



# Cisco Australian Digital Readiness Index 2018

## Digital Dividend or Digital Divide?

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**Australia is well placed to reap the benefits of digitisation, but those benefits are not being shared equally, and may be placed at risk should Australia fail to build a more digitally inclusive society.**

## Introduction

The impact of digitisation on Australian business and society has been extraordinary, and today Australia sits at the forefront of digitally transformed nations. While the changes we have seen to date have been profound, and in many cases unimaginable just a few decades ago, they are only the first steps in an ongoing journey. The progress of a nation undergoing digital transformation can be demonstrated by its digital readiness - in other words, how digitally ready a country is positioned to benefit from the internet economy and whether it is digitally inclusive as a society.

While there is still much to be learned, the businesses and societies that started their digital transformation journey early and with the greatest enthusiasm stand out as most digitally ready today, and best positioned to reap the rewards of digitisation in the long term.

If Australia is to continue to thrive in an increasingly digital world, more needs to be done to harness the power of digitisation to create positive outcomes for all. Transformation is difficult, especially when applied

at the scale of an entire country, and not all segments of society and the economy are moving forward at the same pace. This poses the real risk of creating a divide, resulting in a nation of digital 'haves' and 'have-nots', leading to the possibility of negative social and economic consequences for the 'have-nots', combined with an overall diminishment of the benefits of transformation through reduced access to human capital and domestic market opportunities.

The *Cisco Global Digital Readiness Index* was developed by Cisco and Gartner to explore the digital readiness of 118 countries globally. To create the Index, a holistic framework was created which includes components beyond technology. The Index also examines the positioning of Australia and with an additional study, investigates the digital readiness of Australia's states and territories. It also provides guidance for government and policy makers to maximise the benefits of transitioning to a digitally inclusive society and ensure those benefits apply across Australia.



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# Global Digital Readiness

The digital readiness of a country is determined by examining seven factors which are standardised and summed to obtain an overall digital readiness score. These factors are:

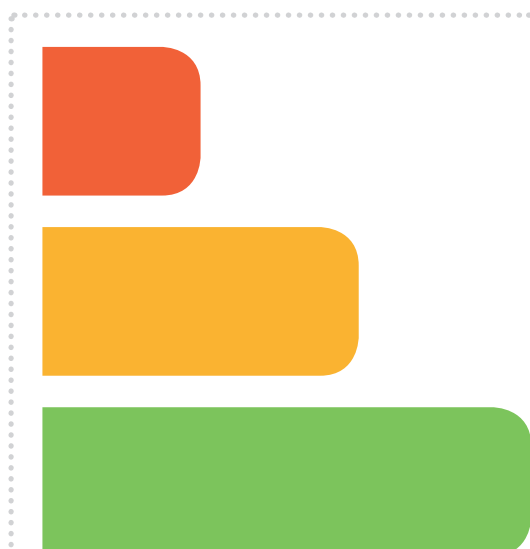
- **Technology infrastructure**
- **Technology adoption**
- **Human capital**
- **Basic human needs**
- **Ease of doing business**
- **Business and government investment**
- **Start-up environment**

These seven components were chosen to reflect a country's level of digital readiness and to understand key interventions and investments needed for a country to continue to increase their digital readiness. Although technology is critical and foundational for digital readiness, a holistic model for measuring a country's digital readiness was created, as many factors are critical to a country's level of digital readiness. Other indices have primarily focused on technology measures.

However, there are many other factors that can indicate a country's level of digital readiness, such as the availability of skilled labour to help deploy and maintain technology. Without enough skilled workers, countries are not able to take advantage of new opportunities technologies can bring. In addition, business and government investments are critical along with the ease of doing business. The start-up environment is also an important component as many digital innovations and net-new jobs come from start-ups. Finally, ensuring that a country's citizens have their basic needs met is foundational. The best infrastructure provides little value if a population cannot take advantage of it.

The *Cisco Global Digital Readiness Index* measured these factors across 118 countries to determine how each rank in terms of digital readiness. The research also uncovered three stages of digital readiness amongst the nations studied.

## Stages of Digital Readiness



**Activate:** Lowest stage of digital readiness with a need for interventions targeting critical human needs and human capital development. Most Activate countries are in Africa and Southeast Asia.

**Accelerate:** Moderate stage of digital readiness with a need for investments in critical human needs, human capital development, and improvements in the ease of doing business in the region. Accelerate countries are commonly found throughout Asia and South America and Eastern Europe.

**Amplify:** Highest stage of digital readiness with a continued need for human capital development focused on higher-level training for enhanced digitisation. Amplify countries are found in North America, Western and Northern Europe and Oceania.



Australia was ranked in the highest category of digital readiness, Amplify, with an overall score of 17.34 out of a possible 25, and ranked highly across all seven components of digital readiness. This places Australia amongst global leaders including the United States of America and European nations, and demonstrates Australia is well situated to reap the ongoing benefits of digitisation.

This finding builds on foundations that are decades old, such as Australia's strong education system, healthcare and rule of law, and from more recent work such as the strong technological uptake and digital capability creation within Australian businesses and public sector organisations. These social and economic factors are boosted by the Australian Government's investment in fundamental infrastructure such as the National Broadband Network, and the Mobile Black Spot Program, which both strive to ensure all Australians have access to basic digital services.

The result of this work helps to place Australia amongst the global leaders in digital readiness today, and ensures there is strong scope for Australia to continue to reap a digital dividend in the future, in the form of greater economic prosperity and enhanced quality of life.

However, whereas aggregate national results for Australia were impressive, additional examination by Cisco of the digital readiness of each state and territory revealed significant disparities in how digital transformation is taking place, along with opportunities for additional investment to ensure all segments of society and the economy experience its benefits.

The *Cisco Australian Digital Readiness Index* shows that the Australian Capital Territory is leading Australia, with a digital readiness score of 21.14, ahead of the more populous states of Victoria, with 16.07, and New South Wales scoring 15.58.

