Transformation in motion

PwC New Zealand's 2017 Digital IQ Survey

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Executive Summary

We're now many years into the digital age but New Zealand businesses are still grappling with what it means for them. The ones that succeed in this new landscape have mastered the key combination of human centred design and the business potential of data and analytics.

This is a key insight from this year's Digital IQ Survey, the 10th we've run internationally. It's a study of over 2,000 global business leaders, including those here in New Zealand, on their view of what makes a digital business succeed. For this publication, we've taken our survey data and introduced analysis from our team of data scientists to create a report that goes even further in understanding the state of digital in New Zealand.

The findings are insightful for local organisations. We fare well in scores on innovation, but are falling behind when it comes to putting better customer experiences at the heart of our digital strategy. New Zealand organisations still see digital investment as a matter of revenue generation, rather than a broader cultural and organisational transformation. The study shows this is holding back New Zealand businesses from truly realising the potential of digital that we see in leading overseas organisations.

Digital is about people and culture as much as it is about technology, something New Zealand companies are only beginning to grasp and act on. As organisations go through a generational change towards millennial workers, this attitude will only become more important.

We see this in the priorities businesses have for the next year. Products and services are receiving the most investment, while customer experience and enterprise transformation are taking a back seat. However, the transformation that digital has set in motion isn't limited to just products.

Another key area of investment is in data and analytics. We're seeing that a purposeful use of analytics to improve products and customer experience is showing dividends. Success here rests on a data and analytics strategy that is squarely focused on customer outcomes.

Emerging technologies are about to drive fundamental change for global and local businesses. We identify eight essential technologies that will have the greatest impact over the next few years, comprising Artificial Intelligence, Virtual Reality, Augmented Reality, Blockchain, Internet of Things, Drones, Robotics and 3-D Printing. Last year's Digital IQ survey revealed that these technologies were on the horizon for local leaders, but New Zealand firms are still taking a technology-first, rather than a business-first approach to these developments.

Data and analytics and human centred design can't be undertaken independently and they certainly can't be ignored. Sitting behind them has to be a broader digital approach, one that is equal parts business strategy, customer experience and technology.

It's a big challenge, but I know New Zealand companies are up to it.

Kris Nygren
Partner

Here are our key New Zealand findings from the 10th PwC Digital IQ Survey

Grow revenue
57% Global — 76% NZ

Increase profits
12% — 4%

Create better customer experiences
10% — 6%

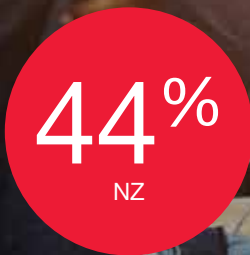**Achieve cost savings**
7% — 4%

Other
14% — 10%

What value do you expect from digital technology?

What's the most important digital initiative you will invest in over the next year?

Re-imagine existing product/service portfolio
24% Global — 44% NZ

Enterprise transformation
19% — 14%

Customer experience
12% — 18%

50% of our respondents are bringing their digital strategy into their business strategy

28% Don't know

22% We don't integrate digital into our strategy

What's your approach to new and emerging technologies?

14%
Vendor driven: We wait until technologies are introduced to us through our vendors

38%
Business driven: We have a proactive approach to technology based on business criteria

48%
Technology driven: We evaluate many emerging technologies that might have an impact on business performance

A third of respondents say data and analytics is very important, compared to a quarter for human centred design

44% Global
34% NZ
Data and analytics

21%
24%
User experience and human centred design

Getting priorities and balance right in transformation

Digital transformation is not new. We've seen a few companies doing it well, and we see many companies making it a priority. However, for the vast majority of organisations, this digital transformation is very much a work in progress.

From our work in digital with local and global clients, it's obvious that three key components have to align. Successful transformation takes place at the intersection of technology, customer experience and business strategy. Few New Zealand organisations are currently delivering against all three components, with many over-emphasising the technology component.

Legacy technologies, under-investment and data integration are major issues and a lack of digital skills within their organisation is holding back their transformation efforts. Interestingly, we saw a relationship between respondents with a high Digital IQ and those who reported tech integration as a challenge for their business. Among our respondents, having a high Digital IQ meant they were more aware of the challenges they face when integrating new technology into their organisation.

Digital still isn't making its way into the organisational strategies of New Zealand businesses.

Only **50%** integrate digital strategy into their corporate strategy (globally it's 70%)

Part of this transformation has to be the way businesses structure teams within the organisation. All of our respondents with a Digital IQ of more than 85 reported they are approaching their digital transformation with cross-functional teams. Across the board, we saw a strong correlation between high Digital IQ and a preference for teams that bring together business, technology and user experience experts.

