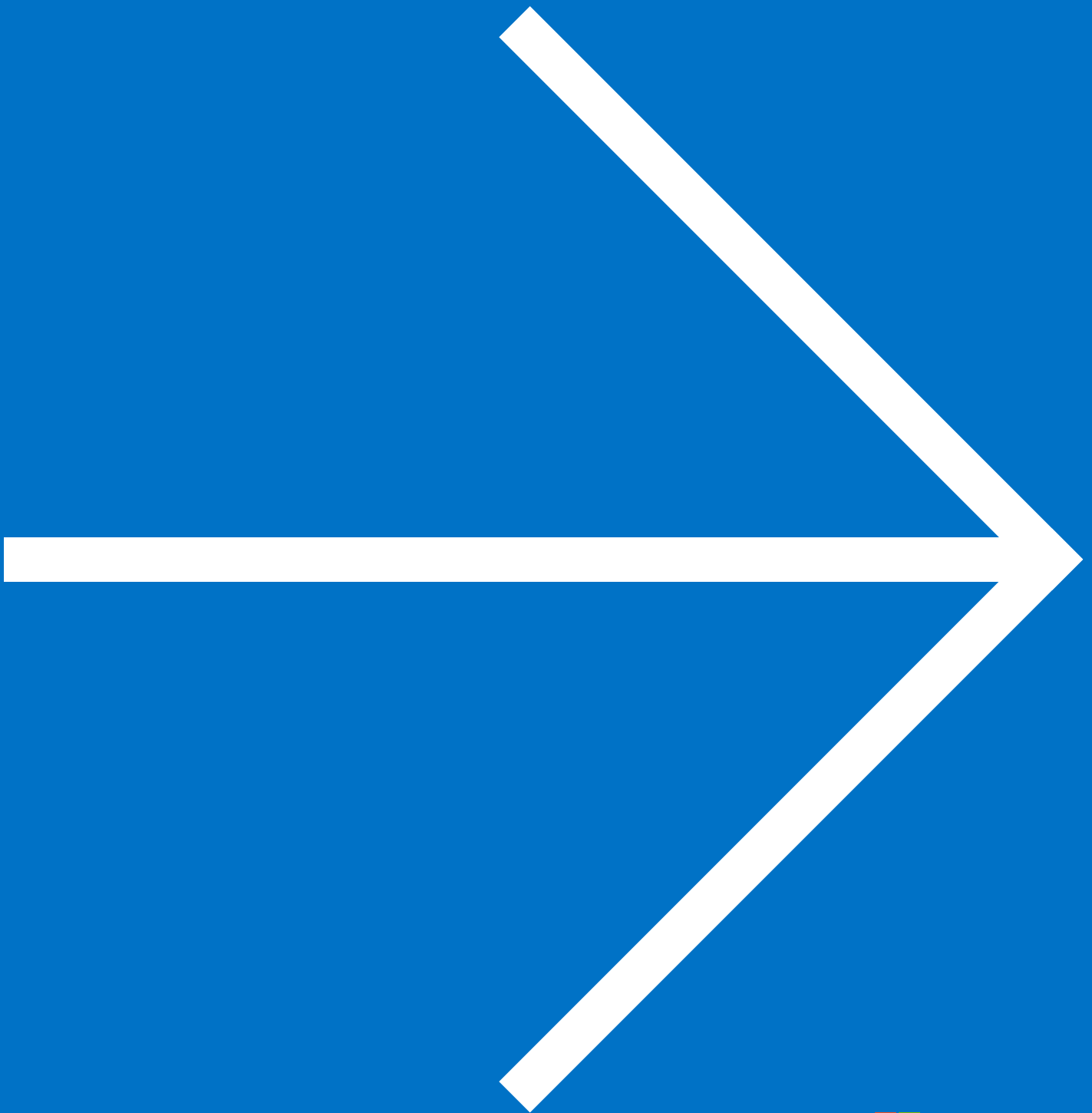


Embracing digital transformation

Experiences from Australian organisations



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Welcome

It's my great pleasure to present this study marking Microsoft Australia's latest contribution to helping Australian organisations survive and prosper in the digital age.

There's no doubt that we are in the middle of a digital revolution. Our world is being transformed before our eyes as new technologies give some organisations a huge competitive edge, and see others left behind.

In a similar study conducted by Microsoft in the United Kingdom, 44 per cent of respondents believed existing business models would cease to exist within the next five years and half expected industry disruption within the next two years.¹

More recently, a survey of 1,494 business leaders from across the Asia-Pacific region found that 80 per cent believed they needed to become a digital business to enable future growth. Even so, only 29 per cent had a full digital strategy in place.²

Here in Australia, we know it's time to transform beyond 'business as usual' – to tap into the extraordinary potential of digital technologies and find new ways of doing business. But how can you fully commit to this journey and push on when obstacles arise?

To answer this, we conducted in-depth interviews with a rich array of leaders at Australian companies and government agencies. They are all Microsoft customers or partners, or developers we work with closely.

The most digitally advanced organisations had several factors in common. Their success stories were underpinned by leaders who embraced digital transformation and empowered their people to pursue it. They typically exhibited entrepreneurial cultures and had access to beneficial skillsets.

However, there were also numerous organisations that were 'motivated but constrained'. These groups recognised that digital technologies were ushering in profound change – and the need to change – but they were finding it hard to do so for a range of reasons discussed in this report. As a nation, we urgently need to focus and overcome these constraints.

We also found there was no 'right' approach to digital transformation. In fact, the leaders we spoke to recommended that when other organisations develop digital transformation strategies, they should stay flexible and let initiatives evolve day by day.

I hope this report helps you move forward on your own digital transformation journey and would like to thank all the participants who donated their time to make it possible.

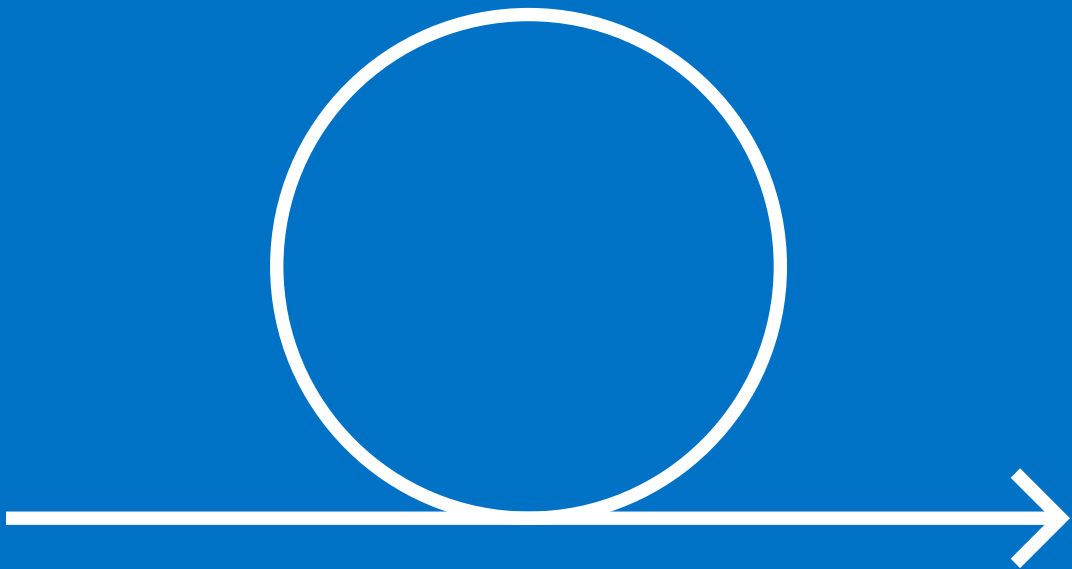
A stylized, handwritten signature in black ink, consisting of a large 'S' followed by a series of loops and a long horizontal stroke.