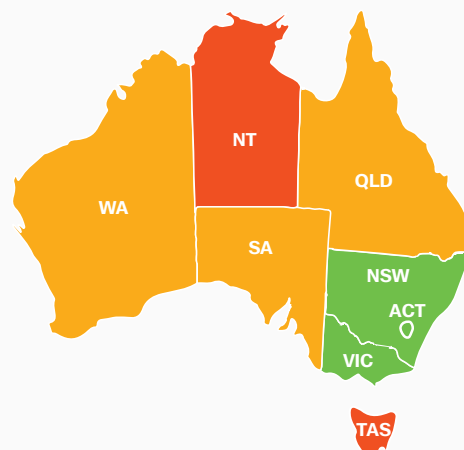
But at the other end of the spectrum lies Tasmania, with a score of 9.65, and the Northern Territory, at 4.80.

Australia's states and territories can be grouped into three digital readiness stages based on their scores across specific measures:

Amplify - High

Amplify - Medium

Amplify - Low



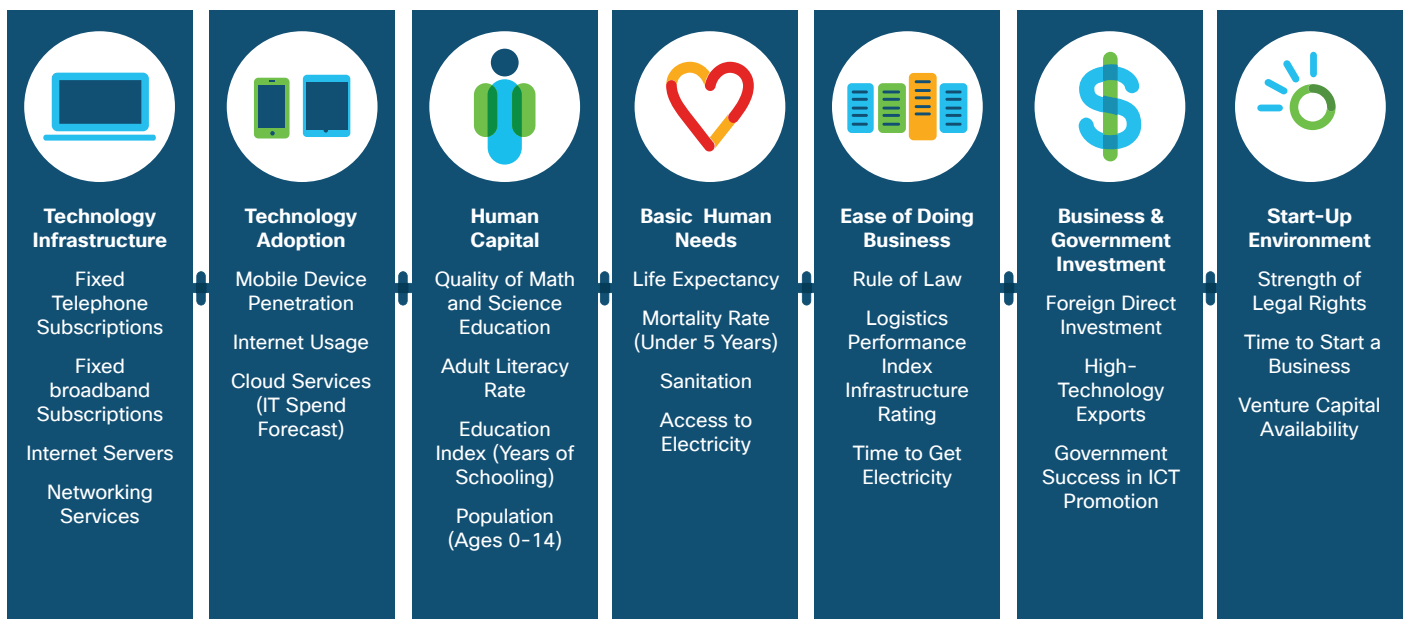
These findings demonstrate that, despite Australia ranking highly in the global study, not all Australian communities will experience the same digital dividend and point to the potential emergence of a new digital divide, in the form of states and territories with digital development that significantly lags their peers.

There is a real risk that communities that do not match the highest levels of digital readiness will fall further behind, should additional government and policy makers not address this area and investment not be forthcoming.

# Research Overview

The *Cisco Global Digital Readiness Index* research report is a study conducted by Cisco and Gartner which analysed multiple sources of data to create like-for-like measures to determine digital readiness scores for 118 countries. Countries included in the study were restricted to those with a population of more than three million, and those that were not the subject of significant trade embargoes. In total, 118 countries were scored on digital readiness based on seven components. These are:

- **Technology Infrastructure:** Available to enable digital activities and connected consumers (Internet of Things, Cloud).
- **Technology Adoption:** Demand for digital products and services.
- **Human Capital:** Build and maintain a skilled labour force to support digital innovation.
- **Basic Human Needs:** For a population to survive and thrive.
- **Ease of Doing Business:** Basic infrastructure/policies needed to support business continuity.
- **Business and Government Investment:** Private and public investment in innovation and technology.
- **Start-Up Environment:** Environment which fosters innovation within a community.



The strongest components of digital readiness identified by Cisco include human capital, basic human needs, technology infrastructure, technology adoption and ease of doing business. The start-up environment and business and government investments are also important components. However, it is a holistic approach to policy across all of the components that will yield results in the long term.

Additional research was undertaken by Cisco and Gartner for the *Cisco Australian Digital Readiness Index* to examine the digital readiness of each Australian state and territory. While this provides a comparative ranking, it also demonstrates opportunities for government, industry, education, and community organisations to increase digital readiness and serves as a benchmark to measure improvements.



## Main Findings – Australia

### A Digital Nation Divided

Australia's overall digital readiness score places it firmly in the highest-ranked Amplify stage, alongside the United States of America, Canada and most Western and Northern European nations. Countries that were ranked at the Amplify level generally scored well across all seven digital readiness categories.

When Australia's states and territories were examined in detail in the *Cisco Australian Digital Readiness Index*, three distinct stages emerged, which have been categorised as Amplify High, Amplify Medium and Amplify Low.

