

Disruptive Decision-Making

Better ways to shape your
digital transformation journey

A Telstra thought leadership paper



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Start



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Foreword

Digital transformation has become a strategic priority for almost every organisation around the world.

It has moved out of the realm of ad hoc experimentation into a widespread adoption as companies seek to better connect with their customers and disrupt themselves or their industry to create business value.

Yet getting digital transformation right is a major concern for many business and government leaders - it's a lot more than just digitising a process or implementing a new technology platform or hiring in digital expertise.

The reality is there is no one formula for success.

Disruptive Decision-Making takes a fresh look at the challenges leaders face as they seek to make the right decisions on how to approach digital transformation to deliver the outcomes that will ultimately drive growth.

To shed light on these challenges and many more, we surveyed 3,810 respondents from 12 industries in 14 markets around the world.

Our research will provide insight into how organisations are making successful digital transformation decisions, identify the areas for improvement in the decision-making process, and how decision-making influences the outcomes of key organisational goals.

It helps to not only explain the 'what' and 'why' of digital transformation but also the 'how'.

We hope the insights and recommendations made in this report enable and empower you to optimise your disruptive decision-making and drive success on your digital transformation journey.



Michael Ebeid AM
Group Executive
Telstra Enterprise



Introduction – Why Digital Transformation Decision-Making?

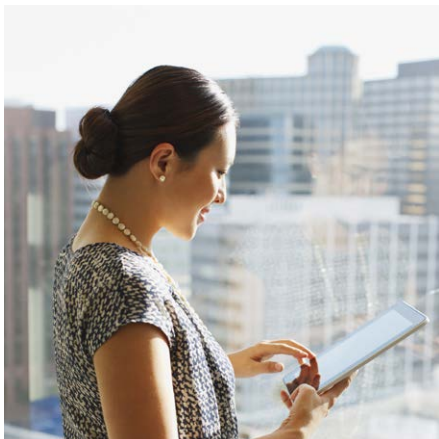
Digital transformation is firmly established on the agenda of boards and executives around the world.

Businesses of all sizes are disrupting markets and industries with innovative new models, products, and services. Or they are being disrupted by those that are.

Digital technologies are at the heart of this new industrial revolution. Cloud computing, IoT, mobility, big data, artificial intelligence and more are changing the way that we live our lives. And in turn it is changing the way we choose to interact with each other, with businesses, and with other organisations.

The pressure is on organisations to use digital transformation to better meet customer needs and keep up with, or surpass, competitors.





Digital transformation is becoming even more complex

Managing and implementing a digital transformation project can have wide-ranging consequences for an organisation. Making the right call is important.

Yet with so many options available, the pace of change so unrelenting, and complexity increasing with every new innovation, making those decisions is hard.

Sixty-one per cent of CIOs say projects are becoming more complex, and 58 per cent say they are more ambitious, than five years ago ([KPMG CIO survey 2017](#)).

At the same time, 79 per cent of CIOs find it challenging to find the right information to enable them to make decisions ([IDG Customer Engagement Study 2017](#)).

Some information will break through, but it can be hard to filter out what is important from what isn't. As one senior executive interviewed for this research put it:

“Businesses are swimming around in information and technology. But every industry is struggling with it. Some have understood that and brought on the right people to help – and they are probably doing better, and in the future, they will do better as a business. The more you understand it, and can implement it, the better.”

Understanding digital transformation decision-making

Telstra sought to understand how business leaders around the world make digital transformation decisions. What contributes to good digital decision-making? And, what is holding organisations back from making better decisions that deliver tangible business benefits?

To determine this, we polled 3,810 organisations in 14 markets around the world to find out how organisations rated their digital transformation decisions and what outcomes they seek to achieve. We also researched organisational priorities for digital transformation projects, and their performance in achieving those goals.

To do this, Telstra identified four key factors that drive the success of digital transformation and used them to measure decision-making in this study. The four were chosen after extensive background research and consultation prior to the research going into field. They were:

- People
- Processes
- Technology Understanding
- Partnerships

We uncovered valuable insights into where organisations believe their decision-making strengths and weaknesses lie. We also gained understanding into how decision-making influences business outcomes, and where organisations can focus attention to improve their initiatives and achieve their goals.

Executive Summary



“Digitally mature companies are better at developing digital leaders and push decision-making deeper. They aren’t organisations that simply buy boatloads of new technology and drop them on top of their workforces. They recognise that digital transformation has to come from within – adopting forward-looking attitudes, encouraging innovation at levels, and enabling decision-making at all levels.”

Forbes, June 2018: [Technology Alone Won't Buy You Happiness – or Digital Transformation](#)



Organisations are, for the most part, focused on technology as part of the decision-making process to derive the benefits of digital transformation.

Our study looked at the ability to make digital transformation decisions in light of four core business factors: **'people'**, **'processes'**, **'technology understanding'**, and **'partnerships'**. Of the four, respondents rated their **technology understanding** the highest in the digital transformation journey. At the other end of the scale, **'people'** rated the lowest.

And, while strong ability and performance in technology is important, the research showed that strength in all four decision-making factors is a sign of a digitally mature organisation. This was measured in the research in terms of how far along the digital transformation journey organisations felt they were. When analysed as standalone factors, those organisations with a focus on **'people'** and **'processes'** are both more likely to be further along their digital transformation journey and as such, more digitally mature.

To determine decision-making ability, respondents rated their organisation's effectiveness across seven stages of the decision-making process, analysed through each of the four core business factors. Generally, respondents had a positive perception of organisational decision-making ability. Yet, challenges appeared early on in the decision-making process, such as having the right vision and mindset.

Respondents' views of digital transformation performance did not reach the same levels of optimism as their decision-making ability. Rating how effective the four factors were across eight outcomes for digital transformation projects, organisations failed to realise good outcomes in areas such as **'increased profit margins'** and **'streamlining business costs'** in each of the four factors.

When outlining positive outcomes across the four factors of decision-making there was again consistency. **'Increased customer experience'** and **'delivering business efficiencies'** finished with the highest net scores across **people, processes, technology understanding, and partnerships**.

The results suggest organisations find it challenging to tie back digital transformation projects to hard financial measures. This finding is supported by Gartner analyst Paul Proctor, who in a recent [CIO.com](https://www.cio.com) article said that enterprise CIOs seeking to craft digital KPIs should begin by targeting two broad categories. The first set of KPIs should assess the company's progress in digitising its current business model by measuring goals in sales, marketing, operations, supply chain, products / services, and customer service.

A second set of KPIs should assess new revenue sources generated from new digital business models. These KPIs should represent growth, revenue, market share, and margin metrics that are differentiated from physical assets.

Anecdotal evidence suggests that most companies are further along with the first set of KPIs than the second.

Keeping up with priorities

Respondents generally reported a strong focus on security and optimising existing technology in their digital transformation priorities.

Yet, three of these top priorities (highlighted in italics in Figure 1) recorded some of the lowest performance scores across all 17 priorities.

It is interesting to note that the digital transformation priorities of digitally mature organisations show a greater emphasis on transformative innovation and doing more in real time.



