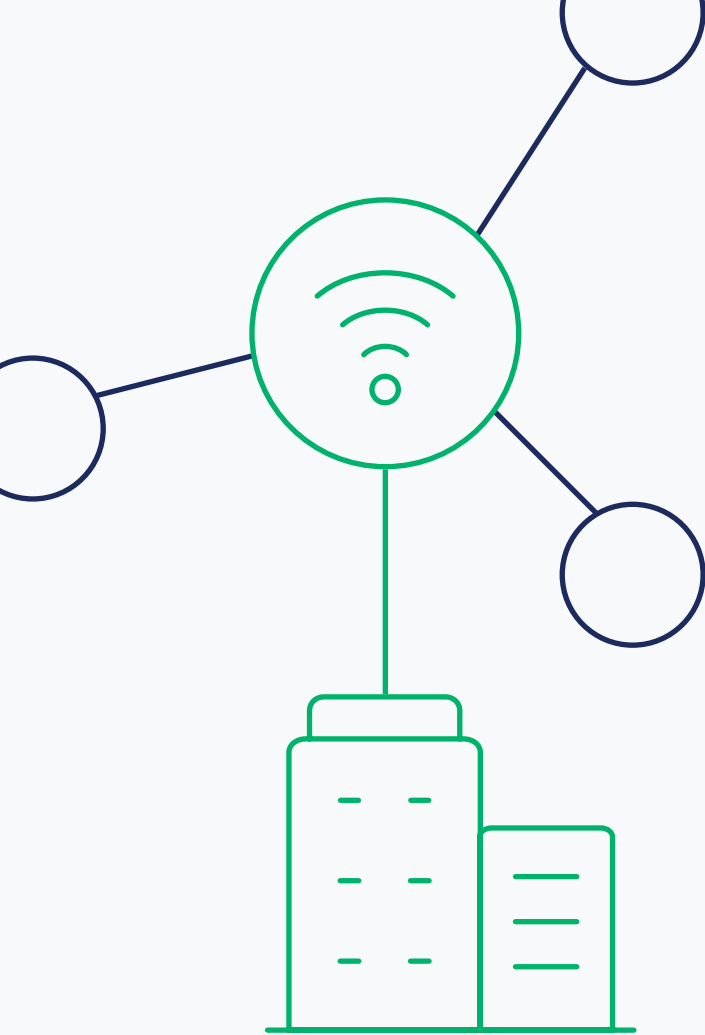
nbn™ Enterprise Ethernet has additional capabilities that use a dedicated fibre connection between the business premises and a fibre access node on the nbn™ access network.† This provides a high level of network performance and predictability for linking branch offices, headquarters, and key facilities such as data centres and redundant disaster recovery sites.#

Each of these capabilities is typically relevant for businesses pursuing transformation agendas, and in complex or far-flung operational environments.

Service providers can help ensure a good user experience by helping businesses map out application requirements, and backing it up with enhanced service level agreements between nbn and the provider designed to reduce the time it takes to rectify any faults that might occur on the nbn™ network.

^# The disclaimers can be read in full on page 4.

† nbn™ Enterprise Ethernet is only available on the nbn™ Fixed Line network and on limited premises in the nbn™ Fixed Wireless and Satellite footprint.

business nbn™ wholesale solutions offer service providers the option of traffic prioritisation at the network level to help businesses embrace next-generation products and services with less the network congestion than best-effort solutions.^#

This is particularly important when digital transformation efforts involve the migration of legacy applications that, as Omdia notes, often weren't designed for modern networking environments.[2]

Wholesale business nbn™ feature options such as symmetrical bandwidth and prioritised data paths allow the nbn™ network to prioritise delivery of certain application streams ahead of the general traffic of mass-market services such as internet.# These parameters are defined within the various traffic classes on nbn™ Ethernet, or classes of service (CoS) on business nbn™ Enterprise Ethernet.†

Getting transformation on track

Digital transformation is a complex and involved activity, particularly now as businesses navigate through the effects of the pandemic. But it's even harder if you're trying to drive major business change when legacy infrastructure isn't up to the task.