Those rated as Amplify High generally scored highly in the categories of ease of business, technology adoption, technology infrastructure and start-up environments. This reflects the value of decades of public and private sector investment in both the social infrastructure of education and business enablement programs, and in the physical infrastructure that supports them. It is no coincidence that Amplify High states also boast the highest level of urbanisation in Australia, as they are able to easily boost the impact of investments in education and communications infrastructure across their more tightly-packed populations.

Those states rated as Amplify Low commonly scored poorly across these four attributes, but also struggled in terms of more fundamental attributes such as human capital and basic needs. This points to a strong requirement for continued investment in education programs across the board, to raise basic standards and increase workforce skills. Interestingly, one of Australia's most digital ready states, NSW, also boasts the highest levels of enrolment in the Cisco Networking Academy program, which provides education, technical training and

career mentorship to students to prepare them for a career in technology and IT.

These results point to significant disparities in digital readiness across Australia, but it would be incorrect to assume that the hard work is over for the states and territories that ranked as Amplify High. Whereas states with high digital readiness scores are gaining the greatest benefits from digital transformation today, those benefits will not be fully realised without constant investment to accelerate that transformation through continued government and commercial investment in education and training, technology research and adoption, and support for their start-up ecosystems.

At the other end of the scale, states and territories with lower scores will fall further behind without continued investment in capability building, starting with basic needs and human capital development, to lay the foundations for greater upskilling of the population as a whole and increased technology adoption. The impetus here is to accelerate investment to help close the gap between the digital haves and have-nots to create a stronger state of digital readiness for the nation as a whole, and may be fundamental to ensuring the continuation of the Australian tradition of a 'fair go' into the digital era.

While Australia is well placed today within the Amplify stage, it exists within a competitive global environment, and can expect pressure from more nations joining this group in years to come. Australia needs all states and territories contributing equally to ensure that we retain our place at the global forefront of digital readiness.



# Australian Capital Territory

## Leading the Pack

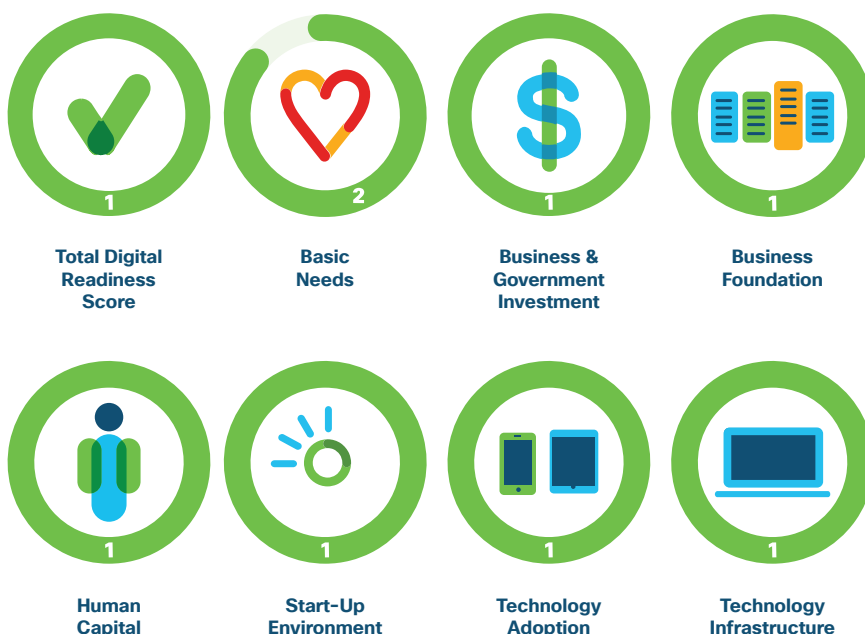
The Australian Capital Territory ranks first in almost every category of digital readiness. Indeed, the only category where it ranks second is in basic needs, where it is outperformed by Victoria.

This result is due in part to factors that are specific to the ACT, such as its compact size and the highly urbanised nature of its population in the city of Canberra. This makes the provision of infrastructure relatively easy in comparison to much larger states with more disparate populations, such as WA or NT. The ACT also boasts a large number of well-established and high performing research and education institutions, including the Australian National University.

As the centre of federal Australian government, the ACT also has a higher proportion of educated and skilled workers in professional and management categories, including the highest percentage of ICT workers, and the lowest level of unemployment. As Australia's largest technology purchaser, the Australian Government already provides a massive customer opportunity for local technology developers, and in recent years has increased its willingness to engage with early stage technology creators through the National Innovation and Science Agenda. This also serves to assist Canberra's already strong start-up community, by giving them access to motivated customers.

Other initiatives include the integrated Smart City Canberra initiative, featuring one of Australia's largest free outdoor public Wi-Fi networks, as well as trials of an integrated smart parking network.

### Digital Readiness Ranking ACT







## Victoria

### Investing for Growth

While it is eclipsed by the ACT in most categories, Victoria ranks number one in terms of basic needs and performs at average or above in every other measure, boosting it into second place overall.