Figure 1: Digital transformation priorities



This paper gives a snapshot of where the strengths and weaknesses lie in the digital transformation decision-making journey across the 14 markets surveyed. Specifically, with regards to the four core factors, the following conclusions can be drawn:

- Organisations need to empower their people more
- Processes need to support organisation-wide digital transformation
- Technology understanding is strong but not enough on its own
- Organisations can get more value from partnerships

Furthermore, the research provides insights you can use to evaluate your decision-making ability against your business objectives, help you identify areas for improvement, as well as understand where the focus and priorities are right now in organisations around the world.

Decision-Making in the Digital Transformation Journey

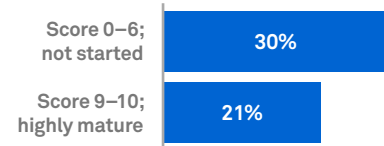


The digital decision-making landscape

The state of digital transformation – and digital transformation decision-making – around the world shows that organisations are aware there is more to do.

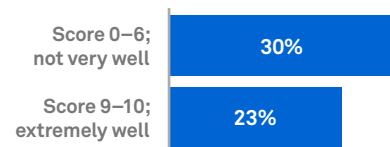
Thirty per cent of organisations rated their progress on the digital transformation journey as low (0-6). Just 21 per cent of respondents rated their organisation's progress in digital transformation as high (9-10).

Figure 2: Please indicate on a scale of 0-10 how far along your company / organisation is on its digital transformation journey, with 0 being not started and 10 being highly mature.



This perception is reflected in how global organisations perceive their digital transformation decision-making, though slightly more organisations showed high confidence in their decision-making abilities.

Figure 3: Please indicate on a scale of 0-10 how well you feel your company makes decisions related to its digital transformation, with 0 being not very well and 10 being extremely well.



How people, processes, technology understanding, and partnerships contribute to digital transformation decision-making

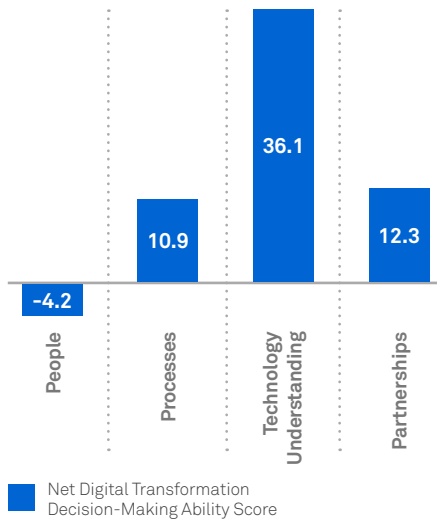
Looking deeper at the decision-making process, respondents rated (on a scale of 0-10), seven decision-making stages of digital transformation in light of their current 'people', 'processes', 'technology understanding', and 'partnerships'. These were:

1. Help with adopting the right vision / mindset
2. Help us understand and establish what it means for our business
3. Help us access the right information and support
4. Help us evaluate and assess its impact
5. Help us design and implement it
6. Help us monitor its effectiveness
7. Help us analyse and re-evaluate its effectiveness

The results show (Figure 4) that organisations are most confident in their 'technology understanding' as part of digital transformation decision-making.

At the other end of the scale, global organisations reported the least confidence in their 'people' to contribute to digital transformation decision-making.

Figure 4: These scores represent the total sum of all seven stages of the decision-making process, combining the net scores for people, processes, technology understanding, and partnerships. Respondents were asked to rate each stage in light of their people, processes, technology understanding, and partnerships.



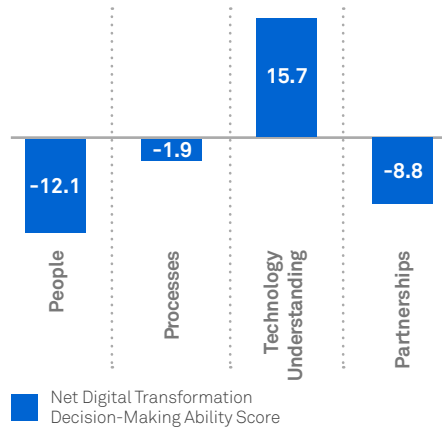
This trend continued when investigating how effective 'people', 'processes', 'technology understanding', and 'partnerships' were at helping to deliver business outcomes as part of the digital transformation journey. In total, eight outcomes were highlighted in Figure 5, they were:

1. Increased customer experience
2. Streamlined business costs
3. Deliver business efficiencies
4. Revenue growth
5. Increased profit margin
6. Increased customer loyalty
7. Increased employee satisfaction
8. Increased partner satisfaction

Again, it is clear global organisations believe their 'technology understanding' is most effective in terms of delivering across the right business outcomes.

Once again, 'people' were considered the least effective at being able to deliver business outcomes related to digital transformation.

Figure 5: These scores represent the total sum of all eight business outcomes, when measured in light of their people, processes, technology understanding and partnerships.

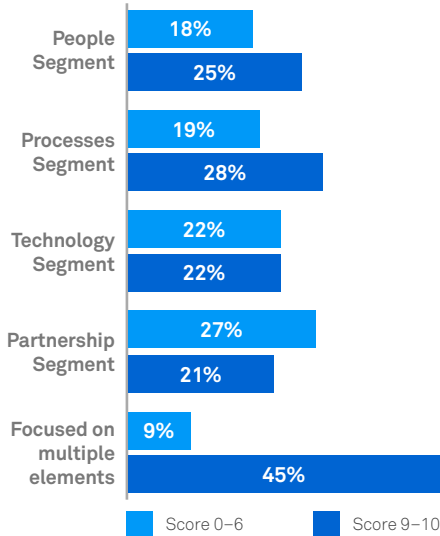


Too much focus on technology alone

The outcome scores in Figure 6 echo those of the ability scores in Figure 5. Business leaders are confident in their **'technology understanding'** as part of making better digital transformation decisions. Yet they recognise the decision-making ability of **'people'**, followed by **'processes'**, are the largest barriers towards getting the most from digital transformation initiatives.

This is in stark contrast to the key indicators that identify digitally mature organisations which have moved further along their digital transformation journey. Excellent ability across all four factors is likely to lead to greater digital maturity. However, when benchmarking the four factors against one another, our study identifies that organisations with strong decision-making ability in both **'people'** and **'processes'** show more signs of being digitally mature.

Figure 6: Please indicate on a scale of 0-10 how far along your company / organisation is on its digital transformation journey, with 0 being not started and 10 being highly mature.



The focus on people and their role in the digital transformation decision-making process in particular was highlighted in a 2018 study by The Economist Intelligence Unit (EIU), which featured an update of the Asian Digital Transformation Index first launched two years prior. The Index ranked 11 Asian economies in their overall environment for digital transformation across the pillars of digital infrastructure, human capital, and industry connectivity.

This second iteration of the study has found that digital expertise, particularly in fields such as AI and advanced analytics, is in short supply in most parts of the world.

