DIGITAL

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◥ OVERVIEW

The world is becoming increasingly interconnected as technology transforms traditional business models and how we access goods and services. With this change there is an increasing need for faster, more reliable digital infrastructure.

Digital infrastructure is the physical technology that connects people, businesses and communities to a variety of online products and services. It includes mobile networks, fixed lines and satellite broadband services.

Queensland's industries are embracing digital technology (described as a 'new industrial revolution') to advance the economy, create new jobs and improve our lifestyle. For example, there has been a surge in the uptake of AgTech solutions that will modernise practices and add value to the sector. In particular, building digital capability and capacity will help small businesses harness new and existing economic opportunities, especially in regional parts of the state.

The vibrancy of future communities and businesses, economic development, innovation and the effectiveness of education and training, healthcare, public safety and other services, directly depends on our ability to establish infrastructure that will bridge the digital divide. Action led by the Australian Government and NBN Co over the coming years will be critical to avoid the digital divide widening in Queensland. The Queensland Government wants to work with responsible parties to ensure rural and regional Queenslanders aren't left behind as speeds in metropolitan areas accelerate at a much faster rate than the rest of Queensland.

COVID-19 and seasonal weather events have had a significant impact on the way Queenslanders engage with digital technologies. Industry, small businesses and households have embraced new ways of working, which will be key to our future success. Digital technologies have been leveraged to change service delivery and consumption models, enable business continuity and extend the use of e-commerce. People have also worked more from home and discovered new means of social engagement. Digital infrastructure plays a vital role in keeping residents and emergency service workers safe during natural disasters and assisting with the response, recovery and reconstruction phases.

While telecommunications networks are regulated by the Australian Government and delivered largely by NBN Co and commercial providers, the Queensland Government continues to:

◥ use its influence with the Australian Government and work with other jurisdictions

◥ leverage government telecommunications expenditure

◥ leverage state government-owned investments and programs

◥ leverage state planning frameworks

◥ make strategic investments.

The Queensland Government is a strong advocate for improving digital infrastructure, as it is a critical building block for future prosperity. It is also working to provide the community with new and improved digital services. These future services will rely on continual improvements to the underlying digital infrastructure – particularly in regional and remote areas.

In a decentralised state such as Queensland, there is enormous potential to improve service delivery through the optimisation of existing digital infrastructure and technology. Digital capacity needs to be built into all infrastructure to future-proof investments and assets, and capitalise on capabilities. It needs to be considered during the design phase of an infrastructure project and fully specified within the scope.

The Queensland Government's *Digital1st: Advancing our digital future* strategy focuses on the potential of digital services by thinking primarily about the customer. In parallel to this service-based strategy is a need for a focus on the underpinning infrastructure. The Digital Infrastructure Plan, once developed, will set out priorities to help bridge the digital divide to enhance network coverage, speed and reliability.

CURRENT KEY INITIATIVES

▾ **QCN Fibre**
Unlocking thousands of kilometres of optical fibre to deliver better internet for regional Queensland.

▾ **Digital1st: Advancing our digital future**
Positioning Queensland as a leader in digital government now and into the future.

Curiocity Brisbane 2021 (Source: Tourism and Events Queensland)

COVID-19 forced Queenslanders to rapidly turn to **online services** such as **telehealth** with virtual doctors and digital scripts, children doing online learning, and business moving online. Now accustomed to this, we are **continuing to do more online** than we did before the pandemic

There has been a significant **increase** in the proportion of **older Australians using the internet** to bank, shop, watch videos, listen to audio, and access telehealth services[101]

Australians consumed **subscription TV services** at an astonishing rate of **82.1 per cent in 2020** – an **increase of 16.2 per cent** since 2019[102]

Internet demand is increasing on the NBN with a **70 per cent upstream increase** during business hours from **pre-COVID-19 to June 2020**[103]

Sailing the Whitsundays
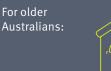*(Source: Tourism and Events Queensland)*

TRENDS

According to the Australian Communications and Media Authority, **IN 2020 AUSTRALIANS WERE GOING ONLINE AND USING MOBILES MORE:**[104]

SMART TVS use is up from **14 PER CENT** in **2017** to **48 PER CENT IN 2020**

For older Australians:

93 PER CENT of older Australians now have **INTERNET IN THEIR HOME**

80 PER CENT felt technology is **CHANGING TOO FAST** for them to keep up

For younger Australians:

almost half use **FIVE OR MORE TYPES OF DEVICES** to go online

78 PER CENT are now **MOBILE-ONLY FOR CALLS** (up from 59 per cent in 2017)

18 PER CENT have gone **MOBILE-ONLY** for home **INTERNET ACCESS**

Australians went online using:

Mobile devices – **78 PER CENT**
Tablets – **59 PER CENT**
Laptops – **58 PER CENT**

The **LIKELIHOOD OF SEVERE CYBER-ATTACKS** is increasing due to our growing dependence on new technology, interconnected equipment and systems like Internet of things devices. New thinking is needed to safely use all these rapidly evolving technologies.

CASE STUDY

Queensland Capacity Network

Queensland Capacity Network (QCN) Fibre is the state government's telecommunications carrier. It was established to boost internet connectivity and potentially lower prices for businesses and households in regional parts of the state. The optical fibre network stretches west from Brisbane to Toowoomba and north, through regional townships, to Cairns. Improving the availability, affordability and performance of digital infrastructure can help local businesses be better connected, allowing them to expand and support more jobs in regional areas.

