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# *Commercialising Innovation*

A proactive guide to harnessing emerging technology



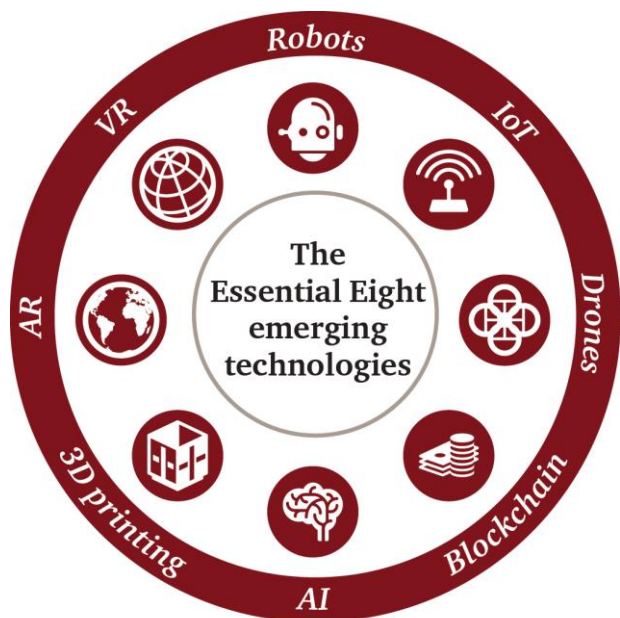
In 2016, we published [the Tech Breakthroughs Megatrend report](#), which tracked a wave of new technologies that are on the horizon for New Zealand companies and will demand increasing investment over the coming years. It was in this publication that we tracked a set of technologies that will drive this change – the Essential Eight (Artificial intelligence (AI), The Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), Blockchain, Robotics, 3-D Printing and Drones). As well as their individual influence, we’re expecting these eight to combine in new ways, creating products and services we haven’t even imagined yet.

That research provides a blueprint for us to start thinking about innovation and emerging technology, but it begs the question: How do established companies commercialise innovation in a way that adds to the bottom line and improves the customer experience?

This paper explores that very issue, drawing on findings from our recently released [Digital IQ](#), [FinTech](#) and [Global Innovation Benchmarking](#) surveys, as well as our own analysis of the New Zealand innovation landscape.

What we’re seeing in New Zealand is varying levels of awareness around these opportunities. Innovation and emerging technology are hot topics, but few companies have a clear linkage between the enterprise strategy and innovation functions, or a defined process for ensuring that innovation has a demonstrable commercial impact.

Adoption of the Essential Eight is also mixed. When we look at where companies are focusing most, the Internet of Things is leading the charge, while the thinking around other technologies like Blockchain isn’t at the same level yet.



So how do you commercialise technologies that are at very different levels of maturity? We believe it takes a commitment to:

- Evaluating emerging technologies
- Integrating to innovate
- Shifting thinking to outside-in
- Creating an IT culture that will enable innovation
- Fostering a company culture that supports talent and innovation
- Taking a partnership perspective

Underpinning this approach also has to be a laser focus on the customer problems being solved. It also requires an innovation process that gives organisations a structure and a framework to their innovation efforts that is constant, methodical and draws on expertise from inside the company and externally.

Driving innovation isn’t easy when you’re also running a large organisation day-to-day. However, these two goals must come together – that starts with the board and has to include the entire enterprise. Creating a culture that can commercialise innovation is something every organisation is going to have to focus on if they want to lead their industry in developing new products and services, challenge the status quo and ultimately stay relevant to their customers in the future.



**Andy Symons**

*Innovation Partner*

T: +64 9 355 8535

E: [andy.d.symons@nz.pwc.com](mailto:andy.d.symons@nz.pwc.com)

Front cover: A drone flying at our 2016 Platinum Series event on the Essential Eight emerging technologies.

## How are New Zealand businesses currently commercialising innovation?

Before starting on how companies can commercialise innovation, we have to understand the current state of play among New Zealand businesses. What we're seeing here is a split into three groups:

- **“Successful innovators”** This first group are those organisations that are currently investing strongly in innovation and customer centricity, and are reaping the benefits as a result. These are the companies that make up the 22 per cent of our Digital IQ respondents who said they're taking a systematic approach to emerging technology.
- **“Playing catch-up”** The second are those that aren't making these changes yet, but they've noticed that things are moving fast and they're getting ready to dip their toes into the emerging technology space.
- **“Looking the other way”** Lastly, there's a third group of companies hoping they can ride out the current waves of change that emerging technologies are unlocking, without actually embracing new opportunities.