The EIU report noted:

“The success of digital transformation, however—as with any change initiative—relies on much more than access to technology and talented specialists. It hinges on changing employee mindsets and organisational culture.

How willing and able are managers and staff to use emergent technologies to change their business processes and upend long-established ways of working? How ready are senior management to make structural changes in their organisation—for example creating new teams that are better able to leverage newly acquired technologies?”

There is a significant gap between digital transformation priority and performance

We surveyed respondents on 17 digital transformation priorities to understand which they ranked as their top priorities. Furthermore, they rated their organisations' ability to deliver those priorities in light of their current 'people', 'processes', 'technology understanding', and 'partnerships'.

Respondents reported a strong focus on security and optimising existing technology in their digital transformation priorities.

The top five priorities all sit within these two areas:

- 1. *Protect our digital assets from cyber threats. (39%)*

- 2. *Optimise our technology to move faster and adapt to change. (38%)*

- 3. *Optimise our technology to be more competitive. (36%)*

- 4. *Protect, detect, and respond in real time to events. (34%)*

- 5. *Optimise our security investments to reduce time and resource management. (34%)*

NB: The percentage scores relate to those who rated it a top priority.

However, there is a significant gap between digital transformation priority and performance.

Despite rating as the overall highest digital transformation priority, 'protecting digital assets from cyber threats' achieved the lowest performance score for the ability of current **people, processes, technology understanding, and partnerships** to deliver results.

In fact, three of the top priorities (highlighted in italics in the previous column) appear in the bottom five in terms of performance.

When analysed more deeply, 'people' and 'partnerships' were highlighted as the two areas that require most focus to help deliver better performance for these priorities.

Specifically, within the seven decision-making stages related to 'people', work needs to be done on:

- Giving people more support
- Empowering them to design and implement digital transformation projects

Partners need to focus on:

- Having the right vision and mindset
- Understanding and establishing what digital transformation means for the business
- Gaining access to the right information and support

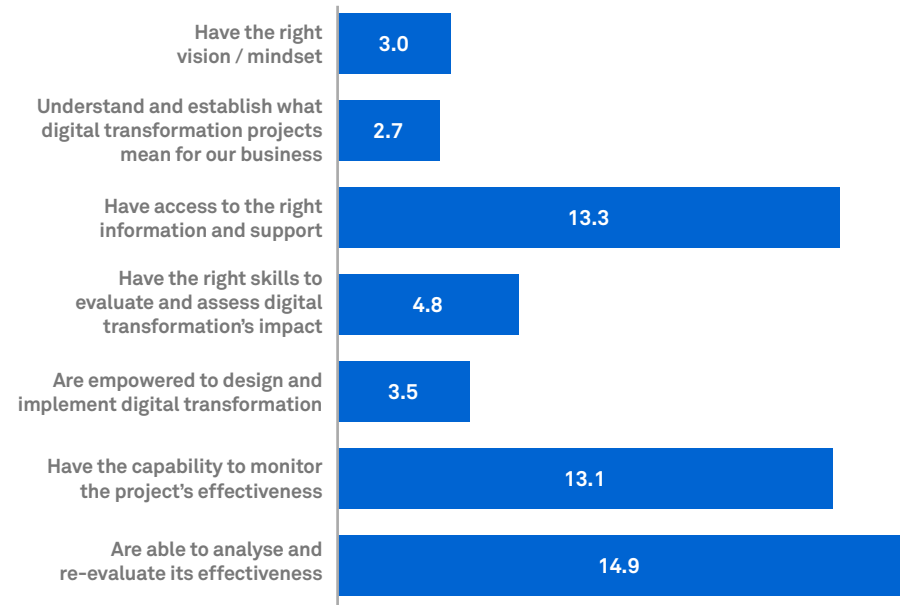




Better decisions start with a clear vision

Looking closely at the seven stages of digital transformation decision-making, we can identify significant areas for improvement. The table below represents the total net scores for each of the stages across all four factors of 'people', 'processes', 'technology understanding', and 'partnerships'.

Figure 7: These scores represent the total net scores for the seven stages of digital transformation decision-making.



It is significant that the lowest aggregate net scores across 'people', 'processes', 'technology understanding', and 'partnerships' concern the foundational stages of the digital transformation process. To ensure better and smoother decision-making across the entire process, a holistic view is required.

What does this mean for organisations?

The stages of the digital transformation process achieving the lowest net scores are the ability to **'understand and establish what it means for our business'** and **'having the right vision / mindset'**. It is clear that organisations can do more at the outset of digital transformation projects across all areas of business.

When considering these findings alongside the high scores for **'technology understanding'**, it suggests there may be a disconnect between understanding a certain technology's features and functions, and what it can achieve or deliver in the wider context of an organisation's digital transformation.



One senior business leader we spoke to described how he saw this trend playing out in the market.

“People don’t have the vision and competitive sharpness because there’s a lack of education around what digital can and will do. Decision-making becomes reactive and driven by the customer through the functional departments.”

Our research shows organisations that focus on empowering their people, building effective partnerships and strengthening their processes – to support good decision-making through all the phases of decision-making – will enjoy better outcomes than those that focus on technology understanding alone.

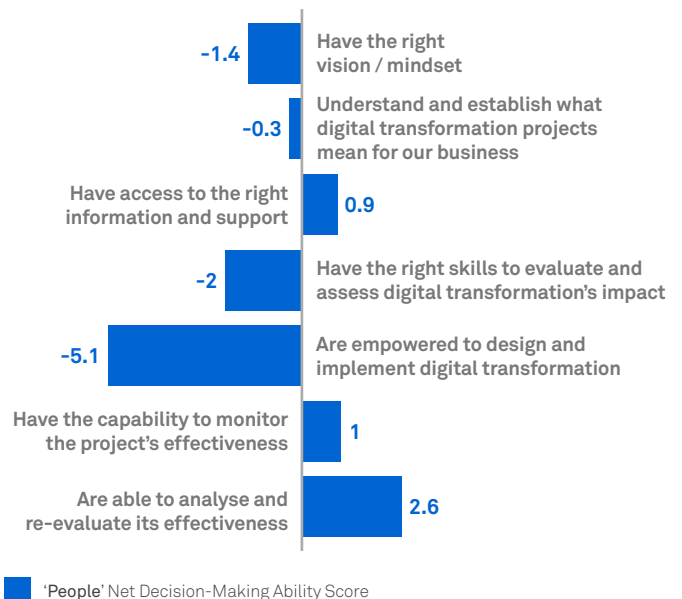
Decision-Making Ability in Detail: People



Organisations need to empower their people

'People' rated the lowest of the four core factors when it comes to their ability to contribute to overall digital transformation decision-making. Respondents were asked to view each of the seven decision-making stages below in terms of their 'people's ability' when embarking on a digital transformation project.

Figure 8: Our understanding of people's role in our business' digital transformation projects, by net score.



Looking at the seven digital transformation decision-making stages, it's clear that empowerment of people is a major part of the problem. Organisations gave the lowest net score to 'Being empowered to design and implement digital transformation projects'.

