

# Boardroom

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SPRING 2021



 Institute of  
**DIRECTORS**  
NEW ZEALAND

Zero trust for the cybersecurity Hydra | A homegrown vaccine |  
Apocalypse when? | Working for peanuts | That old-time anti-vax  
feeling | A stepping stone to recovery

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*Hercules slaying the Hydra*, wood engraving, 1880.


#### PRODUCTION NOTES

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# “Constant exposure to dangers will breed contempt for them.”

Seneca, Stoic philosopher, 4 BC-65 AD

There was no internet in ancient Rome, but Seneca may as well have been talking about our sometimes blasé approach to online danger.

Globally, a ransomware attack is estimated to occur every 11 seconds. And that’s just one type of cyber risk. Others include phishing, denial of service, data theft or simply human error.

Reported cyber attacks on New Zealand businesses surged 65% in 2020, according to CERT NZ. Preventing them is very much like fighting the multi-headed Hydra on our cover. When you patch a vulnerability or successfully block a hacker, another appears.

In this issue we explore the concept of zero trust as a cybersecurity

strategy. It’s a technological and cultural approach that presupposes your systems are already compromised. Rather than breeding contempt for the danger, it puts it in permanent focus.

We also explore another familiar danger, covid-19, now in the form of the Delta variant.

As the number of New Zealanders vaccinated continues to rise and the government moves to loosen border controls, what can boards do to update their strategies? Sir Peter Gluckman has a few ideas, but also a warning. The virus may have a few more surprises for us yet.

Ngā mihi

**Aaron Watson, editor**

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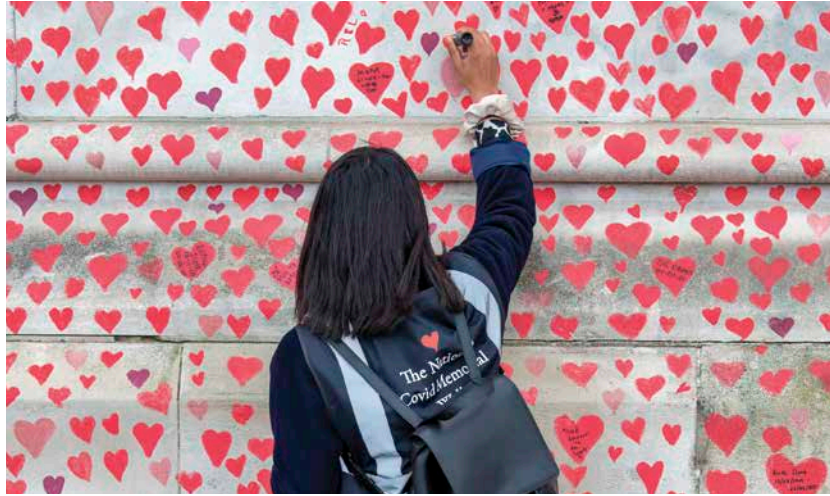
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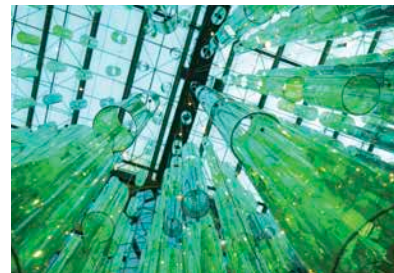
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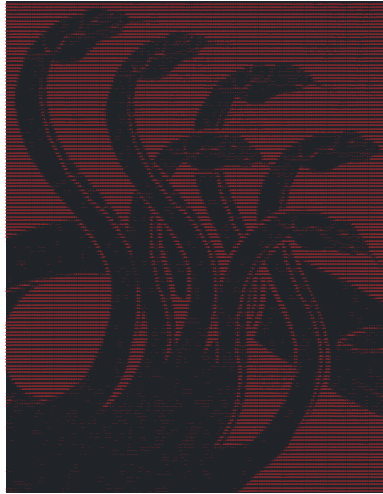
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## Helping hands

When British surgeon Joseph Lister proposed using carbolic acid to clean scalpels and bandages in order to reduce post-operative infections, he was pooh-poohed by the establishment.

Lister was even mocked in medical journal *The Lancet* for suggesting surgeons should sanitise their implements. Ironically, *The Lancet* also published his series of articles in 1867 that outlined the low infection rates among his patients.

So it often is with new ideas. People don't, or simply won't, believe them. Even when they are demonstrably, scientifically true.

We see that human tendency today in the variety of beliefs around vaccination and covid-19. Some people won't believe the evidence that vaccination reduces the severity of a covid-19 infection. Others seem to think that when scientists learn something new about the pandemic – about the virus, or face masks, or the likelihood of airborne spread – the new knowledge is proof that that science is inherently unreliable. Why trust scientists when they keep changing their minds?

The answer to that chestnut is that each time a scientific idea is rejected, and replaced, it brings us closer to the truth – and closer to managing the impact of the virus.

Ultimately, Lister's ideas paved the way for antiseptics as a key defence against germs. And today, the establishment in Britain provides public sanitising stations to help people stay healthy as the UK reopens its society after multiple lockdowns.

Lister would surely approve.

Photo by: **Hollie Adams**/Getty Images

A City of Westminster hand sanitising station on Oxford St, London, England.





City of Westminster



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HAND SANITISER



Hand sanitiser is retrieved overnight

# New to our species

AUTHOR:  
**AARON WATSON,**  
BOARDROOM EDITOR

Photo by:  
**Dave Rushen/SOPA Images/**  
LightRocket via Getty Images

A volunteer paints red hearts  
on the National Covid Memorial  
Wall, London, to honour victims  
of the pandemic.

**Planning in the face of  
the covid-19 pandemic is  
complex because humans  
have never had this  
particular virus before,  
says Sir Peter Gluckman,  
president-elect of the  
International Science  
Council and chair of the  
global Covid-19 Scenarios  
Project.**

**If you are looking for  
certainty, stop reading  
now.**

“This pandemic is unheralded in nature,” says Sir Peter Gluckman, former Chief Science Advisor to the New Zealand Government.

“It is quite distinctive from the most often-quoted pandemic, the so-called Spanish Flu and subsequent flu epidemics. That was a mutation of a flu virus, which our species had had a lot of experience of. This is a virus that is new to the human species. We are still in the early stages of it embedding itself with the human vector. So there are a lot of unknowns and uncertainties and there are different scenarios ahead.”

For this reason, directors and governments share a new problem – how to plan for the future while a pandemic rages due to a virus we do not yet fully understand.

As president-elect of the International Science Council (ISC), Gluckman is currently chairing the Covid-19 Scenarios Project, an ISC initiative run with the support of the United Nations and the World Health Organisation, which brings together a multidisciplinary group of experts to map out possible pandemic futures. As head of this ISC project, he is at the forefront of trying to foresee how the pandemic will influence future global health, economics and societies.

New Zealand epidemiologist Sir David Skegg, who recently fronted the advice of the New Zealand Strategic Covid-19 Public Health Advisory Group, also sits on the Covid-19 Scenarios Project.

With the government now committed to loosening border controls in 2022 – subject to a successful vaccine rollout and clarification of new quarantine requirements – New Zealand directors can begin to envisage a future where business travel, access to skilled staff from overseas, and a return of overseas customers to industries such as tourism is a real possibility.

But there remains a very real problem for strategic planning. We don't know what the virus is going to do. And the emergence of the Delta variant in New Zealand has shown



RIP MUM  
DEAN  
1950-2020

RELO

MUM  
21-04-20  
AGE 70

My love  
I miss you  
so much  
I hope you  
are happy  
in heaven

KATHY  
a lovely  
girl

THE GREAT  
ONE

God  
bless  
you  
and  
your  
family

My love  
I miss you  
so much  
I hope you  
are happy  
in heaven

ALAN  
THE  
REVIVER

how quickly our expectations and plans can be upset.

### REALITY FOR KIWIS

The most promising scenarios involve sustained efficacy of current vaccines or the development of a polyvalent vaccine that is effective against all variants of covid-19. Both would potentially relegate the virus to something more akin to a seasonal flu, Gluckman says.

“If a polyvalent vaccine appears and is available in the next year or so the thing might effectively be excluded, at least in countries that are prepared to have close to universal vaccination.”

What mitigates against that scenario is the low level of vaccination, globally.

“There are large chunks of the world’s population that have no access to vaccine yet and are not close to having access to vaccine. So the virus will be circulating for a while.”

As the virus continues to travel unchecked in many parts of the world, the likelihood of new variants emerging remains strong. And this scenario challenges a lot of the world’s efforts to open borders.

We have already seen the havoc the Delta variant has caused in Australia, where it has spread widely in a largely unvaccinated population. In New Zealand, it triggered lockdowns that were still in force as *Boardroom* went to print.

Even with the best will in the world, Gluckman says, we are not going to get to 100% vaccination in New Zealand. So the choice before the Government becomes one of trade offs.

“At what point does government say we have given you enough opportunities, we have got enough people vaccinated, the number of cases likely to emerge will not overwhelm our health system so we can reopen fully? What are the intermediate steps for that to occur?”

Directors can be encouraged by the Government’s intention to loosen border

“At a global level, what will the consequences of debt mountains and quantitative easing be? Will special drawing rights be issued by the International Monetary Fund in sufficient quantity to help? There are a lot of unknowns in the macroeconomic space that have flow-on effects to New Zealand.”

controls, but must remain aware that mutations in the virus could make that challenging.

“A prudent board would have to accept that whatever follows the Delta and Lambda variants could well turn out to be much more virulent or transmissible, that it could break through more of the vaccines.”

Gluckman’s bottom line is simple: “The virus is not going to disappear from the planet. The challenge is that this is a new virus in the human domain. The mix of vaccinated and unvaccinated people in the world means it will continue to mutate.

“The solution lies in good vaccines. There are things we are trying to learn about the vaccines, for example, should children be vaccinated? There are vulnerable populations that have a degree of vaccine hesitancy. So people will get covid-19. It will be of various levels of severity. People who choose not to be vaccinated will be at risk.

### HOW CAN BOARDS PLAN FOR THE FUTURE?

“Directors need to think globally,” Gluckman says, noting that only a global solution will reduce the ongoing risk to societies.

They also need to think more broadly about risk, he says.

“The pandemic is not just about covid-related illness. It has impacts on the rest of the health system. Do not discount the mental health consequences of the pandemic. Lockdown, educational disruption, the digital divide all will have long-term echoes in one way or another. People have families disrupted, have missed out on seeing their families. There will be mental health issues that are long term.”

That means businesses will see a greater number of employees who have stress problems.

“Even simply Zoomitis, if that is a word,” Gluckman says.

“Then there is the economics. Businesses have disappeared. Some businesses will

never recover. At a global level, what will the consequences of debt mountains and quantitative easing be? Will special drawing rights be issued by the International Monetary Fund in sufficient quantity to help? There are a lot of unknowns in the macroeconomic space that have flow-on effects to New Zealand.”

Geopolitical and geostrategic risks have also changed during the pandemic, he says.

“What are the geopolitical consequences of the diversion of a lot of attention onto the pandemic? It has shifted the focus away from climate change and other major risks. It has created opportunities for the geostrategic games around vaccines. There is a general concern that democracy in some places has been undermined by the pleasures of autocracy that democratic governments have enjoyed under the pandemic. There are even concerns about that here, given the unusual political constellation we have of an absolute majority government.”

It all adds up to a complex situation driven by a virus new to humanity that we don't fully understand.

“Directors need to be thinking laterally and making broader assumptions about risk. What will most affect your business? Be prepared to think about what contingency plans you should have.”

But in the meantime, planning for the eventual, and gradual, reopening of the borders is now a realistic prospect.

“I believe it is possible to maintain a high barrier to the virus, but a barrier that people can cross. It has to be done very cautiously because vaccination in itself does not entirely protect you from being a carrier.

“What are the scenarios for New Zealand if we don't achieve high vaccination rates, and what are the scenarios if we do? They are quite different.

“The population needs to know that this will happen at some stage. It is unrealistic to stay locked in isolation indefinitely and the virus will continue to find ways in whatever we do - so vaccination is key to progress.” BQ

## A QUESTION OF IMMIGRATION

As the Government plans for the loosening of border restrictions sometime in 2022, the Productivity Commission is preparing draft recommendations on future immigration policy. The draft is expected in October 2021 with a final report due in April 2022.

The Commission released an issues paper, *Immigration, Productivity and Wellbeing*, in June 2021 that outlined a series of questions around how immigration policy could improve the economic and social future of New Zealand and how it could reflect Treaty of Waitangi obligations.

“The Treaty of Waitangi was an immigration policy,” says Dr Ganesh Nana, chair of the Commission. “It is useful to consider the different drivers of immigration in our history as we look to the future.”