Steven Worrall
Managing Director
Microsoft Australia

¹ *Digital Transformation: The Age of Innocence, Inertia or Innovation*, Microsoft UK, 2016.

² *Microsoft Asia Digital Transformation Study*, Microsoft Asia Pacific, 2017.

Executive summary



Digital transformation opens up many possibilities, but what is it and can every organisation reap the benefits? In this report, leaders from 30 Australian organisations share their experiences – the drivers, challenges and gains – to show you what's possible and to help you on your own digital transformation journey.

➔ On the agenda

Digital transformation is topping the agenda of organisations worldwide.

The World Economic Forum gathering in January 2016 contemplated the possibilities of digital transformation under the banner of the Fourth Industrial Revolution. The Forum contrasted discrete digital technologies such as electronics, IT and automated production with today's integrated cyber-physical systems, and highlighted their distinguishing characteristics: breadth of impact and unprecedented speed.²

These traits present challenges for organisations across industries and around the world, but they also present immense opportunities. For example, one study estimates that "digital optimisation can boost profitability by 20 to 30 per cent" in large enterprises.³

² *The Fourth Industrial Revolution: What it Means and How to Respond*, World Economic Forum, 2016.

³ 'The digital utility: New opportunities and challenges', McKinsey & Co., 2016.

➔ A practical approach

Against this backdrop of challenge and possibility, we asked 30 senior leaders of Australian organisations to share their experiences with digital transformation.

All our interviewees viewed digital transformation as a competitive necessity, and most saw it as a significant opportunity. They expected the impact of transformation to keep increasing, and emphasised the importance of getting started or maintaining momentum.

Most organisations were undertaking digital transformation in a series of strategic shifts. Despite feeling a strong sense of urgency, leaders recognised it was unrealistic – and often unhelpful – to expect change to happen overnight. This was especially the case in large, well-established organisations.

By and large, these organisations viewed digital transformation as a journey that started with isolated digital experiments and built up progressively over time. They typically started these journeys with a strategic plan. We found that half of all strategies were initiated in the past two years, indicating the newness of large-scale transformation efforts.

These organisations were also taking a very practical approach to transformation. They were experimenting with and implementing digital tools to better engage customers, empower employees, optimise operations and transform products and services.

Typically, organisations were motivated to transform the customer experience first, but were starting to realise the importance of other dimensions – in particular optimising operations – for wide-scale transformation. A handful of organisations were reinventing business models to get the most out of digital transformation.

All the leaders we spoke to said education and tracking progress were essential for successful transformation. Most reported significant, measurable pay-offs that motivated forward momentum.

“Moving quickly has sometimes helped us not get caught up in trying to get the perfect solution, because by the time you think you have got the perfect solution, it’s not.”

Richard Burns General Manager Customer, Aussie



Two camps

Interviewees identified three critical success factors for digital transformation: strong leadership buy-in, an entrepreneurial culture and access to talent. Having a clear vision and strategy were also very important. We found organisations broadly fell into two groups, based on the extent to which they exhibited these traits.

‘Proactive and Embracing’ organisations embraced digital transformation and were empowered to pursue it – resulting in a strong digital mindset and a propensity for disruption. The second group, ‘Motivated but Constrained’ organisations, were keen to progress but found their digital efforts hampered (usually by internal conditions).

We found that Proactive and Embracing organisations made digital transformation a top priority. They were building entire systems to capture data and convert it into insights and intelligent action at scale. Motivated but Constrained organisations were more likely to deploy point solutions to digitise business processes, such as moving from paper to electronic forms.



An optimistic outlook

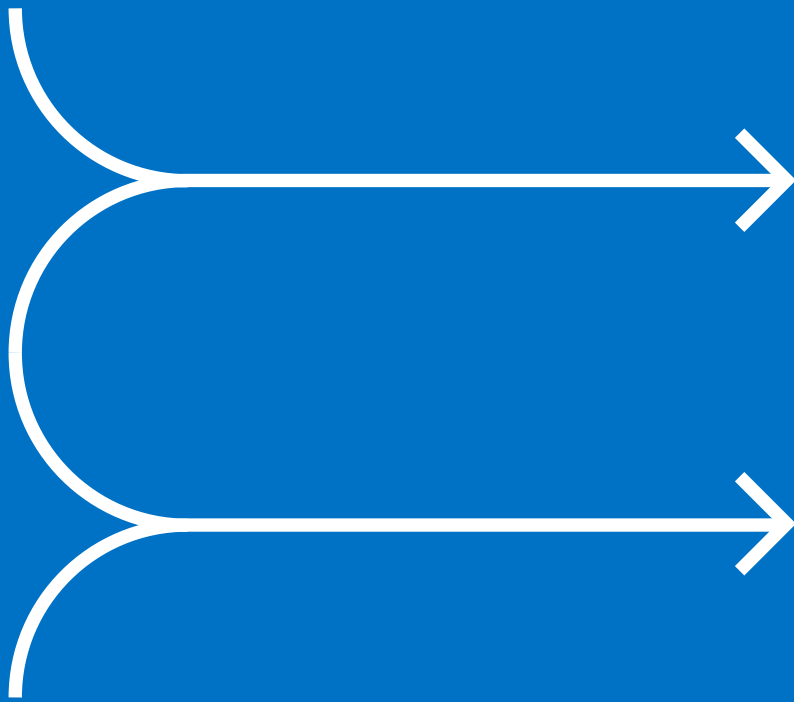
All organisations expected digital technologies to keep evolving – and rapidly. They anticipated that within the next five years new technologies would significantly affect them, in particular cloud computing, Internet of Things (IoT) systems and artificial intelligence.

Our interviewees acknowledged the steep learning curve that accompanies digital transformation, but also held high hopes for those that learn to embrace it.

“My business understands that we are focused on progress over perfection and that this is a journey. We focus on delivering value within short sprints, which are validated through ongoing employee feedback loops.”