Each of these groups are at different points in their innovation journey. The first have to keep refining their processes, while the second have to start planning to drive more innovation. For the third, the challenge is just to start moving in the right direction.

It's this first group that will also be the ones that are currently succeeding in turning their innovation efforts into commercially viable products and services. Again though, these companies are currently a minority.

In our Digital IQ research, we saw a clear disconnect between innovation and commercialisation. Just 18 per cent strongly agreed that their innovation process included identifying and commercialising digital products. While this was slightly higher than their counterparts overseas, it's still not a strong result, especially when many New Zealand respondents are falling at the other end of the spectrum. Overall, New Zealand businesses were some of the least likely to be identifying and commercialising digital products when we compared the findings to the rest of the world.

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*Just 18 per cent strongly agreed their innovation process involved identifying and commercialising digital products.*

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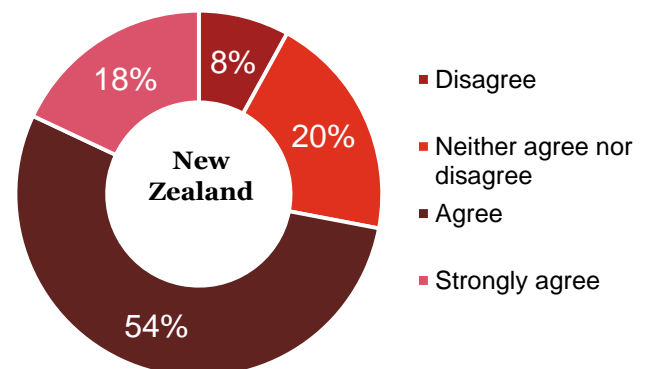
Equally challenging is being able to combine innovation strategy with business strategy. In our Global Innovation Benchmark, 54 per cent of companies said they're struggling to bring together innovation strategy and business strategy.

For each of the three groups here in New Zealand, the challenge is now to invest in their innovation efforts in a strategic way, by linking it through to their broader strategy and building a culture and framework around innovation that will allow it to thrive.

While New Zealand companies are split into roughly three groups, there's a similar split within emerging technologies themselves. Awareness and investment is divided across three groups, as some technologies enter New Zealand's mainstream, while others are still yet to see major investment – something we explore in more detail on page 7.

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Does your innovation process include identifying and commercialising digital products?



Source: Respondents to the 2017 Digital IQ Survey.



## *Putting research to work: How the University of Auckland commercialises great ideas*

When your organisation's purpose is to push the boundaries of current thinking, carry out leading research and hire the brightest minds in their fields, you might think innovation would come naturally. However, for higher education institutions like the University of Auckland (UoA), turning great research into commercial opportunities rests on having a strong process behind the research that lets them really harness this potential.

Bridging this gap between academic research and commercial imperatives is UoA's UniServices. The organisation has two mandates: to work with businesses to commercialise ideas through a partnership with university researchers and to help academics within the University to commercialise their research. It's this approach that has supported the development of Mark Sagar's Soul Machines (see page 8), and other leading tech companies like PowerbyProxi, Stretchsense, Objective Acuity and SapVax, that span the whole spectrum from power electronics and wearable tech to medical devices and new pharmaceuticals.

When working with external businesses, UniServices CEO Dr Andy Shenk emphasised that "choosing external parties to work with is really a dialogue, we're looking for companies that are able to clearly enunciate what they need and then we ask ourselves whether it is an area where we can bring our expertise to help."

When this relationship starts, UniServices evaluates whether there's something real to the idea that the University can pursue. Once established, these relationships with external businesses will run for years, with students even moving into roles within the partner organisation after they graduate.

To bridge the cultural gap between commercially minded organisations and the goals of the University's own researchers, UniServices focus on the strategic outcomes that their partners are looking to achieve. As Andy puts it:

"We go and have conversations with clients where we'll say 'our plan is to offer you this' or 'we're proposing to do it this way, what do you think?' If we haven't got that right, then we'll have a conversation about where their priorities are and how we can help them. The result is more than 500 active customer relationships worth more than \$100m per year."