From the “nation building” approach of Premier Julius Vogel in the 1870s to the humanitarian considerations of refugee settlement after World War 2, New Zealand has seen waves of immigration driven by very different policy goals, he says.

“It is only in the past 20 years that the focus moved to the idea that we need workers and their skills to fill in gaps in our economy.”

As a policy, it made sense in a global labour market that was more mobile than ever before. However, it has proved to be a more complex idea than it may have seemed, he says.

“We wanted workers, and we got people.”

In the future he expects successive governments to spell out the policy goals of immigration more clearly and understand the complexity of bringing people and their families – not just workers or investors – into our communities.

“It is curious that, in terms of legislation, nowhere is there written down a purpose or objective for immigration. For too long we have assumed the purpose was skills, or a workforce.”

Future policy may include a return to an overtly humanitarian focus “there is a dark cloud of climate chaos hanging over us” and rising seas are going to affect our close neighbours in the Pacific. Post-pandemic immigration trends will also impact on New Zealand.

“The next 30 years has got to be different to the past, because of the global influences out there. Don't expect to go back to the business-as-usual immigration of before. It is not something we are going to return to, whether by choice or design.”

Future immigration policy is likely to be underpinned by the concept of investing in people and “not just equipment”, he says, while incorporating long-term ideas about social wellbeing and a sustainable economy.

“That means policy for the next 25 years, not just the next 12 months.”

# A homegrown vaccine

AUTHOR:  
**AARON WATSON,**  
BOARDROOM EDITOR

**New Zealand needs the capacity to develop and manufacture our own vaccines if we are to avoid the worst impacts of future pandemics, says Dr William Rolleston CNZM MInstD.**

**D**r William Rolleston could manufacture enough covid-19 vaccine for New Zealand and the Pacific Islands. If we had a homegrown vaccine.

“We are likely to see the development of a homegrown vaccine,” says Rolleston, a director of Timaru-based South Pacific Sera, a manufacturer of vaccines, biologics and sterile medicines.

“It is a real possibility. So how do we want to fit that into the current regime?”

Rolleston is a former president of Federated Farmers. His biotech company is working with medical researchers and universities as part of Vaccine Alliance Aotearoa New Zealand.

Given the current, albeit constrained, supply of vaccines available for New Zealand is enough to vaccinate our entire population, the success of the project will mean increased protection from outbreaks in the future rather than protection now, he says.

“There are a number of uncertainties out there. Uncertainty around how long

immunity may last. How often do you need to be re-vaccinated? Once we have got vaccine saturation here in New Zealand there will still be billions of people in the world who need to be vaccinated. If there is a reasonably short turnaround of when you need to be re-vaccinated – say a year, like the flu – then we are going to be sitting in line for that.”

Variants of the covid-19 virus will also continue to develop as infection rages in large parts of the world’s population. It is possible a variant will break through the protection offered by current vaccines, meaning rapid development of new vaccines may be required.

“We are lucky that so far the variants have been susceptible to the vaccines we have, but we may need to pivot quite quickly to new vaccines for new variants.”

In that scenario, the ability to develop and manufacture a new vaccine locally would likely speed up the availability of a vaccine here, Rolleston says, as the whole world will be trying to buy new vaccines at that point, and New Zealand may not be at the front of the queue.

Photo by:  
**Tim Hüfner** on Unsplash

**MAKE CORONA  
SMALL AGAIN.**



“The key thing from a global perspective is to get the virus’ reproduction down as low as possible so it has fewer opportunities to evolve.”

#### **RETURN TO TRAVEL**

As the rollout of vaccine in New Zealand ramps up, the government is taking steps to reopen our borders. It has said it will open borders next year, subject to developments in the meantime.

Rolleston says directors should plan for opening in the medium term, but also realise it could still be a long time before borders reopen fully.

“At some point New Zealand is going to open up. When the vaccination rate gets high enough and the efficacy of the vaccine is high enough there will be a point where we say we are better to open up and accept that there will be some infection around in New Zealand at a level we can cope with.”

But that doesn’t necessarily mean covid-19 will fade away. The virus – and its social and economic impacts – could remain with us for many years, he says.

“I don’t think we are at the point where we can say one or the other. In the medium term, I would plan for both scenarios. I don’t think we can say that we will all be vaccinated and it will disappear. We are seeing high infection rates even in countries which have quite high vaccination rates.

“We don’t know if there will be another twist in this pandemic. I think it would be a brave board member who thought it would all be over in 6-12 months - and didn’t have a plan B.”

#### **KEEP A WEATHER EYE ON THE SCIENCE**

And what form should your plan B take? Rolleston says that will depend on how the virus mutates and the effectiveness of the global medical response. Boards need to watch scientific developments closely if they are to plan effectively.

“From what I can see, there could be more twists and turns in this pandemic. If you are on a board that has been impacted – and there probably isn’t a board

**“At some point New Zealand is going to open up. When the vaccination rate gets high enough and the efficacy of the vaccine is high enough there will be a point where we say we are better to open up and accept that there will be some infection around in New Zealand at a level we can cope with.”**

member whose company hasn’t been impacted – you need to make sure there is contingency for any twists and turns.

“A breakthrough of the virus through the vaccine and if we get a secondary spread of a variant would be the most important thing to look at for. We do see these things coming. We have seen the Delta variant come out and that has been a really good lesson in terms of how the virus can mutate and change the rules of the game.”

On the positive side, viruses tend to become less deadly as they mutate.

“What you tend to see in a pandemic is a virus will become more infectious but less virulent – it will spread more quickly but it will not be as nasty. If a virus is killing people it is not doing a very good job of spreading unless it can spread really quickly. The most effective virus hangs around and the person stays infectious and everybody survives.”

As virologists continue to learn about the Delta and Lambda strains, directors need to keep a weather eye on the science.

“We are not sure yet if Delta is more deadly than the initial strain. The worst thing for any director to do would be to say ‘I know the answers, science hasn’t got it right and I am going to plough on as if this pandemic doesn’t exist’.”

“I know that might sound crazy, but we have seen people in Sydney marching against lockdowns so there are people who have these views. Be aware that people even in your own company may share these views.”

That raises very immediate questions for directors. What policies or practices are they putting in place around vaccination in their organisations? And how will they manage people who do not want to be vaccinated?

“How do you mitigate against people not following the rules, particularly around vaccination? What do you do with staff who don’t want to or refuse to be vaccinated? It is those points that are particularly difficult and can cause a real breakdown in your well-laid plans.” **BQ**



127 HOURS

# 2018

\$45K

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140 HOURS

# 2019

\$46K

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147 HOURS

# 2020

\$46.7K

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132 HOURS

# 2021

\$50K

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The Institute of Directors (IoD) with EY has released its 2021 Directors' Fees Report. The report is a key source of information on director remuneration trends in the New Zealand market.



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# Covid-19 curveballs keep coming

AUTHOR:  
**NICK TUFFLEY,**  
ASB CHIEF  
ECONOMIST



It has been a dramatic year (and a bit) on the road to recovery from last year’s big lockdown, with more twists and turns than a cunningly-written whodunnit novel.

**N**ew Zealand has recovered from its past lockdown experiences surprisingly well, though the challenges of protecting our health while reconnecting with the rest of the world could still create a bumpy road ahead.

New Zealand’s economic performance – like its health performance – has been quite remarkable. The economy has got back on its feet quicker than in many countries, while also remaining free of covid-19 beyond the occasional border leak. Very few countries have done so well on both fronts.

By early 2021 the level of GDP was already nearly 1% higher than it ended 2019. The peak drop in employment amounted to “only” 27,000 – so much less than feared at the start of the pandemic. Employment is now 36,000 people higher than its recent peak, with the unemployment rate back down to 4%, where it was just before the pandemic broke out.

**SUPPORT WORKED**

A lot of this turnaround can be put down to the extraordinary amount of fiscal and monetary support rolled out last year – not just the kitchen sink but the entire kitchen was thrown at the challenge.

The wage subsidy, in particular, seemed to give businesses the courage to hold people in jobs and better position them

for the climb out of our collective bunkers into a world of uncertainty.

The March–June lockdown, with all the support provided, was short enough that businesses were in the main able to survive it. And fortunately, the fear of losing our jobs quickly turned into the fear of missing out on a bargain and a good time – and, particularly, a house.

New Zealanders have enjoyed a huge degree of social freedom, which has been key to enabling in-person interactions to resume.

But there are some factors we should be mindful of, as there has been an artificial nature about the recovery to date.

The impact of the huge degree of government support is waning, and interest rates are on the rise.

Recovery has been skewed towards construction and durable goods spending while people aren’t travelling abroad, meaning some parts of the domestic economy have performed very strongly. But the borders remain largely shut, which is still a huge strain on the tourism and international education sectors – as well as contributing to skills shortages.

**THE NEXT 12 MONTHS?**

So where to from here? The economy is settling into its closed-border and

post-rebound state. But there are still adjustments to make and pandemic risks to hold at bay or mitigate.

First of all, New Zealand will remain vulnerable to a breach of its border defences – particularly while vaccination rates remain low. The latest lockdown is a brutal reminder of this.

The very clear lesson from Australia's latest outbreak is that we cannot afford to allow a Delta variant community outbreak to become entrenched. Right now, and for some months at least, NZ will resort to hard lockdowns to stamp out community transmission. New Zealand will need to remain resilient to coping with occasional shuttering.

The extent of border opening will also be hugely significant. Tourism and education earnings are still missing revenue, and the pace and extent of that recovery links back to the border.

Important is the ability to fill labour shortages and key skill gaps through bringing people into New Zealand. It has become increasingly clear that New Zealand is hitting the effective short-term limits on domestically sourcing key skill gaps and wider labour needs. A focus on advancing people's technical and life skills is an admirable long-term goal, but it will not fill the gaps in the here and now.

New Zealand's recovery will be hampered by constraints at the border, as well as experiencing sustained labour cost pressures that are set to feed into wider inflation.

### **RELAXING OUR BORDERS**

The expert advice to the Government is essentially for New Zealand to stay with its covid-19 elimination strategy while gradually relaxing border restrictions once a high proportion of New Zealanders are vaccinated. With herd immunity unlikely to be reached, maintaining elimination will mean continuation of tracking/tracing, testing, isolation, and – as a last resort – lockdowns. But the higher the vaccination rate, the less disruption there will be.

Against that backdrop, border relaxation is likely to be very cautious and won't really start until sometime next year. The pace at

which tourism, international education and long-term immigration can pick up will be linked to the extent of any travel bubbles and the number of people that are eventually able to bypass part or all of an isolation period in MIQ facilities.

And the latest outbreak raises the question of how compatible the elimination strategy is with further border relaxation – it may be that one of these goals needs to shift.

So, New Zealand will need to adjust itself to a gradual recovery in inbound visitors and slow growth in the pool of available workers.

For organisations, and the directors overseeing them, people and investment strategies will be important. Employee retention, remuneration, working conditions, training and development (particularly for new employees) should be firmly in the spotlight.

Investment decisions should take into account the need and ability to supplant labour and skills that are hard to come by. A strong focus on improving productivity is important given a period of faster wage growth and higher costs of landing imported goods will impact on businesses' bottom line. Yes, interest rates are still likely to head up, but the environment will still be one of relatively low interest rates that is conducive to funding capital expenditure.

Barring a sustained lockdown, New Zealand's growth should average out around a 2.5%+ trend pace through to the end of 2022.

Global economic rebound is a bit of a tailwind for the time being. However, we are already starting to experience challenges (labour shortages, inflation, rising interest rates) that normally appear much later in the economic cycle and build more gradually than is happening this time.

And covid-19 setbacks – here and elsewhere – will remain a fact of life.

It's going to remain an environment in which agility and adaptability remain important for organisations and those charged with overseeing them. **BQ**

“...New Zealand will remain vulnerable to a breach of its border defences – particularly while vaccination rates remain low. The latest lockdown is a brutal reminder of this.”

Photo by:  
**Tim Wildsmith** on Unsplash

# Working for peanuts

AUTHOR:  
**AARON WATSON,**  
BOARDROOM EDITOR

**Pic Picot is seeking to overcome supply chain disruption by growing his own. Peanuts, that is.**

**S**upply chain disruption due to covid-19 meant Pic's Peanut Butter moved from a "just in time" production model to "just in case".

With uncertainty about when key ingredients would arrive, the company had to retain a large inventory in order to produce and package its products on time, says founder Pic Picot.

In order to ensure a secure supply of raw ingredients, Picot began working with farmers in Northland and the Ministry of Business, Innovation and Employment (MBIE) to grow his own peanuts.