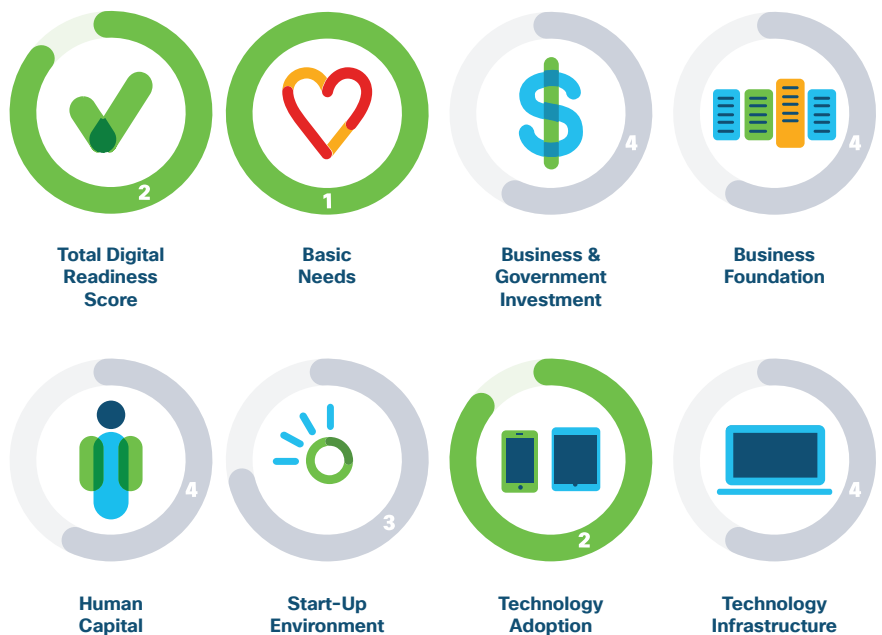
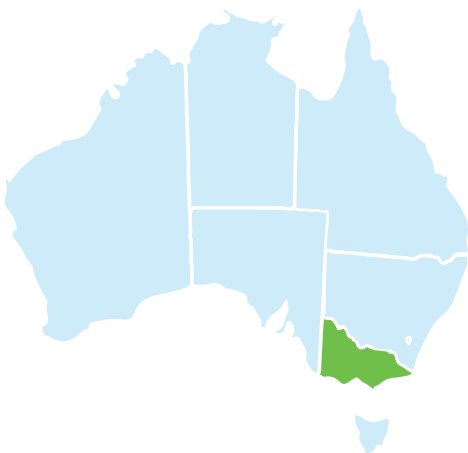
Victoria scores high on technology adoption, which reflects a high level of demand for digital products and services, and through being home to numerous market-leading digital companies including SEEK, REA Group, Carsales.com, MYOB and Envato.

Victoria also ranks above average for its start-up environment, which is supported by long-term initiatives such as the York Butter Factory co-working space. In recent years this has been enhanced by the Victorian Government's creation of LaunchVic as a booster for the local start-up industry, and the arrival of the Stone and Chalk fintech hub.

However, Victoria falls to the middle of the pack around key contributors to digital readiness in the form of business and government investment.

Victoria also ranks in the middle for human capital, although it is taking steps to remedy this through the allocation of \$125 million in funding to create 10 specialist Tech Schools, with an additional \$21.6 million to be spent on teacher training. Victoria experienced the highest population growth in Australia from 2016-17, and is expected to continue growing the fastest of all states for the foreseeable future, which bodes well for its human capital score into the years to come.

#### Digital Readiness Ranking VIC





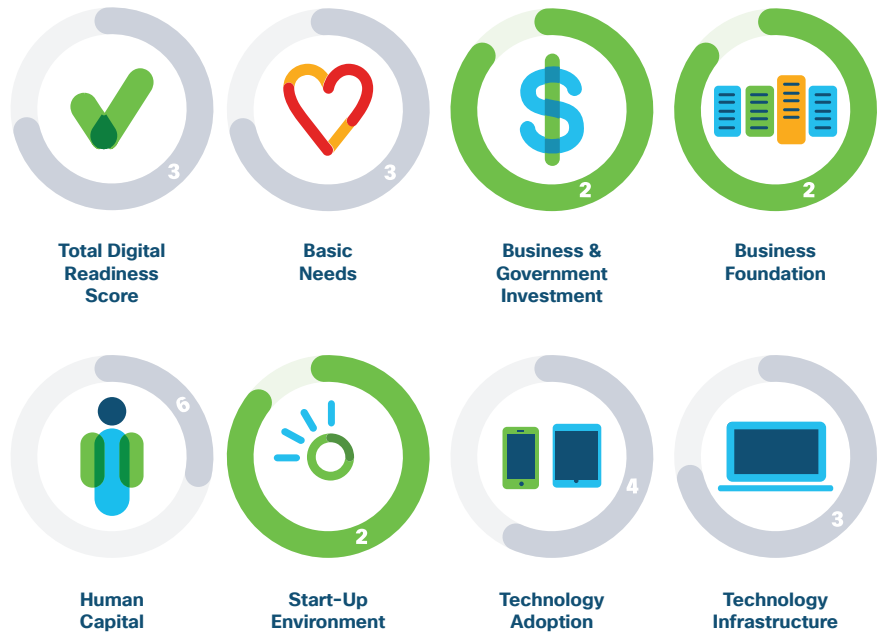
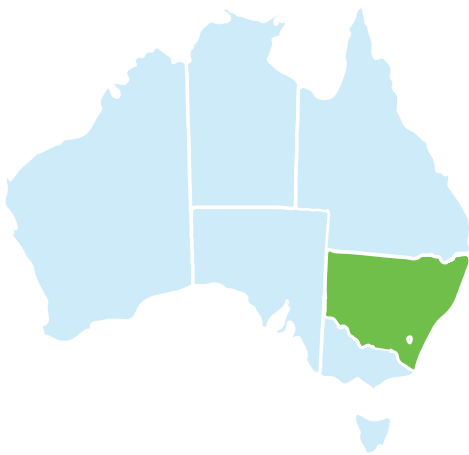
## New South Wales Best for Business

NSW is the third state behind the ACT and Victoria in terms of overall digital readiness, partially due to a lower score for human capital. However, Australia's most populous state outranks Victoria across the categories of business and government investment, ease of doing business and start-up environment.

Surprisingly, NSW also ranks in the middle for technology adoption, which is unexpected given that NSW is home to the head offices of many domestic and international multinational organisations, particularly in the technology and financial services sectors.

NSW is often considered the home of Australia's start-up community, with numerous supporting initiatives such as the Cisco-led collaboration, Innovation Central Sydney at the Australian Technology Park, and the Stone & Chalk fintech hub, Tank Stream Labs, which recently launched in the \$35 million Sydney Start-up Hub to provide office space for approximately 2,500 desks. This start-up ecosystem is also being boosted by a \$25 million investment by a partnership of 11 universities in the Sydney School of Entrepreneurship.