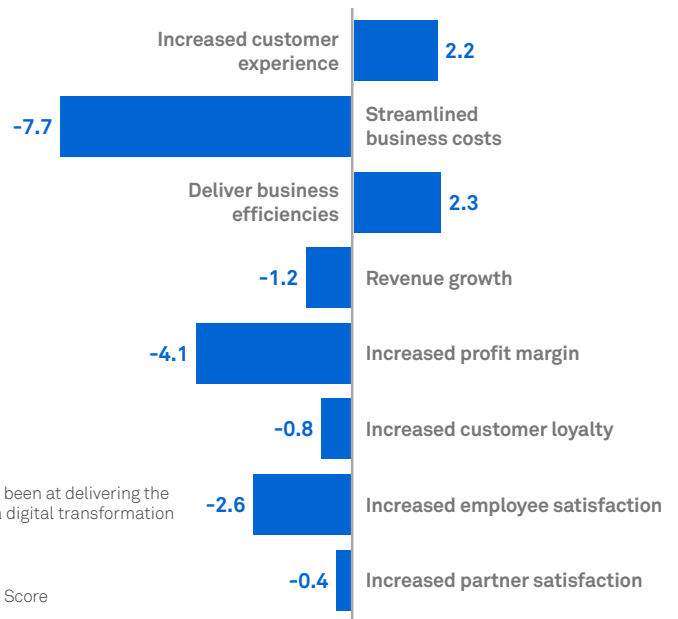
It's also apparent that work is needed in the initial phases of the journey too. From having the right initial vision and mindset for a digital transformation project, through to being able to evaluate and assess the options available to them, there is opportunity for organisations to improve digital decisions at the outset of transformation projects.

It is not until we move towards the final stages of the decision-making journey that we see organisations feeling relatively comfortable with their people's ability, especially in being able to monitor and re-evaluate digital transformation projects.

When it comes to the outcomes of those decisions, people are primarily driving 'softer' benefits.

Figure 9: How effective have your people been at delivering the following outcomes as part of a digital transformation project, by net score.

■ 'People' Net Effectiveness Score



Organisations saw their people's contribution to digital decisions helping to deliver 'improved customer experience' and 'delivering business efficiencies'. Yet, that leaves opportunities for organisations to improve financial benefits, including 'streamlining business costs' and 'increasing profit margins'.

While 'people' received the lowest digital decision-making ability ratings of the four factors, there are some digital transformation priorities where people play a positive role.

In particular, 'people' was rated the highest of the four key decision-making factors when it came to delivering:

- Keep up with the pace of innovation in new markets
- Challenge the status quo to differentiate, seizing new market opportunities
- Increase connectivity to improve employee effectiveness

There is still work to do when it comes to developing people as a digital transformation asset.

Recent research from MIT / Sloan into digital maturity found that "many people don't innately possess the skills necessary to succeed in a digital world, but they must develop them as they adapt to the new challenges wrought by digital disruption".

While the lack of skills is a concern for organisations around the world, our research suggests that there is a larger cultural barrier. If organisations can empower their people to design and implement digital transformation projects more often, they can unlock the potential of their workforce and improve their business outcomes.

A spotlight on: People

Supporting exponential growth in India through digital skills

It's an exciting time to be in India.

McKinsey estimated that India will be the third-largest incremental GDP growth engine for the planet by 2030.

That growth is creating a climate of confidence.

Telstra's 2017 research study in collaboration with The Economist Intelligence Unit, Connecting Commerce, investigated executive confidence in their city's digital transformation environment. Of the top five ranking cities in the world, three of the five (Bangalore, Mumbai, and New Delhi) are located in India.

And confidence is infectious.

Our research has found that organisations in India are realistic about the maturity of digital transformation projects in their organisations. However, they are optimistic about how well their organisation makes digital transformation decisions and the impact of those decisions.

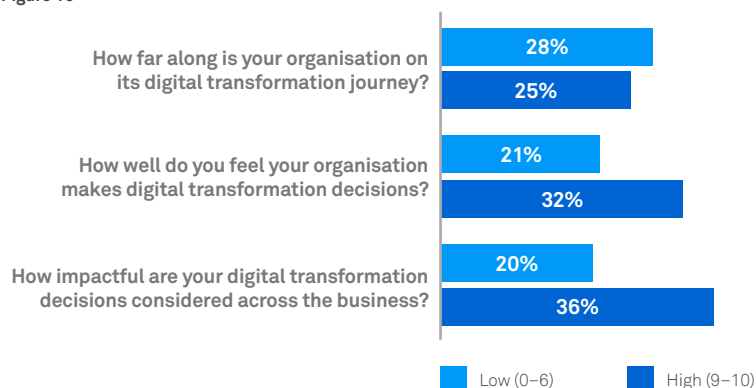
Organisations in India ranked **'technology understanding'** as the area contributing the most to their digital transformation decisions.

Yet, the results also point to key opportunities to further complement the country's growth by investing in people.

Of the four key factors in digital transformation decision-making, **'people'** achieved the lowest score in total, as well as in six of the seven stages of digital transformation projects we polled.

And those people need help at the outset of transformation projects. Organisations in India believe they are the least effective overall at **'having the right vision or mindset'**.

Figure 10



When it comes to their people, organisations in India are not **'empowered to design and implement digital transformation'** – ranking this the second lowest of the seven stages of digital transformation.

These statistics may point to a need for greater management of digital transformation projects.

But plans are afoot to bolster the digital skills of India's booming population.

The Indian government launched the [National Digital Literacy Scheme](#) (NLDM) with the vision to empower at least one person in every household with crucial digital literacy skills by 2020.

Touching the lives of an expected 250 million people, the NLDM is developing digital skills at a foundational level and on a wide scale.

And India's people are taking advantage of the opportunities on offer. According to [LinkedIn's Workforce Report for India](#), digital skills are fueling India's employment growth, with a particular focus on hiring software engineers. These skills are driving adoption of [new, agile work practices in some of India's biggest firms](#), leading to more efficient, thriving digital transformation.

As more digitally literate people enter the workforce – and more digitally skilled positions are filled – organisations in India will increasingly have the tools to improve the decisions their people contribute to digital transformation success.

The 2018 Asian Digital Transformation Index study by EIU also highlights India for the progress it has made with regards to human capital. The report notes:

“India also deserves mention when it comes to human capital, not only for the large pool of software experts who have underpinned the growth of its IT outsourcing industry. The quality of its maths and science education has also improved in recent years, according to the WEF. The growing digital savviness of the population overall is manifested in extensive and relatively sophisticated citizen use of e-government services, as judged in the United Nations' latest e-government survey.”