"Supply chains had been an issue, but I was also concerned about our carbon footprint. Anything we can do to reduce that is a plus," Picot says.

"It just seemed weird that we were bringing in peanuts from the other side of the world and then sending peanut butter back to the other side of the world."

The company spends up to \$10m per year on peanuts, predominantly sourced from Africa.

"That could be spent in New Zealand. And to spend that in Northland would be a huge boost for that region," he says.

The benefits go far beyond securing his supply chain, Picot says. If his experiment in Northland is successful, New Zealand could have a peanut industry that creates jobs, keeps more dollars onshore and cuts our carbon footprint.

"I don't know if I'm an old-fashioned protectionist of some sort, but if we are not importing things that would seem to have the same sort of benefit as exporting does. It helps our balance of payments and makes us much more resilient.

"I think it makes huge sense. I would like to see overseas suppliers become a backup rather than our main source."

## **GREEN SHOOTS**

Picot says the trials are looking "quite hopeful" and it appears a peanut industry may be viable in Northland.

"Some of the varieties are showing promise. We would need something like 700 hectares to supply our peanuts. The bulk of our crop would come in under contract from local farmers. There is a lot of enthusiasm and some great farmers up there who are really excited about this.

"There will be a lot of expense involved in setting up a processing facility to dry them, store them and shell them. I would

Image supplied by Pic's Peanut Butter



love to be at the forefront of getting a peanut industry going in Northland. It is very exciting.”

While there have been a few challenges – bulls got into a field and trampled it down, weeds need to be managed – the local farmers have thrown their knowledge and enthusiasm into the trials.

“Seeing the passion these guys have and their understanding that we need to reduce our carbon footprint and do things differently is incredible. It is astounding to see the general realisation among New Zealand farmers that we need to do things differently and our competitive edge is

going to come from being responsible caretakers of the land,” Picot says.

At a Te Hono conference this year, Picot got a sense that industry leaders are ahead of consumers when it comes to taking climate action seriously.

“Crusty old meat company guys who have forever been pushing along – there is a real feeling that things have to change. I was talking to a farmer who was talking about social license as smoothly as his stocking rates and irrigation.”

And one of those forward thinkers is Picot himself, working for peanuts. **BQ**

“I think it makes huge sense. I would like to see overseas suppliers become a backup rather than our main source.”

# Knowledge network

AUTHOR:  
AARON WATSON,  
BOARDROOM EDITOR

**An online business service born of covid-19 continues to assist small business recovery. Prue Halstead MInstD is one of its army of advisors.**

**A**s New Zealand moved toward lockdown in March 2020, business and innovation advisory Indigo lost three quarters of a million dollars in cancelled bookings.

But a lightening pivot to digital saw the company launch Manaaki, an online advisory service for small businesses that brought the brains of New Zealand business experts to bear on the problems faced by the SME sector.

Prue Halstead MInstD is one of the expert volunteers who answer the questions Manaaki receives. With a day job as executive officer at Invest South, which invests in, and assists the growth of, businesses in Southland, Fiordland and Queenstown Lakes, she is well placed to understand the challenges that SMEs face. Below, she offers a few observations from what she learned from helping others online.

**I was first introduced to Manaaki by one of its founders, Andy Hamilton, and – like many responses to the pandemic lockdown – I was astounded by how many people put their hands up around the country to assist local businesses, which were struggling with the unprecedented nature of the issues they faced.**

**I was asked by Andy a few months ago whether I would be happy to provide some online advice on the platform in the areas of investment and capital raising. I was very happy to be involved and there are now 330 advisors on the platform.**

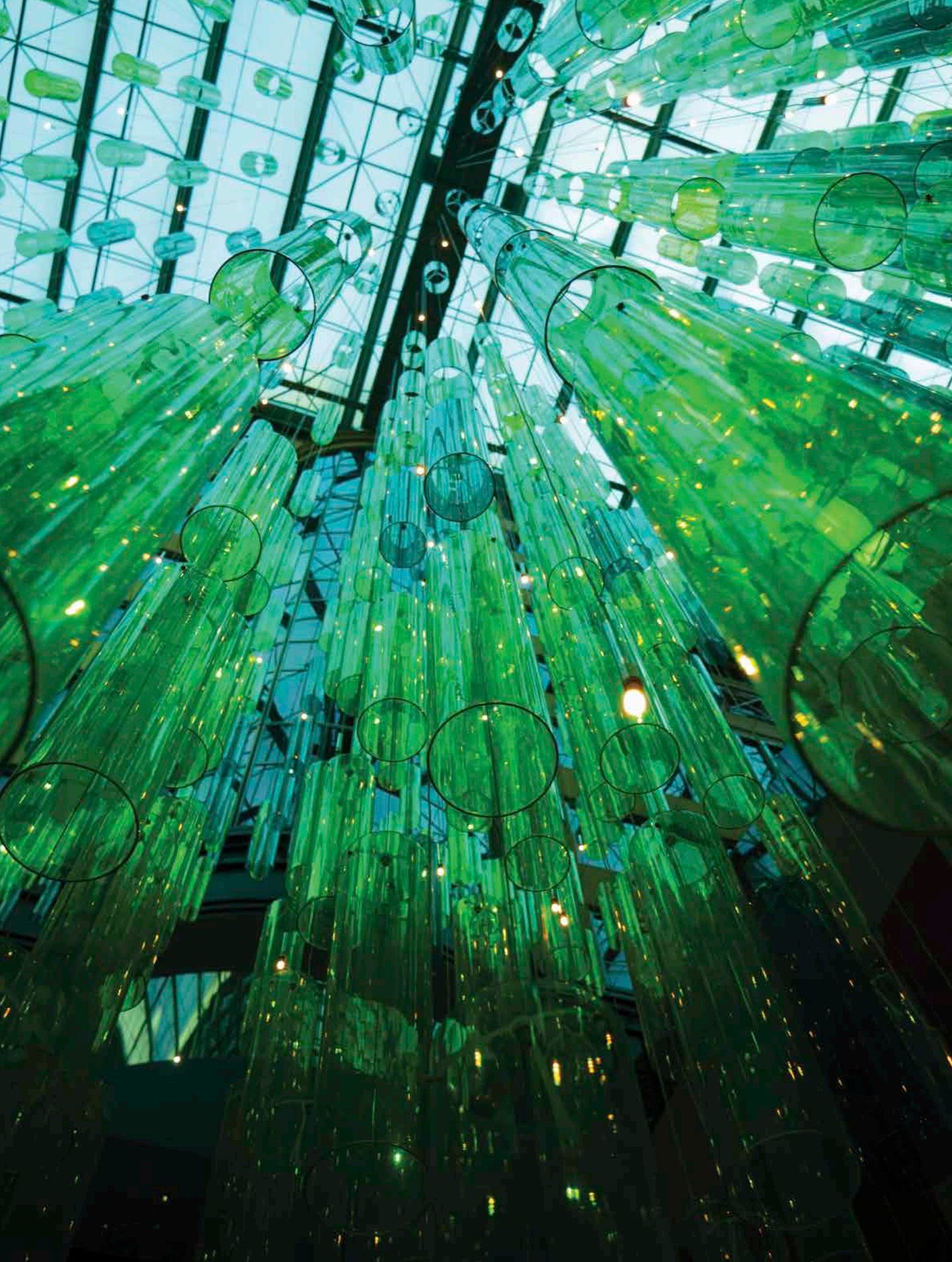
**I have been amazed at the volume and depth of questions coming through.** 140,000 users have logged into Manaaki since last year’s first lockdown and 1,330 questions have been asked with 3,300 answers submitted by experts.

**I don’t think we can underestimate the isolation still felt by small businesses in New Zealand, particularly those who don’t have any governance representation in their business.** The speed at which business owners need to respond to both crises and opportunities is unprecedented and the usual rules do not often apply. The advice they receive from advisors needs to be equally as speedy.

**Small businesses are such an important part of our economic recovery** and providing digital access and the opportunity for small businesses to be able to reach experts across over 20 specific categories across the country is a great addition to the advisory market. Business owners can be connected to experts almost instantly to give them confidence and remain agile. Alongside their traditional advisers, this enables business owners to understand and explore how they can find a way through a challenge or opportunity that is really important to them in a timely manner.

**It’s empowering and so many more business owners are taking advantage of Manaaki and other digital tools.** Time isn’t something they have a lot of these days so digital resources are a critical tool, particularly in the regions. **BQ**

Photo by:  
Pat Whelen on Unsplash



# Zero trust for the cybersecurity Hydra

AUTHOR:  
**ZILLA EFRAT**,  
FREELANCE  
JOURNALIST

**Cybersecurity strategies will be more effective if they are based on the idea your organisation is already compromised.**

**T**he switch to working from home and a rise in cybercrime globally during the covid-19 pandemic means that boards can't protect their organisations in the same way they did in the past.

Hilary Walton, chief information security officer at network and technology solutions group Kordia Group, says the world of cybersecurity has changed and is now all about having "zero trust".

"We used to think that cybersecurity in organisations was basically about placing a hard crunchy shell around them with firewalls," she explains.

"In the past, people were working in offices and going out onto the internet







through the big corporate firewalls that used to protect them. But now people are frequently working remotely because of covid-19 and going out to the internet through their own internet systems at home. And these don't have the same amount of protection.

“The corporate firewall is just not going to work anymore. Cyber security is becoming really hard to keep up with so we need to think of other ways to protect our organisations. It's no longer ‘if’ but ‘when’ a cyberattack will happen. Plus, it's almost moving beyond that. You should assume that the organisation is already compromised.”

#### **TRUST NOBODY**

Walton says when it comes to a “zero trust” approach, nothing can get into the network unless it meets very specific requirements.

“It will only allow people or traffic onto the networks when they have been identified, certified, authenticated and proven,” she says.

“It's about looking at the context in which the user is entering the network, what date and time they logged in, what geolocation they were in and what device they used.

“For example, I join from my home network. Then my device is checked to ensure it has all the software updates. The system then checks that it is me and that I am logging on at the time it would expect me to do so and from a place I would be expected to log on from. My computer should not be logging in from

# 1/3

.....  
Almost 1/3 of kiwi businesses saw an increase in cyber-attacks during lockdown.

# 40%

.....  
More than 40% were targeted by a covid-19 themed attack.

# 1/3

.....  
Despite a rapid rise in Ransomware and DDoS attacks almost 1/3 of businesses did not review their security post-lockdown.

“It's kind of like a ‘default deny’ policy. It's not going to let you in unless all these default criteria are met. And, then when it does let you in, it will only give you access to what you need access to, rather than all the apps in your organisation.”

Africa, for instance.”

Walton continues: “In the auditing world, they use a saying: ‘trust and verify’. Auditors will trust what you are telling them and then they will go away and verify it by getting some evidence. ‘Zero trust’ is a bit like that, except it doesn’t have the trust.

“It’s kind of like a ‘default deny’ policy. It’s not going to let you in unless all these default criteria are met. And, then when it does let you in, it will only give you access to what you need access to, rather than all the apps in your organisation.

“Many companies don’t actively have their networks monitored 24/7. Often, they are monitored by the IT team working nine to five. But what we find is that most of cyberattacks happen during business hours rather than on the weekend or out of office hours.

“The reason for this is that people are on their computers during business hours, clicking on stuff that they shouldn’t be and entering passwords on things that they shouldn’t be. But with ‘zero trust’ the traffic is inspected all the time to ensure that it is clean and that the behaviour is appropriate. Only when all of that is done, will the door to the organisation open.”

#### **QUICKER AND SEAMLESS**

“Zero trust” is set up in a way in which a lot happens without the user being aware of it. It’s a really seamless experience for the user and a massive tick in terms of IT,” Walton says.

With “zero trust”, she says your organisation will still need two factor authentication – that is, an extra layer of security to prevent someone from logging in. But “zero trust” gets rid of the need for things like virtual private networks or VPNs which allow the data traffic to your organisation

**“What you are basically saying in the organisation is that you are not going to trust people. But it’s not actually about people. It’s about devices and traffic across the network.”**

to be routed through an encrypted virtual tunnel.

“Other things are done instead and users like that because they take away some of those hurdles that they had to overcome to get into the organisation’s systems, like firing up the VPN and waiting to connect, which can take more time.”

Walton says “zero trust” is a different way of thinking about your IT architecture and it’s one of those things that it will take a while for people to get their heads around.”

It’s also not one product, but a suite of products.

“You can use lots of different vendors and lots of different IT products. This is where the help of experts is really key,” she says.

“Before you get started, you need to think about what you are currently using in terms of IT and security products and whether any of those can be used to create the architecture for all the different products you may need to consider as you move towards ‘zero trust’. Also think about whether you will move in one big bang – that is, get it done in, say, six months – or whether you will progressively move your organisation towards ‘zero trust’, say, within a couple of years.”