However digital transformation is a question of balancing priorities. Almost half of our respondents (44 per cent) said their most important digital initiative over the next year is to reimagine their product and service offering. On the other hand, only 14 per cent are prioritising enterprise transformation and 18 per cent are focusing on the customer experience.

Our New Zealand respondents are trailing behind their global counterparts when it comes to integrating digital strategy into their overall corporate strategy. Exactly half of our respondents said they have taken this step, compared to 70 per cent internationally. It's a missed opportunity, as digital strategy has to be integrated into broader business objectives if it's ever going to achieve the broader transformation companies need to undertake.

Products and services take the lead over customer experience

What's the most important digital initiative your organisation will invest in over the next 12 months?

44%

said they're focusing on **re-imagining existing product/ service portfolios** and disrupting their current business model to identify new sources of revenue.

Just

18%

will focus on designing and creating innovative experiences based on an **understanding of customer needs.**

Data and analytics: where people and information collide

Data and analytics is one area where we're really seeing local businesses lagging behind their international counterparts. Just a third reporting they're making analytics a priority – compared to 44 per cent internationally.

While that's low, it's a different story among those companies with a high Digital IQ. All the respondents with a Digital IQ greater than 85 said data and analytics is very important for them. This lack of investment and interest among the majority of our respondents is now signalling a blind-spot for New Zealand businesses. We're long past the time when 'big data' was considered an emerging technology trend; it's already here.

A truly world-class data and analytics function isn't just about investing more money though, it's also about taking a human centred approach to developing your analytics function, from how you engage the business, through to how you prioritise what the analytics function does.

So how do you bring a human centred design approach to data and analytics?

It's a simple question, but it requires a complete rethink of the way we approach analytics within an organisation and is central to defining digital ways of working vs a purely technical approach. Combining these two approaches not only changes the process of analysing data and delivering insights to an organisation, it also changes the relationship between an analytics function and the rest of the business.

In a traditional analytics process, a data scientist will be given a question to investigate, one which may or may not be linked to a valuable or desirable business outcome. To reach any sort of outcome, they'll then have to add their own assumptions into the process, with a 'big reveal' in eight to twelve weeks, more often than not, missing the mark. When you take a human centred approach, you can remove those assumptions, replacing them with 'organisational wisdom' from the business and from your customers, that better defines the problem analytics is solving. By running and evaluating this process iteratively, you can actually address the root of the problem, with better informed assumptions, while turning the process around in two to three weeks rather than eight or more.

Putting human experience at the core of digital

Digital is much more than technology or data and analytics. More than ever before, putting the customer at the centre of digital strategies will be key to unlocking value from digital investments in a fast changing world.

In line with the global data, New Zealand businesses that demonstrate a strong focus on the human experience are more likely to have a higher Digital IQ. In fact, we saw a 75 per cent correlation between those saying human centred design was very important to them and those recording a high Digital IQ.

More importantly, experience and human centred design will become a key source of competitive advantage as emerging technologies such as Artificial Intelligence (AI) and the Internet of Things (IoT) define the next wave of technological disruption and the way people interact with machines.

"We used to spend a lot of time creating a solution, but we weren't necessarily solving the problem for the customer. With these changes, and with the introduction of people who can bring that design thinking, we're now taking a very definitive, customer-first approach"

– Chief Digital Officer at a large New Zealand retailer.

Yet, the reality for most New Zealand business is far from ideal. The survey shows that creating better customer experiences through digital technologies is at the bottom of the priority list for most companies. While 76 per cent of New Zealand businesses rank growing revenue as their main goal for digital investments, better customer experiences is a priority for only 6 per cent of respondents.