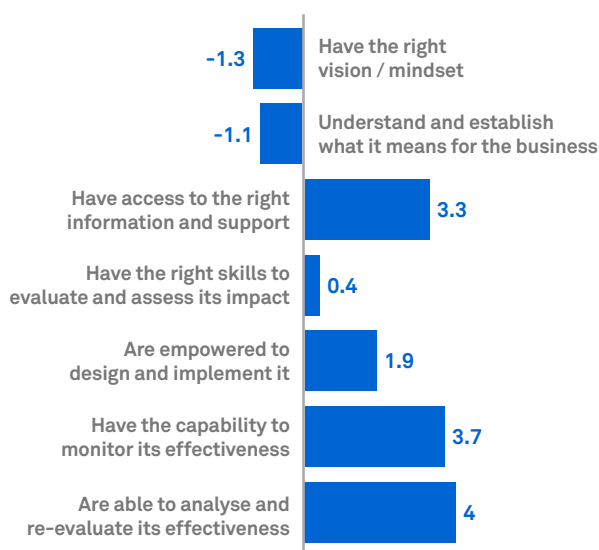
Decision-Making Ability in Detail: Processes



Processes need to support organisation-wide digital transformation

Global organisations are cautiously optimistic about the role their 'processes' have in digital transformation decision-making. It contributes across many stages of the decision-making cycle.

Figure 11: Our understanding of processes role in our business' digital transformation projects, by net score.



■ 'Processes' Net Decision-Making Ability Score

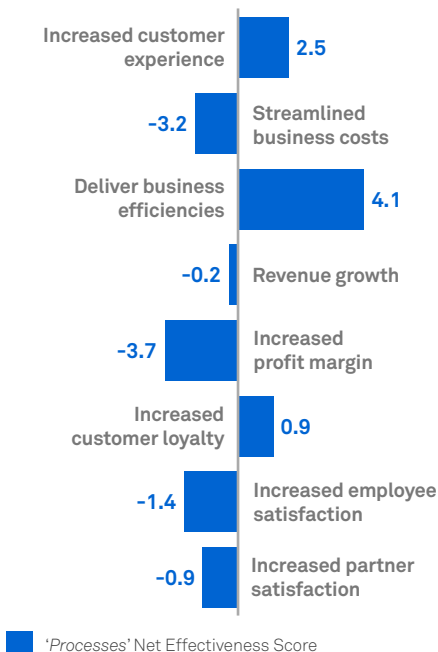
Processes contributed most to effective decision-making when helping organisations to:

- analyse and re-evaluate a project's effectiveness
- monitor a project's effectiveness
- access the right information and support

The clearest opportunities for improvement are at the outset of digital transformation projects. Organisations are sceptical about the contribution of their processes to 'having the right vision or mindset' and 'understanding and establishing what digital transformation projects mean for the business'.

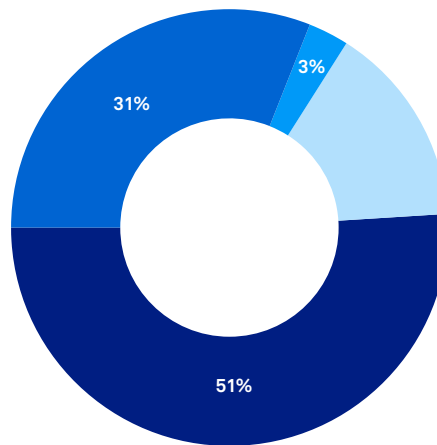
Processes are also seen as being effective at improving customer experience and delivering business efficiencies. In line with the other decision-making factors, 'processes' are not delivering financial outcomes such as 'streamlining business costs' and 'increased profit margin'.

Figure 12: How effective have your processes been at delivering the following outcomes as part of a digital transformation project, by net score.



Part of the problem seems to be the fragmented nature of digital transformation projects. Our research found that digital transformation projects are still done on a piecemeal basis. Over half were characterised by respondents as incremental and driven by business units.

Figure 13: When it comes to implementing a digital transformation project in your business, what is your organisation's preferred method?



We heard from one business leader that most organisations either outsource everything or attempt digital transformation in pockets. This means digital transformation projects are often siloed – which can create more problems than they solve.

This approach contributes to a lack of integration across the business for digital transformation projects. Less than a quarter of global organisations (24%) believe their digital transformation strategy is extremely well integrated across the business, and as many as 31 per cent say it is not very well integrated.

Organisations should look to create or adapt processes to break down internal silos and integrate their digital transformation more deeply throughout their business. If they succeed, it will give them a more holistic view of the outcomes, which will let them improve their decision-making ability and benefit more from digital transformation opportunities.

A spotlight on: Processes

How organisations in China require a focus on processes to optimise digital transformation projects

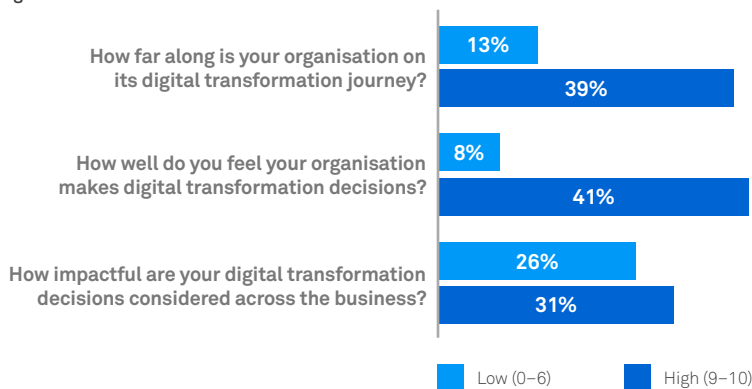
Organisations in China are already part of an enormous success story.

Despite mounting uncertainty in global trade and international relations, China's economic growth [is still on track](#) and foreign direct investment – [especially in high tech markets](#) – has remained steady. Underpinning growth is an understanding that significant funding is needed for digital transformation. And the country is investing heavily – China is the [second-largest global investor in R&D](#).

It is a success story that is reflected in our results. Organisations in China are bullish about their digital transformation success and their role within it, though there remains work to do in considering the impact of digital transformation decisions across the business.



Figure 14



So, how can organisations in China improve the impact of their digital transformation?

The result might not be immediately apparent. When it comes to their perceived ability to contribute to digital transformation decision-making, Chinese organisations ranked their 'processes' as second only to their 'people'. The same goes for the impact of processes on outcomes, where 'processes' again rank second highest.

China is a thriving, fast-growing country replete with opportunities for domestic and international companies alike.

Yet organisations in China need to focus on improving digital processes to fully realise their digital transformation priorities.