Beyond working with external companies, Andy and his team are responsible for evaluating and commercialising the University's intellectual property, backed by their own investment fund that they apply to ideas from within the University.

"We have quite a structured process where we engage with potential inventors and talk about what their invention could be, what the market looks like, what it's going to take to advance and what competitors are doing," said Andy.

Andy and his team at UniServices will then work with its Return on Science investment committees that evaluate an opportunity and advise whether or not UniServices should invest in the idea. In the last year alone, this process has led to 11 new companies starting and over 100 new ideas running through UniServices' investment process.

"As well as working with the Return on Science investment committees, we run workshops with academics where we take them through a lean canvas process so they can explore and get feedback on their ideas. That helps them to know what they could do, what they'll need to develop further and their personal involvement in this process. That's just one of a whole array of preparatory activities we're running across the University," said Andy.

Among those activities is the Velocity Entrepreneurship programme in the Centre for Innovation and Entrepreneurship, of which UniServices is a Gold sponsor. Velocity supports and develops entrepreneurial teams of students and researchers, and provides the coaching and mentoring required to bring their ideas to fruition. Among the thousands of alumni of Velocity, none exemplify the programme more clearly than PowerbyProxi, which came second back in 2004. After Velocity, the founders went on to build the exciting New Zealand technology company that it is today, with large teams of engineers, a sizable intellectual property portfolio and top-tier customers from around the world.

Lastly, for Andy and the team at UniServices, a key focus is to ensure New Zealand as a country isn't too reliant on incremental innovation that only builds on the country's existing strengths.

"I think we have to be supportive of these activities, but not overly constraining in the types of activities we're supporting. No one in their right mind would have said a decade ago that New Zealand would have an aerospace future – but look at us today. So we have to be giving things a chance that will be truly new and unique, and that none of us could have predicted," concluded Andy.

A man plays a virtual keyboard using Stretchsense gloves. The technology behind Stretchsense grew out of research conducted at the University of Auckland, and Uniservices has been instrumental in helping to commercialise the technology.

Image provided courtesy of Uniservices.





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## *The road to commercialising innovation*

A customer-centric approach to innovation is essential, but it still doesn't answer the question of how you commercialise innovation. For that, we believe it requires companies to focus on six key areas:

### ***1) Integrating to innovate***

Integrating current and future technologies was the second-biggest emerging barrier to innovation for our Digital IQ respondents. Incumbents should make use of modern cloud-based or open-source systems utilised by start-ups and they should work together to integrate new technologies into already existing architecture.

### ***2) Evaluating emerging technologies***

Recognising the disruptive potential of the Essential Eight is a start, but it has to be accompanied by a process. Companies need a framework and a dedicated team who can spot these opportunities and drive this process.

### ***3) Shifting thinking to outside-in***

Starting with customer problems is part of a broader shift that organisations have to undertake to operate from the outside-in. That means using customer data to inform decisions they make about new products and co-designing with customers to ensure a product is solving that need.

### ***4) Taking a partnership perspective***

Partnering with start-ups is a useful way to kick start innovation, especially around emerging technology where these firms will have an edge. However, this also has to be backed up by a strategy that ensures corporates are partnering with start-ups in the right way and are plugging this collaborative work into their broader commercialisation strategy.