Michael Ross Chief Information Officer, Pact Group

About this research



This report is based on interviews with 30 C-suite executives, general managers and digital transformation leaders of Australian organisations. Each organisation has a relationship with Microsoft Australia as a customer, partner or developer.

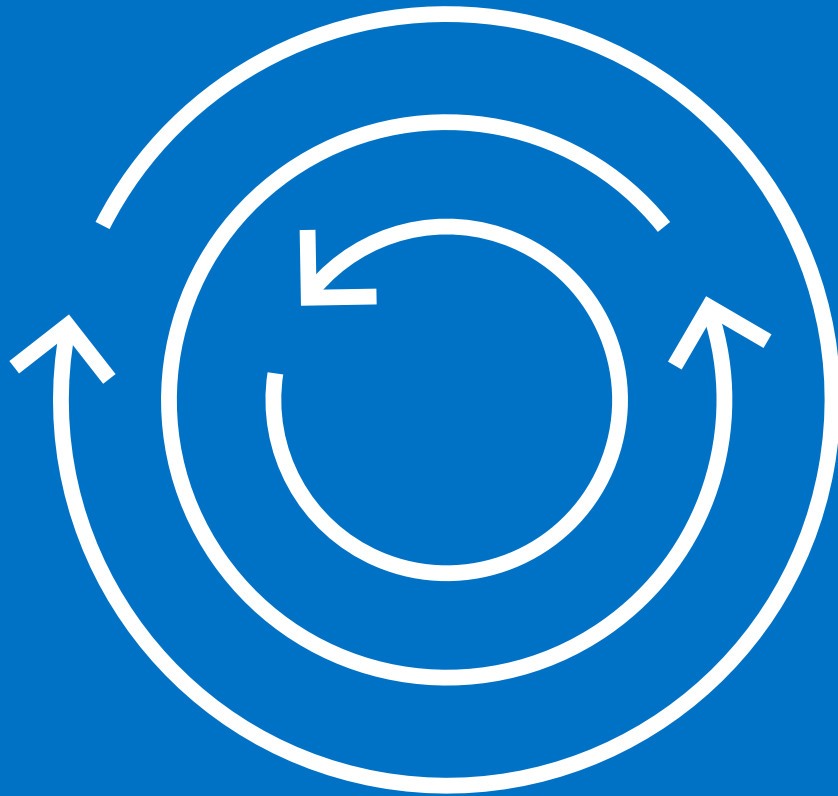
The organisations span the private and public sectors and a range of industries, including manufacturing, finance, retail, technology and healthcare. A majority were happy to be acknowledged as contributors to this research and some interviewees are quoted directly.

Research participants were asked to define digital transformation and comment on the changes their organisations were making. They were also asked about the related payoffs, opportunities, challenges and critical success factors.

We conducted our research in August and September of 2016. This report presents the qualitative comments and high-level quantitative findings revealed during one-hour, face-to-face interviews with these executives.



What is digital transformation?



When it comes to digital transformation, the first challenge is to define it. We started by asking organisations what the term meant to them.

➔ Improve outcomes

Interviewees agreed that digital transformation was about harnessing new technologies to improve business outcomes. This typically involved changing business processes and even business models to make the most of those technologies.

Some, such as Michael Osborne, Head of Technology at Cricket Australia (see the case study on page 19), saw it as an extension and acceleration of the investment that organisations had been making in information and communications technology (ICT) over many years.

“To a certain extent, digital transformation to me is a bit of a buzzword. Organisations have been applying emerging and increasing technological capabilities for decades now, so to me it’s the next iteration of that,” he said.

Others took a practical view. “For me, digital transformation is about getting away from the traditional cumbersome processes of paper,” said Danny Lindrea, Director of ICT Architecture at Bendigo Health.

Some organisations viewed digital transformation as revolutionary to every aspect of their business. Wayne McMahon, Group Chief Information Officer at pizza chain Domino’s, which is actively exploring the potential of digital technologies, said, “Our share price is now over \$65. This is not based on product sales alone. We have a high PE ratio because we’re seen, act and behave like a technology company. And so we have a tech company share price.”

➔ Prioritise for progress

A slight majority of interviewees said they felt Australia was ahead of or on par with other nations' digital transformation efforts. Further, we found organisations tended to be in one of two camps, based on the extent to which their leaders and corporate culture enabled digital transformation. We have labelled these groups 'Proactive and Embracing' and 'Motivated but Constrained'.

Proactive and Embracing: These organisations have high ambitions for digital transformation. They have a strong desire to exceed customer expectations and a need to gain scale. They are often driven by a fear of missing out on opportunities or being wiped out by the next digital start-up. Their leaders are strongly committed to driving digital transformation programs and have a clear vision and strategy for the results they wish to achieve. The wider organisation is also embracing transformation by being brave, transparent, open to change and willing to tolerate risks and failures.



Digital technologies are changing the way health professionals interact with patients.

Motivated but Constrained: These organisations recognise the importance of digital transformation and, in theory, are keen to progress; but certain factors are holding them back. They are typically less certain of their transformation objectives and lack strong leadership buy-in, clear vision or well-developed strategies. There is a lack of permission to move ahead aggressively. As a whole, these organisations are generally risk-averse and likely to feel overwhelmed by the changes digital technologies are bringing to their market. Insofar as they are undertaking digital transformation, they're likely to have forces pushing them, rather than taking the initiative in moving forward. These forces might include customers' and employees' expectations, competitors, fear of irrelevance and cost control.

Dividing up our interviewees in this way, we noticed that all respondents in the Proactive and Embracing group strongly agreed that digital transformation was a high priority. In contrast, only slightly over half of the Motivated but Constrained group agreed (though not strongly) that transformation was a high priority, while the remaining organisations disagreed or strongly disagreed with this statement.

The priority given to digital transformation corresponded with progress made. Thus, digital initiatives were more likely to be pervasive throughout Proactive and Embracing organisations than in the Motivated but Constrained camp.

→ Create systems

According to our survey group, digital transformation offered significant opportunities at every turn – with more potential gains for Proactive and Embracing than Motivated but Constrained organisations.

As Figure 1 shows, respondents were most bullish about the potential of digital-led change to help them better engage with customers and employees. This was followed by potential gains in the area of transforming products and streamlining operations.

Our view is that successful digital transformation requires these four dimensions to eventually converge. By systematically combining information technology and operations technology, an organisation can reap the true benefits of creating systems of intelligence.

Here, digital transformation is about building rich systems to better engage customers, empower employees, optimise operations and transform products and services. It's about using this intelligence to access data insights for a laser-sharp focus on commercial objectives and converting that into intelligent action.

Previously, businesses designed, built, produced and shipped a product, and then customers bought it. That was the end of the cycle. Now, organisations are re-envisioning entire business models. They are building in continuous digital feedback loops – sensors in products, after market services and customer feedback from a variety of channels. These are systems of intelligence.