#### **A NEW APPROACH**

Walton says “zero trust” is a mindset. And then you look at the products around it.

“What you are basically saying in the organisation is that you are not going to trust people. But it’s not actually about people. It’s about devices and traffic across the network.”

But Walton adds that human error is an issue when it comes to cybersecurity. People make mistakes and expose their organisations because of poor behaviour, she says.

“With ‘zero trust’ you are helping individuals with bad security habits come into an organisation with good IT health so that they don’t compromise the organisation.”

In addition, staff online activity used to be hidden because this would be inside corporate networks in the office, but people working from home often have less protection, says Walton.

“After covid-19, people will still be working from home through a hybrid working model. People aren’t just going to go back to the office fulltime. People recognise that flexible working can be good and useful. There are benefits for both employers and employees.”

**QUESTIONS FOR DIRECTORS**

Walton says boards need to have the “zero trust” discussion with their executive teams. They also need to know what the “zero trust” journey looks like and they need to be proactive. Some of the questions they could be asking include:

- Does our board have enough knowledge about cyber security and types of threats? If not, which experts can we speak to and what courses or webinars can we do?
- Do we fully recognise the risks posed to our organisation by cybercrime, such as fraud and loss of customer data and reputation?
- How is the board going to prioritise “zero trust”?
- What is the business case that has come up to the board around “zero trust”?
- Out of all the IT projects being examined for “zero trust”, which have the biggest risks and how will these be mitigated?
- How do we deploy “zero trust” across the business?
- How do we measure the results? After introducing the “zero trust” architecture, has the organisation actually reduced cyber incidents? **BQ**

**WHAT DO WE MEAN BY “ZERO TRUST”?**

- .....
- Evolution of the concept of “least privileged” access
- .....
- Never trust, always verify
- .....
- A set of architectural principles and concepts that is data and identity driven
- .....
- A journey of continuous improvement
- .....
- Building, designing and operating with the mindset that the network is compromised
- .....

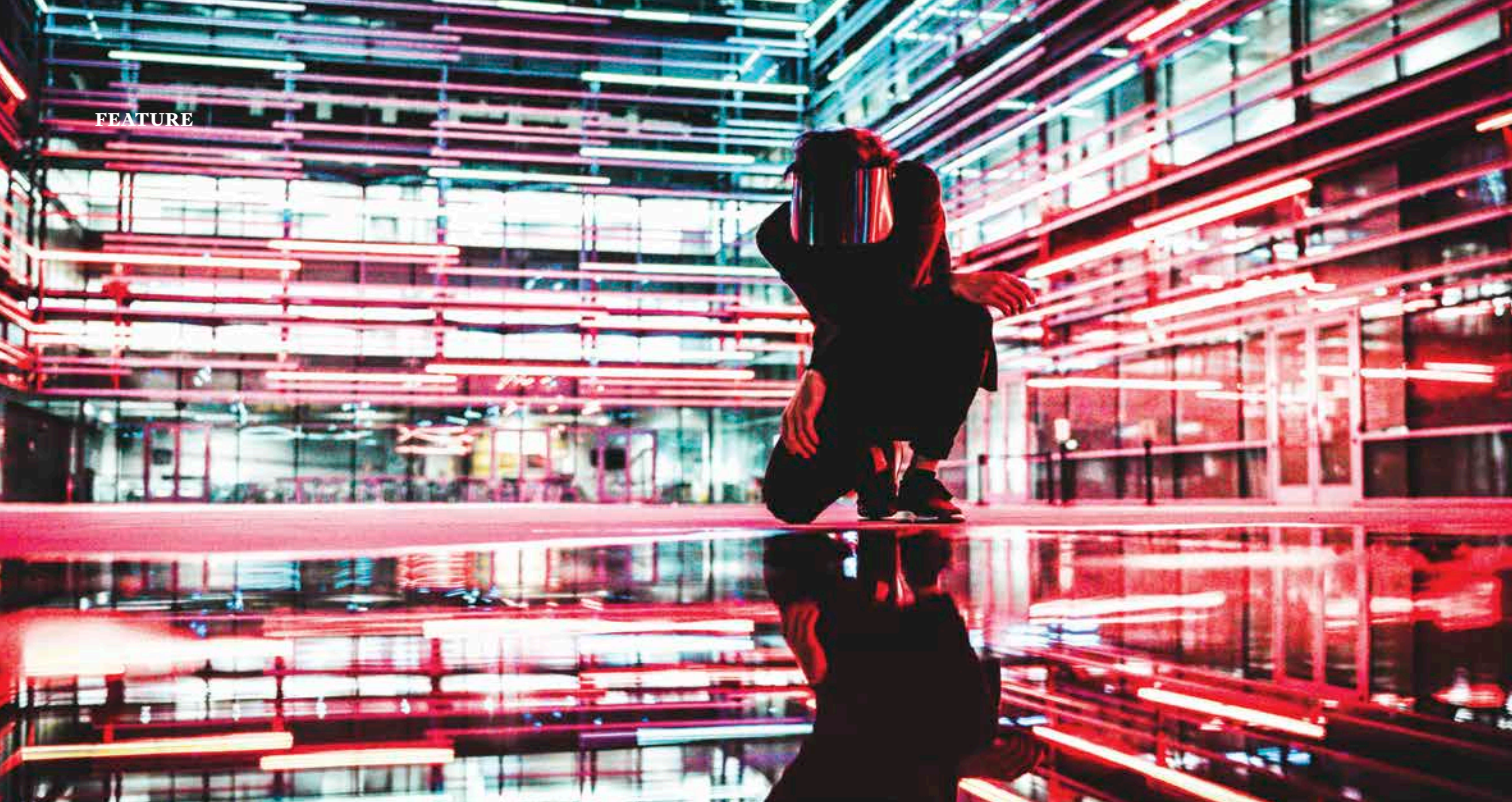
*Source: Kordia Group*

**BREAKOUT: WHAT DO WE NEED TO DO?**

- .....
- Positively identify systems before granting access to other systems and data
- .....
- Encrypt, encrypt, encrypt
- .....
- Deal with blind spots
- .....
- Scan, analyse, and detect on the assumption that you will be compromised
- .....

*Source: Kordia Group*

“With ‘zero trust’ you are helping individuals with bad security habits come into an organisation with good IT health so that they don’t compromise the organisation.”



# Cyber risk and supply chains

Supply chain vulnerabilities are among the most significant cyber threats facing organisations today.

AUTHOR:  
ALEXANDRA  
JOHNSON,  
FREELANCE  
JOURNALIST

Photo by:  
Drew Graham on Unsplash

Recent cyber security breaches in New Zealand, including the New Zealand Stock Exchange, a kindergarten group and the Waikato District Health Board, have brought into sharp focus the increasing threat hackers pose to organisations of all kinds.

The responsibility for cyber security no longer falls neatly into the lap of IT professionals and has instead become an organisation-wide concern.

Lisa Fong MInstD is the director of the National Cyber Security Centre (NCSC) at the Government Communications Security Bureau and says supply chain vulnerabilities are amongst the most significant cyber threats facing organisations today.

She talks to *Boardroom* about these complex challenges and the role directors should play in building an organisation's cyber resilience.

## HOW RESPONSIBLE IS THE BOARD FOR THE CYBERSECURITY OF AN ORGANISATION'S SUPPLY CHAIN?

Cyber security threats target organisations' most vulnerable points and are strategic risks for all organisations, regardless of their sector.

Directors must act in good faith and the best interests of the company and part of that should include ensuring the adequate protection of their critical information assets. While organisations can outsource business functions, they can't outsource responsibility for risks that could result from that outsourcing.

**HAS SUPPLY CHAIN CYBERSECURITY BECOME MORE VULNERABLE RECENTLY AND, IF SO, WHY?**

As organisations outsource aspects of their technology services or digitise their business, they increase their vulnerability to and likelihood of supply chain compromise.

As organisations strengthen their own cybersecurity, their exposure to cyber threats in the supply chain increasingly becomes their weakest point. Adversaries will compromise these suppliers to get past the security controls of your business. This could be through use of privileged access controls held by your supplier, compromise of legitimate software updates, scanning for unpatched or unknown vulnerabilities in systems, or overwhelming your supplier’s capacity to maintain their service to you.

**HAS THE COVID-19 PANDEMIC INCREASED THE FREQUENCY OF ATTACKS AND SUCCESSFUL BREACHES IN CYBERSECURITY IN NZ?**

The NCSC didn’t observe any change in the frequency of malicious cyber activity impacting New Zealand. Internationally, cyber criminals used the pandemic as part of ongoing phishing campaigns, and we understand some New Zealanders were indirectly targeted as part of these global campaigns.

There is an observable change in organisations’ digital posture, however. In response to the covid-19 pandemic, organisations that were used to protecting their assets within a secure office environment suddenly had to stand up remote access and source new equipment and may have changed their security risk posture, resulting in an increase in potential attack surfaces.

Important business information will likely have been downloaded onto personal devices, unauthorised cloud storage and in hard copies in people’s homes. It’s safe to say that many organisations had to assume more risk through sheer necessity.

Organisations should review any changes put in place to support productivity and connectivity in response to covid-19 and re-assess their security settings to ensure they have built in appropriate resilience measures.

**WHAT ARE ATTACKERS LOOKING FOR WHEN THEY TARGET A PARTICULAR ORGANISATION? HOW IS THIS MONETISED?**

The three most common things that attackers look for are:

- personally identifiable information
- credentials such as usernames and passwords, including for other organisations’ systems
- sensitive information.

An attacker will sell this information (often multiple times) or, in the case of credentials, use them to try and break into other systems that the victim might use such as their bank accounts and social media accounts to gather more personal information to sell. They may even use the information they’ve stolen to extort money from the victim by threatening to publicly release it, in some instances forwarding it directly to media outlets to increase leverage.

While the full extent to which all New Zealand victims of ransomware and other forms of cyber extortion are making payments is not data the NCSC maintains, where ransoms are demanded, we advise against making payments. Paying the ransom is no guarantee systems will be restored in working order or data will be safe from exploitation. In fact, it could just encourage the same actors to come back again.

**From a governance perspective, what should a director’s priorities be when addressing supply chain cyber security?**

Understand which business units are responsible for critical assets and the level of risk these assets/services are vulnerable to. Digital interaction with supply chain elements can occur across many aspects of an organisation’s operation, not just the IT or procurement teams. For example, a marketing department might use a third-party service to store a customer information database in the cloud.

Define, and agree to the organisation’s cyber risk appetite and tolerance for each of the organisation’s assets and information in the context of the organisation’s strategic goals.

Ensure the risk appetite is expressed in financial terms to inform decision making. This can only be done if boards are receiving timely and accurate information.

Ensure your organisation operates an industry-accepted framework for measuring risk so that potential outcomes of supply chain compromise scenarios can be calculated.

All supply chain cyber risk management decisions should be based on timely and accurate information. Ensure the leadership team is engaged with the programme by requiring regular status updates, insights and recommendations.

Champion a risk and assurance culture in the organisation where business units own the risks associated with each critical asset and the resulting supply chain risks, and hold them accountable for managing those risks. A governance group should be set up to oversee supply chain cyber risk management functions including representation from all of the business units.

**DO YOU THINK NEW ZEALANDERS BELIEVE THAT THEY ARE ISOLATED AND FLYING UNDER THE RADAR AND THEREFORE SAFER THAN BUSINESSES OVERSEAS? IS THIS ATTITUDE CHANGING?**

Any view that New Zealand’s geographic isolation provides a form of defence from cyber threat has largely disappeared over the past few years. The scale and impact of malicious activity publicly reported on both internationally and here in New Zealand should mean that the importance of cyber resilience is firmly on the board and executive radar.

The challenge today is to ensure that boards and executives have the tools and information to ask questions that lead to assurance that cyber risk is appropriately managed. Put simply there must be a move from asking “are we secure” to asking “how do we know we are secure”.

Over the past few years, the NCSC has put a lot of effort into engaging through organisations like the Institute of Directors and other business forums and to producing a range of guidance material to help boards have better informed engagement around increasing cyber security resilience.

**WHERE IN THE WORLD ARE THE MOST PREDOMINANT ATTACKERS SITUATED?**

As part of our commitment to upholding the rules-based international order, the New Zealand government will, from time to time, publicly call out actors responsible for particular events where it is seen as in New Zealand’s interest to do so.

Over the past few years, the Government publicly attributed malicious cyber activity to North Korea, Russia and China. However, we are aware of other countries which are involved in state-sponsored cyber attacks both internationally and on New Zealand networks. **BQ**

**FURTHER READING**

New Zealand’s National Cyber Security Centre has produced a guidance document, *Supply Chain Cyber Security, In Safe Hands*, to help business leaders and cyber security professionals better understand and manage the cyber risks in supply chains.