The importance that New Zealand companies place on skills also reflects the overall lack of customer centricity in digital investments.
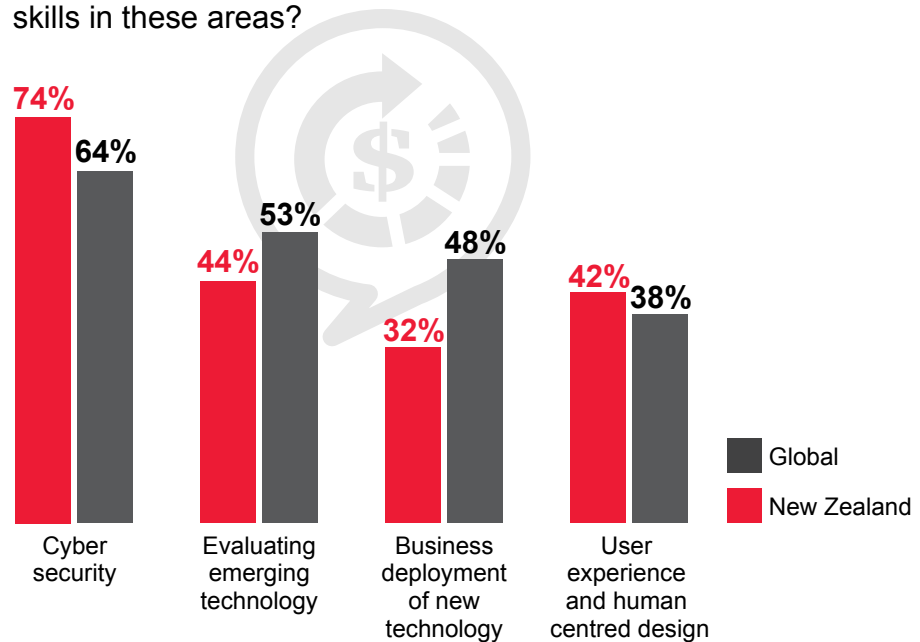
In fact, 84 per cent of businesses in New Zealand have a strong focus on evaluating emerging technology as a core skill, whereas user experience and human centred design is considered important to 62 per cent of businesses.

The good news is that boards and executive teams already recognise the value creating a human centric approach to digital investments can bring to their business.

Addressing customer needs through technology remains a challenge for New Zealand organisations. However, there are certainly more opportunities to be reaped, particularly for those business who are laying the foundations to become more customer centric now.

Experience is an afterthought

How would you rate your organisation's digital skills in these areas?

	Cyber security	Evaluating emerging technology	Business deployment of new technology	User experience and human centred design
New Zealand	74%	44%	32%	42%
Global	64%	53%	48%	38%

- Global
- New Zealand

Industry perspective: Tim Harris, Chief Commercial Officer at Chorus

I would put our Digital IQ at a solid five. There's two dimensions to this; firstly it's about what we need to do internally to deliver what we need to. Secondly it's about what digitisation we need to encourage across the overall industry to deliver an optimal end-to-end customer experience that is as seamless and effective as possible.

A digital strategy is a means to an end. But delivering an optimal customer experience is at the heart of what we are trying to do and where we can start to drive real success for the end customer and the industry.

Whatever we do from a digital perspective needs to follow our core strategy, and our key purpose is to bring New Zealand better broadband. When we looked at that fibre experience we offered, we were delivering a great product and when installed, people really loved it, but the experience of ordering it still requires some work – and that's at the heart of what we're trying to achieve with digital. Traditionally I think Chorus has been quite an inside-out company where we define great process and then try to fit the customer experience around the processes.

We decided to take a customer experience lens and understand where the friction points are, relating to what we do. When we took a step back, we realised no one had really done that end-to-end mapping from a customer lens to the process. That went all the way from customer research about what they want, through to ordering and installation, and then use of the product.

Digital is also a really effective tool for us to think about prioritisation: where do we put scarce resources to have the most impact around customer experience?

Setting in motion a digital culture

As digital has evolved, it has brought with it a number of new working practices, methodologies and cultures that are designed to deliver customer centric technology in rapidly changing environments. These digital methodologies include specific practices such as Lean UX, A/B testing, Lean Analytics and Agile, as well as practices such as testing and learning, rapid collaborative problem solving and relentless customer centricity.

These practices are now so central to successful digital businesses that they're synonymous with our wider understanding of what digital is and what a digital organisation looks like. These ways of working are just as central to a business as any piece of technology companies are looking to implement.

However, what we found in our survey data was New Zealand firms lagging behind their global counterparts when it comes to a digital culture – just 6 per cent are making it a priority. We're also less likely to be using tools like agile methodologies to develop products and services – only 2 per cent are using agile for the majority of their projects. When we dug a little deeper though, we saw there's a clear correlation between a high Digital IQ and the use of agile methodologies, highlighting how central new business processes are to a broader digital transformation effort.

When you start adopting these habits across an organisation, it drives a deeper cultural change. In some cases, organisations will then have to flex their structure to reflect this. When organisations start translating a digital methodology into a cultural and structural transformation, they'll really start to be more agile, responsive, customer centric, technology enabled, data driven and ultimately highly competitive.