### Digital Readiness Ranking NSW





## Western Australia

### Smart People, Smart Adopters

Commonly known for its reliance on the resources sector, the ranking of Australia's largest state as Amplify Medium can be credited to high scores for the attributes of human capital and technology adoption, balanced against lower results for basic needs, business and government investment and its start-up environment. WA's last placing for tech infrastructure cements it in fourth place amongst Australian states for overall digital readiness.

The weak result for tech infrastructure can perhaps be attributed to its vast size and the resulting difficulty in reaching and servicing its population. While this is difficult to rectify, the WA Government is boosting its start-up sector through \$16.7 million in assistance in 2017-18, and the launch of WA Digital, which aims to improve the delivery of services to the public using digital channels. The Cisco-led collaboration, Innovation Central also launched at Curtin University in Perth in 2015 to support the start-up environment in WA.

#### Digital Readiness Ranking WA





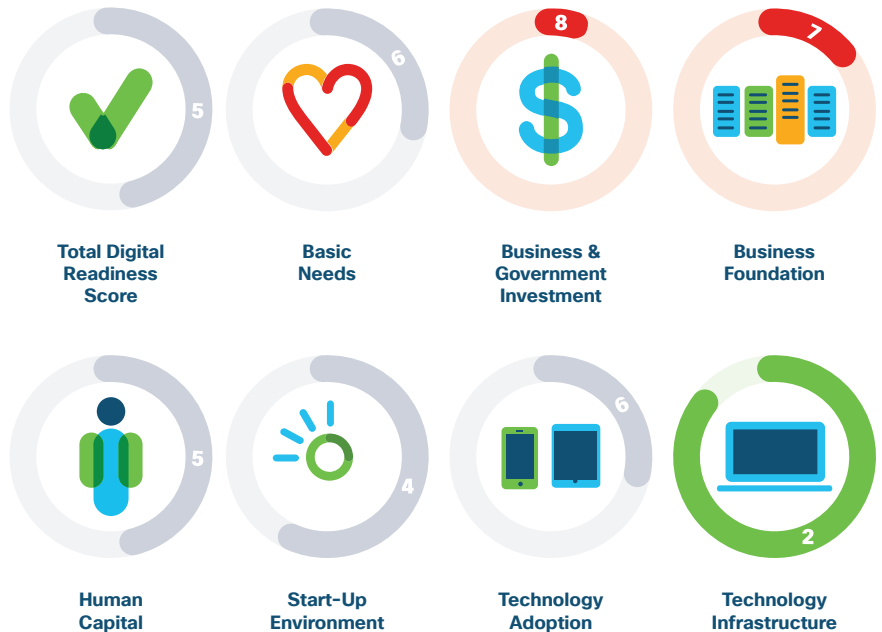
## Queensland Foundations for Growth

While Queensland ranks second nationally in terms of its technology infrastructure, it performs poorly in a range of categories including business and government investment and ease of doing business.

The Queensland Government has been working to address a number of these shortfalls through programs such as Advance Queensland, which is providing \$650 million in funding to support programs that drive innovation, build natural advantages and raise the state's profile as an attractive investment destination.

The Queensland Government has also invested \$6 million in The Precinct start-up hub, while numerous local government bodies have also invested in digital development programs, including the City of Ipswich's Fire Station 101 Innovation Hub and the Sunshine Coast Council's Smart City Program, which includes the development of a new CBD for the city of Maroochydore.

### Digital Readiness Ranking QLD





## South Australia

### Building Human Capital

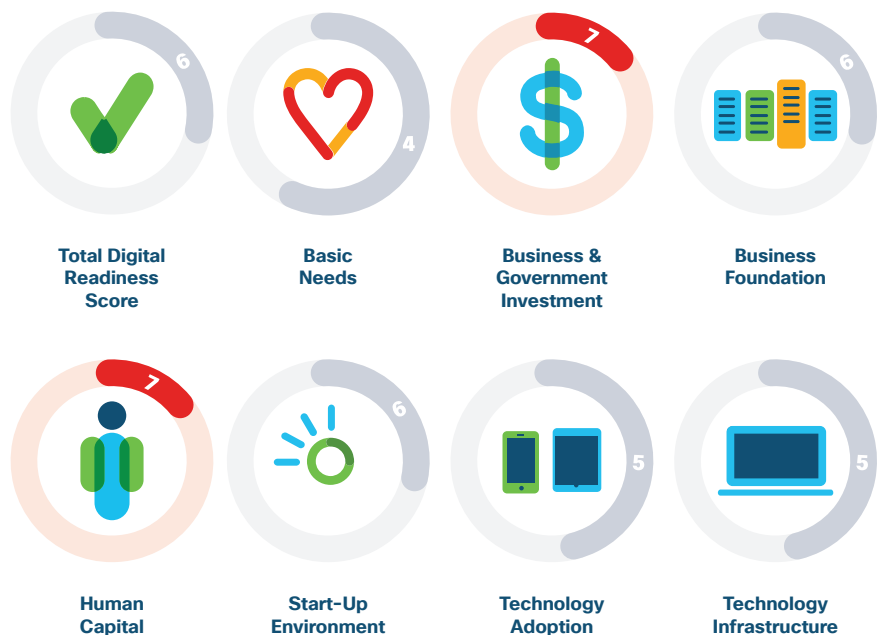
South Australia has room for improvement in terms of its digital readiness, ranking average to below average across most measures and in the bottom two for business and government investment and human capital. The latter of these can be attributed in part to an ageing population, and younger workers moving to the east coast cities.

Signs of change exist however, as South Australia also boasts several strong research and education providers plus the development of Adelaide’s world-class Research and Medical Precinct anchored by the new Royal Adelaide Hospital and a \$200 million SAHMRI health and medical research centre.

Government investment has also recently been boosted through the South Australia Government’s support for the transformation of the Tonsley manufacturing precinct into a technology education and employment precinct, the Tonsley Innovation District, as well as significant Federal Government investment in a local high-tech defence manufacturing capability. The City of Adelaide is also developing the world-leading Adelaide Smart City program, which has included the deployment of a 10Gbps (billions of bits per second) optic fibre network through the city.