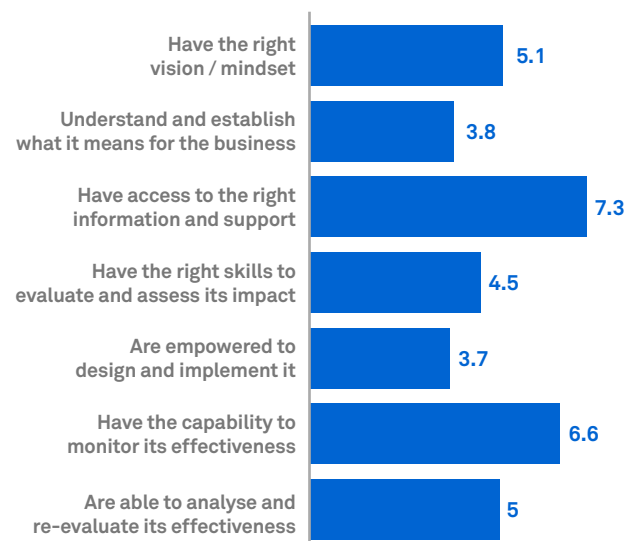
Decision-Making Ability in Detail: Technology Understanding



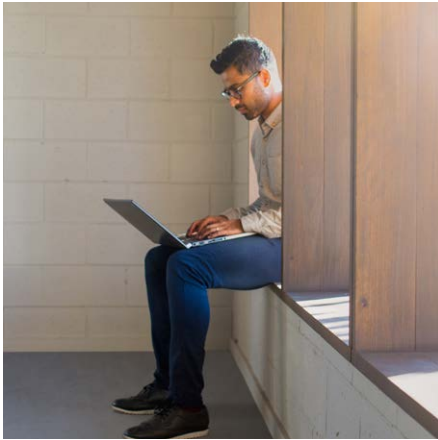
Technology understanding is strong but not enough on its own

Respondents positively rated their understanding of technology's role in digital transformation at all stages of the decision-making process, showing better results than for 'people', 'processes', and 'partnerships'.

Figure 15: Our understanding of technology's role in our business' digital transformation projects, by net score.



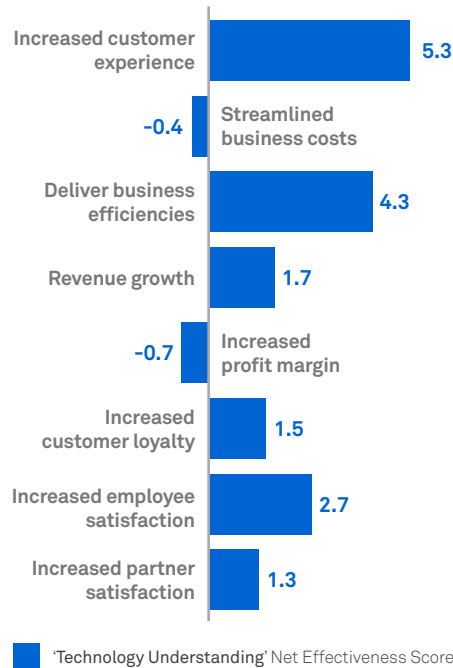
■ 'Technology Understanding' Net Decision-Making Ability Score



In particular, **‘technology understanding’** scored the highest when it came to knowledge-based stages of transformation projects, like **‘having access to the right information and support’** and **‘having the capability to monitor digital transformation effectiveness’**.

Organisations’ understanding of technology also helped to deliver better business outcomes compared with the rest of the four factors.

Figure 16: How effective has your understanding of technology been at delivering the following outcomes as part of a digital transformation project, by net score.



Organisations’ **‘technology understanding’** contributed most to **‘increased customer experience’** and **‘delivering business efficiencies’**. It is notable that financial benefits are lacking, with respondents reporting lower performance for **‘streamlining business costs’** and **‘increasing profit margins’**.

The research found that organisations’ performance in achieving digital transformation priorities cannot be secured by a high level of technology understanding alone. Organisations must pair a deep understanding of technology with a similar focus on all other areas of digital transformation projects.

A spotlight on: Technology

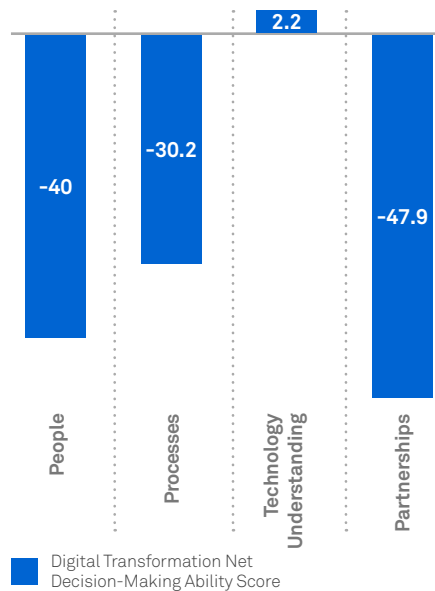
Driving digital transformation through technology in Australia

Australia has often been called the ‘lucky country’ because of its considerable natural resources.

Yet, for the most part, it is hard work and innovation rather than luck that has driven success in Australia. In 2018, Australia was ranked among the top 20 most innovative nations in the [Global Innovation Index](#) created by the World Intellectual Property Organisation.

Australian organisations’ understanding of technology within digital transformation decision-making performs relatively well when compared with the other three components of ‘people’, ‘processes’ and ‘partnerships’.

Figure 17: Technology understanding leads the way
The scores across each of the four factors in this figure represent the total net sum of all seven stages of the decision-making process in Australia.



So where can organisations in Australia improve their digital transformation projects?

With deeper analysis, it’s at the beginning of the decision-making process that Australian organisations should focus on. In three of the four decision-making factors, ‘**having the right vision and mindset**’ – the first in a series of seven stages – needs the most attention.

Technology understanding is also central to Australian organisations’ ability to deliver on their business priorities.

Respondents rated it the best factor to deliver on 11 of 17 digital transformation priorities, including the top three:

- Protect our digital assets from cyber threats (41%)
- Optimise our technology to move faster and adapt to change (40%)
- Deliver great, consistent customer experiences across global operations (35%)

Organisations in Australia should not rely solely on their strength in technology understanding. Our global results underline the need to complement technological proficiency with excellence in people, processes, and partnerships.

Smart city innovation: how IoT is helping to build our cities of the future

Driven by maturing Internet of Things (IoT) technology and infrastructure, Smart Cities are becoming more than a future concept; it's now a reality. Whether it's in the private sector with smart cabs and smart parking or in public infrastructure with traffic and waste management, there's a big push to embrace smart city connectivity and the innovation it can enable.

Connected infrastructure

With Australia's population projected to double by 2075 and the average home predicted to climb from 13.7 to 30.7 connected devices by 2021, it's critical that we build the infrastructure necessary to allow businesses, residents and tourists to seamlessly and securely connect what they want and need, as and when they want it.

Tasmania's second-largest city, Launceston, aims to become one of Australia's most innovative cities. In a partnership between Telstra, the University of Tasmania and Federal, State and Local government, the city has been chosen as the vanguard in Australia's move into a connected future. To achieve its vision, it's currently conducting trials to scope and define the future of city planning, healthcare, education and emergency management.

The backbone of these plans is the IoT infrastructure necessary to enable a smart city transformation: it's gained access to Telstra's [Narrowband and Cat M1 IoT networks](#) which integrate with connected devices used by homes and businesses.

Smart Services

Much of the current IoT infrastructure development is about preparing for future technology that capitalises on these specialised networks, but some of it can have a more immediate effect.

Telstra and [Smart Parking](#) have installed thousands of IoT ground sensors across several Australian council regions, including the City of Casey in Melbourne and the City of Joondalup in Perth, that monitor the use of parking spaces. This data feeds into a smartphone app that can offer precise directions to the nearest vacant spot so that drivers can stop circling around hoping to see an empty space.

