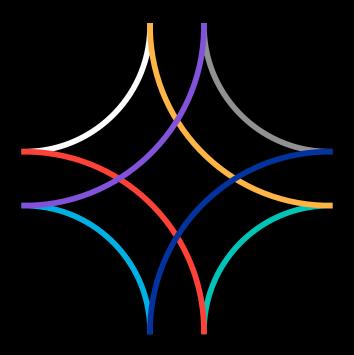


Revitalising the economy

Positioning Australia for the digital future beyond COVID-19



COVID-19 is disrupting businesses, accelerating change and proving deeply painful for many people. But the virus is also revealing many of Australia's unique strengths and presenting opportunities. It's creating the space – and the urgent need – for a new conversation as we seek to manage the disease and rebuild our economy in the digital era.



Australia revitalised: a blueprint

Lessons from the crisis

The COVID-19 pandemic is driving Australia's deepest economic downturn since the Great Depression and has created the nation's largest budget deficit since World War II.

The crisis has also come at a time when our productivity was already falling, and wages and investment growth were weak. It's a far cry from the past three decades, when we grew our economy every year despite the global financial crisis (GFC) and other challenges.

Yet there are also positives Australia should take the time to understand and build on. These are a good place to start as we consider what lessons we can take from our past successes – and our response to the crisis so far – to set us up for the next 30 years.

Our governance works

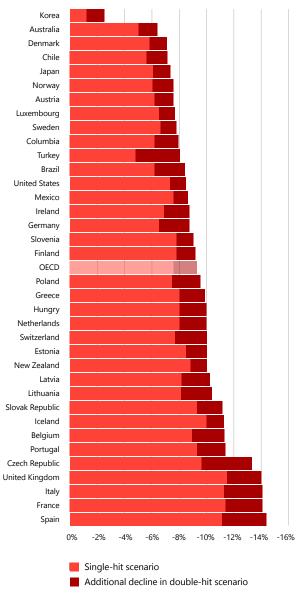
The first positive is the effectiveness of our governance. While challenges remain, the fast and coordinated actions of our three levels of government have been critical to the nation's success in containing the spread of the virus and managing its economic impact.

"Governments have very quickly made radical changes in the ways we live and work. They have done that by telling society the facts as simply and clearly as they can."

The Hon. Kenneth Hayne AC QC Sir Zelman Cowen Centre Oration 2020

In recession, but doing better than most

2020 Projected change in GDP



Source: OECD



Digitalisation has made us resilient

Australia's relatively high degree of digitalisation has enabled many business and government organisations to continue functioning throughout the crisis. It has also enabled essential suppliers within our economy, such as supermarkets and healthcare providers, to quickly scale up parts of their operations to manage rapid changes in demand.

18.3%
increase (2019)

\$8.1 billion
spend on public cloud computing services (2020 forecast)

Source: Gartner

A key enabler has been the growing use of cloud computing services, which are supported by the nation's extensive telecommunications infrastructure. According to <u>Gartner</u>, Australian business and government enterprises are expected to spend \$8.1 billion on public cloud computing services in 2020 alone – up 18.3 per cent on 2019.

This use of cloud computing has been critical to organisations' ability to allow hundreds of thousands of workers to switch to working from home. It has also enabled many Australian businesses to continue selling to each other and the world, seamlessly.

Australia's relatively high degree of digitalisation has enabled many business and government organisations to continue functioning throughout the crisis.

The cloud helps keep AGL and Austin Health running

When COVID-19 hit Australia in early 2020, large enterprises suddenly had to enable thousands of workers to work from home. Many also had to use the internet much more heavily to serve customers. This transition was much easier for organisations that used cloud computing services that could be quickly scaled up to meet their new demands.

Early in the crisis, AGL Energy transitioned 4,000 staff members to working from home in Australia. It also moved 800 contact centre workers in India and the Philippines to their homes for the first time. Despite this radical shift, the business was able to continue delivering its essential services because all staff members could access their office systems via the cloud. The move relied on its use of Microsoft Azure and Teams, and cybersecurity investments.



