

22nd CEO Survey  
Key findings for New Zealand  
February 2019

# Storm clouds and silver linings: what's the outlook for New Zealand CEOs?



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**“With the wave of protectionism and populism sweeping the globe, as well as the increasing speed of technological change, it’s not surprising CEOs are looking ahead and seeing an uncertain future.”**

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## Executive summary

How our outlook has changed. In last year’s survey we spoke of CEOs’ anxious optimism. We saw business confidence take a few knocks, particularly here in New Zealand, but the prevailing mood was cautiously confident.

Fast forward to 2019 and any optimism our CEOs felt last year has fallen sharply. A standout from this year’s survey is how severely the enthusiasm about global economic growth has dropped, with New Zealand CEOs among the most pessimistic. Similarly, CEOs’ bullishness about their own growth prospects has dropped from 38% being ‘very confident’ in 2018 to 26% in 2019.

With the wave of protectionism and populism sweeping the globe, as well as the increasing speed of technological change, it’s not surprising CEOs are looking ahead and seeing an uncertain future. For New Zealand CEOs, however, domestic matters are seen as the greatest threats to growth alongside any factors that could impact the ease of doing business.

This year we used the CEO Survey as an opportunity to drill down into leaders’ thoughts on artificial intelligence (AI). Again, we see a level of uncertainty about what lies ahead. New Zealand CEOs clearly see the transformative power of AI but only 32% have already introduced AI initiatives into their business.



Opinions on the reach of AI and the consequences it could have – not only on the workforce but on society as a whole – are divided. The Government’s role in implementation and development is also up for debate with many CEOs seeing AI as something that’s beyond traditional governing bodies.

We also asked CEOs about data and analytics. It’s clear that we all have a vast amount of information to digest. However, extracting value from the numbers and using the data to make better business decisions is something many CEOs are struggling with.

I’d like to thank everyone who participated in this year’s survey, particularly those business leaders who took part in an in-depth interview. Your insights into the New Zealand business landscape and what lies ahead are greatly valued and form the backbone of this report.

I hope you find the 2019 PwC CEO Survey an informative report and one that provides some insights into how New Zealand businesses can prepare themselves for the future.

Mark Averill  
CEO, PwC New Zealand

 51%

believe global economic growth will decline over the next 12 months compared to 29% globally and 32% in Australia

26%



are 'very confident' about revenue growth in their own organisations over the next 12 months down from 38% in 2018

56%



believe trade conflicts are a threat to businesses



CEOs believe the data they receive is inadequate because of:

62%  
data siloing

54%  
lack of skilled analytical talent

## What's the outlook for New Zealand CEOs?

 84%

think AI will transform their businesses but 30% have no plans to pursue any AI initiatives at the moment

46%



believe AI will displace more jobs than it creates in the long run

# Is there trouble ahead? New Zealand CEOs signal an unsettled future

CEOs are looking ahead with growing pessimism about both the prospects for global economic growth and the growth of their own organisations. Whether it's Brexit, potential trade conflicts or government policy, many CEOs see a more unsettled future.

## Falling confidence in growth prospects

The survey results show New Zealand CEOs are considerably more gloomy than their peers. Over half of our CEOs (51%) believe global economic growth will decline in the next 12 months compared to 32% in Australia and 29% globally. It is a sharp rise in pessimism for CEOs in this country, up from 19% in 2018 and 16% in 2017. Also, fewer CEOs are taking a neutral stance and saying it will 'stay the same'.

This downbeat trend is mirrored in CEOs' confidence about revenue growth in their own organisations. While over a quarter (26%) are very confident they will achieve growth in the next year, it's a considerable drop from 38% last year and indicates lower confidence than CEOs globally (35%) or in Australia (40%). 72% of our CEOs now say they see uncertain economic growth as a major concern for their business.

The good news is that the further out New Zealand CEOs look, the more optimistic they become. When asked about revenue growth over the next three years, 30% are 'very confident' about their prospects.

Despite the decreasing optimism, CEOs are still looking to invest in staff numbers, although not at the same rate as previously. 44% expect headcount to increase in the next 12 months compared to 51% in 2018. Again, New Zealand CEOs seem less confident than their global and Australian peers where 53% and 56% respectively are looking to hire more people in 2019.

These numbers support our anecdotal evidence about what lies ahead for New Zealand business. When asked about 2019, the words 'uncertain' and 'volatile' were used repeatedly by local CEOs and a drop in business confidence was a continual theme of news reports throughout the last year. Similarly, many economists have adjusted their forecasts to show a downtrend although there are few suggestions of a recession just yet.

## Are domestic issues the greatest threat to growth?

Weakened business confidence in New Zealand has been linked to ambivalence about the new government and a perception that it is less 'business-friendly'. Threats related to government policy loomed large for New Zealand CEOs with 79% pointing to over regulation and policy uncertainty as key macro threats for business.

When it comes to threats outside these shores, our CEOs express less concern than their global peers about what's happening around the world. With the rise of populism and protectionism, it's not surprising geopolitical uncertainty is seen as one of the top three concerns by CEOs both globally (75%) and in Australia (73%). Yet, a comparatively low 61% are troubled in this country.

## Key takeaways



New Zealand CEOs are among the most pessimistic about global economic growth and business revenue growth



Domestic rather than global issues are seen as the greatest threats to business growth



The threat of trade conflicts is causing concern



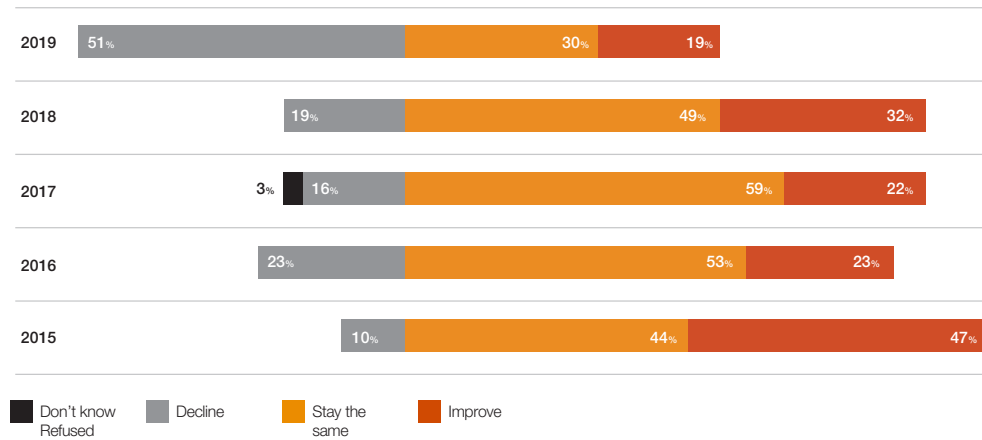
China, USA and Australia remain key markets although uncertainty is increasing