There's been an increasing rollout of smart bins, too, that notify maintenance crews when they need emptying, which allows for more efficient scheduling, a better citizen experience and fewer trucks on the road. Sensors have also been installed in parks and other places to monitor air quality, vehicle traffic flows and more. As an added bonus, the City of Joondalup has found that [since its smart park technology trial](#) the council's internal culture has improved – with people now actively looking for digital solutions.

Data-driven planning and innovation

All this IoT infrastructure opens the door to technological innovation from the private sector. Take [Cab Digital's TaxiLive](#) digital billboard system, for instance, which is expected to be fitted into 945 taxis Australia-wide by November 2018.

TaxiLive integrates a 32-inch digital screen into a custom-built boot, with on-board GPS data and mobile connectivity used to not only run tailored advertisements but to provide other road users with location, time and place-specific accident, traffic, weather, or other alerts.

Better yet, there are future plans to share the data generated by TaxiLive-equipped cabs with roadside authorities to help with future transport and infrastructure planning. When a critical mass of taxis is reached, each generating real-time location data, we could see insights emerge about which areas of a city are under- or over-served by taxis at different times of the day.

The better the data gathered by sensors spread across connected cities, the better the potential optimisations and refinements to city infrastructure and services. Imagine AI-assisted reactive traffic management systems that automatically control lane openings and traffic light sequences to create the best flow of vehicles not in just one intersection but across the whole city. Or zoning regulations and urban planning decisions – not to mention local business investments – made according to insights identified in detailed real-world and predictive data analytics.

This is all just the tip of the iceberg. The biggest benefit for IoT in our cities and their surrounding regions is likely still unknown as most successful initiatives so far have focused on small and well-defined business challenges.

The connected city's greatest potential lies in the opportunities the technology creates for businesses to innovate, to dream up exciting use cases and new solutions to problems we might not even realise exist – and to actually make them a reality.

Decision-Making Ability in Detail: Partnerships

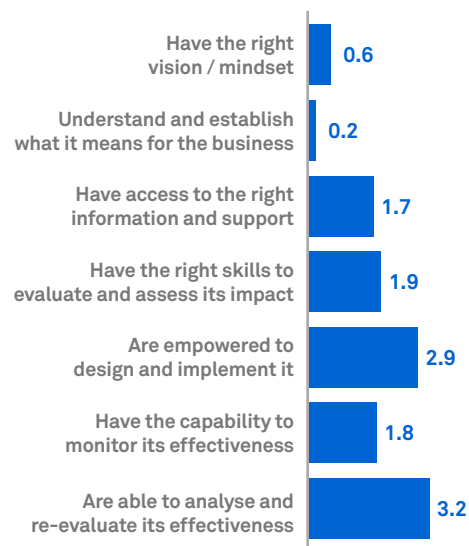


Organisations can get more value from partnerships

Global organisations are mostly confident about the role their 'partnerships' have had in their digital transformation decision-making.

'Partnerships' scored well in helping organisations make digital transformation decisions at all stages of the decision-making cycle. In particular, organisations see 'partnerships' making positive contributions to effective decision-making when it comes to the 'ability to analyse and re-evaluate digital transformation effectiveness' and being 'empowered to design and implement it'.

Figure 18: Our partnerships' role in our business' digital transformation projects, by net score.



■ 'Partnerships' Net Decision-Making Ability Score



However, the effectiveness of ‘partnerships’ in helping businesses achieve better outcomes was not rated anywhere near as highly.

Figure 19: How effective have your partnerships been at delivering the following outcomes as part of a digital transformation project, by net score.



There is also much to do to improve the ability of ‘partnerships’ to deliver digital transformation priorities.

Among the four key decision-making factors, ‘partnerships’ had the lowest scores in helping businesses achieve nine of 17 key digital transformation priorities.

Those nine included three of the top five priorities for global organisations:

- ‘Protect our digital assets from cyber threats’ (priority number 1)
- ‘Optimise our technology to be more competitive’ (priority number 3)
- ‘Optimise our security investments to reduce time and resource management’ (priority number 5)

However, our findings suggest that many businesses are not yet fully adopting a collaborative model with multiple partners needed to serve their customer needs.

The rapid pace of digital technology innovation, the [global scarcity of skilled workers in many ICT disciplines](#), and the ever-changing cyber security environment make it imperative for organisations to make the most of their partnerships. It is equally important that vendors and consultants work ever closer with their customers to deliver greater value and help them achieve their goals.

A spotlight on: Partnerships

Why the United States needs to look to its partners to create comprehensive digital transformation benefits

The United States is often considered the epicentre of the global technology industry. From the jewel in the crown that is Silicon Valley and its surrounding cities in California, to the fintech centre of New York and emerging markets like Seattle, Chicago, and Portland, the US has a reputation for leading technological understanding.

That reputation is well deserved. In our research, **'technology understanding'** is considered central to digital transformation decision-making, as well as achieving business outcomes.

But **'technology understanding'** alone is not enough to deliver digital transformation success. Companies in the US are realistic in assessing their progress in digital transformation, and in their ability to make digital transformation decisions.

So where can organisations in the US focus to move beyond technology understanding?

Organisations in the United States believe **'partnerships'** contribute strongly to decision-making, ranking it second of the four decision-making factors after **'technology understanding'**. However, when it comes to delivering organisational priorities in light of their current **'people'**, **'processes'**, **'technology understanding'**, and **'partnerships'**, companies in the US rated **'partnerships'** the lowest across 10 of 17 priorities.

Organisations in the US often emphasise collaboration and partnership across enterprises, academia, verticals, and specialisms. So, creating even further value from partnerships may seem challenging. Yet our research has found organisations in the US approach digital transformation in an incremental way. Therefore, there may be significant opportunities to increase the value of partnerships by moving beyond quick, business unit wins toward the creation of an over-arching organisational strategy.

Figure 20:
How US organisations assess their digital transformation.