Austin Health in Melbourne is a major healthcare and training provider, and has played a key role in preparing Australia for COVID-19. By using Microsoft Teams for chat, voice and video calls, it's been able to keep its services running and has even started exploring using the system for virtual hospital visits.

"We've activated 8,500 people in a couple of weeks and we've got more than 4,000 people actively engaged in Teams right now. On our biggest usage day, three weeks in – we hosted 550 meetings in one day, and about 1,000 telephone calls and 16,000 chats."

Alan Pritchard

Austin Health's Director of EMR and ICT Services

Supply chains matter

We've also learned about the critical importance of supply chains and how quickly they can be disrupted. This has been visible in the struggle to have enough toilet paper to fill shelves, for instance, and concerns about having enough ventilators and personal protective equipment (PPE), like face masks, to manage the pandemic.

As we discuss below, these supply chains run much deeper than these items and also include our digital supply chains – all the ways we connect with each other and the essential computing resources we use to run our businesses and government agencies.

Digital technology helps Woolworths manage the COVID-19 surge

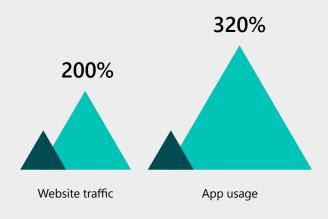
Woolworths operates more than 3,000 stores across Australia, employing 201,000 people and serving 29 million customers every week. When COVID-19 hit, the company had to make many changes to manage a sudden surge in demand and new trading conditions.

One technical change was to leverage the Microsoft Azure Kubernetes Service (AKS) to manage a rapid growth in online orders as people switched to ordering their groceries, office supplies and more from home.

AKS enables organisations to deploy new software quickly and safely, and is one of the many sophisticated services that enterprises call on in Microsoft Azure. It is also an example of how Australian companies have become more responsive and resilient by using the latest global technology offered through the Microsoft technology ecosystem, which is typically delivered by one of the company's more than 10,000 local partners.

"As demand for our e-commerce services has soared in the wake of the global health crisis, we've had to scale our online capability incredibly fast," says Nick Eshkenazi, Woolworths' Chief Digital Technology Officer.

"Traffic to our website has doubled and our app use is up more than 320 per cent. With Azure Kubernetes Service we have been able to remove some of the manual steps previously required in our releases – speeding the process up and increasing the reliability of our delivery. Together with Microsoft, we've been able to keep our site and app readily available for our customers at a critical time, and avoided the digital queuing many other retailers have had to implement."



How to rebuild our economy



The pandemic has shown how quickly and comprehensively Australia can change when faced with a crisis. This has included developing practical approaches based on data and science, and sweeping aside established orthodoxies and habits. Two examples are organisations allowing people to work more flexibly and governments supporting telehealth.

Business and government leaders should maintain the same spirit of open-mindedness and practical decision-making as the country rebuilds and reinvents the economy. Australia has many extraordinary advantages, including its geography and natural resources, highly educated multicultural population, proximity to Asia and sophisticated capital markets.

As we move forward, we believe it will be important to focus on five areas to capitalise on these and other advantages to create a bright future in the digital age. These are to continue the digital transformation of our businesses and government organisations; ensure our enterprises enjoy a choice of competitive offerings as they build their digital supply chains; invest in our communications networks and data sharing capabilities; find wealth and jobs through world-leading innovation; and to improve our decision-making capacity.

"If the theme of the last great era of Australian reform was internationalising the Australian economy – opening us up to the world, taking advantage of globalisation – then the theme for the next great era of reform should be digitisation."

Dr Andrew Charlton Founder, AlphaBeta



Continue Australia's digital transformation

As we noted above, companies and government agencies that had already digitalised their operations have tended to fare better during the COVID-19 crisis. Moving away from paper-based processes and a reliance on physical locations and assets has been key to enabling people to switch to working from home, reaching customers and maintaining supply chains.