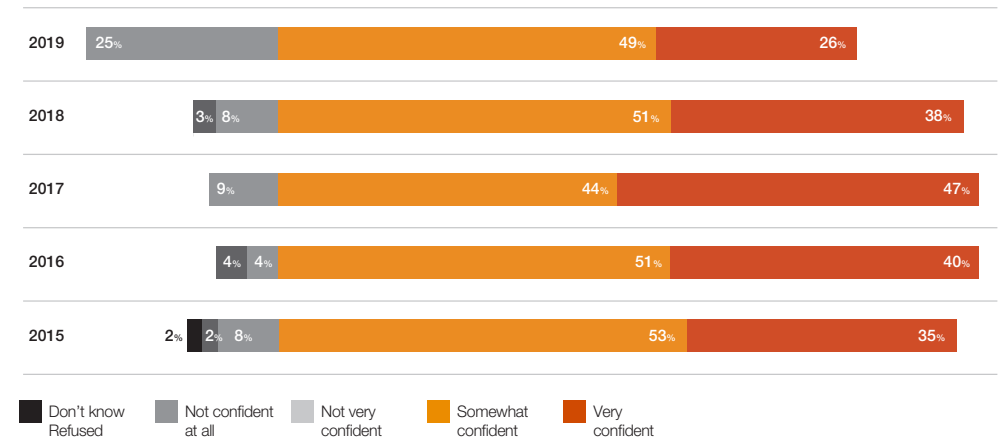
“There are so many international threats out there you can’t help but feel a bit nervous about what’s going to happen. The figures look good at the moment but New Zealand is a trading nation so we are highly dependent on the international scene.”

Kevin Lavery, Wellington City Council

### Do New Zealand CEOs believe global economic growth will improve, stay the same or decline over the next 12 months?



### Are New Zealand CEOs confident about their organisation’s prospects for revenue growth?



“Overall, despite the obvious risks of Trump, trade wars and Brexit, my feeling is that the global economy is in reasonable shape for the time being.”

Marc England, Genesis Energy



**“Many of our clients talk about Australia and the US a lot but not Europe. Actually, Europe is a massive part of global markets and New Zealanders do have plenty of exposure there.”**

Blair Vernon, AMP

The domestic focus of New Zealand CEOs is also evident in the numbers relating to the future of the Eurozone. For local CEOs the situation in Europe is the least important issue with a mere 16% expressing concern. However in Australia it carried more weight at 26%. Across the Asia Pacific region, 50% of CEOs see it as an issue.

Should the European situation be of more concern than it is? Some commentators including Blair Vernon of AMP suggest that trouble in Europe could well have a significant impact on New Zealand.

Our CEOs see issues that are closer to home having the greatest impact on their growth prospects with the availability of key skills and cyber threats being two of the main concerns.

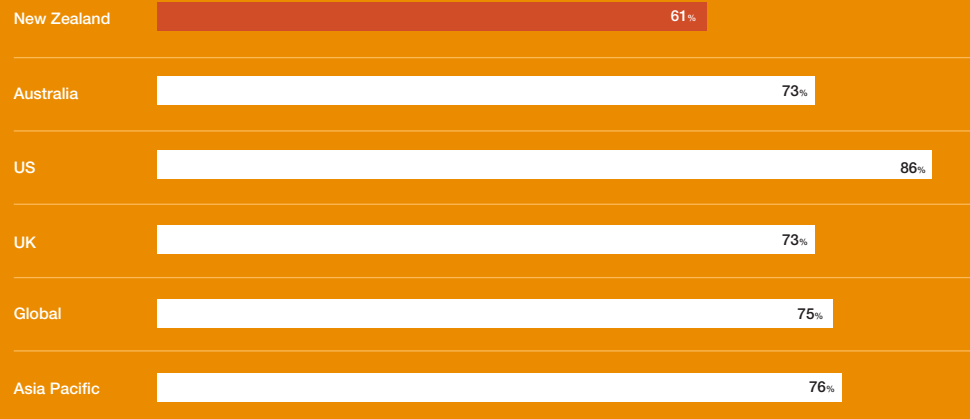
Finding the right people for the job continues to be a major pain point for CEOs. 91% now believe the availability of key skills is one of the top threats to their business compared to 84% in 2018. Unsurprisingly, 63% say it's becoming more difficult to hire people with capabilities they need.

To try and close the skills gap, New Zealand CEOs are focusing on re-training existing staff as well as hiring people from different industries who can bring new ideas and different expertise.

Cyber threats are still at the forefront of CEOs' minds. Over the course of this year, 84% believe their organisation will be affected by geopolitical cyber activity. However there is some good news – 81% say their organisation is cyber resilient and will be able to recover quickly from an attack.

New Zealand CEOs are more concerned about the talent shortage and cyber threats than their global or Australian peers. Our market size and reliance on digital connectivity could well be playing a part here.

## CEOs concerned about geopolitical uncertainty



Note: All % 'somewhat concerned'/'extremely concerned'



## Top threats to growth for New Zealand CEOs:



Note: All % 'somewhat concerned'/'extremely concerned'



## Interview

# Blair Vernon AMP

My sense of the coming year is that there will be more volatility in the global economy, that we'll see more ups and downs, and that by the end of 2019 we won't be in a better position than we are in now. We expected 2018 to be more volatile than it has been but I think people are waiting to see how some issues, like trade conflicts and low interest rates, are going to play out.

In terms of potential impact on markets, we see Brexit as the most worrying issue. If the outcome of Brexit is negative, it will have huge repercussions for Europe and the UK which will flow on to New Zealand. Many of our clients talk about Australia and the US a lot but not Europe. Actually, Europe is a massive part of global markets and New Zealanders do have plenty of exposure there.

The threat of cyber attacks, particularly in respect of customer data privacy, remains critical and that's why we've invested more in security measures in the last five years than ever before. We have a dedicated resilience and risk programme which includes cyber although the issue is broader than that – it's also about the pieces of paper in the back of someone's car and the impact of reputation damage.

When it comes to government policy, I support the introduction of a capital gains tax. I haven't seen all the details of what that could look like in New Zealand but I'm open-minded about it. I believe there is a massive imbalance of wealth in this country that is skewed towards those who have assets. I'd like to see the tax system equalised because that would mean people are able to save more.

Hiring people with the right skills isn't so much of an issue for us because we can train people on the job. The challenge is finding people who are passionate about what they do. There's no 'secret sauce', we want people who want to pick up the phone and have a meaningful conversation with a customer. That's meant we've adopted a more diverse view on recruitment and have had some success by hiring people from outside the industry.