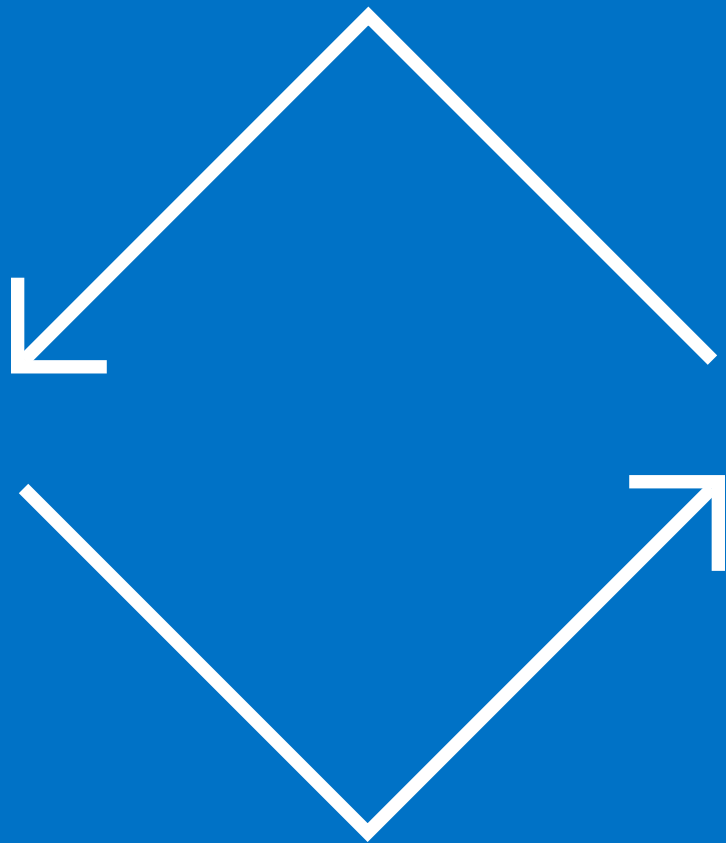
These systems are underpinned by a digital mindset that is a unique interplay of technology, people and process. It is adopting this mindset and a systems-based approach that we believe truly puts an organisation on the path to digital transformation.

Figure 1: Where respondents see opportunities in digital transformation



* Includes technology partners.

How to transform your organisation



Digital transformation starts with a strategic plan and centres on one or more of the following areas in a business: customers, employees, operations and products. The final step is to measure the results to assess impact and inform future initiatives.

➔ Set a strategy – and measure your success

A clear digital transformation strategy provides a foundation for success. It should align with an organisation's value proposition and have the potential to be effectively embedded and scaled.

A large majority of the organisations we spoke to had formulated digital transformation strategies for supporting broader business objectives. Half of these strategies were initiated in the past two years.

We found that organisations did not follow formal, structured programs for executing on their strategies; rather, they let digital initiatives evolve. This flexible approach makes sense in light of the speed with which technology is developing, and the traits of organisations that successfully transform (characteristically entrepreneurial, agile and competitive).

As Ros Harvey, founder and Managing Director of the agricultural technology company The Yield, said, "When you are creating something completely new, there's no road map. You are inventing every day."

Anthony Stevens, Chief Digital Officer at KPMG, also described his firm's transformation as a work in progress. "I think in some areas, it's more or less formalised; in some areas, it's emerging and pretty embryonic," he said.

Most organisations recognised the importance of questioning existing business models and experimenting with new ones. Nevertheless, only a handful were acting on this as part of their digital transformation.

One such organisation was the mortgage broker Aussie. Richard Burns said the organisation had changed various structures in the past 12 months as part of its digital strategy. This included restructuring marketing and technology teams, implementing process innovations and refocusing to make the most of new skillsets.

Data Scientist Dr Suresh Sood, from the Chartered Accountants Australia and New Zealand, also emphasised the importance of examining business models as part of digital transformation. "Digital transformation offers an opportunity to change the business model. Now, if you change your business model, you are going to change the way in which people work and you are going to change processes. So, to me, the essence of transformation is the opportunity to build new business models and shift from outright purchases to a pay-as-you-go mentality," he said.

The leaders surveyed agreed it was important to track the progress of digital initiatives. This included collecting feedback, measuring return on investment and taking appropriate action. Tracking progress can help secure buy-in for future initiatives, correct design flaws and pinpoint knowledge gaps.

The beauty of digital feedback loops is that they enable fast, reliable measurement, as observed by Silvano Tittoto, General Manager – Data Analytics & Insights at WorldSmart. "It's not like you get traction and you might see results in three months' time; it's instant," he said. "We can track you on day one. So, if that thing hasn't had an impact, you can make modifications on the fly."

Leaders said their organisations mostly measured success via feedback sessions, forums with internal and external stakeholders, and annual surveys; for example, for employee engagement. Those organisations without formal feedback loops said they aimed to stay informed by encouraging open communications about digital initiatives.

All organisations recognised the importance of internal communication in digital transformation. Interviewees said this education process enabled the adoption of new technologies by building understanding and confidence. They also said that having well-informed teams was critical to the effective use of new digital systems.

"On the monetary side, our budget has gone down by 20 per cent over the past 10 years. And we probably provide 200 to 300 per cent more services for a 20 per cent lower budget... This was a five-year program of work and we injected a huge amount of transformation very quickly, and at the end of it we were two steps above everybody else and we could leverage that going forward. So, digital transformation has been significant to us."

Phil Sherwin Director Strategy and Architecture,
NSW Department of Education



Richard Burns
General Manager
Customer, Aussie

What does progress look like?

Our interviews revealed three main approaches used by Australian organisations pursuing digital transformation projects.



Isolated experimentation

These organisations have experienced isolated success for a particular product or business unit, but these point projects have not had an immediate or direct flow-on impact in other parts of the business. Often this is intentional, with businesses experimenting in a controlled environment, perfecting the initiative and then rolling it out enterprise-wide or to external customers.



Progressive building

These organisations start with a series of small shifts that build the foundations for the future. They do so on the pretext that this is more practical than rolling out one large-scale program. These smaller shifts allow for fast iteration, encourage buy-in from the rest of the organisation and provide quick wins as evidence for future developments.



Rapid delivery

These organisations have been able to build momentum quickly, sometimes at large scale, and have even surprised themselves at their pace of change. For example, Aussie's Richard Burns said, "We literally turned every part of the business upside down in 12 months. So, there wasn't really much of a chance not to buy in, because the pace of change has been pretty substantial... If anything, the feedback has been, 'Well, that's been really empowering and exciting'."



Engage your customers

Digital transformation facilitates positive customer experiences. It generates insights from data and enhances connectivity – ultimately helping organisations to win, grow and retain customers. This benefit was reflected in our research findings.

Many organisations said digital transformation was first and foremost about serving customers. Peter Harvey, Division Director – Workplace Technology at Macquarie Bank, advised, “Start with the customers and start with your business. Understand their problems, their opportunities, and use digital as a tool to meet their needs.”