The use of websites and mobile apps has enabled our governments to quickly roll out support programs and information to millions of people across the nation. Governments and businesses have also gained from programs to automate processes, by using physical and software robots among other technologies. Many of these advances are taken for granted but are the result of years of hard-won effort to complete digital transformation projects.



The digital economy is here to stay

Looking ahead, we believe that the economy will become even more digital and many of the changes that have occurred during the pandemic will drive permanent changes in consumer and workplace behaviour. The disruption should also create an environment that gives businesses the impetus to reinvent existing processes and try entirely new approaches.

According to <u>Australia Post</u>, the pandemic has driven a surge in online shopping. It reports that more than 200,000 new households shopped online during April 2020 alone and ecommerce surged 80 per cent in the eight weeks after the World Health Organisation declared COVID-19 to be a pandemic.

This is just one example of how the pandemic has accelerated changes that were already underway. Others include the greater use of videoconferencing and allowing customers to sign documents electronically, rather than via paper forms. As our CEO Satya Nadella noted early in the crisis, "We've seen two years of digital transformation in two months."



80% increase in online shopping

Chemist Warehouse transforms to boost competitiveness and go global



As one of Australia's largest pharmacy groups, with a network of 500 franchisees selling \$5.5 billion a year in supplies, Chemist Warehouse has continued trading as an essential and important business throughout the COVID-19 crisis.

In the background, it has also continued to reinvent and streamline its operations through a major digital transformation program. The Melbourne-based, 47-year-old company is deploying Microsoft Dynamics as a new platform to support its international expansion and plans for new and innovative health-related services.

By partnering with Microsoft, Chemist Warehouse is accessing a powerful, global and ever-expanding ecosystem of capabilities to power its business. It will have one central enterprise resource planning system to serve franchisees and provide real-time insights to executives. This means it will be able to open new offices without setting up its own IT infrastructure. It will also feel confident its data is being managed in line with regulations, and will be ready to incorporate the latest artificial intelligence (Al) capabilities to offer new levels of convenience to customers.

"The main reason to leverage the Dynamics 365 platform is time to value-add. The mantra for us is scalability, agility – they're the two things that we bear in mind with everything we do. It's really to be able to provide a better experience to the customer."

Jules Cardinale
Chief Information Officer

A new sense of urgency

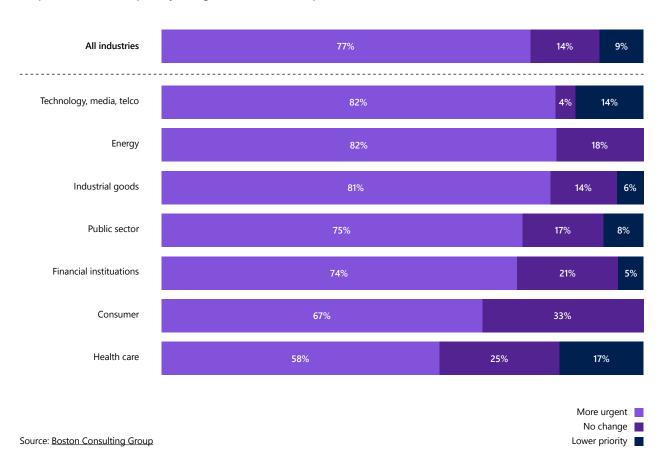
To ensure our economy remains competitive and resilient in the online era, businesses and governments will need to maintain their digital transformation efforts. This has certainly been the view in the United States (US) where more than three-quarters of companies now see digital transformation as a more urgent priority than before the crisis (see chart).

"I've spent most of my career in Silicon Valley and I'd say Australia is at least 10 years behind the United States in terms of digital. But I would argue, anecdotally, that we've accelerated five years in the past five months because of COVID."

Dr Larry Marshall CEO, CSIRO

More than 75 per cent of US companies plan to accelerate their digital transformations

Respondent views on priority of digital transformation post crisis



2

Reinforce competition and choice in our digital supply chain

The disruption caused by the pandemic and growing geopolitical tensions have heightened concerns around countries' reliance on international supply chains.