### ***5) Creating an IT culture that will support innovation***

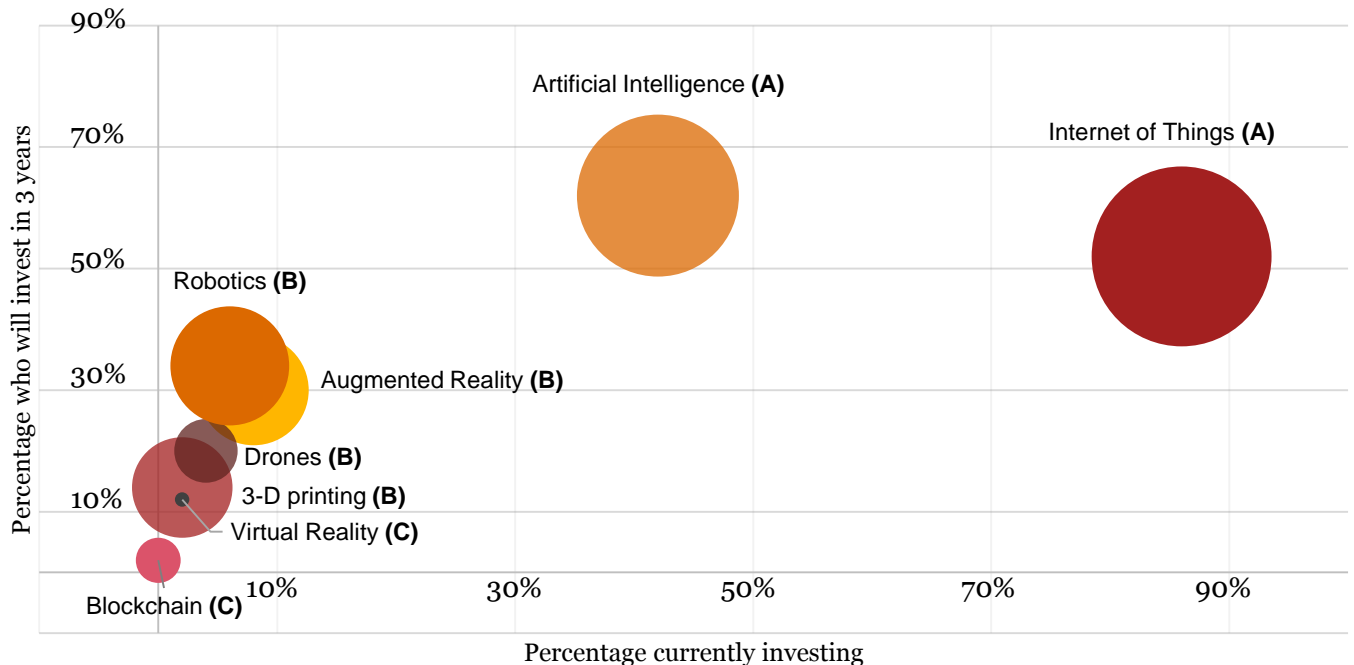
Traditional IT culture has to change from one that inhibits innovation to one that is agile and modern. This will ensure that processes are smooth and new products and services are developed more seamlessly.

### ***6) Fostering a company culture that supports talent and innovation***

Undertaking internal innovation and partnering with start-ups both require a company culture that supports talent and innovation. In our FinTech research we saw that culture is one of the biggest barriers when corporates and start-ups work together. Companies that can build this culture will attract talented workers and can better engage with other companies.



## The state of play for emerging technology in New Zealand



To better understand the roadblocks that come with commercialising innovation, we've taken a closer look at the second of these six steps: evaluating emerging technologies. To get a fuller picture of New Zealand companies' current familiarity with emerging technologies, we mapped the percentage who are investing in each technology now (X axis), against those who will be investing in three years (Y Axis) and the disruptive potential our respondents think the technologies have (the size of each bubble). What we saw were three main groups within the Essential Eight:

**A – Today's focuses (Artificial Intelligence and the Internet of Things).** These two technologies are already the most advanced in New Zealand and are currently dominating emerging technology investment. As a result, they are also the two where our Digital IQ respondents are most aware of their disruptive potential (they're the two largest bubbles).

**B – The new priorities (Augmented Reality, 3-D Printing, Drones and Robotics).** These four all share similar traits: they're all clustered on the left-hand side of the graph so they're areas companies aren't investing in currently, but they will be in the coming years. What's more, while they aren't considered as disruptive as AI and the IoT, they're all areas with significant disruptive potential.

**C – The blind spots (Blockchain and Virtual Reality).** These were the two technologies that were consistently ranked low by our Digital IQ respondents. Few are investing in them, or planning to, and their disruptive potential was barely acknowledged by our survey participants.

Beyond these three categories, there's also a clear arc to the adoption rates of the Essential Eight. Companies in New Zealand are taking their time to become familiar with these technologies, and it's only once they've been on the radar for some time that companies investing in them and recognising their potential. Just because Blockchain and Virtual Reality are today's blind spots doesn't mean they won't be as disruptive as technology like the IoT, it just means efforts to commercialise these technologies aren't as advanced yet.