The key here is the link between a digital culture and competitive differentiation. To create a digital culture you have to understand the core capabilities you need to stand out in the marketplace. For the leadership team, that means making considered decisions on where to invest to build those capabilities, as well as developing a digital-first culture.

Industry perspective: Chris Trigg, Head of IS and Business Transformation at Southern Cross Health Society

For us, digital is around operating in a different way and being focused on providing great experiences – it's about giving people a hassle-free, on-their-terms way of connecting with us. There are, of course, times when things will happen in people's lives and they won't want to use an app, they'll want to talk it through with a human who cares about their outcomes. So it's about creating the right digital channels and being focused on offering a great member experience.

I think a lot of companies fall into the trap where they just digitise their current processes, and we've been guilty of that too in the past. But I think there's a real opportunity with digital to challenge the way we operate and to reimagine our business.

We're also not losing sight of wanting to give our staff the right tools to be working more effectively. The thing we hear back from our teams is they want the tools and technology to work more flexibly, to collaborate more easily and that they want to be upskilled - and we've been working hard on that.

We've now put 100 people from across the business through agile training, and that's not just from the IT team but from across the organisation. Our Leading Edge programme has also been really good at bringing cohorts of people together from across the business to develop and train them in areas like agile, design thinking and problem solving methodologies. That capability then feeds into the way we manage change and drive improvement, and they're learning skills that equip them for an exciting future.

I think there are a few hotspots out there where it's hard to find people. In Information Security, there's a real hotspot for talent. As organisations figure out how to build out from their legacy systems, everyone's looking for people who can work on integration solutions. What I'm really keen to do is start working with the universities where students will work with us over the summer so we're creating a new pipeline of talent, and also to get insights into how millennials think and work – we can surely learn from them.

Are we ready for the impact of emerging technology?

Last year, we published our Tech Breakthroughs Megatrend report, identifying eight technologies that we believe will have the greatest impact on New Zealand businesses over the coming years. These 'Essential Eight' technologies are: Blockchain, The Internet of Things (IoT), Virtual Reality, Augmented Reality, 3-D Printing, Robotics, Drones and Artificial Intelligence.

Across these eight, our respondents know they aren't yet up to scratch. When asked if they're struggling to integrate new and existing technologies and data, 32 per cent said it's a challenge for them now, compared to just 22 per cent internationally. As a result, many are turning to external partners to help them implement new technologies in their organisation.

While New Zealand companies are struggling to master emerging technologies, it isn't surprising: these technologies are emerging for a reason. Technology like Blockchain is only now seeing its first commercial applications, but that doesn't mean companies can afford to ignore its disruptive potential.

Below: A drone and its controls at our 2016 Platinum Series event on emerging technologies. The event explored how companies can begin to use the Essential Eight and integrate them into their products and services.

When we asked which of the Essential Eight emerging technologies our Digital IQ respondents were most comfortable with, the Internet of Things (IoT) was by far the most popular. It's leading in current investment and is the area that New Zealand companies are the most comfortable with. Interestingly, our respondents are planning to pare back their investment in IoT and AI over the coming years, in favour of other technologies like Robotics. For all the hype, Virtual Reality and Blockchain aren't currently priorities for our survey respondents.

Clearly there are varying levels of maturity around emerging technology – something that was true globally as well as in New Zealand. Successful companies will have an approach to emerging technology that can scale as their organisation changes and can shift investment and resources to the most pressing new developments, in line with their broader digital and business strategies.

New Zealand companies' current capabilities in emerging technology:

4: Quite developed

0: Not at all developed

Note: Ranking reflects average score from respondents across each of the Essential Eight emerging technologies.
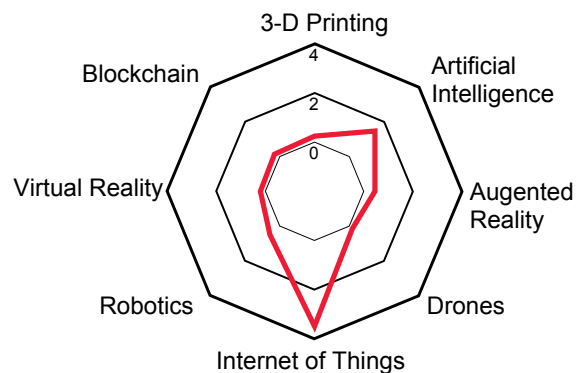
Industry perspective: Roger Jones, CTO at Auckland Transport (AT)

I would say our Digital IQ is about five out of 10, and I expect that to go up to about seven or eight within the next two years or so. We can do that by rolling out the methodology behind digital – namely customer centricity – across the whole business. We need to do that because if you look ahead 10 years' time, the transport system we know now will be completely different and that change will be driven by digital.