This has been most visible in the availability of goods in our supermarkets and whether we can get enough PPE for our health workers and citizens. Many Australian businesses have also become key players in the supply chains of global organisations. For instance, Boeing has more than 3,000 employees and extensive facilities in Australia to support its advanced manufacturing of commercial aircraft composite components, design and develop defence systems, and perform other integral production, research and support functions.

Another key component of Australia's supply chain is the telecommunications and digital infrastructure that the country relies on to operate in the national and digital economies. This has raised debate about the notion of 'digital sovereignty', based on legitimate concerns regarding our ability to avoid disruptions during emergencies, personal privacy protection, national security and local economic opportunities.

Microsoft understands these concerns and the desire to find solutions that protect and promote Australian interests and values. As a global technology leader, we also believe it's important that we help find ways to address them.

Digital sovereignty is about ensuring there are competitive choices for governments, businesses and consumers.

Understanding digital sovereignty

As we discuss above, technology plays a central role in helping Australian businesses to succeed, regardless of their size or sector. Innovation and competition have also been long-term driving forces behind our economic growth and international competitiveness.

However, digital sovereignty is not about ensuring that every part of our digital supply chain (see <u>page 14</u>) is located in Australia. Rather, it is about ensuring there are competitive choices for governments, businesses and consumers, while respecting that Australia determines the rules that technology companies should follow within its own digital supply chain.

Microsoft supports a rules-based approach that preserves and advances Australian values in the digital and interconnected world we live in, while building on the foundations of an open and competitive Australia. It is important these rules align to global norms and standards, so Australian businesses operate within a framework that transfers easily to global markets.

For example, adopting internationally harmonised data protection standards to regulate global data streams would both protect Australian consumers and help Australian companies to do business in Europe or with European entities globally.



Supporting innovation and openness

These factors will be even more crucial as we rebuild our economy after COVID-19. They will also become more important if geopolitical tensions continue to impact technology. We believe Australia's best interests lie in ensuring that the digital economy remains as global and open as possible, to support innovation and choice for its businesses and consumers.

This point was articulated by Australia's Foreign Minister Marise Payne and Defence Minister Linda Reynolds in *The Australian* on 31 July 2020 in a column about the nation's alliance with the US. "The incentive for Australia, the US and partners to ensure trusted vendors of critical technology remain viable competitors in a free global marketplace is enormous."

"Countries that believe technology should be used for good – to make people freer, more connected, more able to pursue interests and economic opportunities – will need to cooperate to wire these principles into global norms and standards, whether through our innovative companies or through establishing rules in multilateral bodies."

Marise Payne Australia's Foreign Minister

Linda ReynoldsDefence Minister

Australia's digital supply chain



Hardware & components

The chips, memory and other building blocks for creating the networks and computing equipment that power the digital economy.

Networks

The networks that connect businesses with the resources they need and their customers. Within Australia, this means the NBN, our national mobile networks which are moving towards 5G, and other infrastructure.

Computing infrastructure & platforms

The computers that companies own and the third-party cloud computing platforms (such as Microsoft Azure) that they are increasingly using for additional and flexible computing capacity.

Software & applications

The code that puts all the above computing power and networks to use to bring business models to life and enable productivity. This now includes software robots, such as chatbots, for process automation.

Data

Customers' names, supplier relationships, proprietary intellectual property and more. This data must be protected and, when analysed appropriately, can deliver valuable insights for improving business performance and service delivery.

Products & services

The end point of the supply chain is the delivery of products and services to customers. Many of these are now fully digital, such as books, music and banking services. Others remain physical (such as buildings, iron ore and wool), but the process of creating, selling, delivering and providing services for them is increasingly electronic and reliant on the digital supply chain.

Supporting each part of the digital supply chain is an array of critical partnerships and relationships that enable organisations to access the elements they need – and to have confidence in their long-term supply. Organisations must also consider how they keep their digital systems secure, their access to the skills needed to create and use technology, and their policy and regulatory settings – which are only becoming more complex as technologies such as Al raise new possibilities and ethical questions.