By evaluating your current and future network needs, then pairing them with features from service providers based on the appropriate wholesale business **nbn**™ features, you can help reduce barriers that arise when attempting to marry legacy services with new systems and applications.

In 2019, Omdia recommended that every transformation-minded business work with their service provider to conduct a formal business connectivity review. And with the **nbn**™ network volume initial build now complete (with some complex connections ongoing), and business-grade **nbn**™ fibre upgrade options now accessible to the majority of business locations across Australia, now is the time to understand how your business may be able to take advantage of this national investment of the **nbn**™ network.§

Omdia recommends a review should include a range of high-level business and application or hardware specific issues, asking questions like:

- Is your current network suitable to your current and planned business requirements?
- How important is it to have service continuity?
- What potential infrastructure consolidation is possible?
- What business **nbn**™ support framework could be used to help ensure adequate service availability?

Over the course of a business connectivity review, you are able to gain a much better idea of what infrastructure elements may be potentially holding back your transformation, or which ones could further support your ICT agenda.

§ The disclaimer can be read in full on page 8.

> "As legacy services are now at or past their recognised useful life, few scenarios remain for retention of legacy functionality." [2]

Digital transformation is complex at the best of times, but early successes can help engender a stronger commitment to transformation, which in turn might spread across the organisation to help deliver very real productivity benefits.

Our team of industry advisors are available to provide advice and help consult on the design, rollout, and migration of the **nbn**™ network, and can help facilitate an informed discussion between you and your preferred service provider.

By engaging with **nbn** early, you can explore various options and considerations that may help you land a network solution that is modern, flexible and capable of supporting business transformation now and into the future.
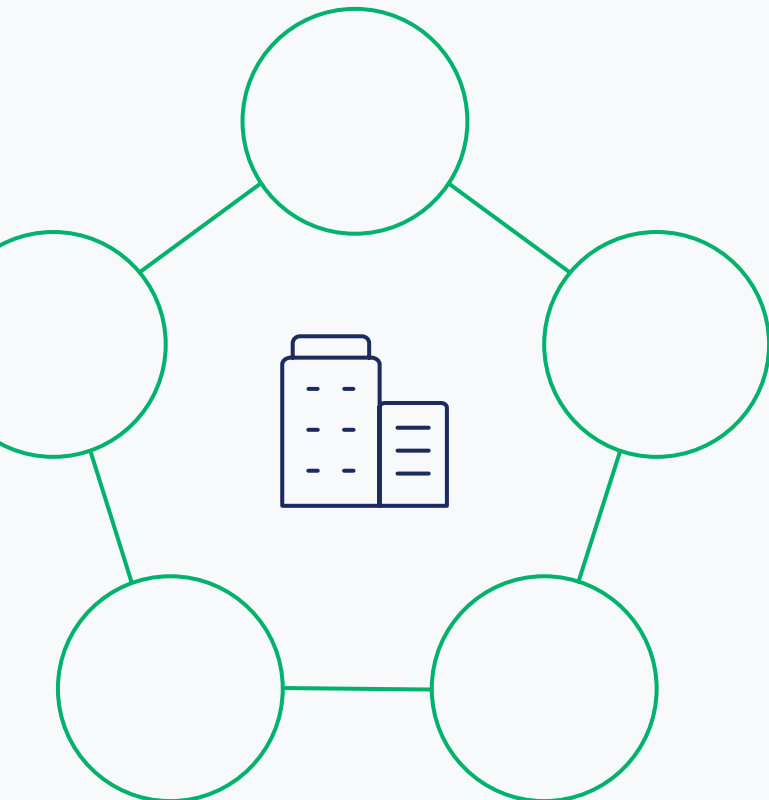
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Sources:

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2. The **nbn**™ broadband access network for business – a foundation of digital transformation, an **nbn** commissioned report, Myers, S. (2019)
3. Understanding digital mastery today: Why companies are struggling with their digital transformations, Capgemini (2018).
4. From Gatekeeper to enabler: the role of IT when digital transformation is the norm, The Economist Intelligence Unit (EIU) (2018).
5. Cisco Visual Networking Index: Forecast and Trends, 2017–2022 White Paper, Cisco (2019).
6. Inside Australian Online Shopping 2020 eCommerce Industry Report, Australia Post (2020).
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