Likewise, the Essential Eight we tracked are just the technologies that will have the greatest impact over the next five years. Behind them will be another generation of products that build on and combine with today's emerging technologies. That's why having a structured approach to turn new ideas into viable products is going to be vital for companies as they look to navigate each of the coming waves of new technological innovations.

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## *Putting a face to AI, Soul Machines' journey to commercialise digital avatars*

What does AI look like? How do you interact with it and how does it respond to you?

It's these questions that have quickly gone from science fiction to business reality. As companies integrate AI into their customer service, they're grappling with how you create an artificially intelligence agent to mimic the service you'd get from a human.

It's this space where Soul Machines has made a name for itself, led by CEO Dr Mark Sagar. After earning a Ph.D in Bioengineering, and two Academy Awards for his work with Weta Digital on movies like Avatar and King Kong, Mark's latest move has seen him commercialise his research at the University of Auckland into the start-up Soul Machines.

For Mark, Soul Machines' work is about setting the stage for the next evolution in AI technology, working on the interfaces that will define our day-to-day interaction with AI. Soul Machines' digital humans are designed from the ground up with realistic facial expressions and muscles, an artificial central nervous system which can learn and adapt, as well as possessing the ability to detect emotion in the person its speaking with.

"We're going through a change away from chatbots and personal assistants that is just software we can talk to and towards a digital person interface that reacts to you in an emotionally intelligent way. The difference in that jump will be like moving from radio to television," explained Mark.

The technology has already evolved quickly. From the first demonstration of the technology (Baby X), Soul Machines has developed a variety of digital humans. These include 'Rachel', one of their current prototypes, and specific projects like Nadia, a virtual assistant developed for the Australian National Disability Insurance Scheme.

Mark's also looking towards further applications, especially for locations where cameras are already in place that can let the avatar 'see' the person they are talking to. While most modern laptops and smartphones have cameras built in, Mark is looking to devices like ATMs which also use cameras and could benefit from a digital person interface.

As Mark and the Soul Machines team have begun to implement their digital people interfaces with clients, they've also seen some key differences in the way people choose to interact with AI, and how companies can use human and AI-driven customer service alongside one-another.

"What we're finding is there are some interactions that people would prefer to have with a virtual agent than with a human. They're also prepared to talk to an virtual agent if it's more convenient for them, instead of waiting on hold for another half an hour to reach a call centre, for example. It's that opportunity to give customers different choices that's really exciting about AI."

For Soul Machines, commercialising their technology has meant working with an increasing number of corporates, looking to integrate a digital person interface into their broader efforts to harness AI.

"There's a lot of low-risk areas where companies can start to explore emerging technologies," said Mark. "Some of the first projects we'll work on with new clients are things like frequently asked questions. You can easily turn those into a conversation and it's incredibly low risk, so it's a great starting point."

Once the AI software has had a chance to have conversations with real customers and learn from those interactions, the technology can then advance to more complex projects that are central to an organisation's service offering. From these smaller projects, AI applications can start to bubble up through the organisation, bringing in more departments and projects.

It's still early days in the commercialisation journey for Soul Machines; it's only been in the last few months the company has seen commercial applications of its technology. But as AI matures, the need to give it a human face is only going to increase.








Soul Machines' Rachel, the digital avatar designed to provide a human-like interface for AI systems.

Image provided courtesy of Soul Machines.




# Artificial Intelligence: the hottest topic in innovation?

We've looked at the Essential Eight technologies as a set and analysed the different levels of awareness that New Zealand companies have across them. But how does the potential impact of an emerging technology translate into an industry or a company? To understand this, we've analysed just one of the eight, to understand how AI and related technologies like those being developed by New Zealand companies such as Soul Machines will impact companies here and around the world. At PwC, we estimate AI will see a US\$15.7 trillion increase to the global economy by 2030.<sup>1</sup> Here's how we see that playing out in different industries:




### Financial Services

-  **Ready now:** Robo-advice, Robotic Process Automation and automated insurance underwriting.
-  **Medium-term:** Personalised product design to match customer preferences.
-  **Long-term potential:** Shift to prescriptive analysis to improve customer outcomes.