We also know that people want to be part of an organisation that has merit and purpose. I think attracting people to the financial services sector, and keeping them in their roles, is going to be tough over the next couple of years as the froth comes off remuneration. How do you motivate people by something other than remuneration and incentives? For us it's about creating a sense of purpose so people want to help New Zealanders manage their finances better.

I don't think AI will have a huge impact in New Zealand in the next five years, ten years is more likely. In New Zealand there is a tendency to underestimate the impact of new technology but overestimate the speed at which it will arrive.

We are currently using AI in a modest sense. For example we've introduced a couple of tools like chat bots. I see the true benefit as the ability to mine the masses of data we have and use it to help people make decisions.

In our business, so much of our work is still about face-to-face interaction. We've seen a lot of the online tools fall over in recent years and because of that I'm not so worried about robo advice. One of the big problems of our industry is that people don't want to engage with a financial adviser and I don't think AI is going to change that right now.

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“In terms of potential impact on markets, we see Brexit as the most worrying issue. If the outcome of Brexit is negative, it will have huge repercussions for Europe and the UK which will flow on to New Zealand.”







Interview

## Carolyn Tremain MBIE



I am cautiously optimistic about the outlook for the global economy over the next year. However, we are facing a few headwinds, including Brexit and the rise of anti-globalisation, protectionism and populism, and these make the global outlook feel less conducive to growth. While New Zealand is not completely insulated from what's happening on the global stage, we do have a few things on our side that will help us to be resilient.

The New Zealand Government has a very clear pro-free trade position. We have an active programme negotiating new (and upgrading existing) trade deals – including the CPTPP (Comprehensive and Progressive Agreement for Trans-Pacific Partnership), the EU and the Pacific Alliance – which is important for an export-focused country like ours. We have lots of products and services that growing parts of the world want.

The Government has a vision of a modern economy that is equipped to take on the opportunities and meet the challenges of a rapidly changing world. This includes achieving a low carbon economy by 2050. From a government agency perspective, we are actively engaged in helping to put policy settings in place that support a transition that is fair and works for New Zealanders.

When it comes to developing public policy, we have access to better data collection and analysis methods than we've ever had before. We have a huge amount of data we can use to provide insights and to evaluate policy effectiveness – and we are learning to do this more quickly, easily and cost effectively than in the past.

And we can make the insights from our analysis available to New Zealanders and New Zealand businesses. With our Regional Economic Activity app, for example, you can get economic indicators aggregated by region which is useful data for determining business opportunities.

Another example is how we can use data to understand the dynamics of the New Zealand workforce, including the outcomes for migrants, and use this to inform advice on immigration policy. Of course, we also have a big responsibility to make sure we have the right systems in place to store this vast amount of data, make sure it's accurate and used appropriately.

Technology is also helping us to change the way we think about our own workforce. To date, we've been quite Wellington-centric, but technology changes also mean that there are more jobs that could be done in the regions. Technology can also help to create opportunities for staff to work in more flexible ways.

And there are lots of other benefits from technology change for an agency like ours. We've been watching the development of AI for quite a long time, but we're now seeing an acceleration in the opportunities to use it to improve our services for New Zealanders.

People expect to interact with a government agency 24/7 and AI tools can help us achieve that.

From a future of work perspective, I think we forget how much technology change we have experienced throughout recent history, the pace at which we have adapted, and the benefits that technology has created. Therefore, I'm optimistic about people's ability to adapt to the changes AI will drive in the workforce. Because of this, I see the role of government as an enabler rather than a driver of change. By looking to adopt more of these technologies ourselves, we can help show the benefits for New Zealanders and our businesses, while at the same time identifying the safeguards that need to go with its use. In this way, we can help build trust and provide clarity on what AI can do and where it should be used.

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**“We have a huge amount of data we can use to provide insights and to evaluate policy effectiveness – and we are learning to do this more quickly, easily and cost effectively than in the past.”**

## Enter the threat of a trade war

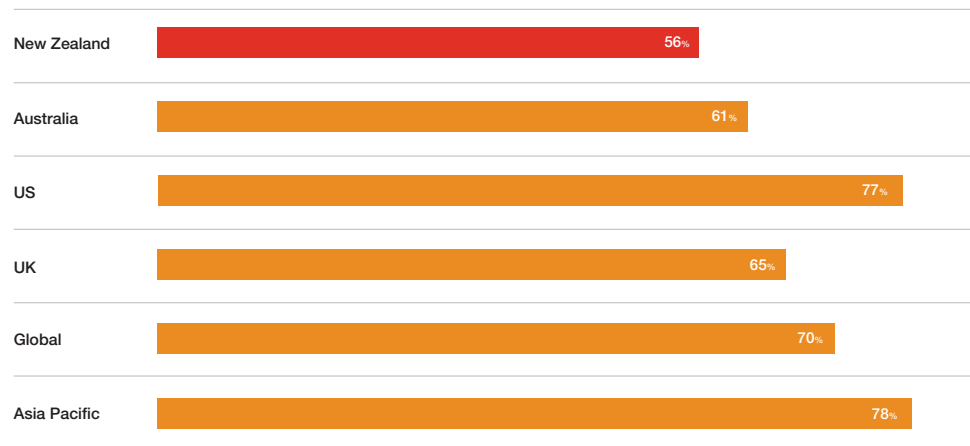
Global tensions over trade have regularly featured in the headlines over the last 12 months with the threat of trade wars never far from the news. This year we asked our CEOs whether trade conflicts were weighing on their minds and which disputes could have the greatest impact.

Globally the level of concern about trade conflicts is high at 70% compared to 78% across Asia Pacific and 61% in Australia. The numbers aren't as high for New Zealand but over half (56%) of New Zealand CEOs express concern. Given how reliant we are on trade it's intriguing this number isn't higher.

Initiatives like the CPTPP (Comprehensive and Progressive Agreement for Trans-Pacific Partnership) may be giving our CEOs confidence.

Conflict between China and the US is seen as the most troubling by New Zealand CEOs followed by conflict between the EU and UK, and EU and US.

## CEOs concerned about trade conflicts



Note: All % 'somewhat concerned'/'extremely concerned'



**“In the UK you see uncertainty, and also now in France, but in Asia it’s more to do with trade with the USA.”**

Ross Taylor, Fletcher Building

**“The New Zealand Government has a very clear pro-free trade position...We have lots of products and services that growing parts of the world want.”**

Carolyn Tremain, MBIE



## Interview

# Ross Taylor Fletcher Building

My sense is the global economy will remain positive over the next year although there are a lot of risks and the potential for volatility. In the UK you see uncertainty, and also now in France, but in Asia it's more to do with trade with the USA.

Formica is still part of our business until the divestment is finalised. It operates in the US, China and Europe and you can see sales momentum is starting to slow because of increasing trade conflict. Tariffs are already having an effect. Importing materials into China from the US has become more expensive and Chinese goods going into the US are also being hit.