In our conversations, we found that organisations were using digital technology to enhance customer relationships by:

- establishing direct communication channels with customers that extended beyond stores, calls centres and other traditional points of contact
- sharing more information with customers in real time
- tracking customers’ experiences and tailoring interactions.

Cale Maxwell, Senior Manager – Digital, PR & Content at the Royal Agricultural Society of NSW, said he wanted to use data to improve the experience of customers at the Sydney Royal Easter Show. “We’re looking at what would make a customer’s day at the Show really easy, like by pulling out their phone and it automatically adjusts to Wednesday the 17th and shows you what’s on at 10am. And it automatically shows you the attractions that are closest to you to start with – because it knows where you are,” he said.

We also found organisations were connecting with customers in ways that were previously impossible. According to Michael Osborne, Cricket Australia is delivering digital platforms to support the thousands of volunteers that make grassroots cricket great. “We are investing heavily in capabilities that allow Cricket Australia to connect directly with our volunteers across the country and reduce the administrative burden... so that they have more time to be out on the oval doing what they really love.”

An organisation using digital tools to provide a highly tailored experience is Oneview Healthcare. It equips healthcare facilities with cutting-edge technology and tools that enable them to embrace the growing demand for consumer-centric care, while also empowering clinicians to focus on what they do best: improving the lives of those they care for.

“We see a better way to improve not only the patient experience, but the experience for everyone involved in their care, including family members and clinicians,” said James Fitter, CEO of Oneview Healthcare. “Our solution enables patients to be more connected, more empowered and more in control of their healthcare experience. It allows care teams to spend time on more meaningful work and provides fewer IT headaches for CIOs.”



Cale Maxwell Senior Manager – Digital, PR & Content, Royal Agricultural Society of NSW

Case study

Cricket Australia – intelligence shaping team and player performance

Cricket Australia is the national governing body for the game in Australia. Its purpose is to unite and inspire Australia. Australian cricket has more than 14 million fans and 1.3 million participants.

According to Michael Osborne, Head of Technology, one of the organisation's goals is to produce the best teams, players, competitions, coaches and officials in the world. "It's all part of our vision to be Australia's favourite sport and a sport for all Australians," he said.

This is an ambitious goal, requiring a state-of-the-art approach to performance management. Mountains of performance management data are available internally; the challenge is putting it to best use.

Cricket Australia is addressing this with technology. Working with Microsoft, it is developing a team and player performance (TPP) platform that aims to supercharge player results. The platform will include a visual and intuitive dashboard that will surface key insights to help coaches and high-performance staff prepare players for peak performance.

The TPP is about giving each athlete and team every possible advantage, and that translates to scoring more runs and taking more wickets. As Osborne said, "The results will play out on the field."

The TPP platform is powered by the Microsoft Cloud Platform and the Cortana Analytics Suite, and uses machine learning, predictive analytics and rich visualisations. These technologies will help Cricket Australia track and manage injuries, report on athlete and team wellness and readiness for matches, and even set intelligent alerts that watch for specified issues and flag when intervention is required.

"We not only want to help define and drive this evolution, we also want to feed into the development of the world's best practices in sport data analytics. We aim to unlock the insights buried in the data surrounding our athletes and make the data more actionable... tailored not just for every individual player but also to take into account how each player responds to particular conditions and their role on the team."

Michael Osborne Head of Technology, Cricket Australia







Empower your employees

Digital technologies foster innovation, efficiency and growth, and break down communication barriers, enabling unprecedented knowledge sharing. Employees gain flexibility – being able to work anywhere, anytime – and the ability to focus on high-value-added activities to increase their productivity. Organisations can also gain insights from data to help them make decisions that increase engagement and retention.

Interviewees said social networking tools such as Yammer, intranets and videoconferencing solutions engaged and empowered employees. These tools increased collaboration and intimacy beyond staff members' natural work groups. They also increased employees' capacity to work with remote or overseas colleagues by improving their understanding of cultural and organisational context, and local awareness.

Silvano Tittoto from WorldSmart said digital transformation empowered customers and employees to demand more, resulting in a snowballing effect.

"It used to be IT saying, 'Hey, this is what you can and can't have', but now it's the business saying 'You need to deliver this, and I don't really care what happens here, just deliver it.'"

Silvano Tittoto General Manager – Data Analytics & Insights, WorldSmart

Digital feedback loops have allowed packaging leader Pact Group to track increased employee engagement.

"Year on year we have had significant improvements in employee satisfaction with regard to our solutions, platforms and capabilities. Three years ago, IT was not seen as an enabler, but we've now pivoted to the point where every day teams are knocking on our doors asking for IT's capability, support and insight."

Michael Ross Chief Information Officer, Pact Group



Case study

Macquarie Group creates virtual corridors around the world

Macquarie Group is a leading provider of financial, advisory, investment and funds management services. It employs more than 14,000 people in 28 countries, and has a near 50-year record of unbroken profitability. Although global, the organisation operates as a collection of small businesses.

According to Peter Harvey, Division Director – Workplace Technology, employees drive the digital transformation agenda. Delivering transformation also requires an ongoing and widespread commitment to innovation. This can be challenging with so many diverse businesses under one roof.

Macquarie Group is successfully stepping up to this challenge. It is using virtual hallways, videoconferencing and Yammer to help global teams connect and collaborate. Harvey noted the importance of supporting digital tools with a digital mindset.

“We talk a lot about a ‘bump factor’. We engineer and architect our workspaces so people inadvertently bump into each other. We create central cafes, common stairways, and kitchens on every second floor. Then, we complement that with the virtual bump... We are doing things like creating virtual hallways between locations and vibrant Yammer communities that create the same connections digitally.

“You can create the technical empowerment, but if you don’t have the cultural element of empowerment and digital experimentation you get a mismatch of the two.”

Peter Harvey Division Director – Workplace Technology, Macquarie Group





Optimise your operations

Digital transformation can significantly streamline an organisation's operations, especially by providing real-time feedback on operations that can be used to improve decisions.

In fact, major companies are finding that the project to optimise operations can be significantly larger than customer-focused initiatives. According to a recent report from technology research firm Forrester, the American business Home Depot is investing \$4 on digital operational excellence for every \$1 it spends on digital customer experiences.⁴

All of the organisations involved in our survey were using digital tools to optimise their operations. A majority were increasing automation to drive down operating expenses and increase agility, productivity and consistency in the integrity of data.

In many cases, new digital capabilities were being used to extend traditional customer relationship management and enterprise resource planning systems. Some organisations were also creating digital platforms to integrate business units and accelerate software development processes.

We found organisations were using cloud computing – including Infrastructure as a Service and Platform as a Service approaches – to drive the pace of innovation, focus resources and scale quickly.

Brent Southey, Director of NBN IT at Telstra, said, "At Telstra we have a 'Cloud First Strategy'. We want to take advantage of cloud and software as a service to reduce investment in maintaining and upgrading on-premises hosted IT systems. More importantly, to be a leading digital company, we need to leverage the scale and investment in these ecosystems to deliver the customer experiences required and to be prepared for the rapid changes coming to our industry."