Building on our supply chain

In practical terms, Australia needs to consider the composition of its digital supply chain since it underpins the success of every business in the country.

A key part of this supply chain is hyperscale cloud infrastructure created by global technology companies including Microsoft. This infrastructure has become a vital utility for businesses that is just as important as internet connectivity, electricity and other utility services. And like any utility, organisations and consumers want it to be safe, secure and always on.

Microsoft has made significant technical and commercial investments in Australia, including in data centres. This has enabled governments and enterprises to enjoy the full benefits of our efficient and powerful solutions, while maintaining their autonomy and the highest standards in data management processes and security protection.

We have also put in place many capabilities to enable organisations to build their own sources of competitive advantage at the 'layers' that sit on top of the nation's utility-style digital infrastructure. Those are the software development tools, Al services and other sophisticated services that our Australian customers and partners use to build their own unique applications, algorithms and user experiences. It is this innovation that can help power Australia's growth.

Our partner network is made up of more than 10,000 businesses that employ close to 300,000 people in Australia. About 70 per cent of those firms are Australian small- and medium-sized enterprises that are helping the rest of the organisations in our economy become more competitive while generating significant high-value employment. Having access to competitive technology choices based on global standards is critical to enabling these organisations to operate, and it means they can – where relevant – sell their solutions to the world.

"It was the organisations who came into this crisis with an understanding of their digital supply chain – were investing in it, were securing it, were strengthening it – that were in a better place to adapt and pivot given all the challenges we've experienced."

Steven Worrall Managing Director, Microsoft Australia



10,000

Our partner network is made up of more than 10,000 businesses



300,000

These businesses employ close to 300,000 people in Australia



70%

About 70 per cent of those firms are Australian small- and medium-sized enterprises

Macquarie enhances services and goes offshore with Microsoft Azure



Macquarie Cloud Services is a leading Australian cloud computing services provider and a key part of the ASX-listed Macquarie Telecom Group. It is also showing how leading Australian telecommunications providers are partnering with Microsoft to bring the latest capabilities to Australian businesses while growing their own businesses globally.

In February 2020, Macquarie launched a new practice focused on providing Microsoft Azure public cloud solutions to its customers in Australia. The new practice can also help Australia-based companies – or any business – use Azure in offshore locations. The Azure practice complements Macquarie's highly regarded cloud, hosting, data centre and telco businesses.

"We've invested heavily in people, accreditations, product development automation, and we're helping Australian businesses embrace Azure to its fullest expression. This will lead to successful migrations, cost savings and predictability, refined IT architecture and true cloud-native operations for our customers."

Naran McClung

Head of Azure – Macquarie Cloud Services, Macquarie Telecom Group

3

Invest in connectivity and data sharing

The COVID-19 crisis has highlighted the critical role our communications networks play in enabling the economy to function every day. We could not have so easily transitioned to working from home, selling products online or making nationally coordinated decisions without Australia's robust and far-reaching broadband and mobile infrastructure. As was also demonstrated during the recent bushfires, these networks are key to our national resilience.

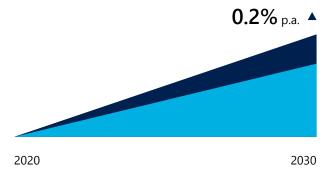
Looking ahead, Australia can support its economic recovery by ensuring it maintains and grows the capacity and reach of this key part of its digital supply chain. Our digital communications capabilities are critical to ensuring our economic resilience and enabling our enterprises and individuals to fully participate in the global digital economy.

Some new areas to focus on are systems that leverage 5G, Al and Internet of Things technology, which promise to deliver productivity benefits and keep Australia at the leading edge globally. These productivity gains can be expected in a host of areas, from allowing businesses to deliver better experiences to customers to enabling driverless vehicles, optimising crop yields, facilitating remote working and education, and much more. In many cases, the benefits lie in the powerful combination of communications and data sharing.