More will need to be done to overcome other systemic issues within South Australia, including poor scores for ease of doing business and start-up environment, although this will be helped by a \$50 million government funded venture investment program, and the arrival of the Techstars Accelerator Program.

#### Digital Readiness Ranking SA





# Tasmania

## Laying Digital Foundations

Tasmania may be renowned for its natural beauty and produce, but in terms of digital readiness it ranks low in almost every category.

This includes having the lowest ranking of all states and territories for human capital, and ranking second last in terms of basic needs and technology adoption. This may be due in part to Tasmania having the nation's highest unemployment rate at 6.1 per cent, and the lowest level of post-secondary school education.

Combined, these factors also contribute to Tasmania also ranking last in terms of the start-up environment, as there is little human capital within the state to form a strong start-up community.

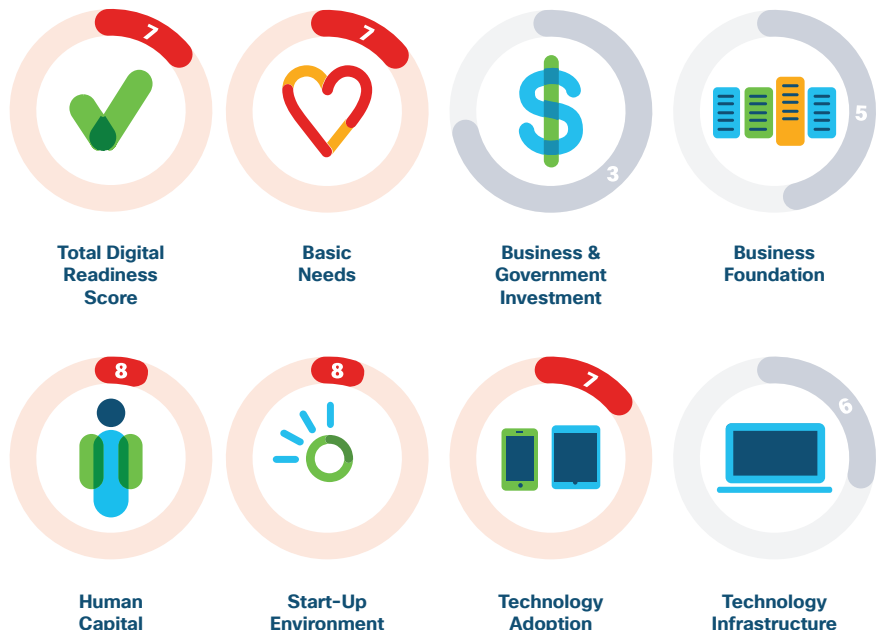
Tasmania does however, rank above average in terms of business and government investment, due in part to strong positive perceptions of government policies, and middle-of-the-pack research and development investments.

Recent announcements by the University of Tasmania investing in a Northern Transformation Project with two new campuses at Burnie and Inveresk, linked to the Launceston campus, and the creation of Associate Degree courses which have a vocational focus are positive steps toward bridging the human capital gap.

In addition, the recently announced city deals in Tasmania are a good example of the federal, state and local governments collaborating with the education and business sectors to create an entrepreneurial culture and infrastructure.

Digital Readiness Ranking TAS

High Medium Low





# Northern Territory

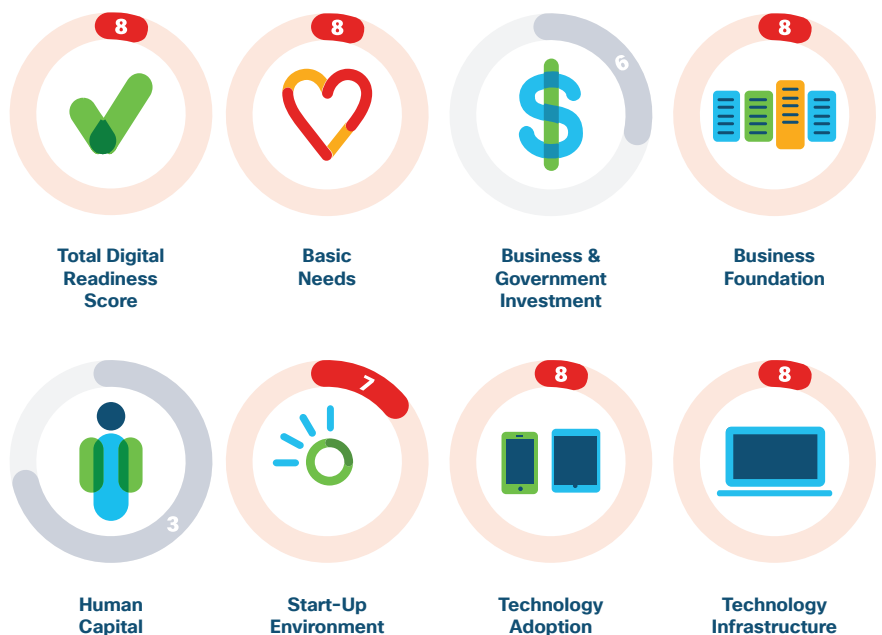
## Building the Basics

The Northern Territory's last place ranking for digital readiness is an unfortunate reflection of the social issues that have afflicted Australia's least populated territory. Its poor ranking for basic needs is driven by factors such as NT citizens having a life expectancy of just 77 years old – which is five years less than that of the national average – coupled with the highest rates of mortality under one year and homelessness.

A bright spark for the NT however, can be found in its human capital score, where it ranks third nationally. This is in part due to it having a population with a median age of 31.8, six years younger than the national average. While this young population provides a strong potential digital workforce, significant investment is required in developing appropriate skills, with the NT having the lowest scores in terms of mathematics proficiency.

Unlike Tasmania, the NT did not report a strong result for business and government investment, and is still deficient in real business and government expenditure on research and development. Again, signs of a turnaround exist in the form of the creation of the Darwin Innovation Hub, which is a partnership between Charles Darwin University, the Northern Territory Government and the NT based investment company Paspalis. It is designed to support a pipeline of technology start-ups in the NT. This initiative has been specifically designed with a focus on building connections into innovation hubs throughout Asia, capitalising on the NT's north facing frontier and providing a point of difference compared to other states.