It outlines three key phases to effectively manage supply chain cyber risk and improve organisational cyber resilience.

Download a copy from **[ncsc.govt.nz](https://ncsc.govt.nz)**

**Identify**

Because digital interaction with supply chain entities may occur from any part of an organisation, systematically identify suppliers and establish minimum-security requirements.

Identify your critical services and assets. When you know what is most important, you can prioritise them and evaluate the potential harm that could be caused by failures or outages.

**Assess**

Some suppliers have minimal access to an organisation’s systems while others provide critical products or services that pose a high level of risk if compromised or interrupted.

The guide offers criteria to review your suppliers and categorise them into levels of risk so you can formulate business continuity plans and arrange for contingencies in the event that a critical supplier is disrupted. Criteria includes whether a supplier has access to your intellectual property, customer information and other sensitive data.

Supply chain risk should be viewed as a mutual concern between you and your suppliers and collaboration is key.

**Manage**

Supply chain risk management programmes were once considered feasible only for large enterprises, but smaller-scale organisations can still assign resources to assess and manage supply chain cyber risk.

In order to manage supply chain risk and improve resilience, roles and responsibilities within a cyber risk management programme should be clearly defined. The guide offers some steps to initiate a formal supply chain cyber risk management programme which includes gaining approval at board level and ensuring the programme’s responsibilities are distributed throughout the organisation.





**CRAIG PELLETT**  
**DIRECTOR, STREAMLINE BUSINESS NZ LTD**

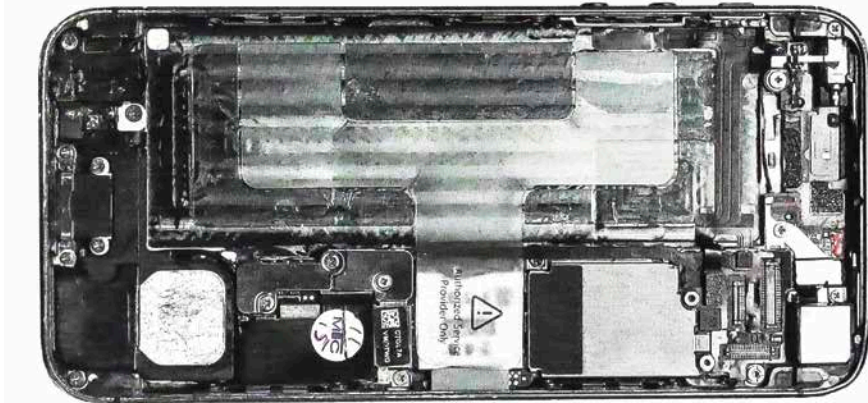
**THE CALIBRE**  
**OF THE**  
**DIRECTORS**  
**WE LEARNED**  
**FROM WAS**  
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**I ENJOYED**  
**THE ROBUST**  
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**AND CLARITY**  
**OF THINKING**  
**TO MAKE**  
**GOOD SOLID**  
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Governance development



# When perfect isn't perfect enough

AUTHOR:  
**JENNIFER KARPINEN**,  
FORESIGHT ASSOCIATE  
WITH THE US-BASED  
*FUTURE TODAY*  
*INSTITUTE*

The illusion of privacy has been shattered. We lulled ourselves into believing that we could keep our smartphones secure, but, the Pegasus Project, a consortium of journalists and news outlets spanning ten countries, exposed the truth – there is nowhere to hide.

**W**ithout even clicking a link, someone can gain access to your messages, photos, and calls and even control your phone's microphone and camera.

Pegasus is spyware sold by Israeli surveillance company NSO Group. The company states the software is “sold to vetted foreign governments” and is part of its “life-saving mission” which includes preventing terrorism and gun violence, recovering kidnap victims, and locating survivors in collapsed buildings.

Early versions of Pegasus used phishing techniques that tricked users into clicking malicious links, but the technology has progressed and can now infect phones through “zero-click” attacks that exploit zero-day vulnerabilities in the phone's

operating system – whether iOS or Android.

Every day, we carry around a smartphone that has become an inextricable part of our lives. We personalise it; we panic when we lose it. What do we do when that same device can be turned against us and used for 24/7 surveillance, no matter what we do?

When government regulation is no longer a possibility because it's the government that's hacking you, who do you turn to?

## **THREE THINGS YOU SHOULD KNOW**

A booming private sector: NSO Group isn't alone in selling spyware to governments. Candiru is another Israeli company active in the area. It was recently implicated by Microsoft in the

Photo by:  
**Jonny Caspari** on Unsplash

creation and sale of an exploit targeting Windows and linked to two Chrome flaws. Other players include US-based Zerodium and UAE firm Crowdforce.

Cornering the market: starting in September 2021, tech experts in China will be required to report any zero-day vulnerabilities they find to the government within two days. The programme is raising concerns about the government's intentions for the exploits and is expected to disrupt bounty programmes and public disclosure.

No hack required: Every time you use an app, you consent to data collection. Despite assurances about "anonymisation," online data is easily de-anonymised with real world consequences, like the recent outing of a Catholic priest.

The ability to opt-out of advertising identifiers on iPhones and Android devices may slow the stream of data to brokers, but companies like Procter & Gamble are investing in loopholes.

#### **FUTURE SCENARIO - PESSIMISTIC, 2025**

The paranoid among us were right – we were being watched.

Between our spying personal devices and intrusive surveillance at work, it never feels safe to be ourselves. Instead, we spend our days wearing a persona of who we think we're supposed to be.

Mental health issues proliferate, but we don't dare speak with a therapist, afraid that the discussions will leak.

We create algorithms that fill our social media streams with synthetic photos and posts that align perfectly with our synthetic personas.

As the pressure builds, people long for the next "block party" – where massive crowds and a network of signal jammers create a secure "bubble" where you can disappear. Hardly a night of mayhem, most people come to let their guard down and scream out those things they've wanted to say but couldn't. It's all drowned out by the music and the other people wanting to break out from their own masks that have become permanent accessories.

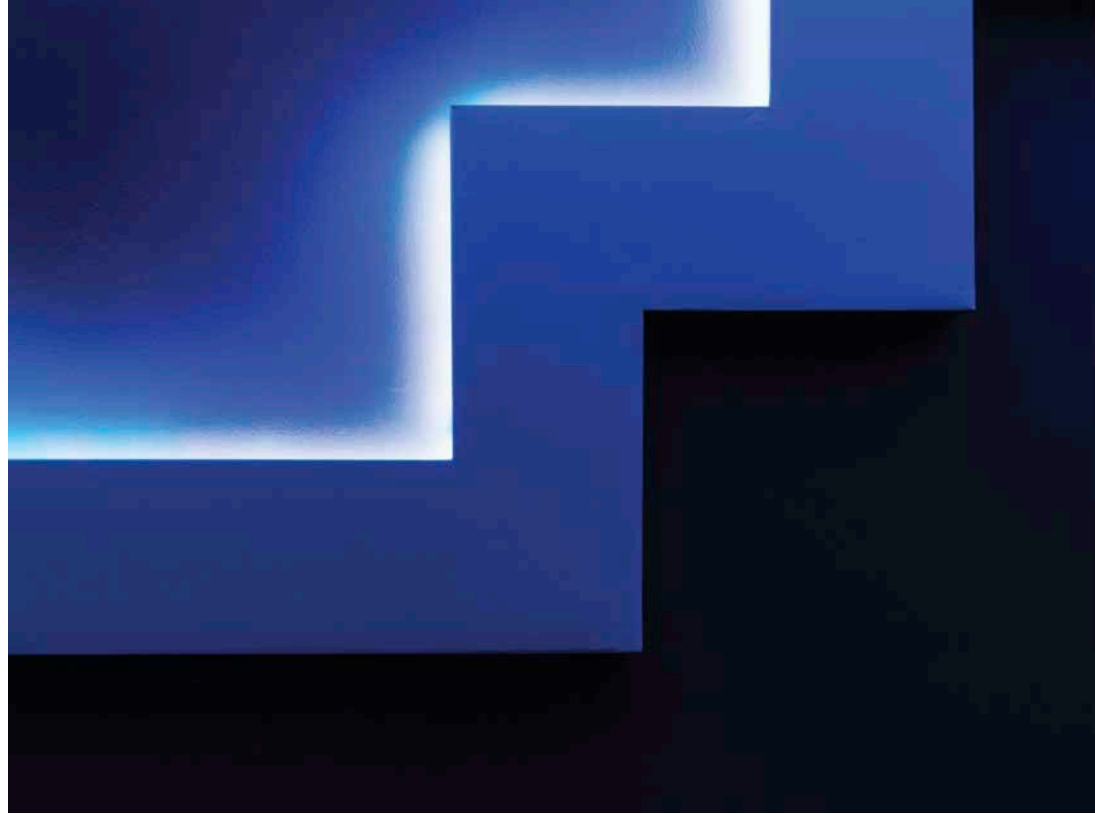
#### **RABBIT HOLE**

If you want to take a deeper dive into personal surveillance, I recommend the following sources:

- The US National Security Agency issued a guide last year outlining steps you can take to reduce security vulnerabilities on your devices. Shouldn't we at least try?
- We also need to worry about car-based surveillance [see "Your car is spying on you, and a CBP contract shows the risks" at [theintercept.com](https://theintercept.com)]. Infotainment systems collect and retain tons of data from our smartphones when we pair them and the car itself records actions we might not suspect like linking location data to the opening and closing of each door.
- Some countries are cracking down on the sharing of personal data collected by apps. In January, Norway fined hookup app Grindr over its data practices. The case sets a precedent that "consent" that relies on "take it or leave it" provisions is unlawful.
- Recode outlined how to opt out of sharing with data location companies X-Mode and Cuebiq.
- The US Council on Foreign Relations has an overview of the US government purchase of personal location data. A bill introduced in the US Senate - The Fourth Amendment is Not for Sale Act – proposes to close loopholes that enable government agencies to purchase this data without a court order.
- A coalition of companies including Microsoft, Cisco, Google, and VMware filed an amicus brief in support of WhatsApp's suit against NSO Group in December 2020. In it, they argue that private companies shouldn't be granted immunity for actions taken on behalf of foreign-government customers. The brief raises the inherent risks of profit-seeking companies creating and deploying cyber-surveillance tools.
- NSO Group published a Transparency and Responsibility Report in June. It continues to deny responsibility for anything its government customers may do with its spyware.
- And just for fun, play "Terms & Conditions Apply," a game designed to expose dark patterns that are regularly used to trick us to consent. **BQ**

“The paranoid among us were right – we were being watched. Between our spying personal devices and intrusive surveillance at work, it never feels safe to be ourselves. Instead, we spend our days wearing a persona of who we think we're supposed to be.”

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# Understanding cyber risk

## How cyber risk dashboards can help protect organisations from attack.

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Photo by:  
**Dawid Sokołowski** on  
Unsplash

**B**oards are under mounting pressure from regulators to tackle a wave of cyber attacks that are costing New Zealanders millions of dollars every year.

From the smallest to the largest organisations, no one is immune.

“Systems that the C-suite thinks are secure — and may appear secure because they’re password-protected or seem limited in scope — are often the systems that are ripest for exploitation,” says Diligent Corporation Chief Information Security Officer Henry Jiang.

But directors are being held back by a lack of transparency about their own organisations’ ability to withstand such a cyber attack due to the increasing complexity of cybersecurity, data governance and supply chain management.

### **CYBER RISK IN NEW ZEALAND IS RISING**

The number of reported cyber incidents last year grew by 65% according to government cybersecurity authority CERT NZ. They cost New Zealanders a total of \$16.9m.

Without strong preventive action, the cost



would be significantly higher. Around \$70.5m of damage to nationally significant organisations was averted by the National Cyber Security Centre in 2019-20.

New requirements, such as the updated Privacy Act and the Reserve Bank’s guidance for regulated entities, are increasing the pressure on boards to effectively address cyber risks.

No one is immune to cyber attack, but organisations can reduce their vulnerability and strengthen their preparedness. Cyber risk dashboards are an essential tool in elevating boards’ capability to monitor this critical business risk.

#### **KEEP IT SIMPLE AND STREAMLINED**

Dashboards are an ideal way to provide visibility across the different facets of cybersecurity to support effective monitoring. Accompanied by in-depth discussions, deep dives and ongoing training, they equip boards to ask better questions and focus on key areas for improvement.

#### **DEVELOP DASHBOARDS FOR A BOARD AUDIENCE**

Boards don’t need every director to be a qualified accountant, but they should make sure all members are financially literate. The same principle applies to IT.