According to <u>Deloitte</u>, 5G networks could increase Australia's economic productivity by 0.2 per cent a year by 2030. That would equate to an extra \$50 billion in GDP every year as companies and governments leverage the faster speeds, better reliability and improved capacity offered by this next generation of mobile phone technology.

"This idea of sharing data sets is a tremendously important shift."

Peter Harris CEO, National COVID-19 Coordination Commission



\$50 billion

possible GDP increase from 2020 to 2030 with 5G networks increasing Australia's economic productivity

Telstra creates secure Data Hub to promote enterprise collaboration

There is enormous potential for Australian businesses and governments to use Al technology to become more efficient and effective. This promise lies in enabling organisations to gain better insights from the vast amount of data that is available or could be collected from businesses, governments, citizens, smart sensors and elsewhere.

However, this data has traditionally been held in isolated 'silos' and across various systems, making it hard to use Al tools to analyse it. To solve this problem, Telstra has partnered with Microsoft to create a unique Data Hub to streamline access to secure data from organisations that span the nation's most important economic sectors.

Telstra is initially focusing on three key areas:

Agribusiness

Water use and management

Connected supply chain



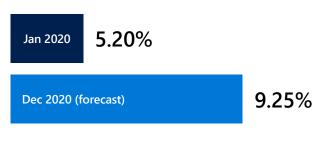
For example, the solution is being used to monitor water quality in Queensland's Lower Burdekin River, and the supermarket chain Aldi is an early adopter.

Such data sharing and analysis could boost farmers' profitability and yields, and reduce the environmental impact of their operations. Accelerated by the arrival of 5G and other technologies, such new datasharing approaches will also unlock whole new products and services.



Create employment opportunities through innovation

One of the most challenging aspects of the COVID-19 crisis is likely to be its impact on employment. As Microsoft's President Brad Smith has discussed, 250 million people could lose their jobs globally in 2020. The government forecasts that Australia's official unemployment rate will reach 9.25 per cent by December 2020 due to the pandemic.



Australia's unemployment rate

To address this issue, it will be vital to ensure Australians have the digital skills they'll need to find employment and help organisations in the digital economy. It will also be as important as it has ever been to create jobs and wealth through innovation and entrepreneurialism.

"I know people tend to think of the mining industry as being not all that innovative ... but we are investing in all forms of innovation – technology, data analytics, automation."

Elizabeth Gaines
CEO, Fortescue Metals Group

Australia's track record

Australia has proven many times over that it can create world-leading innovations and build successful new businesses. When we succeed, we help to make science and technology key drivers of our economy rather than just enablers for other industry sectors.

In the medical world, Australians invented the medical application of penicillin, the HPV vaccine, Cochlear's bionic ear and ultrasound scanners.¹

Our recent digital success stories include creating breakthrough technologies such as WiFi and companies such as the software maker Atlassian, financial technology player Afterpay, Al leader Appen and graphic design online platform Canva. Atlassian, for instance, is now a global business with more than 4,000 employees and a market value of over \$60 billion.

We also have a range of success stories in the advanced manufacturing arena, which is being transformed by digital technologies such as 3D printing and so-called Industry 4.0. Companies like carbon car parts maker Carbon Revolution, industrial tools producer ANCA and sound equipment specialist RØDE Microphones are all world leaders in their fields.

Australian innovators create value and jobs

Appen share price: AI specialist now worth over \$4 billion



Cochlear share price: global hearing leader worth \$13 billion



Microsoft's support for local innovation

Microsoft sees Australia as a significant location for innovation globally and is demonstrating this confidence through a range of long-term investments. For example, we have formed a \$150 million partnership to create the Sydney Nanoscience Hub at The University of Sydney to develop quantum computing technologies.

"These industries that are based on digital capabilities know no boundaries. So you can have a global audience and you can operate in a boundaryless world – and so the ability to grow is incredible."