### Technology, Communications and Entertainment

-  **Ready now:** Content recommendations for consumers.
-  **Medium-term:** Automated telemarketing capable of having a conversation with customers.
-  **Long-term potential:** Individualised AI-created content.




### Energy

-  **Ready now:** Smart metering.
-  **Medium-term:** Optimised power management.
-  **Long-term potential:** Improved renewable energy management, e.g. by predicting wind power outputs.

### Healthcare

-  **Ready now:** Smart scheduling of medical appointments and medical insurance.
-  **Medium-term:** Data-driven diagnostics and virtual drug development.
-  **Long-term potential:** Robot doctors that will manage diagnosis and treatment.

### Manufacturing

-  **Ready now:** Automating even larger parts of the production process.
-  **Medium-term:** Intelligent automation in areas ranging from supply chain optimisation to predictive scheduling.
-  **Long-term potential:** Prescriptive analytics are integrated into product design.

*We estimate AI will see a US\$15.7 trillion increase to the global economy by 2030.*

Source: <sup>1</sup> PwC Global Artificial Intelligence Study 2017.



## Retail



**Ready now:** Product recommendations based on previous customer interactions.



**Medium-term:** Fully customised products and services.



**Long-term potential:** Products that anticipate demand from market signals.



## Government



**Ready now:** Process automation, emergency response triage and routing, translation services.



**Medium-term:** Intelligent and emotional response chat bots, digitally controlled surgery, crime prediction analytics, chat bot service advice (health, tax, immigration).



**Long-term potential:** Bot-to-bot interfaces with third parties, driverless public transport, on demand public transport, fully automated surgery.



## Automotive



**Ready now:** Automated driving assistance like parking assist and lane centring.



**Medium-term:** On-demand parts for manufacturing and maintenance.



**Long-term potential:** Engine monitoring and predictive maintenance.



## Transportation and Logistics



**Ready now:** Automated warehouse management and deliveries.



**Medium-term:** Traffic control.



**Long-term potential:** Completely autonomous delivery and transport.

Our analysis of AI shows is just how varied the impact of emerging technologies is likely to be and where potential opportunities for commercialisation will come from for established firms. From productivity gains to improved customer experiences and developing brand new product categories, we're only now starting to see just how influential AI and other emerging technologies will be over the coming years.

Realising the potential of these opportunities will take time, resources and new approaches. Business leaders need to work through what AI means for their industry, what their strategy will look like (will they be an early adopter or a fast follower?) and what talent and culture they'll need to deliver on AI's potential. Underpinning all of this has to be new governance and control measures that ensure new technologies are integrated into an organisation in the right way.

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*We're only now starting to see just how influential AI will be over the coming years.*

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## *Shopping's new reality: How the Shopper360 VR platform is reinventing market testing*

Imagine a virtual supermarket, one where every move a customer makes (or doesn't make) can be recorded. What's more, you can use all the data you're gathering to understand exactly how customers interact with your products. From pricing to store layouts, a virtual supermarket would let you test and refine in a way that is simply too expensive and time-consuming to do physically.

It's this vision that Rush Digital, a hyper innovation studio based in Auckland, has brought to life with Shopper360 (by Lumaten), a VR platform that is already being used commercially. We sat down with Rush Digital's CEO Pavan Vyas to discuss the Shopper360 platform and its journey to commercialisation, as well as their image recognition software which is currently being trialled with customers.

Both projects have taken different approaches to their development. Shopper360 is a collaboration between Rush Digital, Lumaten and Forward. While Lumaten and Forward have provided the retail industry expertise and research knowledge respectively, Rush Digital has provided investment and the technical expertise to develop the product.

"In Shopper360, we looked at whether there was a category-beating opportunity where the other party (Lumaten) could combine our capability with their relationships and experience within the category. So we can bring in our technical skills to really accelerate that idea," explained Pavan.

"Our partners in Lumaten knew there was an opportunity there, so we took them through what was essentially a lean start-up process. Then, as we validated different parts, like the technology risk and the market risk, we made a call that there was something in there, so that's when we partnered and put equity into the business to help them get to the next level."