### Digital Readiness Ranking NT



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## Recommendations

Australia ranks highly in comparison to other nations in terms of its digital readiness, but the hard work is far from over. While Australia is already capturing the benefits of its investments in digital readiness through its strong economy and high quality of life, continued investment is essential to maintaining this standing in a globally competitive environment, and to ensure these benefits are experienced across Australian society.

Critical to Australia's state of digital readiness is its ability to be both a smart creator and a smart consumer of technology. It is no coincidence that those states that scored highly for digital readiness also tended to score highly for investment and for the strength of their start-up ecosystem.

"Critical to Australia's state of digital readiness is its ability to be both a smart creator and a smart consumer of technology."

Investment in education and skills are critical to Australia retaining its world-leading position. However, the focus of investment in education should not just rely on applied research, or commercial research; the development of vocational education and digital skills is important to ensuring Australia maintains its human capital ranking and creates an appropriately educated and digital ready workforce.

There is also a requirement for additional ongoing investment in specific fields. For example, strong cyber security capabilities have emerged as a critical factor in securing Australia's long-term prosperity as a digitally ready society. To continue on this path, Australia must also be a digitally resilient society, as it is likely that many of the benefits of the digital dividend could be placed at risk should Australia fall victim to a prolonged cyber-attack. This has already been recognised as a priority area for support by the Australian Government, and that is now being matched at a state and territory level. The scale of the risk indicates that additional investment in human capital is necessary to protect both private and public services and infrastructure.

Investment must also continue into emerging fields which are becoming key drivers of digitisation both in the short and long term, including the Internet of Things, Quantum Computing and Artificial Intelligence.

Australia is currently well placed in each of these fields and stands to benefit immensely through the ability not only to utilise these technologies for commercial and social benefit, but also for building the next generation of start-up suppliers and exporters.

The rapid emergence of these technologies also points to the need to further equip the workforce and management layers of public and private organisations to ensure they can readily adopt these emerging technologies, to gain benefits ahead of international rivals while also providing a domestic launching pad for the next generation of start-ups.

"Not all states and territories are well positioned to contribute to this digital future, and hence to experience its full benefits."

However, as the *Cisco Australian Digital Readiness Index* shows, not all states and territories are well positioned to contribute to this digital future, and hence to experience its full benefits. This should be a critical consideration for governments, policymakers, the education sector, the business community, and the people of Australia as a whole in determining what it means to be a digitally transformed society.

The *Cisco Australian Digital Readiness Index* paints a clear picture of the various speeds with which Australian states and territories are progressing in their digital journey, from the world-leading position of the Australian Capital Territory through to the weaker progress being made by Tasmania and the Northern Territory.

What is clear is that the digital dividend that Australia may expect from its investments in digital capability will not be evenly shared across the nation without significant intervention, especially in Tasmania and the Northern Territory, and to a lesser extent in Western Australia, South Australia and Queensland.

The primary risks associated with falling digital readiness are twofold. Firstly, there is the risk of creating a new digital divide, where individuals and businesses in lagging states miss out on the full benefits of digital transformation. Secondly, there is a risk that Australia will fail in its mission to be both a smart producer and user of technology if it is not able to upskill its population to play those roles.



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A clear theme throughout the research is the importance of basic needs and human capital. These are essential for providing both a digitally literate workforce, and a strong consumer population to create demand for digital products and services. This points to the ongoing need for continued investment in education and training, particularly in the Amplify Low states of Tasmania and the NT. The importance of human capital is reflected by the impact the NT's low score has on overall digital readiness. When NT is included in the national result, human capital has the second lowest correlation to the digital readiness score. When the NT is excluded, human capital becomes the second highest correlated category.

This points to a very real need to invest urgently in human capital development in the NT.

The challenges of remaining at the forefront of digital readiness are not insignificant, nor are they insurmountable, although they are made more challenging by the emergent potential for Australia to split into a nation of digital haves and have-nots.

This report makes seven key recommendations that will ensure Australia retains its place as an Amplify nation, and that the benefits of that ranking are shared by all.



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## Digital technologies & solutions should be part of the policy formulation process

Digital transformation is all encompassing and is influenced by everything from the health and wellbeing of society through to education standards and direct government spending. Digital technologies can also provide solutions to the challenges experienced in society today, such as reducing the gap in providing education and healthcare to people in remote areas. Furthermore, digital skills provide the foundation for many of Australia's existing and future export opportunities. It is therefore essential that digital technologies and solutions are a key consideration in policy formulation at almost all levels, to ensure Australia both maximises the benefits from the investments made in digital capabilities, while ensuring it is well positioned to continue doing so into the future.

### Investment in infrastructure

World-class infrastructure is essential to ensuring the benefits of digitisation can be shared equally. Because the geography and population dispersal of Australia presents challenges in providing equitable access to digital services across the nation, continued investment in underlying infrastructure such as the National Broadband Network and Black Spot Program will be essential in years to come.

### Increase investment in vocational education with a focus on digital skills and knowledge

Maintaining and maximising our digital dividend requires an ongoing commitment to developing Australia's human capital, to produce the digitally enabled workforce and entrepreneurs essential to Australia's digital future. While much focus is given to building capabilities at the tertiary level, in a truly digitally ready society all roles will require a component of digital skilling. Therefore, it is essential that greater consideration is given to ensuring digital skills are embedded in all vocational training, to support the creation of a workforce that is suitably equipped to gain the greatest benefit from digitisation.

### Find ways to increase interaction between industry and academia

The greatest breakthroughs in research and development are of little consequence if they are unable to be utilised within the society that has created them. Often this role falls to commercial organisations to take those breakthroughs and convert them into products and services. It is essential that governments, academia and the commercial sector continue to work together to find new ways to bring

innovations to market quickly, to ensure that benefits and commercial returns are both maximised and accelerated.