When it comes to using data to make better decisions, Graham Anderson, Head of IT at Webjet, said, "We've now got lots of data with pre-emptive metrics and measures that help us drive good decisions around what products we should be offering, what price points we should be doing it at, what our customers think about us and what our customer service is really like."

"As we digitise, we are getting better intelligence, which is leading to better decision making."

Anthony Corbitt, Assistant Secretary – Operational Capability, Department of Immigration and Border Protection



⁴ Ted Shadler, 'In 2017, Digital Transformation Budgets Will Top The Billion-Dollar Bar', Forrester blog, 1 November 2016.

Case study

Webjet builds first-of-a-kind travel industry blockchain solution

Webjet is a leading digital travel business, spanning regional consumer markets through its business to customer (B2C) division, and global wholesale markets through business to business (B2B) activities. The B2C division operates the leading online travel agency in Australia and New Zealand under the Webjet brand, and operates in Singapore and Hong Kong under the Zuji brand. The sites help customers compare, combine and book flight deals, hotel accommodation, holiday package deals, travel insurance and car hire worldwide. The B2B division provides online fulfilment of wholesale hotel bookings for travel agencies throughout the world via the Lots of Hotels, Sunhotels and FIT Ruums brands.

With so many facets to its business, it is important for Webjet to keep things simple. In its wholesale hotel environment alone, Webjet processes thousands of transactions each day – connecting customers with hotels, and passing through multiple operators along the way. A single error affects multiple parties, and can have serious financial consequences.

“Globally, hotel room wholesaling is a hundred billion-dollar marketplace.⁵ Every day there are millions of transactions taking place and a single hotel stay could involve five or more transactions in the distribution chain. This marketplace can be prone to data discrepancies due to the volume of bookings passing through multiple systems. Between five and ten per cent of bookings can be impacted, or in other words, up to ten billion dollars’ worth of transactions.”



John Gusic Managing Director, Webjet

⁵ 'Hotels Market (Type – 1-star, 2-star, 3-star, 4-star, 5-star, and unrated) – Global Industry Analysis, Size, Share, Growth, Trends and Forecast 2015–2021', Transparency Market Research, July 2015.

Case study

continued

The scale of this challenge led Webjet to explore blockchain as a way to resolve issues created by data mismatches. This new technology encrypts data to enable security and transparency. Blockchain helps businesses to almost instantaneously make and verify transactions, streamline payment processes and save money throughout the distribution chain.

Webjet is using the technology to underpin the use of smart contracts. "Blockchain eliminates transaction errors by having an indisputable record of truth, and as we've tested the technology, we quickly realised its potential to improve processes with the rest of our travel partners who face similar complexities. It didn't just benefit the Webjet environment, but it could assist every one of our partners in the supply chain to improve their efficiency," said Guscic.

The company's digital solution for optimising operations is also becoming a disruptive new business in its own right.



"We realised facilitating bookings in the travel industry through blockchain could become an additional business we could enter in the future, and the same technology could also help solve problems outside the travel industry. Undoubtedly, the blockchain technology built with Microsoft is an exciting opportunity for us."

John Guscic Managing Director, Webjet





Transform your products and services

A digital mindset combined with a systems-based approach propels product innovation. Organisations can design and redesign products in real time to reflect customer preferences and market trends.

A number of organisations we surveyed were using digital capabilities to transform their products and, in turn, the experiences they delivered to customers. These new developments often complemented existing value propositions.

For example, Domino's transformed the experience of its customers by allowing them to use an app to track the delivery of their pizzas in real time. It is now going further and piloting the delivery of pizzas by autonomous vehicle and drone.

Oneview Healthcare is developing solutions for the aged care market with wearable technology to enable a holistic view of each resident's wellness, including information about their biological, physical and social state. "We are very excited about how the Oneview solution will bring about digital transformation in the aged care market and change the model of care for the better," said Mark McCloskey, President and founder of Oneview Healthcare.

Other organisations, such as Macquarie Group, have opened up new revenue streams. Peter Harvey said the bank developed an app that made it easier for clients to trade blocks of shares, transforming how the Group trades with its wholesale customers.



Mark McCloskey
President and founder,
Oneview Healthcare



Case study

The Yield – ‘Smart farming’ combats uncertainty



Barilla Bay, Tasmania

Established in 2014, The Yield is an Australian technology company focused on the agribusiness sector. Its founding vision, as described by Ros Harvey, founder and Managing Director, is “to help feed the world without wrecking the planet”.

The Yield’s customers are growers, food processors and industry regulators who need access to accurate, reliable and current data to support their decision making. The Yield’s goal is to help its customers deal with the uncertain effects of weather on food production. The Yield is applying intelligent digital solutions to help solve this challenge in two primary fields: oyster farming and crop production.

These solutions combine IoT technology, Microsoft’s Azure machine learning and apps to measure and predict hyper-localised growing conditions. They distil this into elegantly simple user interfaces designed in collaboration with growers. The result? Growers can make fast decisions with confidence.

Saving oysters

The Australian oyster industry, which turns over about \$100 million a year, loses an estimated \$25 million annually from rain-related closures. Oysters are filter animals and accumulate contaminants from run-off. Food safety authorities close harvesting when it rains to protect human health.

The Yield used the Microsoft IoT hub in the Azure cloud to create a system of sensors at 14 oyster harvesting sites in Tasmania. Using real-time salinity data from the leases, instead of rainfall data from the nearest weather station, The Yield’s technology reduced the number of unnecessary harvest closures by 30 per cent. This has saved the Tasmanian oyster industry alone an estimated \$1.6 million annually. Both the NSW and Tasmanian food authorities are customers.

The Yield can also use machine learning to predict closures so that growers can get their oysters out of the water before harvesting is closed down.

The Yield’s technology is also being used to proactively manage the risk to oysters of a virus called Pacific Oyster Mortality Syndrome, to track food provenance and to improve labour productivity by up to 25 per cent through highly localised tide predictions.

“Basically what that means for me is when I see trouble brewing, I now have enough time to start getting the oysters out of the water, five hours in advance, when I used to just have five minutes.”

Justin Goc Manager, Barilla Bay Oysters



Houston Farm, Coal River Valley, Tasmania.



Case study

continued



Ros Harvey Founder and Managing Director, The Yield

Watering crops

Crop irrigation presents a major challenge for farmers. Decisions about when and how much to water plants have traditionally relied on a combination of experience, intuition and guesswork.

The Yield has developed a technology that Ros Harvey describes as “taking the guesswork out of growing”. It measures and predicts hyper-local real-time weather data at the farm, field, row and even plant level. The Yield then converts this into crop-specific knowledge that growers care about, such as when to plant, irrigate, feed, protect and harvest their crops. Its apps are designed with growers to solve on-farm challenges.

“When you’re harvesting hundreds of tonnes of lettuce each year, this app makes it less farmers’ intuition and more of an exact science.