Shopper360's development process has drawn on this collaborative approach to innovation, bringing together industry, technical and research expertise. However, Rush Digital's work in computer vision has been a purely internal project, building on their existing experience the company to understand the technical requirements that a successful computer vision project would require.

"For every computer vision project we've done, there have been five more that were just too expensive to pursue. So with computer vision, we knew we had to democratise it. We had to do for computer vision developers what Adobe Dreamweaver did for web developers. We had to package up hundreds of pre-developed computer vision algorithms in widely adopted scripting languages such as Python and we'd need a hardware platform that cost just a few hundred dollars, rather than a few thousand. Once that was in place, we were then able to think about where the big areas of opportunities were that computer vision could play a part in."

This process of exploring costs as part of the commercialising innovation process has been key to Rush Digital's success. When working with partners, they're approach is to start with a paper-based prototype and market testing within just three to five days. Not only does this ensure the product is solving a customer problem from the beginning, but it means a working prototype can be up and running at a fraction of the cost of committing to the full product build.

Underpinning this approach is also a broader understanding of how technology is evolving, and the space that Rush Digital is looking to occupy in the future. As Pavan puts it:

"For me this fourth industrial revolution that we're in will be about the physical world meeting the digital. That means processing power is going to meet with distributed networks and the ubiquity of data - so the physical and digital worlds will blur and that's where we're looking to develop our business."

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## *Commercialising innovation through collaboration and customer centricity*

It's easy to look at the world of emerging technology and see examples of solutions that aren't actually solving customer problems. In the past, technologies that were hyped as the next big thing have often failed to have real commercial impact because they took a technology-first rather than a customer-first approach to their development. A critical factor in successfully commercialising innovation is to start with the customer and the enterprise strategy – not just the technology. That's why step three of our commercialising innovation framework is to take a customer-centric, outside-in approach to innovation.

This requires a deep understanding of customer problems. It might sound obvious, but companies that have an effective, sustainable approach to innovation aren't pursuing emerging technologies for the sake of it. Instead, they're zeroing in on customer problems and then developing solutions that draw on the most appropriate technology for the job.

Currently, companies that are doing this successfully are in a minority. While companies are starting to acknowledge that customer experience is important, only 18 per cent of New Zealand companies say they will be prioritising customer experience in the next year.<sup>1</sup> It's a missed opportunity for businesses in general, but one that is especially relevant for the innovation process.

Globally, we're also seeing customer-engagement strategies become a hallmark of stronger growth prospects. Those companies that are using design thinking, and bringing user-driven requirements to every stage of the innovation process were twice as likely to be expecting growth rates of 15 per cent or more over the next five years.<sup>2</sup>

Companies that are starting on this process also have to be carving out resources internally to focus on innovation, while also bringing in experts from outside the company to introduce new perspectives (as we discussed on page 6). Working with start-ups, university researchers and even competitors on joint innovation projects can infuse a depth of expertise to these efforts.

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*Only 18 per cent of Digital IQ respondents said they will be prioritising customer experience.*

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Sources:

<sup>1</sup> PwC NZ Digital IQ Survey 2017

<sup>2</sup> PwC Global Innovation Benchmarking Report



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## *Samsung Healthcare puts AI heart monitoring through its paces*

Healthcare is a topic close to everyone's heart. Heart disease takes the life of one New Zealander every 90 minutes, according to Heart Foundation NZ, while 172,000 people live with the condition, whether they know it or not.

It's in these situations, when you're living with a heart condition, that knowledge is power. If you can monitor your heart regularly, it's possible to pre-empt some of the more serious repercussions of heart disease. Doctors use electrocardiogram (ECG) tests to do just that, but so far those tests are limited to a hospital setting. It was this problem that led Samsung Healthcare to create a new product and trial it in New Zealand, said the company's Principal Consultant, Young Juhn.

Called the S-Patch, Samsung's medical device is a small, eight-gram wearable that people attach to their chests. The S-Patch then measures the wearer's ECG, and that data is collected and displayed through the user's phone. However, for most people, information on the heart is difficult to translate into a diagnosis – doctors train for years to identify heartbeat abnormalities that signal an underlying problem. For Young, that's why the S-Patch is unique: it uses artificial intelligence (AI) to translate the mass of data into actionable information.

"The AI records millions of heartbeats, many more than any individual could see. It doesn't get tired or make mistakes and it works faster than a human too," Young explained.