Making cyber issues more accessible to directors involves increasing their digital understanding along with positioning reporting at the right level.

It’s clear there’s plenty of room for improvement. More than half of New Zealand directors (53%) don’t receive comprehensive reporting from management on data security risks, incidents and actions, the Institute of Directors’ *2020 Director Sentiment Survey* revealed.

“Boards don’t need every director to be a qualified accountant, but they should make sure all members are financially literate.”

Using digital solutions can improve insights into digital risks. Online, real-time dashboards enable directors to click through for more information without the need for management to update manual reports.

#### **SET QUANTIFIABLE MEASURES**

Using consistent, clearly-defined KPIs and basing reporting on verifiable facts rather than subjective opinions improves the value of dashboards.

It’s important to select a range of metrics that span the full breadth of the risk framework from identification and analysis to defence, response and remediation.

At an early stage, that might include yes/no questions such as whether there is a security policy or if the organisation has cyber risk insurance. As maturity develops, more nuanced measures become relevant, such as the time taken to identify a breach after it’s occurred.

#### **CONSIDER THE BIGGER PICTURE**

Context is everything when it comes to board reporting. It’s impossible to consider the implications of an individual risk without reference to the wider organisation and its environment.

Two important things to ensure are communicated to the board are whether the organisation’s cybersecurity is improving and how it compares to good practice.

#### **LOOK OUTSIDE THE BOUNDARIES**

An organisation’s own systems aren’t the only source of cyber risk. Incidents affecting third-party providers are a growing issue as digital integration increases and organisations become more interconnected.

The reputational, financial and regulatory damage can be severe, as demonstrated by the Reserve Bank incident which is expected to cost in the order of \$3 million.

Dashboards should consider cyber risk across the supply chain, including the significance of data held by third parties and the extent of external access to the organisation's systems.

**Does your dashboard include:**

- the percentage of vendor risk assessments completed
- the number of vendors with low risk management maturity
- third party data breaches?

**COMPARE YOUR PERFORMANCE**

Evaluating cybersecurity isn't a simple pass or fail outcome. Increasing cyber risk maturity involves continuous review and improvement to mitigate new threats.

Even organisations with sophisticated systems and robust risk management can fall victim to an attack. However, the risk is far greater for those who haven't yet put baseline measures in place.

Organisations with the lowest cybersecurity rating are 7.7 times more likely to have a data breach occur than their counterparts with the highest rating level, according to analysis by SecurityScorecard and Diligent.

**Does your dashboard include:**

- benchmarking against industry, peers and best practice
- highlighting changes in performance and compliance
- external trends in data breach notifications and cybersecurity incidents?

**CONNECT OVERSIGHT TO ACTION**

Dashboards can give boards the insight to manage cyber risk more effectively.

**“An organisation’s own systems aren’t the only source of cyber risk. Incidents affecting third-party providers are a growing issue as digital integration increases and organisations become more interconnected.”**

Adding it to the meeting agenda is just the first step, next is to explore what the information reveals and oversee a structured improvement plan.

That includes allocating appropriate resources to cybersecurity, something that's a struggle for many smaller organisations. More than six in 10 small businesses (61%) say their investment in cybersecurity isn't adequate, according to a 2020 CERT NZ survey.

**IDENTIFY THE GAPS**

It's important to have realistic expectations about what cyber risk dashboards reveal. Rather than a row of green lights that indicate everything's under control, dashboards reveal the vulnerabilities that need to be fixed.

One of the potential gaps boards can directly influence is their own capability. Around two-thirds of directors (65%) don't believe their board has the right mix of digital skills, according to the Institute of Directors' *2020 Director Sentiment Survey*.

**USE DASHBOARD REPORTING AS A CATALYST FOR DEEPER DISCUSSIONS**

Having a complete picture of the organisation's cyber risk profile supports more informed discussion and decision making by boards and management, including: investing resources based on priorities and risk weightings; expanding internal capability, including IT and digital expertise at board level; and engaging specialists for targeted training, action plans and assessments. **BQ**

**Does your dashboard include:**

- staff understanding and engagement on cybersecurity
- spending on cybersecurity, including improvement vs remediation
- delays in implementing actions and recommendations?

# The experts in building cyber resilience.

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# Pet projects

AUTHOR:  
**ALEXANDRA  
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FREELANCE  
JOURNALIST

**A Kiwi vet is leading the way in the commercialisation of technological innovations.**

**I**f you had tapped Steve Merchant MInstD on the shoulder when he was ten years old and asked him what he wanted to be when he grew up, he would have said “vet”.

And while he fulfilled that ambition early, graduating with a Bachelor in Veterinary Science at just 22, he also spawned a range of successful, highly-innovative animal care businesses including a pet supply online retailer, a veterinary nurse training centre, and Pet Doctors, New Zealand’s first veterinary clinic conglomerate.

At 25, he bought his first veterinary clinic in South Auckland, purchasing the neighbouring practice soon after.

“I’ve always had an interest in the vet business as well as the profession,” he says. “I relished the opportunity of being able to do what I wanted while having the freedom of being a business owner.”

Merchant has a special flair for detecting or anticipating a need in the industry and successfully catering to it. Prior to establishing Pet Doctors, he addressed the problem of succession planning for vets.

“As in many professions, baby boomers struggled to sell their businesses as they retired. So, we decided to create a succession planning process and establish standards of care, offer subject and business experts, and let the vets be vets.”

Establishing that business offered an interesting lesson in governance.





“We had more and more vets wanting to join, but had to be careful as that could get very messy from a governance and operational perspective. We bought in private equity and arranged a different class of shareholding for all the vets that came on board. We were quite keen to avoid the complexity of too many people sitting around the table.”

#### **TECH SOLUTION**

When the pandemic hit in early 2020, Merchant had been using a New Zealand tech platform, Ambit, and “playing around” with a new idea, a virtual vet nurse, or conversational chatbot, to help busy practices manage clients.

He says there are around 450 veterinary clinics in New Zealand, many of which are small businesses operating with high overheads. The chatbot is designed to be the first point of contact for client enquiries. It can make bookings, order repeat prescriptions, arrange quotes and answer some general pet care questions.

“There is increasing compliance and administration work in vet practices,” Merchant says. “Add a shortage of staff and it seemed to me that a digital assistant would help solve problems and help a business function better.”

And what better time to employ a virtual assistant while vets were trying to self-isolate and provide essential services?

“I thought the pandemic was the perfect storm to create this business. And what nobody really anticipated was the surge in business. People aren’t spending their money on travel, they are spending it on their nearest and dearest. There are one hundred thousand more dog owners in New Zealand than there was a year ago.

“During covid-19 we gave it free to a few clients because the bots learn as they work. Every conversation they have builds their intelligence, so we got them out there to do some R&D. Chat bots are only as good as the number of people who use them.”

“I thought the pandemic was the perfect storm to create this business. And what nobody really anticipated was the surge in business. People aren’t spending their money on travel, they are spending it on their nearest and dearest. There are one hundred thousand more dog owners in New Zealand than there was a year ago.”

#### **NEW MARKETS**

Merchant’s chat bot has talked its way into Australia and South Africa, and leads are opening up in Asia and North America, he says. “It’s a new business, and we are very mindful of the principles of good governance. How do we get a clear focus on strategy, hold ourselves accountable, and look at risk? The same principles apply.”

Are New Zealanders happy to talk to a bot?

“Demands are shifting and people are less willing to spend ten minutes waiting on the phone. And there are lots of stats coming out – for example over 50% of millennials in Australia would rather talk to a bot than a human.”

He says the 80/20 rule applies to veterinary clinics, whereby 80% of enquiries are repetitive, “and so we can script those and take the pressure off the team”.

“Plus, 40% of these chat bot conversations are happening after hours, so you’ve kept the customer engaged and they are back with you in the morning.”

Now, in addition to the chat bot, he is working on a digital human virtual nurse to have a real-time conversation with vet clients to discuss topics such as nutrition and pet care.

He is also working on another animal-related tech called Talkily, a pet wearable device which analyses actions and behaviours from the dog collar and helps identify a range of medical and psychological conditions.

“It’s like a Fitbit for dogs.”

Eventually, the data from both the Talkily device and Virtual Vet Nurse might connect with a vet’s practice management system.

“So that’s quite a tight supportive unit. Anything can be integrated these days.”

#### **FOUR PILLARS FIT ALL SIZES**

Merchant started out in governance at the New Zealand Veterinary Association, where

he was on the board for 11 years, including serving as president and chair.

He says IoD's *Four Pillars of Governance Best Practice* – determining purpose, an effective governance culture, holding to account and effective compliance – can be applied to any business venture, large or small.

“If you take the adage, you should spend time working on your business and not in your business, and connect with some independent people that can hold you to account, that’s really the genesis of governance,” Merchant says.

“I am passionate about things that can make a difference, things that are growing and exciting and looking at creating solutions for problems. What excites me is trying to balance risk with growth and potential and strategy.”

He says the ultimate sustainable success of any business depends on effective governance, “which needs to be fit for purpose and the life stage of the business”.

“Directors can be effective by being curious and challenging as required, but also by being aligned and supportive of the board in their strategy and decisions.”

Furthermore, director accountability has increased with even more compliance issues to be aware of, such as reporting climate impacts. “There is no excuse to not be aware of legislative developments or not ask the appropriate questions of the board or management team.”

In addition to his own business activities, Merchant currently sits on three very diverse boards. He is a director at MAS, a membership-based insurance and investment company with a philanthropic focus, which direct profits to health inequalities in society. He is on the board of the SPCA where both his interest in animal welfare and governance experience are utilised. And he is a director at 95bFM radio.

“I enjoy the diversity of different directorships, especially in high growth,

“If you take the adage, you should spend time working on your business and not in your business, and connect with some independent people that can hold you to account, that’s really the genesis of governance.”

value-add New Zealand companies that make a difference.”

Merchant says it is much easier to be a director in an organisation that aligns with your values.

“Strategic and environmental scanning should always look to disruption and the threats and opportunities from social trends. The steadily increasing importance of animal welfare and the environment to society should be of no surprise to any director and form part of the strategic development of any organisation.”

#### **NEW ZEALAND IS LEADING THE WAY**

When it comes to technology, Merchant says New Zealand has huge potential.

“The platforms that we are using, like Ambit and Uneeq, are world leaders in this space.”

The challenges, he says, are providing a solution that’s relevant, translating tech into a product that’s needed, and making it accessible to the market.

“We have the technology, we just need to apply it to a problem that exists, or is predicted to exist. The problem is when you come up with a tech solution that’s fantastic, but doesn’t have a business case around it.”

He is fascinated by how fast digital tech evolves and improves.

“Even with chat bots, six months is like a whole generation. I’ve heard people say, I talked to a chat bot a year ago and it was no good. Well, I say try it out again.

“It’s like a new frontier really. And New Zealand has the chance to put itself on the world stage with this. It’s fully exportable, it’s pandemic-proof, you don’t need offices or trade shows, it’s a very exciting field.

“Even inside our veterinary sector, when it comes to the deployment of digital technologies New Zealand is ahead of the game, many people wouldn’t know that.” **BQ**

# Five questions with new Institute of Directors President Julia Hoare CMInstD

# 5

## 1 What are your priorities as president of the Institute of Directors (IoD)?

The IoD is going through a transformational change in that we are introducing a governing board and reorienting the role of the council. The biggest responsibility I have is to oversee those structural changes to ensure we leave a legacy of a best practice well-structured organisation for future members. In addition, we need to ensure that the IoD remains relevant to all of our members.

At a broader level, directors are grappling with new ideas of how our organisations maintain their social licence to operate. To ensure ongoing success, we need to make sure that we can maintain shareholder value while also providing real worth to other stakeholders. The IoD has a role in supporting members with that challenge.

## 2 Is the purpose of the IoD changing alongside its governance structure?

The IoD is here to support and enable all directors in the work they do in their organisations and in the wider community. We are here to help directors really make a difference. I don't see that changing.

At the moment, the council is the strategic brain of the organisation, but that role will move to the new board. The future role of the council will be as guardians of the IoD, representing the member view and upholding the IoD's purpose. I think this will enhance our ability to support members.



### **3** How do you see the role of the president evolving during your term?

My role is going to be really interesting. As president, I will be the hand on the tiller, steering the transformation as we move to get the new structure right.

That will not just involve appointing a board but also looking through the current subcommittees to see which stay with the council, as they are about member issues, and which transfer across to the board, such as audit and risk.

The president's role is a council role, so once the new structure is in place I will transition into the member guardianship function – although there may be a transitional role for the president as the new arrangements bed in.

We are also updating and enhancing the IoD's standards framework to ensure it remains fit for purpose. That will require some attention.