For our business, Australia and New Zealand are the most important economies. 60% of our business is focused on the residential market with the remaining 40% on infrastructure and commercial sectors. In New Zealand, the residential market looks fairly stable but in Australia it's definitely slowed. That means we have to focus on factors within our business to make sure we continue to grow top and bottom line and there are plenty of initiatives we can pursue.

There is now more data than there's ever been. In some areas of our business we use that data to great effect but not in others. In our manufacturing operation, we can now generate sophisticated metrics that help with energy use and create production efficiencies. However, on the distribution side, while we are very data rich, we are less joined-up in how we use the information.

The reason for that siloing is partly down to our IT infrastructure which was extremely outdated until recently. We had a major IT legacy issue and have a programme to get decent ERP systems in place over the next four years. That should help us be a lot more joined-up in how we use all the data and insights we have.

For the last 12 months we've been focusing on finding meaning and insights in the data. We've changed our reporting from a very centralised model where everything came up to corporate level, to one where the businesses run it themselves and are able to see what's going on more directly. That kind of change doesn't happen overnight but should have a positive impact.

When it comes to headcount in our organisation the trend is downwards and that's mainly because of automation. Automation means that we will be able to reboot manufacturing in this country where labour has been a real constraint – with less labour we can then start to compete with developing countries where labour is much cheaper. I think that in the next five to ten years the effect of automation is going to be quite dramatic in terms of the impact it could have on the relative cost to produce in developed economies.

There will be challenges though, particularly for people doing unskilled work as there will be less of that kind of work to do.

Something that's important to me is social license. Big organisations like Fletchers play a role in New Zealand but you've got to show why what you're doing is important. It's something Air New Zealand are very good at. We do a lot but don't talk about it. It's something we should do more of.

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44%

of New Zealand CEOs expect headcount to increase in the next 12 months compared to

51% in 2018



### Key markets for growth: uncertainty increases

Worries over trade conflicts are not surprising given that China and the US remain key markets for New Zealand business alongside Australia.

Last year we saw an explosion in the number of international markets our CEOs were investing in with countries like Russia, Mexico and Argentina making an entry onto our list. In the intervening 12 months, CEOs are narrowing their choices and focus has returned to the usual suspects.

Globally India is seen as one of the top five markets for growth. This isn't surprising given it has now surpassed China as the fastest growing large economy in the world. Only 2% of New Zealand businesses see India as a key market, down from 5% in 2018.

In 2019 New Zealand CEOs are also strikingly non-committal about which territories are important for their growth prospects. A quarter (25%) said they didn't know. While this is higher than the global results (15%), both numbers show a marked increase in uncertainty from 2018 (5% in New Zealand and 8% globally answered 'don't know').

Interestingly, 26% of our CEOs couldn't choose three territories that are attractive markets for investment outside New Zealand answering 'no other country' instead. This suggests more of a domestic focus for our CEOs which is backed up by the possible tactics for generating growth. Rather than looking at new markets, over the coming year our CEOs will rely on organic growth or internally-focused activities like operational efficiencies.



**“For our business, Australia and New Zealand are the most important economies. In New Zealand, the residential market looks fairly stable but in Australia it’s definitely slowed. That means we have to focus on factors within our business to make sure we continue to grow top and bottom line and there are plenty of initiatives we can pursue.”**

Ross Taylor, Fletcher Building



Activities planned in the next 12 months to drive revenue growth

74%

Operational efficiencies

67%

Organic growth

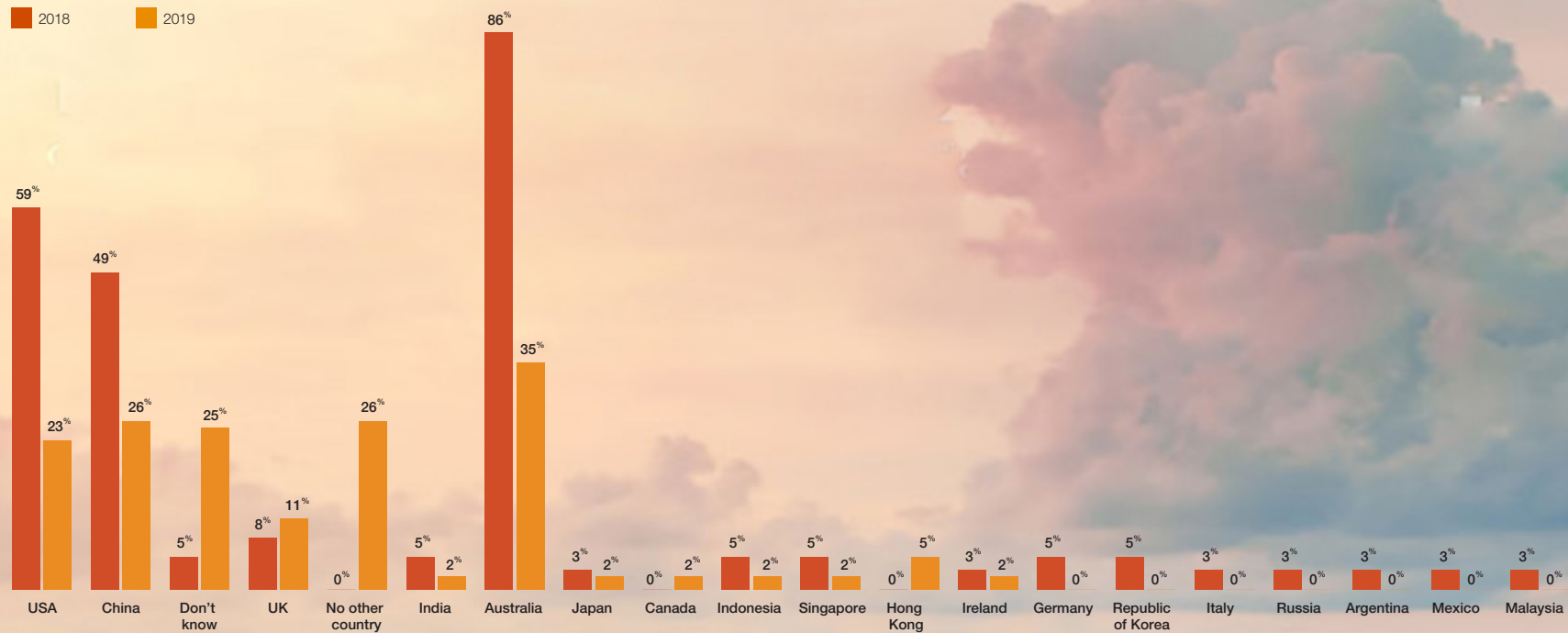
54%

Launch a new product or service

“You can’t ignore the geopolitical events going on right now (for example, Brexit or the debate on trade) which all point towards a downturn – or midnight as I often refer to it. From a New Zealand point of view, the economy is holding up well, but global events could easily trigger a dip or the end to our current economic cycle.”