### Retraining (reskilling) the existing workforce

Australia has already witnessed a significant shift in its economy from a manufacturing to a services basis, and over time these services will be increasingly delivered through digital channels. Therefore, it is vital that workers in sectors that are being impacted by digitisation receive the training necessary to adapt to this change. Retraining is likely to become a much bigger focus for Australia as some tasks and roles are eliminated through the application of automation and artificial intelligence. Therefore, training for the skillset of the future workforce will be a key focus in the near future.

### Develop digital skills within the government workforce development

Federal, State and Local Governments are the organisations with the greatest scope for ensuring Australia maintains a forward path towards digitisation. But in addition to policy levers, the government has the ability to influence that process through also being at the forefront of digital technology adoption. Governments should act as testbeds for breakthroughs in digital technology and service delivery. Not only does this provide opportunities for local research and commercial providers, it also will ensure that Australia as a whole is at the forefront when it comes to reaping the benefits of digitisation. For this to happen, governments must continue to invest in the development of digital skills of their own workforce to provide the basis for rapid adoption of digital technologies and services.

### Build up digital readiness capability in rural and regional areas

Australia is a highly urbanised environment, and this has already been shown to be a key factor in digital readiness due to access to a wide range of resources. However, the benefits of digital readiness should not be denied to a large segment of the population simply because they live in rural areas and using technology to enable accessibility will be key. Increased investment in capability building in regional Australia is essential to ensuring that all Australians are able to reap the benefits of the digital dividend, and to ensure that rural Australians do not find themselves isolated on the far side of the digital divide. However, the limited commercial returns (at least initially) from these capability investments will require ongoing support from government agencies.

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## Stages of Readiness

### Amplify High - Australian Capital Territory, Victoria, New South Wales

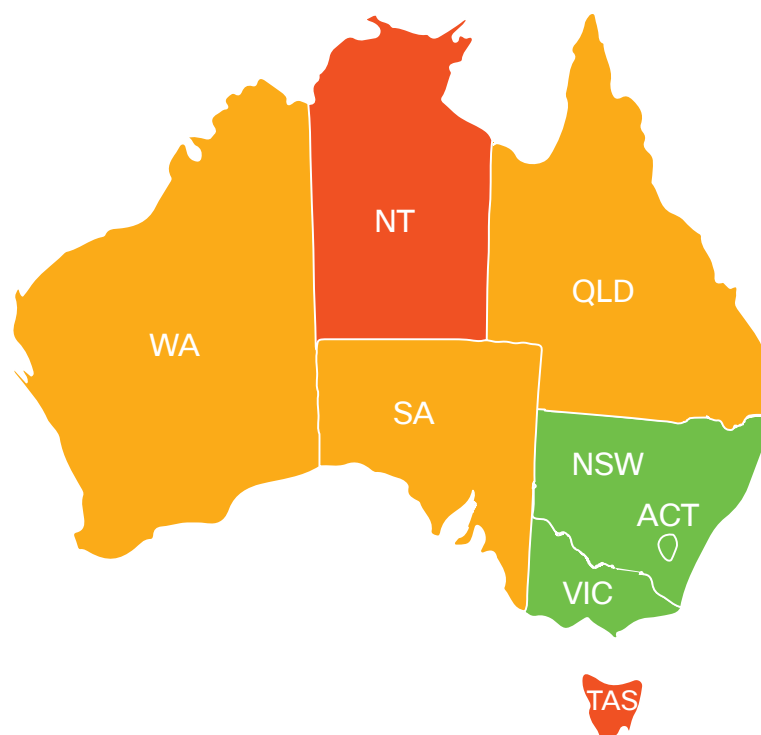
- Investment in additional digital education at a vocational level, to ensure the creation of a skilled local workforce to take on the technical challenge of digital transformation.
- Continued focus on research, development and commercialisation in emerging fields such as Artificial Intelligence and quantum computing, including stimulation of testing and uptake within government and business organisations to provide a domestic launchpad for developments.
- Ongoing support for tertiary training in digital and emerging fields to provide human capital to support research and development activity.

### Amplify Medium - Western Australia, Queensland, South Australia

- Additional investment in business infrastructure, basic needs and human capital, and to boost technology adoption.
- Greater focus on vocational digital education and broad retraining of the current workforce into digitally focused professions to create a digitally literate workforce.

### Amplify Low - Tasmania and Northern Territory

- Invest in boosting basic needs to create the foundation for stronger human capital development, to then boost technology adoption and lay foundations for a stronger start-up community.
- Increase public and private sector investment in research and development to create an environment to support local business opportunities.





## Conclusion

For those states that have invested in building their digital readiness, a digital dividend awaits, in the form of greater economic prosperity and enhanced opportunities for citizens. But as leading states propel themselves forward, a danger lurks that the benefits of digitisation will not be experienced by all Australians. The potential exists for a widening of the digital divide and the creation of a two-tier society of haves and have-nots. This outcome would not only result in a negative economic impact for those people on the far side of the divide, through reduced access to education opportunities and services, but it could result in the diminished capability of those states to contribute to economic growth in the digital era.

The impact of this digital divide should also be viewed from the perspective of its potential to slow overall digital development. While Australia's overall digital readiness ranking of Amplify places it amongst global leaders, Australia exists within a competitive international environment amongst other nations that have also reached the Amplify level, and many more that are working hard to do so. Failure to maximise opportunities through the creation of a digitally inclusive society poses the risk of Australia falling in the global rankings.

As such, the need to develop human capital across the board will be essential for Australia maintaining its global ranking. In a fully digital society, all members of that society will be required to have at least some degree of digital literacy to both contribute to its development and to enjoy its benefits, and this must become a key target for investment.

Should Australia fail to rebalance its digital readiness, it risks failing to create an inclusive society where all members reap the benefits of digitisation, and in turn this will undercut its ability to benefit from the digital dividend.

The alternative option of continued investment across Australia in the seven key areas of digital readiness not only promises to create a society where the benefits of digital transformation are shared equally, but where that digital dividend is actually enhanced through having all elements of society contributing to its delivery.

# Cisco Australian Digital Readiness Index 2018

## Digital Dividend or Digital Divide?

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