### **4** Has the pandemic changed the way directors think, or should be thinking?

The pandemic has really brought many human aspects to the fore. It has brought directors closer to their businesses. There are more meetings and there is more interest in detail. It has brought people together as well as holding them away. There have been deep insights into our fellow directors and senior management. We have Teams meetings where we see into their homes, see their children and what they might have on the walls.

It has created a whole new way of thinking about risk. In terms of the economy, we have had to step back and think about what is essential, and what is not essential. What are the supply chain risks and how can we maintain an interconnected economy?

Good opportunities in terms of new businesses and business models have emerged. And in terms of the use of technology and being agile, the pandemic has had a really profound effect.

What is concerning is the degree to which it has diverted attention away from other important areas that directors should maintain sight of, such as broader sustainability, climate action, people and talent, diversity, and multicultural challenges. There are many things which may have been put on the backburner, things we should not lose sight of.

### **5** It's Spring – what are you looking forward to with the change of seasons?

Long days, warmer evenings, moving out of lockdowns. I think that for many IoD members, 2021 has felt a lot longer than 2020. We have had this ongoing daily impact of covid-19. Spring feels like the start of a way out of the tunnel.

On a personal basis, my 94-year-old mother lives in Australia. I have not seen her for 18 months. I made a couple of attempts to get there that were thwarted by the bubble closing on both occasions.

I look forward to more family time, shared time. I really look forward to that feeling of rejuvenation when New Zealanders are vaccinated and can pop out of what has been a very challenging period. **BQ**

“What is concerning is the degree to which it has diverted attention away from other important areas that directors should maintain sight of, such as broader sustainability, climate action, people and talent, diversity, and multicultural challenges.”

# Work:Space



**What does your desk say about your working style?**

**Sam Fellows MInstD, director and member of the IoD's Bay of Plenty branch committee.**

Sam Fellows MInstD built a desk in his garage, with a little bit of help from his father-in-law.

“After getting involved in more board roles and the rise of video meetings, the little office nook at the top of the stairs was not conducive to avoiding interruptions or being able to have meetings when the kids were asleep,” Fellows says.

“I thought a corner of the garage may be a great place. Wanting a standing desk, like I had at work, I very roughly drew a plan for a desk. And having absolutely no handyman skills, I enlisted the help of my electrician father-in-law to accompany me to Bunnings to get the necessary wood.”

Back in the garage, Fellows was instructed on how to cut the wood

into the correct lengths, and set to it.

“When we got back home my father-in-law lent me his power tools and showed me how to cut the first length of wood. Much to my surprise, he then informed me he was off and I would be right to cut the rest and put it together.”

So, surrounded by sporting memorabilia, work papers, and tyre shine, Fellows now has a desk where he can work uninterrupted in the new normal of working from home.

“Ultimately, I was able to throw together a not-so-perfect desk that is perfect for working at home, board meetings and very occasionally a work bench for kids' toys or my wife's floristry.”

AUTHOR:  
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JOURNALIST

# Coffee with Nive Sharat Chandran

**Nive Sharat Chandran understands diversity from the inside. As a young, Indian woman, she has found herself the sole representative of it around a board table at times. But she maintains true diversity in governance can be as much about what you take away as what you add.**

**I**f family history is anything to go by, Nive Sharat Chandran MInstD has excellent pedigree when it comes to making bold decisions for what she believes in. After her father died when she was a baby, Sharat Chandran's mother packed up the then nine-year old and her 14-year-old brother and moved them to the other side of the world from their home in Chennai (formerly Madras), India.

“She thought getting on a plane and emigrating to New Zealand, where she knew literally nobody, would be a great idea. For which we’re forever grateful,” Sharat Chandran says.

Her mother then worked three jobs to ensure her children had a better life and education. Sharat Chandran is rewarding that sacrifice in spades, with New Zealand society the beneficiary.

Now 30, Sharat Chandran was only 18 when she was awarded an ex-officio position on the board of the Young Women’s Christian Association (YWCA) in Auckland as part of a scholarship arrangement. The YWCA champions young women’s empowerment, leadership and rights. During her year on the board, Sharat Chandran was mentored by other accomplished female directors.

“It was really amazing to see that, actually, these are incredible women doing amazing things. But they’re also willing to give time to this not-for-profit,





## PROFILE

to make sure they're having an impact in the community as well."

She became vice president of the Auckland YWCA branch, then the youngest co-president YWCA Aotearoa had ever had. She was also appointed vice president of the World YWCA at the tender age of 24.

"It was a huge board - over 20 directors. So, you can imagine the conversations we were having around the table. Trying to balance the different personalities, but also the cultural nuances that come with a global board presented interesting challenges."

### THINK ABOUT PEOPLE

At the University of Auckland, Sharat Chandran studied public health and public policy and became chair of the Auckland City Youth Council in her spare time. She helped pull together youth submissions prior to the Auckland super city formation, working alongside YouthLaw Aotearoa, which offers free legal advice to young people throughout the country. Soon she stood for their board.

Eight years later she is still involved at YouthLaw as one of the few non-lawyers on the board. She also currently represents youth interests on ASB Bank's Community Council and was a finalist in the emerging leader category of Westpac's Women of Influence Awards 2013.

Sharat Chandran puts this desire to serve down to her mother.

"She's always raised us to be thinking about people who don't have the same opportunities as us - to make sure we put our hand out and help up as many people as we can while we're going up the ladder."

This means Sharat Chandran has turned down professional roles where the values haven't aligned with hers.

Her current day-job at Auckland-based ProCare - NZ's largest Primary Health Organisation, where Sharat Chandran leads its equity change programme, benefits from her mix of operational and

**"It's hard to do that as one young, brown woman. It's much easier when you have a collective of people thinking around the same diversity lens."**

governance skills. During lockdown last year, these skills came together to help her pivot from the role she then held, to set up one of the covid-19 community-based testing sites and source scarce personal protection equipment needed by frontline staff.

"It is a different lens that I'm able to bring to my day-to-day work that I wouldn't have been able to do without my governance background," she says.

### GOVERNANCE SKILLS

Governance has taught her how to read financial reports - hugely beneficial in her operational role - raise questions around things like sustainability and spot broader risks for the organisation, she says.

Sharat Chandran believes her own diversity makes her attuned to who is missing on boards. One of her biggest frustrations is tokenistic attempts at creating diversity.

"I often get asked to be on a board because I'm 1) young, 2) a woman and 3) from a different ethnicity. If those are the reasons I'm brought on, it makes me uncomfortable."

She has turned down roles for this and says boards need to have different people representing different elements of society to make real cultural change.

"It's hard to do that as one young, brown woman. It's much easier when you have a collective of people thinking around the same diversity lens.

"For me, it's shifting the conversation to who shouldn't be around the table, so vacating seats, and bringing in the people that need to be there, rather than just adding more people on."

So, was the move to the other side of the world worth it? Sharat Chandran's mother recently told her just how proud she is of what her daughter has achieved here. It must be a yes. I would say New Zealand thinks so too. **BQ**



# DRIVING DIGITAL RESILIENCE: A TECHNOLOGY CHECKLIST FOR YOUR ORGANISATION

Governance is highly complex and strictly regulated. It must contend with constantly evolving global regulatory requirements, increasing stakeholder demands related to ESG, fluctuating operational risks and sophisticated cybersecurity threats. By digitising governance practices, organisations can create a strong framework to mitigate these risks while still driving growth and performance. This digital transformation allows them to respond more rapidly to crises and to be more effective in their approach to business.

Organisations should seek out a digital governance solution that allows them to:



From security and risk management, to data analysis and corporate responsibility, modern governance equips organisations with the tools and insights that enable business resilience, even during the most volatile times.



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# Apocalypse when?

AUTHOR:  
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 THE UNIVERSITY OF  
 CAMBRIDGE

## Human nature doesn't help us plan for, and avoid, sudden catastrophes.

**I**n his elegiac memoir *The World of Yesterday*, which he wrote while in exile from the Nazis, the Austrian writer Stefan Zweig observed that most people cannot comprehend the prospect of catastrophic changes in their situation.

Things can get incrementally worse for a long time without prompting a reaction. Once catastrophe strikes, it is too late to act.

Dramatic changes are occurring in our times, too, and we must hope that it is not yet too late to address them. Unfortunately, sufficiently urgent, coordinated, and decisive action will likely be difficult to mobilise when most of us – like the proverbial slowly boiling frog – perceive change to be incremental. So, it is worth asking what we might be facing if the worst happens.

### **WEATHER, OR NOT?**

Climate change-induced weather events are one obvious type of catastrophe. These could render uninhabitable large, densely populated parts of the planet, and it might already be impossible to avert large-scale population movements stemming from them.

Many climate victims might seem far away – tiny Tuvalu in the Pacific is frequently portrayed as one of the first

likely casualties. But recent weather events point to areas closer to global centres of power – such as Florida, the cities of China's Yellow River valley, Seattle, and New Delhi – either flooding or becoming too hot for humans.

Governments and international organisations should therefore start preparing for the prospect of millions of future climate refugees. According to the United Nations, there were 79.5 million displaced people globally at the end of 2019, the biggest number it had ever recorded, and more than at any time since the huge, forced migrations in the aftermath of World War II. Continued global warming means that number will likely increase.

Worse still, climate change, combined with biodiversity loss and soil degradation, threatens to cause a downward spiral in agricultural productivity. That would undo many of the gains of the Green Revolution that has enabled the Earth to sustain its 7.9 billion people.

As such, we need a new Green Revolution that goes beyond genetic modification of crops to encompass social and economic changes such as land reform, altered diets and different business models. Failure to change current intensive, industrialised farming practices rapidly

Photo by:  
**Javardh** on Unsplash



and at scale will result in crop failures and increasing hunger.

For net food importers like the United Kingdom, the post-war plenty we have grown used to could become a thing of the past. But how are we to bring about the system change needed when, despite the pandemic, supermarket shelves are still full?

#### **ZOONOTIC DISEASES**

Another type of disaster related to ever greater human incursions on nature is the increasing frequency of zoonotic diseases that leap from animal hosts to humans. The extraordinary covid-19 pandemic has driven this message home to the world – Ebola, SARS, and MERS were earlier warnings – and there are more such health crises to come. The period in history when infectious disease seemed to have been tamed is likely over.

Similarly, the spread of anti-microbial resistance means some old infection battles have restarted. And if an even more virulent novel coronavirus emerges

in the next few years, will we be prepared for another upheaval like the one we have all experienced over the past 18 months?

These kinds of events will put immense pressure on existing political systems, whether they be democracies or authoritarian regimes. Today, only a Panglossian observer would foresee an imminent return to the trend toward liberal democracy that characterised the latter part of the twentieth century.

On the contrary, the need to deal with more emergencies could make the West more authoritarian. And the retreat from multilateralism to geopolitical clashes could accelerate, fuelling a vicious cycle that makes it ever more difficult to tackle global problems.

Perhaps these gloomy thoughts are merely a sign that their author needs a summer holiday. But with Zweig’s warning in mind, it would do no harm to consider the “what if?” What if this is the time for large actions, not small ones? What would they be? **BQ**

“As such, we need a new Green Revolution that goes beyond genetic modification of crops to encompass social and economic changes such as land reform, altered diets and different business models.”

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# How to develop resilience against ransomware

AUTHOR:  
**NIKI BEZZANT**,  
FREELANCE  
JOURNALIST

Photo by:  
**Ruben Bagues**  
on Unsplash

**R**ansomware is a term that's been firmly in the news this year with several high-profile attacks hitting the headlines. The ransomware attack on the Waikato District Health Board in May took the DHB months to recover from and had a major impact not only on its IT infrastructure but also on its ability to deliver crucial health care to patients.

The attack was a timely lesson for all organisations on the perils of not having robust cybersecurity systems and polices in place.

## WHAT IS RANSOMWARE?

Ransomware is a type of malicious software (malware) that encrypts an organisation's files and stops you from being able to access them. Ransomware criminals usually demand payment (often in the form of cryptocurrency) to unlock files and systems.

These attacks are incredibly common. According to *Cybercrime* magazine, by the end of 2021, ransomware attacks are expected to target global businesses every 11 seconds.

Global insurer Marsh warns ransomware is on a meteoric rise, increasing in frequency, severity, and sophistication. Jono Soo, Head of Cyber Specialty for Marsh in New Zealand, says it's currently the most common cyber threat.

"Ransomware has become the go-to method of attack for a lot of cyber criminals. The reason is that's where the money is," he explains.

Soo says there's a sophisticated underground economy of cybercriminals. Tools to carry out attacks are available on the dark web and there are whole companies offering ransomware as a service.

### **EFFECTS OF AN ATTACK**

Ransomware attacks present a double threat to businesses. First, there's the operational issues associated with not being able to access files and computer systems; it affects your ability to do business at a basic level.