Mark Averill, PwC New Zealand

Which three territories do you consider most important for your organisation’s overall growth prospects over the next 12 months?





## Interview

# Kevin Lavery Wellington City Council



Wellington has seen record growth over the last 18 months and there are good reasons for thinking that will continue. We've seen high levels of investment in transport and housing projects which will support further growth. The projection for job growth in the region is great.

Being recognised in indices like the 'World's Most Liveable City' by Deutsche Bank helps attract people. We also benefited from the previous government's changes to immigration as well as the overheating of the Auckland economy. But, we need to keep telling our story to bring more people to the city. Wellington isn't well-known enough beyond New Zealand.

We have the strongest start-up economy for high value tech businesses in New Zealand. There's a reason why companies base themselves here.

It's because of the quality of the graduates, the access to crown research agencies etc. Wellington is at the heart of the 'weightless economy'. This type of economy is important for the future of New Zealand – it helps make us less reliant on agriculture.

Looking at the global situation, I think the best word to use is volatility. There are so many international threats out there you can't help but feel a bit nervous about what's going to happen. The figures look good at the moment but New Zealand is a trading nation so we are highly dependent on the international scene.

There is so much data. The challenge we face is interpreting it and making sense of it all. It's definitely true that we need more data scientists. For us, the issue is how you use the data to figure out the patterns and then use it to do things better or differently.

We are collecting data now that we didn't collect ten years ago. For example, we did some work on graffiti by pulling together data from sensors and CCTV in the central city. This data allowed us to make conclusions about why some buildings are more graffitied than others. With that information, we can deal with the underlying cause of graffiti and design out the likelihood of a building being targeted.

While the level of data has improved, it doesn't necessarily help make long-term decisions e.g. will people still be driving cars in ten years or will they all be self-drive? For cities, we are heading towards a paradigm shift in society and the data isn't going to help us with that. It's more about imagination and the strategic choices you are going to have to make to be the city you want to be.

My opinion is that AI will be a bit like the internet. It started out slowly and then the pace changed and the internet became central to our lives. I don't think AI will change things quickly but there will be a time when it just explodes and becomes completely transformational. It will take time because people and organisations are inherently conservative about new ideas.

I think AI is beyond governments. We still have this old-fashioned view that governments set rules in the way they did 100 years ago. But, governments don't have the power they once did. There is a global convergence now and it's difficult for one government to say they're going to do one thing and another to say they'll do another. In some ways the Googles and Apples of the world have more power than sovereign states – people are more aligned to brands.

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**“While the level of data has improved, it doesn't necessarily help make long-term decisions... For cities, we are heading towards a paradigm shift in society and the data isn't going to help us with that. It's more about imagination and the strategic choices you are going to have to make to be the city you want to be.”**



## Interview

# Mark Averill PwC New Zealand

I'm of the view that the rate of global economic growth will edge towards a decline over the next 12 months. You can't ignore the geopolitical events going on right now (for example, Brexit or the debate on trade) which all point towards a downturn – or midnight as I often refer to it. From a New Zealand point of view, the economy is holding up well, but global events could easily trigger a dip or the end to our current economic cycle.

When it comes to PwC, I'm optimistic about our growth. However, we also face similar challenges to many of our counterparts.

Take diversity as an example, and more specifically women in leadership. You see this as a real issue across all sectors, not just professional services – and it's certainly not something that can be fixed by one sector alone.

We are working on this internally, by introducing more flexibility as well as some interventionist policies such as development programmes to grow our future female leaders. However, diversity of thought is still important and must be incorporated into an organisations decision making process.

I also believe businesses need to think more about the impact they have on society. There is a growing expectation from the wider community that organisations have a clear role in society and fulfil a purpose. Ours is to 'build trust and solve important problems'. It's fine to be profitable but you need to make a positive contribution under your social licence to operate.

With the data that is now available, the world has changed significantly. However, there is a challenge in making sure people use that data without being completely overloaded, and, that it's used to add value.

Many organisations are still being presented with siloed data when they really need a holistic view with meaningful insights.

Across the board, CEOs we speak to feel they have a lot of information and data available to them, but they don't necessarily have the people nor the tools to fully realise the value it can provide. This is something we've identified as a critical business issue, where we are helping clients find meaningful insights from their numbers. We see vast improvements and efficiencies in gathering and analysing data, and gradual improvements in putting it into different forms to make decisions without human intervention.

For us at PwC, we've got a data team who are able to provide new business insights. The underlying data has always been there, but by using the right tools we've been able to use it more effectively.

Our ability to carry out more rigorous analysis has helped us make more informed decisions particularly around productivity, return on investment and client analysis. It's helped us identify opportunities and we know where to channel our resources.

AI will definitely have an impact in the next five years. We've seen technological change speed up in recent times and I believe that pace of change is only going to increase. My concern is that New Zealand businesses aren't adapting fast enough and that we need to be quicker in adopting AI tools.

There are plenty of opportunities to implement AI particularly in reducing the more repetitive tasks most businesses carry out. We are using AI in a number of initiatives and are seeing great results. It's definitely gaining momentum and will continue to evolve as we test and learn. I believe AI will continue to be an integral part of what we do.

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**“I also believe businesses need to think more about the impact they have on society. There is a growing expectation from the wider community that organisations have a clear role in society and fulfil a purpose.”**





# More than a fad? New Zealand businesses debate AI

When we asked local CEOs to name the global trends that have had the greatest impact on businesses over the last ten years, technological advances was the overwhelming response. This trend of transformative tech looks set to continue with the growth of artificial intelligence (AI) as a business tool, although New Zealand CEOs are divided on when to take the plunge.

## Sounds great, but... when is the right time to invest in AI?

A striking 84% of our CEOs believe AI will significantly change the way they do business in the next five years. In fact, 67% believe it will have a larger impact on the world than the internet revolution. New Zealand CEOs seem to be more attune to the idea that AI will have an affect on society. Only 57% of Australian CEOs see it as more significant than the internet along with 37% in the USA and 42% in the UK.

Despite this excitement, CEOs are split on when, or if, they are likely to pursue any AI initiatives. 39% of New Zealand CEOs are planning on introducing elements over the next three years yet almost a third (30%) have no plans at all. Significantly, AI is not present on a wide scale at any of our local CEOs' businesses nor is it seen as fundamental to their operations.

Is New Zealand lagging behind in implementation? The survey results suggest so. While the numbers aren't large, 6% of global and 4% of Australian CEOs say AI is already established in their businesses on a wide scale.