“On a tangible level, each year we lose around 200 tonnes of lettuce to water-related issues. With The Yield, we think we can reduce that by 30 per cent, saving hundreds of thousands of dollars each year.”

Liam Houston Agronomist, Houston’s Farm

Success factors



Our research suggests that successful digital transformation is about people as much as technology. Here we consider the biggest issues being encountered by Australian organisations and how you can make those barriers success factors.

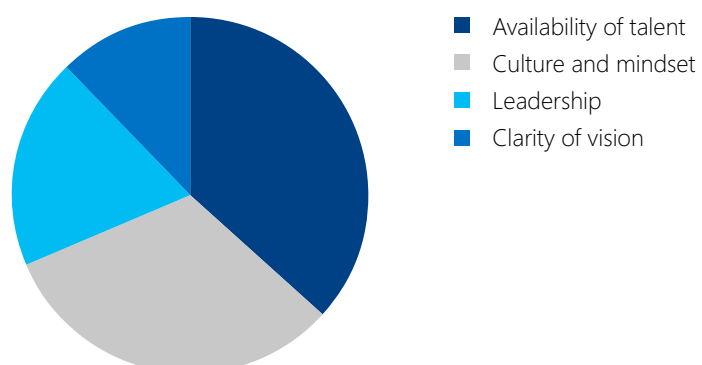
➔ Common barriers

The organisations surveyed identified their top four barriers to digital transformation as availability of talent, culture and mindset, leadership and clarity of vision.

Collectively, organisations cited availability of talent as the number one constraint, followed closely by culture and mindset. However, when we divided the sample into its two groups (Proactive and Embracing, and Motivated but Constrained) we found some variation. Specifically, Motivated but Constrained organisations perceived leadership and culture to be greater hurdles to transformation than availability of talent.

These findings show that strong leadership and culture are important foundations for digital transformation, but that as momentum builds, other layers need to be added. In particular, access to talent – whether internal, outsourced or via advisory or technology partners – is critical for sustained success.

Figure 2: Top barriers to digital transformation (all respondents)



➔ Leadership

Given the breadth and impact of most digital transformation programs, it is essential that they are driven from the top of the organisation and enjoy sustained commitment.

Effective leaders communicate a clear vision and commit to it wholeheartedly, investing resources, including time and funds. They empower their teams and encourage collaboration and experimentation. Strong leaders make digital transformation a priority.

As Richard Burns from Aussie said, "You need strong leadership... strong and aligned and prepared to be bold."

Lynn Warneke, Executive Director – Channels & Platforms at Deakin University, supported his comment. She said, "ROI isn't as clear as it has been in the past for more traditional IT. Some of our work at the leading edge of digital is really radical stuff, and having a Vice Chancellor who is prepared to back augmented reality, for example, is fabulous. It's amazing."

➔ Culture and mindset

An organisation's culture – its shared assumptions, values and beliefs – can enable or inhibit digital transformation. In particular, the business's mindset towards digital transformation is critical. For instance, are transformational projects seen as positive initiatives that will open up new revenue streams or ways to cut costs and jobs?

A respondent from a large company said internal opponents to the organisation's transformation efforts referred to agile development processes as "cowboyism". Another believed employees often drew an imaginary line between digital transformation and job obsolescence. "The ability to create a sense of urgency is very difficult because people see transformation and the next word that flashes in their mind is threat," the respondent said.

Key to overcoming internal resistance is helping stakeholders understand how digital transformation will work and, in particular, how their roles will be changed for the better.

Survey participants warned against retrofitting digital transformation into traditional ways of working. Most organisations will need to undergo some cultural change, including becoming more comfortable with ambiguity, as part of their journey.

Cultures that embrace transformation do so pervasively. Domenic Ziino, General Manager – Digital Technology at the Commonwealth Bank of Australia, said, "We call digital transformation 'a new operating model'... Is any part of the group immune to this? No, it's not... We are going throughout the entire group, asking, 'How can it work in a more agile fashion? Can it start to embrace some of these new capabilities, and do that end-to-end?'"



Lynn Warneke
Executive Director
Channels & Platforms,
Deakin University

➔ Talent

The organisations we spoke to accessed digital talent from a variety of sources. They all employed IT specialists (and often digital experts too, distinct from IT). Some outsourced their digital capability and others used shared services. All organisations used technology partners to augment capacity and capability.

Opinions varied about whether or not it was challenging to find digitally aware talent and build a business case to employ them. Phil Sherwin from the NSW Department of Education, said there wasn't "a scarcity of digital talent", but that the hype and fast pace associated with digital developments led to fairly high turnover and a corresponding "lack of maturity in digital transformation staff".

Some organisations had created specialised roles, such as futurists and chief digital officers, to spearhead their digital transformation efforts. Others had restructured their IT teams to give digital specialists more autonomy, plucking digital support and development staff members from shared-service IT teams. They were placed under designated digital leaders with unique key performance indicators and budgets.

Yet other organisations were combining IT and marketing departments in a powerful, cross-functional approach to improving the customer experience. For example, Phil Sherwin said, "We have seen ourselves move from being a purely back-office cost centre to being business enablers."

The skillsets required for transformation stretch beyond digital savvy, and this means organisations must pay attention to the quality and diversity of their entire talent pool.

➔ Further inhibitors

In addition to the above factors, interviewees said their digital transformation efforts were often hampered by concerns about security, confidentiality and regulatory compliance.

Public sector organisations, in particular, were affected by privacy and security concerns. Lynn Warneke from Deakin University said, "When you want to pursue the most ambitious personalisation agenda possible, it means you have to know an enormous amount about that individual – so you do butt up against issues of personal readiness, privacy concerns, trust and data security."

Anthony Corbitt from the Department of Immigration and Border Protection, added, "I think the main thing for an organisation like ours is the classification of the data that we hold and the protection that we need to put on it. So if you had guaranteed cloud-based services that were in Australia, and the ability to make sure that ours were segregated appropriately, you would have a faster shift towards it."



Graham Anderson Head of IT, Webjet

In most cases, security concerns were not a deterrent to digital transformation; they just put organisations on guard. Graham Anderson from Webjet said, "We want to make sure we are maintaining a good level of security with anything that we put out, and we want to educate our own folk around what's out there in the big wide world of digital transformation and what they need to be mindful of from a security perspective."

Some respondents from large businesses said the size of their organisations worked against them, breeding a risk-averse culture and the sense they had a lot to lose. However, one interviewee said his organisation's bigger balance sheet gave it an advantage as it could invest more on automation.

Respondents also cited other barriers to transformation, including legacy systems and public scrutiny. The role of big data was also raised.

Peter Harvey from Macquarie Group said it was a challenge to harness data. "Data is abundant and big data can be wonderful in the focus and insight it provides. It is no small exercise though, taking a sea of data and turning it into truly meaningful and actionable insights. It's a long-term journey the organisation is on."