This information is invaluable to doctors and other medical professionals in measuring longer-term heart characteristics of patients. Should the doctor notice any abnormalities, they can call their patient in right away. Young says the next step is to make the AI sophisticated enough to provide accurate medical advice based off the data the device collects.

"For full commercialisation, we can't completely use AI at the moment. AI will help, but we still need a person to validate and confirm the data, which is a challenge we're still facing. We still want to innovate the whole process, but we currently have to have that hybrid design.

Regardless, it's a great starting point – one that could help to lower the burden on the healthcare systems and, ultimately, save the lives of the millions of at-risk people around the world. From a financial standpoint, the cost of ECG tests in the hospital can run into the thousands of dollars, whereas a wearable can provide richer data for a fraction of the price.

So there's a very tangible business case; but what about scalability? Young says testing the use of AI for monitoring heart conditions is a great platform to do more with the technology. In reality, the device is already sophisticated enough to collect a greater amount of data.

"There are a lot of devices out there that try and do similar things," he continued, "but the benefit we saw is in the AI and bio-processing chip itself. We use a bio-processor, which is like a CPU but it can be used for analysing a range of biosense data, and we see a huge market for that.

"This bio-processor actually does more than ECG. Eventually we'll start capturing other data that can be collected from the chest area. We're looking at fall detections, stress levels and also skin temperature – other combinations of data that a lot of medical industries want but have never had.

"As soon as I saw that, I thought; 'this should not only meet the current needs of people and hospitals, but their future needs as well'. There's the potential in the future that the price point of these things will be so low we can really disrupt the healthcare market, particularly for people who have heart disease."

Disruption, innovation, technology – these are all things we've heard before. However, Samsung Healthcare has equipped all them to help solve a very real problem, giving us all a lesson in the foundations of successful commercialisation.



## ***Innovating the process of getting to market***

Many businesses do not distinguish innovation from creative activity – they assume it's done by off-the-wall thinkers who are culturally a world away from the traditional corporate environment. This line of thinking has led many companies to establish their own internal innovation hubs or partner with start-ups as strategies to better harness this creative potential.

This could be holding back our innovation efforts here in New Zealand. Those companies that are able to pursue emerging technology in a consistent manner and convert ideas into better performance don't just have a lot of creative people and ideas, they're also the ones with an incredibly solid innovation process in place. It's no surprise that 47 per cent of our global respondents in the Innovation Benchmarking Survey said a clear business model enabled their innovation success.

Creating this process is easier said than done. There's a natural tension between creativity and process – one that has to be overcome for commercially successful innovation.

So what are the benefits of having a strong innovation process? Apart from being able to more quickly identify and commercialise ideas within the organisation, having a strong process can mitigate a range of issues, such as funding restraints. A clear customer problem to solve, and a set budget that is much lower than the estimated cost of an existing solution, a strong innovation process can be used to ideate and test different solutions quickly and deliver a final product within budget.



## Questions for executives and boards to ask:

We've now seen how New Zealand companies can commercialise innovation, and how they are specifically handling developments like emerging technology and the demand for customer centricity. If you're wondering what's next, these are some of the questions you'll need to be asking to develop an innovation process that drives commercial results:

- Who owns the innovation process in your organisation?
- Is their focus purely internal or are they also identifying external partnership opportunities?
- Who do they report to? The CEO? Or another executive?
- How is your organisation identifying and generating new ideas to explore? Is this process technology-led or focused on customer problems?
- Does your company culture support or stifle innovative ideas?
- At what stage are you involving customers in the innovation process?
- How advanced is your exploration of the Essential Eight and other emerging technologies?
- Are you focused on more mature technologies, or are you also exploring those that are still emerging?
- What's the innovation process you're using to turn ideas into viable products?

## Get in touch



**Andy Symons**  
*Innovation Partner*  
T: +64 9 355 8535  
E: andy.d.symons@nz.pwc.com



**Kris Nygren**  
*Partner, Digital Services Leader*  
T: +64 9 355 8955  
E: kris.x.nygren@nz.pwc.com



**Greg Doone**  
*Director, Digital Strategy*  
T: +64 9 355 8946  
E: greg.x.doone@nz.pwc.com