QCN Fibre is jointly owned by Powerlink and Energy Queensland. QCN Fibre leverages Powerlink's spare telecommunications network capacity to improve digital and data services for customers in regional communities. Powerlink provides telecommunications expertise to QCN Fibre, including operation and maintenance services for all QCN Fibre customers.

Powerlink is supporting QCN Fibre to connect to strategically important data centres in regional areas, including the Pulse Data Centre in Toowoomba, the North Queensland Regional Data Centre in Townsville and the new submarine link at the Sunshine Coast Cable Landing Station. It is also providing connectivity to Cairns, Mackay, Rockhampton, Gin Gin and Warwick.

The Australian Government Regional Connectivity Program has funded QCN Fibre to deliver fixed wireless networks to the Central Highlands towns of Bluff Dingo and Duaringa. These projects will extend high-speed broadband connectivity, benefiting local community facilities, small businesses and residents.

More competition in regional telecommunications will improve access to essential online services such as telehealth, e-commerce, online education and training, agtech and cloud-based solutions, which are currently not viable in many regional areas.

Laying cable (Source: Queensland Capacity Network Pty Ltd, trading as QCN Fibre)

QCNfibre
CONNECTING QUEENSLAND

DIGITAL

◥ CHALLENGES

Tyranny of distance

Queensland has Australia's most decentralised population. This higher proportion of regional and rural households means more limited optical fibre connections, longer distances between telecommunications towers, a higher dependency on satellite services and higher connection costs per customer.

Digital literacy

Addressing digital literacy and increasing familiarity with digital service delivery is a key challenge. While improving services and access is important, informed and savvy consumers are key to getting the most out of digital opportunities.

Increasing reliance

Reliability of digital services is increasingly important for the success of Queensland's economy and the safety of its residents. Service outages can be life-threatening and inflict serious damage on the economy (e.g. payment systems). Queensland is also Australia's most disaster-prone state, with community safety and recovery dependent on digital infrastructure.

Great digital divide

The digital divide between our cities and smaller communities can be a barrier to people accessing online services for business, education and training, health, diminishing their ability to effectively participate in a modern society.

Ability to influence

While the Queensland Government is a strong advocate for improved digital infrastructure to grow the economy and provide more digital services, the Australian Government and the private sector are responsible for the majority of infrastructure.

◤ OPPORTUNITIES

Partnering for success

The Queensland Government will continue to work with the telecommunications sector and Australian Government, to represent Queenslanders' interests to improve digital infrastructure and provide better online government services.

Enabling market competition

Explore a variety of avenues to increase market competition, encourage further network investment, drive down service costs and improve service availability, for example, by enabling more shared infrastructure.

Enabling the digital economy

Our digital infrastructure can be leveraged to enable and grow the digital economy. An example of this is the Sunshine Coast international broadband submarine cable. It is the first undersea fibre-optic cable on Australia's east coast outside Sydney, and provides a critical link to global markets.

Leveraging existing investment

Leverage existing state government expenditure, assets or other investments to help reduce provider costs and facilitate greater investment to improve regional connectivity.

DIGITAL

▼ PRIORITY ACTIONS

Encourage jobs, growth and productivity

Develop regions, places and precincts

Enhance sustainability and resilience

Adopt smarter approaches

1 Championing digital infrastructure (DCHDE)

Provide a single point of coordination and collaboration for the development of Queensland's digital infrastructure. This centralised coordination unit will work with local governments, the private sector, the Australian Government and government-owned corporations to advocate in a coordinated manner to align interests for the benefit of the state. It will also develop the Digital Infrastructure Plan to document and focus the collaborative efforts and investments required to bridge the digital divide.

2 Bridging the digital divide (DCHDE)

Work with digital infrastructure providers to better understand and address the growing digital divide between cities and regional communities (including optimum NBN cover). Improvements are critical for the future of essential services such as e-health that need improved reliability, capacity and coverage.

3 Leveraging government expenditure (DCHDE and other agencies)

Assess opportunities to improve connectivity across the state by leveraging the Queensland Government's digital purchasing power and telecommunications expenditure. Improved connectivity will help drive more digitally connected regions and enable the delivery of government digital services.

4 Leveraging government fibre (DCHDE, QCN Fibre)

Continue to explore opportunities for QCN Fibre to leverage existing and future investments in the networks of government-owned corporations, to boost internet connectivity and potentially lower prices for regional Queensland households and businesses.

5 Improving network redundancy (DCHDE)

Work with the Australian Government and industry to strategically improve redundancy across digital infrastructure networks, particularly in remote areas (e.g. Cape York) where network outages have single points of failure that affect stability and uptime.

6 Addressing mobile blackspots (DCHDE, TMR)

Continue to work with the Australian Government and mobile service providers to advocate and facilitate network upgrades in rural and regional Queensland, to address blackspots in key communities and transport corridors.

7 Sharing mobile infrastructure (DCHDE with DSDILGP)

In partnership with local governments and industry, explore policy and planning provisions to optimise the 5G rollout and reduce duplication of investment through shared infrastructure. Mobile carriers could share towers and equipment spaces through neutral host models and even network functionality through radio access network sharing, to reduce costs.

8 Increasing public safety communications (DCHDE)

Public safety agencies are preparing a long-term Public Safety Communications strategy. It will provide departments with shared direction and capability targets to enhance operations, resulting in better and safer outcomes for the community.