Future trends



The rapidly changing nature of technology can already make it hard for organisations to deliver digital transformation programs. Yet organisations expect this fast pace to continue or accelerate.

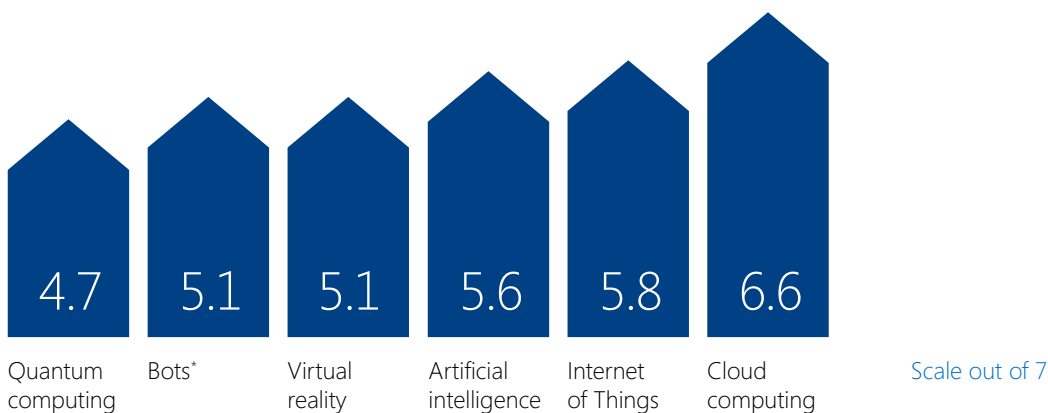
Trends such as cloud computing, IoT systems, robots, artificial intelligence, quantum computing and virtual reality are becoming mainstream. These digital technologies will have unlimited scale, with the possibility for unbelievable innovation.

Figure 3 shows the proportion of organisations that expect their businesses to be substantially affected by specific digital technologies over the next five years.

“Digital change is going to accelerate more and more... If you want to have a future, you’ve got to really embrace it, understand it and engage with it. Find ways to take what your business – whatever it may be – is really good at, and be even better at it.”

Ros Harvey Founder and Managing Director, The Yield

Figure 3: Expected impact of future digital technologies



As a major manufacturer, Pact Group is excited by the potential of robotics. "We have a desire to become a lights-out manufacturing business and, therefore, with everything we work on, from the back office to the factory, there is an increasing focus on automation and robotics," Michael Ross said.

"The Internet of Things is interesting for us. Imagine a future where you are in the backyard with your family, playing cricket. The wicket and balls are all internet-connected and you are using our app on your phone to score. It's not only helping you score, but also giving you ideas to improve your game or different rules you could apply."

Michael Osborne Head of Technology,
Cricket Australia

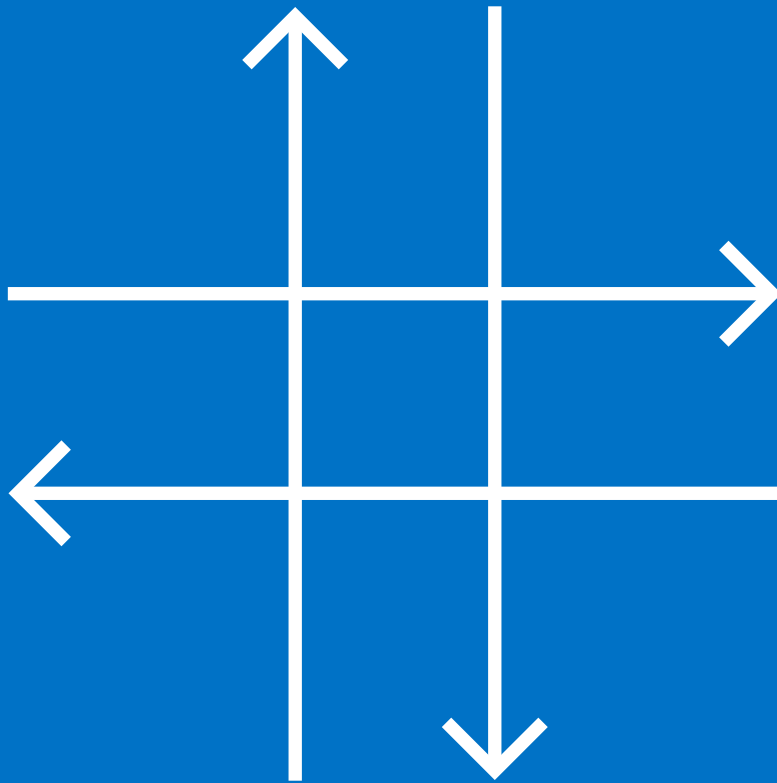
Brent Southey from Telstra is excited by the potential for digital technologies to be used to benefit society.

"Using technology to help people who have disability is another incredible area. Take the concepts of products like HoloLens, robotics and virtual reality combined with great connectivity. I think there's a world of opportunities on how we can apply these to help people in business, healthcare, education and entertainment that we are only just starting to discover."

Brent Southey Director – Digital Enablement, Telstra

* Process automation via software robots.

Your next steps



Digital transformation is about more than just technology. It is about adopting a new approach to the entire network of systems that power your organisation. It is about harnessing people, processes and digital tools to make faster, better decisions that sharpen your competitive edge and bring into focus exciting new opportunities.

Digital transformation is an ongoing journey made up of practical steps that every organisation can take. As you plan your way ahead, some great questions to ask are:

1. What are we trying to achieve and how can digital transformation help us to realise those goals?
2. Which digital initiatives offer the best returns?
3. Do our leaders support digital transformation and have a clear vision for the future?
4. What process, technology, cultural or organisational obstacles do we face?
5. Do we have access to the talent we need to make this happen and how can we make the most of our relationships with advisory or technology partners?

Figure 4: Framework for success

Once you have assessed your situation, you can use the framework for success below as a high-level checklist for turning your intentions into action. This structure is based on our research findings and provides an outline for embarking on a successful digital transformation journey.

Prerequisites	
Organisations need:	→ Leadership buy-in
	→ Clear vision
	→ Well-defined strategy
Which requires the following cultural traits:	→ Brave
	→ Committed
	→ Open to change
And is supported by:	→ Access to digital expertise and other talent

Initial steps
→ Secure strong executive sponsorship
→ Identify digital champions
→ Consult with key stakeholders
→ Develop vision and strategy – possibly with the support of advisory consultants – and communicate these organisation-wide
→ Examine the business model and plot opportunities for improvement
→ Identify change management requirements
→ Secure critical talent

Ongoing
→ Seek operational support from technology partners
→ Commit to ongoing education and internal communication
→ Promote success stories
→ Install regular feedback loops (via personal contact as well as digital)
→ Ensure digital projects are scalable
→ Manage change
→ Recruit and retain talent
→ Collaborate
→ Keep going!

Further information

www.microsoft.com.au/digital-transformation