When we think about emerging technology like autonomous vehicles, for instance, in 10 years' time, you'll still need a train to carry large numbers of people at peak times. However, at non-peak times, you might have an on-demand service and we might see subsidised autonomous vehicles working on routes to pick you up. Just thinking about autonomous vehicles, you come up with a completely different way of operating public transport. These vehicles might not even be run by the Transport Agency, but are part of an ecosystem that operates as a whole.

There are other emerging technologies we're working with right now. We've put Artificial Intelligence into our back-end operations, and we're also using it in the front end to come up with predictions on things like traffic and weather. Then, if the prediction does occur, we want to have AI manage and suggest solutions. We're also looking at investing in robots for the call centre.

Customers might not know we've done things in the back end that will have a direct impact to them on the front end. But whether they know about it or not, there's no point investing in this technology if it's not going to have an impact on the customer experience. We've invested a lot more into building customer-facing applications, and using the customer as the driver of the requirements, not the business.

I believe that the growth of the Chief Digital Officer (CDO) is generally the result of the failure of the Chief Information Officer (CIO) or IT department to adapt to change. If the IT department doesn't adapt and change to a digital approach, the only way to break that is to put in a CDO. What some New Zealand companies have done is that they've changed the titles of their IT people to digital, but nothing has actually changed under the covers.

Preparing for the future

Our Digital IQ Survey tracks the self-ranked Digital IQ of New Zealand businesses, but it's also about looking into the future at what companies have to be aiming for with their transformation efforts if they want to thrive in the digital age.

That ideal future state means bringing together their business strategy, customer experience and technology into a coherent, fully fledged digital strategy. As we've seen in this year's New Zealand findings, it also means being able to bring together human centred design with data and analytics, a combination that is central to this broader transformation, and yet is still a weak point for the majority of our survey respondents.

Lastly, it's worth remembering that today's emerging technology is tomorrow's industry standard. While the tech breakthroughs megatrend isn't slowing down, we already know the business practices that companies need if they're going to make the most of it.

"When we've looked around in the last five years at companies like ours that are being disrupted, it hasn't been because they haven't had a digital strategy, they just haven't had the right strategy."
– Chief Digital Officer at a large New Zealand retailer.

When using third parties, New Zealand companies are focusing on emerging technology. However, the main motivation is to reduce costs.

52%

say they use third parties because they're less expensive (globally it's 42%).

What to consider in your business

Bring people and data together

Combining human centred design with a deep understanding of data and analytics is the secret sauce for a successful digital organisation. It's a combination that no company is getting right, but it's a marriage of skills and perspectives that companies have to foster if they want to be successful in our digital business future.

Transform through iterations

Transformation isn't one-and-done, it's an iterative process that will build up over time. The first steps in any digital transformation effort have to be small, but they'll compound quickly. Trialling and testing a new process or product offering, getting feedback and then constantly refining will snowball over time and then you can begin to make real changes to the way the business works.

Define what digital means in your business

It sounds simple, but many of our respondents focused either on basic definitions (digital is synonymous with IT) or on technology-based definitions. Companies that want to boost their Digital IQ have to take a more holistic view of digital that encompasses organisational structure, data and analytics, customer centricity and human centred design as well as technology and innovation.

Build a culture that is driven by learning and collaboration

As digital becomes part of a company's DNA, everyday business practices have to change as well. For a company culture to support digital transformation it has to be driven by workers who are comfortable adapting to disciplines and approaches that are outside of their own work. That demands a real investment in collaboration and learning programmes that give workers the tools they need.

Prioritise an emerging technology strategy

Today's emerging technology is tomorrow's business imperative. Companies have to be investing time in testing this technology and building knowledge and awareness within their business. Technologies like the Essential Eight will reshape industries in ways that we can't predict now. It's only through a deep understanding of their disruptive potential that companies can plan for these changes.

To have a deeper conversation about Digital IQ:

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About PwC's Digital IQ research
We've been conducting DigitalIQ research since 2007, and this year marks our eighth survey of business and IT executives globally. The 2017 edition was fielded September through November 2016 and included 2,216 respondents from 53 countries. Our New Zealand report is formulated from the responses of 50 local digital leaders and three in-depth interviews.