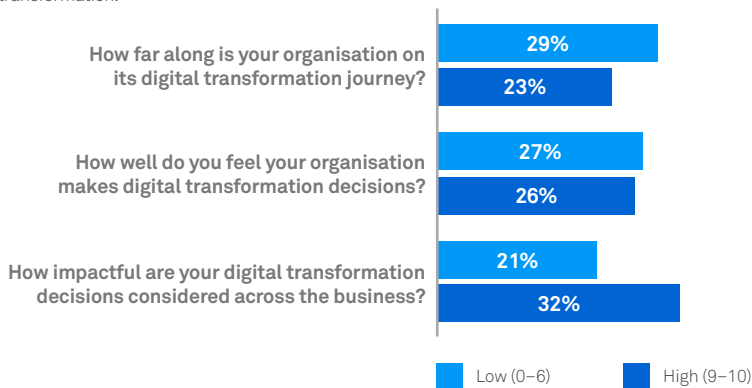
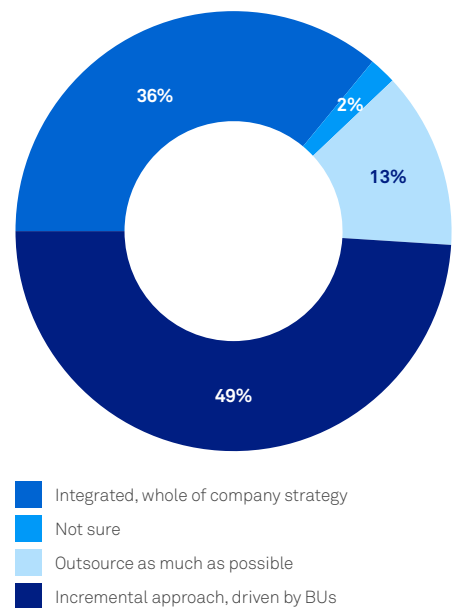


Figure 21: What is your organisation's preferred method of implementing digital transformation projects?
When it comes to implementing a digital transformation project in your business, what is your organisation's preferred method.



Only 36% of companies in the US have a whole of business company strategy for digital transformation, and half (50%) take an incremental approach driven by individual business units.

By working with partners at a more strategic, integrated level across wide digital transformation initiatives, even organisations in the world's technological epicentre can improve their digital transformation outcomes.

Conclusion

Balancing a good mix of factors to drive better digital decision-making

Technology is an integral part of digital transformation. Understanding the functions, capabilities and role of technology is vital to success. And it always will be.

Yet it is clear from our research that focusing on technology alone can only get an organisation so far in its digital transformation journey. It does not guarantee success. This observation is supported by the 2018 EIU Digital Transformation Index study, which notes:

“The availability of reliable, fast, and affordable digital connectivity is not the sole determinant of a positive environment for digital transformation, but it is the most important one.”

It is only through a competent, comprehensive digital transformation strategy, incorporating people, processes, and partnerships alongside technology, that global organisations can truly thrive.

The path to this ideal state is not an easy one.

But we believe that digital transformation success has to be underpinned by good digital transformation decision-making.

So how can organisations drive a culture of better technology decisions?



Understand what digital transformation means for your organisation

The most effective digital transformation projects are those which are driven by a clear vision.

That vision should be shared by the organisation as a whole so that employees can understand the project's objectives and deliverables. This in turn helps them to adopt the right mindset, ask the right questions, and ultimately make better decisions.

This is where partners that really understand your business and your digital transformation goals can add significant value by helping to define what digital transformation means for your organisation.

Those partners and vendors need to ensure they are providing the insights, expertise, information, and support that organisations need.

Empower people and strengthen processes

Innovative businesses are increasingly moving towards new ways of working that feature agile cross-functional teams. These teams are empowered to drive rapid experimentation and iteration of products, services, and experiences.

Such an agile approach depends on employees being able to work collaboratively across sites and even time zones, share information fast and effectively, and test out prospective new solutions without affecting business-as-usual.

Organisations can support these new ways of working by focusing their technology strategies on adopting tools that empower people and enable better internal processes, such as mobility, cloud, unified communications, and flexible networking.

Be confident in your technology so you concentrate on driving change

Innovation at all levels of ICT, from flexible network-as-a-service solutions to automation and AI, combined with the growth of managed services, is making it easier than ever for organisations to manage their technology.

Given their confidence in their technology understanding, CIOs and their teams should look to reduce the time and resources they spend managing business-as-usual IT, and instead focus on strategic initiatives and driving internal change.

The final word on better digital decisions

Good digital transformation decisions are proven to be so by the outcomes they deliver for organisations. Our research gives organisations insights they can use to analyse each part of their decision-making ability against their objectives. It is the first step to creating the culture they need to make decisions that help them thrive well into the future.

Appendix

Overview of methodology

This study was commissioned by Telstra and comprises quantitative research conducted by market research firm Kantar TNS in 14 markets around the world, surveying 3,810 senior decision-makers.

The quantitative research was supplemented with qualitative interviews with 14 senior executives across a range of industries.

The markets surveyed comprise:

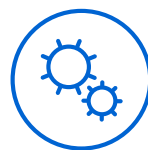
- Australia
- China (Mainland)
- Hong Kong
- India
- Indonesia
- Japan
- Malaysia
- Philippines
- Singapore
- South Korea
- Taiwan
- Thailand
- United Kingdom
- United States

Respondents were asked about their organisation's digital transformation decision-making ability and their effectiveness in achieving business outcomes. Delving deeper, the study investigated how four key factors contribute to organisations' decision-making ability and effectiveness.

The four key factors are:



PEOPLE



PROCESSES



**TECHNOLOGY
UNDERSTANDING**



PARTNERSHIPS

Respondents scored their digital decision-making ability across seven stages of digital transformation projects. They also gave each decision-making factor a score out of 10 for its contribution to effective decision-making at each stage.

The decision-making stages were:

1. Help with adopting the right vision / mindset

2. Help us understand and can establish what it means for our business

3. Help us access the right information and support

4. Help us evaluate and assess its impact

5. Help us design and implement it

6. Help us monitor its effectiveness

7. Help us analyse and re-evaluate its effectiveness

They were also asked to rate their effectiveness against eight business outcomes, as well as ranking each component's effectiveness individually.

The business outcomes were:

1. Increased customer experience

2. Streamlined business costs

3. Deliver business efficiencies

4. Revenue growth

5. Increased profit margin

6. Increased customer loyalty

7. Increased employee satisfaction

8. Increased partner satisfaction

The research goal was to understand organisations' decision-making ability in more detail, including how each key factor contributes to their ability and effectiveness. Through this methodology, the study was able to shed light on organisations' perceptions of their ability measured against their performance.

Using a net scoring system

A net scoring system, similar to the widely-practised NPS methodology, was used in the research to benchmark scores. Respondents were asked to rate their decision-making ability on a scale of 0 to 10, with 10 being the best score. By subtracting the number who rated themselves between 0-6 from those who rated themselves 9 or 10, a net score was produced.

This scoring system enables a clear comparison of the variables within both the seven stages of decision-making, and the eight business outcomes. Within these areas, it allows the identification of where the balance of power, so to speak, exists in decision-making ability and business outcomes.

It is important to note some large differences in scores between some markets. Self-assessment is inherently subjective, and can be prone to cultural bias. This is why the study does not directly compare markets, choosing instead to compare variables within each market against one another.

Telstra regional office headquarters

Asia

Level 19, Telecom House
3 Gloucester Road
Wan Chai, Hong Kong
T +852 2983 3388

EMEA

2nd Floor, Blue Fin Bldg,
110 Southwark Street
London, SE1 0TA
T +44 207 965 0000

Americas

44th Floor
40 Wall Street
New York, NY 10005
T +1 877 835 7872

Australia

363 Oxford Street
Paddington, NSW
Sydney 2021
T +61 2 8202 5134



To find out how Telstra can help you connect to a world of opportunity visit telstraglobal.com or contact your local representative on tg_info@team.telstra.com