**“In our business, so much of our work is still about face-to-face interaction... I’m not so worried about robo advice.”**

Blair Vernon, AMP

**“I think the real question for businesses is what problems we need to solve and how automation can improve customer experiences.”**

Marc England, Genesis Energy



## Are you an AI optimist?

Take our one minute quiz to compare yourself with CEOs around the world

[pwc.co.nz/ceosurvey](https://pwc.co.nz/ceosurvey)

## Key takeaways



New Zealand CEOs see the transformative power of AI but don't know when or if they should start implementation



Opinions on the reach and consequence of AI are divided



CEOs are debating the role government should play in the implementation and development of AI



**“One of my big concerns for New Zealand is that too many CEOs are taking an ostrich-like approach with AI and keeping their heads in the sand. Adoption rates are way too slow here and it’s not something we take seriously enough.”**

Greg Cross, Soul Machines

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#### Will the robots take over?

Perhaps these reservations are linked to concern about the societal impact of AI. More New Zealand CEOs (23%) ‘strongly agree’ that AI will become as smart as humans, compared to 12% globally and 11% in Australia. Similarly only 7% of local CEOs ‘strongly agree’ that AI is good for society illustrating more caution than our global and Australian peers where a confident 18% and 13% see the benefits.

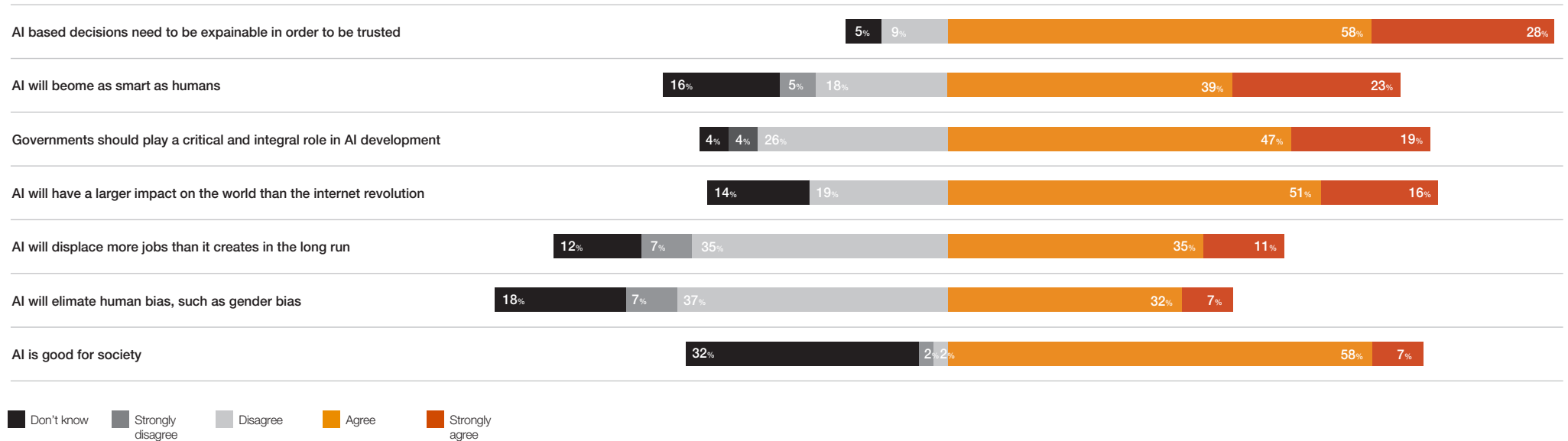
These concerns are also evident in relation to human bias, with only 7% saying they ‘strongly agree’ that it will eliminate subjectivity such as gender bias. We are not as optimistic as CEOs across the Asia Pacific region where 18% see it as having a role to play.

The numbers show how divided CEOs are on the reach and consequence of AI. For example, the jury is out on the impact AI will have on the workforce. Almost half (46% combining ‘strongly agree’ and ‘agree’) of New Zealand CEOs believe AI will displace more jobs than it creates in the long run with those worldwide expressing a similar level of doubt (49%).

Given these concerns it’s not surprising a sizeable number (74% combining ‘strongly agree’ and ‘agree’) of New Zealand CEOs think governments should develop a national strategy and policies for AI and the possible impact it might have on communities.



## How strongly do you agree with the following statements about AI?

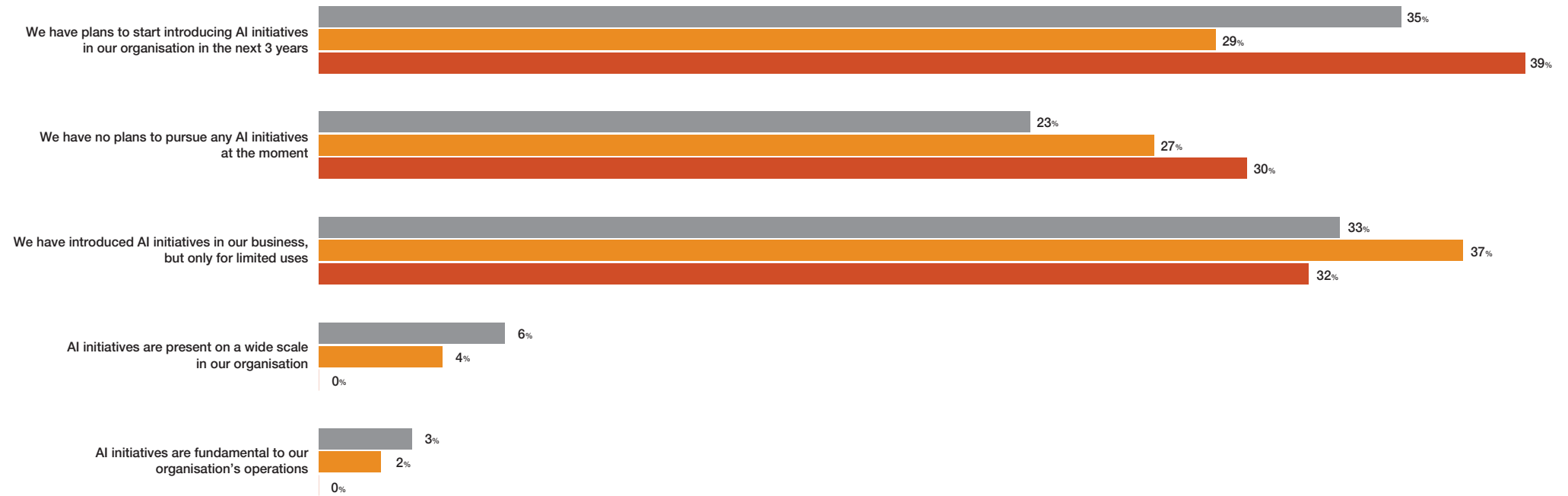


### How we define AI

For the purposes of this survey, artificial intelligence, or AI as it is commonly known, is a collective term for computer systems that can sense their environment, think, learn, and take action in response. Forms of AI include digital assistants, chatbots, and machine learning.