Alison Watkins CEO, Coca-Cola Amatil We are also a major supporter of the Sydney Startup Hub, which was founded by the NSW Government and hosts approximately 2,500 entrepreneurs and innovators, and Microsoft Ventures is backing a range of high-growth Australian companies such as GO1 and the mining drone maker Airobotics.

In addition, we're pleased to be working with leaders such as the Commonwealth Bank and Woolworths to support their venture investing and business innovation initiatives. These activities are in addition to our day-to-day business, providing the tools and services that software developers, our partners and our customers use every day to create new offerings and digitally transform their organisations.

We estimate that our partner network alone invests about \$1.5 billion a year in creating new and repeatable intellectual property, which is a key source of high-value economic activity and employment.

How the GFC unleashed entrepreneurialism

The global financial crisis caused widespread economic damage, particularly in the US. But the hardship it caused also led to the period of extraordinary entrepreneurialism we have seen in the decade since.

One example Microsoft has been pleased to be involved with is MassChallenge, a not-for-profit business accelerator that was founded by John Harthorne and Akhil Nigam, who were working as strategy consultants at Bain & Company in the 2008 recession. They wanted to foster a creative, inspired society where everyone was empowered to maximise their impact.

This vision lead to the creation of MassChallenge in Boston in 2010 to help a new wave of entrepreneurs – who might otherwise have been jobseekers in a bleak employment environment – to start and grow new ventures.

According to its <u>latest progress update</u>, it has helped 2,458 startups from more than 54 countries including Australia. Those businesses have generated more than US\$3 billion in revenue, raised over US\$6.2 billion in growth funding and created more than 157,000 jobs.

5

Focus on the quality of decision-making



The COVID-19 crisis has shown how quickly Australian governments and businesses can make decisions and put them into action when required. It has also shown how access to real-time (or near real-time) data can enable this faster decision-making.

The result has been a surge in agility and bold, but well-informed decision-making that Australia should retain as it rebuilds its economy. Within government, this can be supported by reviewing the effectiveness of measures that were put in place for COVID-19 and deciding whether to retain or expand them.

One example is the National Cabinet concept, where federal and state ministers have met frequently and virtually to speed decisions. This has been taken further in the UK, for instance, where the government has found ways to enable its parliamentarians to meet in person and online to keep its governance processes moving.

Another example is the interactive model that Microsoft has created to help governments and businesses assess the potential impact of COVID-19 on Australia's economy (see box). This complements other initiatives we've built with governments, such as a digital data service to help the NSW Government better meet the needs of the state's 37,000 homeless people.

Within businesses, leaders should consider the rhythm of their planning and execution processes, and how readily they can access information about their operations and markets. Even small improvements in the quality of business decision-making could have a significant impact when multiplied across the economy to support the nation's recovery.

Modelling the impact of the virus in Australia

One of the biggest challenges for decision makers during the COVID-19 crisis has been to strike the right balance between measures that limit the spread of the virus, such as lockdowns, and allowing businesses to continue operating to support economies. To help leaders make these decisions, Microsoft has assembled a deep pool of data about the virus in Australia and around the world.

We have then made it possible for anyone to see the potential impact of different approaches, such as mild or extreme social distancing.

See our <u>Power BI model here</u>, and our related white paper about the modelling and how COVID is leading to new economic thinking <u>here</u>.



Questions to consider

The pandemic has created an opportunity for governments and companies to rethink long-term approaches and have fresh conversations about the future.



Learn more

This perspective is one of six Reimagine Reports from Microsoft Australia. The other perspectives explore the closely related topics of diversity and inclusion in our society, the future of work, how our education and health systems will evolve with COVID-19, and the role of leaders as we seek to chart a course through and beyond the pandemic.

See the reports and related digital events* on our website: microsoft.com/en-au/reimagine



^{*}The comments in this report from Dr Andrew Charlton, Elizabeth Gaines, Peter Harris, Dr Larry Marshall, Alison Watkins and Steven Worrall were made during The Australian Financial Review's Revitalising the Economy event, in partnership with Microsoft, which took place on 13 August 2020.