## Have AI initiatives been introduced into your organisation?





## Interview

## Greg Cross Soul Machines

It's hard to predict what's going to happen with the global economy as there are so many variables at play right now and much more uncertainty. Regardless of how things play out on a political or economic level, there is still the potential for innovation to drive fundamental change in society and in how we do business. I don't think that goes away or slows down as a result of anything happening in the macro political environment.

From a Soul Machines perspective, we are very bullish about our growth prospects. We know that the evolution of our technology will make fundamental changes to some of the biggest brands in the world. And, because of that, we are looking at exponential growth prospects over the next two to three years.

Almost 100% of our growth will come from offshore markets. The sort of money we need to fund our research programmes means we need to look for offshore capital. The US is, of course, very important for us but you can't ignore China – it is an AI superpower. Japan is another key market. Digital technology and robots are more integrated into Japanese society than anywhere else in the world.

The challenge for CEOs is that if you wait to start experimenting with, and implementing, AI technologies in your business, you'll never catch up. When I look at the CEOs I interact with, both in New Zealand and overseas, everyone understands that the rate of change is only increasing. CEOs who are pushing ahead aggressively with AI will create exponential competitive advantage for their companies. Examples include Mercedes Benz, Autodesk and Royal Bank of Scotland. The decisions that are being made now will determine who the winners and losers are in ten years' time.

One of my big concerns for New Zealand is that too many CEOs are taking an ostrich-like approach with AI and keeping their heads in the sand. Adoption rates are way too slow here and it's not something we take seriously enough.

We are moving into the fourth industrial era where machines will become a bigger part of our lives and change our world. Within the next two to three years we will have the ability to produce high fidelity versions of ourselves. Our approach is that machines need to become more like us. By humanising technology in this way people will come to trust it more.

We see the future as being about how machines can deliver services that companies don't currently have the money to provide. Machines can deliver personalised customer experience and knowledge to everyone cost effectively. At the moment, if you're a wealthy person your bank will assign you a private banker. Imagine a world where that kind of service can be delivered to everyone.

I don't buy into the hysteria that the robots are coming and they are going to steal our jobs. The reality is that the job market constantly evolves and the skills people need to find work change. However, I do worry about our local tech industry. There is too much focus on commodity technology and services and not enough emphasis on deep science or research (with a capital R).

At Soul Machines, we currently have just over 90 people spread across our offices in Auckland, Melbourne, San Francisco, Los Angeles, New York and London. We added about 40 people in the last 12 months. We expect to almost double in size over the next year and this will be driven by finding expertise in offshore markets – we are running out of the talent we need in New Zealand.

**“The challenge for CEOs is that if you wait to start experimenting with, and implementing, AI technologies in your business, you'll never catch up... The decisions that are being made now will determine who the winners and losers are in ten years' time.”**

**“...we are running out of the talent we need in New Zealand.”**



## Debating the role of government

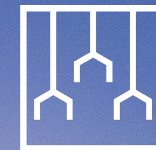
New Zealand CEOs are divided on the role governments should play in the development and implementation of AI. The majority (67%) believe governments should play a critical role in developing AI but New Zealand CEOs are completely split (37% agree, 37% disagree) on whether governments should introduce incentives to accelerate the development and use of AI.

Similarly half of our CEOs (49%) believe governments should provide a safety net to people whose jobs are displaced by AI.

One thing New Zealand CEOs do seem to agree on is government intervention. Only 7% of New Zealand CEOs agree that governments should intervene and slow down the replacement of workers with AI.

Interestingly, we favour a much more hands-off approach than our global (24%) and Asia Pacific (36%) peers.

For our CEOs, the role for governments is in assisting organisations to prepare staff. 60% of New Zealand CEOs believe government should incentivise businesses to retrain workers whose jobs become automated.



# 67%

of New Zealand CEOs believe AI will have a larger impact on the world than the internet revolution compared to 57% in Australia.





## Interview

# Raveen Jaduram Watercare

I think the global economy will remain static over the next 12 months. There is increasing conflict around trade and with our economy being so interlinked with others, particularly China and Australia, we are likely to feel some effects. Politically, it is going to be challenging for New Zealand not to take sides.

For Watercare, we grow when Auckland grows. Growth is different for us because the cost is high – we have to build capacity in our network and those are big investments. We are also telling people to use less water and be more environmentally conscious which has a direct impact on our revenue.

We are a data-rich organisation and we have learnt to be more selective about the data we collect. Data is important for making sense of what is happening at Watercare now but it isn't necessarily a guide for the future.

For example, we have been monitoring the water quality of the Waikato River since the 1970s. We now have pharmaceuticals present in the water so making a comparison between water now and then isn't that helpful.

We are exploring innovative ways of using the data we have but the level of security isn't good enough right now. We'd like to see a situation where you can monitor the water usage in your house when you're not there so it becomes a security feature or a way to keep an eye on an elderly relative who is unwell.

Cyber security is definitely a concern for us. I would describe this organisation as cyber resilient but not cyber proof. The greatest threat is to our treatment plants which are mostly automated – they could be hacked and controlled remotely. We partner with third party experts to help us be as resilient as possible.

In my time here, embedding a good workplace culture has been my number one task. We need to create a culture that is innovative and collaborative and centred around problem-solving. People want to work somewhere where they feel they have a higher purpose. We haven't shared much about our pursuit of sustainable goals or done enough to show we are a great employer. We have started doing that more and are seeing more positive results.

I don't think AI will significantly change our business in the next five years, it will be more like 10. We have already made incremental changes by taking some of the work people find boring and getting a machine to do it. Our treatment plants were automated in the 1990s. We have also put in five bots and plan to bring that number up to 13 in the next few years.

My feeling is that AI will create a different set of jobs. There will always be work that needs imagination and empathy that will be done by humans but the more repetitive tasks can be done by machines.

Government has a role to play in ensuring society is prepared for the changes AI will bring. There needs to be some thought given to how we want society to function and we're not ready at the moment. Our legislators and regulators need to move faster to keep up with technology.



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**“In my time here, embedding a good workplace culture has been my number one task. We need to create a culture that is innovative and collaborative and centred around problem-solving. People want to work somewhere where they feel they have a higher purpose.”**



## Interview

## Marc England Genesis Energy



When we carried out an investor roadshow across Asia and the US in November last year, the mood was quite positive among Asian investors. Even with growth in China slowing down, trade within Asia has increased considerably over recent years and they felt less dependent on the US economy than in the past, giving people confidence in the broader Asian economy.

The mood in the US was different. Investors told us that a lot of companies are over-leveraged which could have a negative knock-on effect to the economy if the trade war bites. It will be interesting to see how that plays out.

Overall, despite the obvious risks of Trump, trade wars and Brexit, my feeling is that the global economy is in reasonable shape for the time being.

At Genesis we are optimistic about the future – with potential for growth over the next few years. From my point of view a successful company is one with a clearly defined purpose. It's important for a company to have a clear sense of where they are going and that everyone internally understands that. Our purpose is to put control in our customers' hands by delivering what they need, sometimes before they even know they want it.

In terms of risks, the biggest for us outside of operational and safety risks are competition, regulatory uncertainty and talent retention. We operate in a highly competitive industry so we can't stand still. We are differentiating ourselves in the market through our products but many of our competitors continue to compete on price alone and it's hard to persuade customers that they can save more by engaging in their energy choices than they can save jumping between retailers.

The biggest near-term risk for us is regulatory uncertainty. There are a number of reviews going on currently and that creates uncertainty within the industry. Once the rules are defined you can compete on equal terms, but while they are still being debated it is difficult to plan for the future.

A longer-term risk is the war for talent. We were one of the first to go Agile in New Zealand and now that others are embracing this style of working, we have an emerging problem retaining talent in some areas. For certain roles like developers it's a very tight market. I see this as one of the biggest risks to delivering on our Energy Management vision. I'm often amazed by what data driven insights can tell us about ourselves and our customers. Distinguishing between information and insight is the challenge. I often find myself saying "so what" when presented with information. Finding the insights within the data is the skill we all need to develop in this data rich world.

We are a data rich industry. We use data to help inform our customers and we can provide a lot more information than we were able to in the past. For example, we can now tell customers what their electricity spend is today and what it is likely to be for the next seven days. A year ago, we couldn't do that. That is a real and useful insight. By monitoring their usage, our customers are adapting their consumption habits.

I'm sceptical about the much-propagated idea that 'artificial intelligence' as an opportunity in business and a threat to society. There are clearly some great opportunities coming to automate customer experiences and employ machine learning techniques but every line of code seems to be classified as 'AI' now. I think the real question for businesses is what problems we need to solve and how automation can improve customer experiences.

At Genesis we are focusing on where technology meets customer needs rather than technology for technology's sake. More widely, AI is already providing solutions to problems in shape recognition, and soon sound (or voice) recognition, but eliminating human-to-human interactions like contact centre roles through cognitive AI will be more difficult and will likely lag the elimination of human-to-machine interactions.

**“Finding the insights within the data is the skill we all need to develop in this data rich world.”**



# Data, data everywhere: New Zealand CEOs grapple with making sense of the numbers

When it comes to data, our CEOs have a wealth of information at their fingertips but are wrestling with how to get the most value out of it.

Most New Zealand CEOs believe they have enough data available to make decisions about their businesses – many spoke of a data mountain – yet they are struggling to translate it into better decision-making and use it effectively.

This sentiment was backed up by the survey results. We asked CEOs for the primary reasons they find data inadequate. Interestingly, data security and privacy are not the main concerns. Rather, 62% mentioned data siloing in their organisations, 54% stated they don't have the people to adequately analyse it.

CEOs also mentioned an inability to assess all the external information they receive as a reason for poor data (46%) which could well be linked to having few people to analyse it.

An equal number (46%) expressed frustration with their IT infrastructure pointing to systems and processes being an issue, not just the skills gap.

As described earlier, CEOs see the lack of people with the rights skills as a major threat to their business prospects and data analysis is one area where they are seeing the implications of the talent shortage.

CEOs believe this shortage creates a range of problems for them, including being unable to innovate effectively, incurring rising hiring costs and causing a negative impact on quality standards and customer experience.



**“There is so much data. The challenge we face is interpreting it and making sense of it all. It’s definitely true that we need more data scientists. For us, the issue is how you use the data to figure out the patterns and then use it to do things better or differently.”**

Kevin Lavery, Wellington City Council

## Key takeaways



The talent shortage, data siloing and poor IT infrastructure are impacting how data is interpreted and used



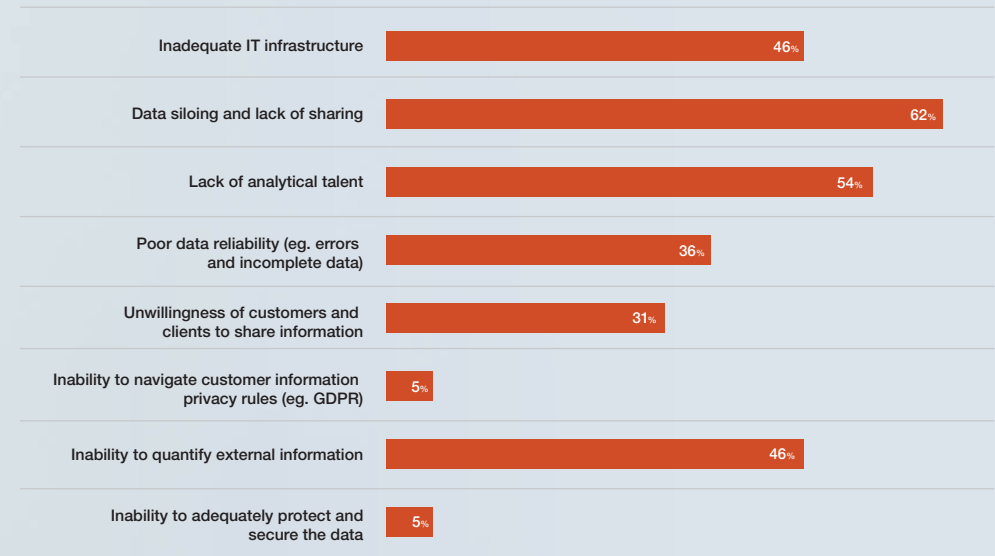
CEOs struggle with using all the data they have



A large amount of data is available and is being used to make business decisions



## What are the primary reasons that the data you receive is not adequate or that you do not receive the information?



“We are a data-rich organisation and we have learnt to be more selective about the data we collect. Data is important for making sense of what is happening at Watercare now but it isn’t necessarily a guide for the future.”

Raveen Jaduram, Watercare





## About the report

- The New Zealand findings from the 22nd Annual Global CEO Survey focus on global business growth trends, data and analytics and artificial intelligence.
- Fifty seven New Zealand CEOs contributed to this year's quantitative findings completing an online survey between September and October 2018. A further eight business leaders participated through in-depth interviews.
- The global survey was released at the World Economic Forum Annual Meeting in Davos, Switzerland on 21 January 2019.

### Notes:

- Not all figures add up to 100%, as a result of rounding percentages and exclusion of 'neither/nor' and 'don't know' responses.
- The base for figures is 1,378 (all global respondents) unless otherwise stated.



[pwc.co.nz/ceosurvey](http://pwc.co.nz/ceosurvey)