The second threat is what's known as data exfiltration; the unauthorised copying or transfer of data.

Soo says data exfiltration is a powerful lever for extortion.

"Whether it's personal information from your customer database or confidential client information; really anything which is valuable to you as a business, they'll steal it and say 'you pay us X amount of money or else we'll sell this to the highest bidder on the dark web'."

Data exfiltration can present a serious threat to a business' reputation. Soo points out that updates to the Privacy Act last December made reporting data breaches mandatory, both to the regulator and to affected individuals.

### **VULNERABILITY**

No sector or business is immune to ransomware attacks. Small- and medium-sized businesses are increasingly common targets. Globally, the healthcare sector, professional services and financial services account for more than half of ransomware incidents.

The covid-19 pandemic, and the changes it has forced on the way businesses operate, has also opened the door to cybercriminals. The shift to remote working has created wider 'attack surfaces' and generally less secure systems; these are a boon for the perpetrators of ransomware attacks.

"I think the mindset used to be, well, who's going to bother attacking me? I'm just a small business in New Zealand doing my thing. We don't have anything valuable..."

"I think the mindset used to be, well, who's going to bother attacking me? I'm just a small business in New Zealand doing my thing. We don't have anything valuable," Soo explains.

"I think we've seen from this pandemic that actually, it's not just the value of your data or what you do. It's the connectivity. If we're all working from home; if we can't access our network, what are we going to do? And if that's down for any amount of time it can be really, really disruptive."

### **PREPARE AND PROTECT**

The most prudent approach for businesses to take is likely an "if, not when" one when it comes to ransomware attacks. This should be top of mind for boards and management. Assume you are going to be attacked at some point and have systems and policies in place.

Establishing ransomware readiness means carefully considering how your organisation would fare in a ransomware event and formulating a plan for this.

The basics of the plan should include prevention strategies such as employee awareness and education, backup policies and procedures, and IT controls such as two-factor authentication, incident logs and software updates.

It should then comprehensively cover how the business will respond in the event of an attack. That means considering everything from how your business would continue to operate during an attack, to managing subsequent communication and reputational issues. It will need to include all stakeholders including legal counsel, police, cyber insurance carriers and security experts. It should establish roles and responsibilities and give response guidelines.

Government cybersecurity authority, CERT NZ, has detailed guidance on formulating an Incident Response Plan for cyberattacks available on its website.

Experts like Soo also recommend practicing a response via drills – just like fire drills - in order to stress test the plan.

#### **IF THE WORST HAPPENS**

Should your business be hit by a ransomware attack, having a well-practiced plan in place means an organisation can respond quickly.

There are likely to be decisions that will need to be made at board level. This might include whether to pay the ransom. Here again, developing a policy and running through potential scenarios is likely to be a valuable exercise.

“It’s a conversation a lot of boards need to have well in advance of something potentially happening,” advises Soo.

“It ties into your incident response. Ransomware is the most common [cyberthreat] to potentially happen. So drill that. Discuss it. Figure out what your stance is on whether you would pay or not.”

#### **TO PAY OR NOT TO PAY**

Opinions are divided on the wisdom of paying ransoms. Overseas law enforcement agencies such as the FBI recommend against it. “Paying ransoms emboldens criminals to target other organisations and provides an alluring and lucrative enterprise to other criminals,” its guidance states.

**Business.govt.nz** and CERT NZ also warn against paying ransoms. And Soo agrees.

“At the end of the day, the ransom payments are encouraging this criminal behaviour,” he says.

However, the payment of ransoms is still

“I think the discussion needs to go further than just the ransom. You need to start thinking of the consequences to your reputation if you were to pay or not to pay...”

happening regularly. It’s unregulated as yet, and may be a business’s best option in some cases.

Boards need to consider what the consequences would be of paying up, Soo says.

“I think the discussion needs to go further than just the ransom. You need to start thinking of the consequences to your reputation if you were to pay or not to pay. And obviously if you were not to pay, what the impacts in terms of operations and everything else are. Each business has a different type of risk... there’s no one-size-fits-all solution, unfortunately.”

#### **SHOULD WE HAVE CYBER INSURANCE?**

A relatively new form of insurance for business, cyber insurance is a growing area of coverage.

“The uptake traditionally has always been low,” Soo says. “But we’re seeing a huge surge in demand at the moment.”

Cyber insurance can assist with the costs involved in recovering from ransomware attacks, including forensic investigators, breach counsel and other support. It can also cover ransom payments, though Soo notes this is a rapidly changing area of coverage.

Preparation is the best form of defence from ransomware attack, Soo stresses. And at a broader level, a unified approach to discourage cybercriminals is needed.

“The real solution at the end of the day is that we do have to work as a collective to stop paying these criminals. It needs to be a joint effort between governments and the private sector around the world to stamp out this behaviour.”

In the meantime, it’s important for boards to have the conversations around protecting their data, networks, customer information and reputation. **BQ**



# Early engagement makes sense



Calder Stewart working with the Dairyworks team.

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**Calder  
Stewart**

# That old time anti-vax feeling

AUTHOR:  
**DANIEL GROS**  
IS A MEMBER OF  
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**The best single predictor of vaccine uptake per US state is not political affiliation, but the share of the population that believes the human race has always existed.**

**V**accination is the best protection against covid-19 and the evidence for that is overwhelming.

While protection against infection or transmission is not guaranteed – especially with the Delta variant raging – getting vaccinated substantially reduces the risk of severe illness, hospitalisation, and death from the coronavirus.

Widespread vaccination is thus the key to enabling responsible governments to relax public-health restrictions, thereby allowing the economic recovery to continue. But this seems increasingly to be out of reach.

Researchers estimate that 70-85% of the population needs to be vaccinated (or otherwise immune to covid-19) to end the

pandemic. Yet even in Israel, which was leading the world in its vaccination drive at the beginning of 2021, the share of the population that has been vaccinated has stalled at just over 60%. In the United States, only about half the population is now protected and vaccination rates have plummeted from 3.2 million doses per day in April to fewer than 700,000 doses per day as of early August.

### **BELIEF AND VACCINATION**

The US case is particularly interesting, because the country-wide average obscures large differences among socio-economic groups and across states. Whereas over 63% of people in Massachusetts and Maine are fully vaccinated, only 34% of people in Mississippi and Alabama are. Across towns and counties, the disparities are even larger.

Photo by:  
**Paul Weaver**/SOPA Images/  
LightRocket via Getty Images

This is less a problem of access than of acceptance. It has been widely observed that, at least in the US, the willingness to be vaccinated is correlated with political affiliation. Polls show that only around 54% of Republican adults have been vaccinated, compared to 86% of Democrats. In counties that voted for Donald Trump, a Republican, in the 2020 presidential election, vaccination rates are more than ten percentage points lower than in counties that voted for Joe Biden, a Democrat.

But while the statistical link between political affiliation and vaccine hesitancy is strong, correlation does not equal causation. Moreover, anti-vaccine sentiment is nothing new: the NoVax movement existed long before the covid-19 pandemic.

The question, then, is whether people are refusing the covid-19 vaccine merely because of their political beliefs, or whether those political beliefs and their stance on the vaccine reflect other, deeper factors.

A look at people's broader attitudes toward science and trust in the establishment (scientific and otherwise) could help us to find the answer.

### EVOLUTION CONNECTION

One useful indicator here is the acceptance of evolution. Surveys have found repeatedly that a substantial minority of Americans reject the scientific consensus that humans are the product of a long process of natural selection.

Belief in evolution is strongly linked to acceptance of vaccination. Indeed, the best single predictor of vaccine uptake per US state is the share of the population that believes the human race has always existed.

Interestingly, religious beliefs do not seem to be decisive here. The link between vaccine uptake and the prevalence of the belief that divine intervention steered evolution is rather weak. Furthermore, political partisanship, as measured by voting patterns in the 2020 presidential election, loses its predictive power over

vaccine uptake after one accounts for belief in evolution.

The implication is that attitudes toward vaccination are rooted not in party allegiance, but in a latent mistrust of science.

### DEMOCRACY IN ACTION

This may reflect how democracy works more broadly. As Christopher H Achen and Larry M Bartels argue in their 2017 book *Democracy for Realists: Why Elections Do Not Produce Responsive Government*, it is not that political parties present their programmes and rational voters choose which to support; instead, parties represent existing identity groups.

In the US, the Republican Party has positioned itself so that it captures the segment of Americans who do not accept science if its results collide with their worldview. This type of person does not believe in evolution (roughly one-quarter of the population, on average) and tends to reject covid-19 vaccines.

But the GOP is not necessarily responsible for those stances. So, contrary to Jeffrey Frankel's recent assertion, America's Republicans probably cannot be said to be "killing their voters".

In a sense, this is bad news. If people's decision not to get vaccinated is based on fundamental beliefs, it will be much more difficult to change than if it was based on political partisanship or health concerns. Disseminating more factual information – more studies, more statistics – will not make a difference. After all, evolution has been taught in schools for generations.

Financial incentives, like lotteries, might sway some of the doubters. But a substantial community of hardcore anti-vaxers is likely to remain – and not only in the US. Compulsory vaccination elsewhere, such as in France, is also being met with strong resistance.

As the Delta variant fuels new covid-19 outbreaks, governments in countries with a strong anti-vax movement have few good options left. **EQ**

### RESEARCHERS ESTIMATE THAT

.....  
**70-85%** of the population needs to be vaccinated (or otherwise immune to covid-19) to end the pandemic.  
.....

In the United States, only about half the population is now protected and vaccination rates have plummeted from

**3.2 million** doses per day in April to fewer than **700,000** doses per day as of early August.  
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.....

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# A stepping stone to recovery

AUTHOR:  
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Photo by:  
**Pedro Da Silva** on Unsplash

**New Zealand's new stock market for SMEs, Catalist, could boost growth among businesses that are too small for the NZX.**

**N**ew Zealand's smaller businesses are the next big thing. Making up 97% of all businesses in New Zealand, our small and medium-sized businesses (SMEs) are our biggest business sector – and it's time we started catalysing their growth.

We all know that small businesses are the backbone of New Zealand, employing nearly a third of our workforce and contributing more than a quarter of GDP, so the performance of these small firms is crucial to driving economic growth. That much is fairly obvious.

Yet perhaps we should ask why our businesses are mostly small – and could a new type of stock market really help scale a significant number of them? This is what was recently suggested by Commerce and Consumer Affairs Minister David Clark when announcing New Zealand's new stock market, Catalist.

Some people say Kiwi business owners want to settle for the good life – a boat, batch and BMW – rather than scaling their business. But for most SMEs, this just isn't true.

While the simplicity of staying small may be a deliberate choice for some, a large chunk of New Zealand businesses just don't have the right resources to grow. Hearing of business owners passing up growth opportunities because their bank requires security over their family home is an unfortunate and all-too-common story.

In my previous role, as head of conduct for the Financial Markets Authority (FMA), I heard a lot of grumbling about how dysfunctional the New Zealand capital markets were for SMEs and for social impact businesses. There were three key problems that kept being raised.

- The funding gap - New Zealand start-ups have good access to funding, such as angel investment, crowdfunding, or friends and family. Likewise, large businesses can list on the NZX or ASX to raise capital. But there's a big gap in the middle for established SMEs who are looking to raise capital of between \$2 million and \$20 million. Whilst funding from venture capital firms is improving, the vast majority of SMEs will never be on their radar.



- A lack of liquidity - founders of SMEs and their early investors often find themselves locked into an investment they can't exit easily. They end up with very few (or no) opportunities to sell down. The ability to find new investors is hugely restricted due to regulations designed to protect smaller investors from higher-risk (but also potentially higher-reward) investments.
- Little access to investments - for the same reason, there is a great disparity in investment opportunities available to wealthy New Zealanders, compared to everyone else, and retail investors find themselves locked out of SME investments with high-growth potential. It's yet another example of the great divide roaring its ugly head. Many would agree that we should provide all New Zealanders with equal opportunities for wealth creation. Investing in any shape or form involves risk - that goes without saying - but so long as retail investors are provided with appropriate protections and information disclosures, then they shouldn't be excluded from these opportunities.

“So, with these problems in mind, Catalist was born – New Zealand’s only licensed stock exchange designed specifically for small and medium-sized businesses.”

So, with these problems in mind, Catalist was born – New Zealand’s only licensed stock exchange designed specifically for small and medium-sized businesses.

In a nutshell, Catalist is a growth market for SMEs that are too small to list on NZX.

#### **IT’S ALREADY BEEN TRIED**

Now here’s the million-dollar question: can a market for smaller businesses work in a country the size of New Zealand?

In short, absolutely. The key to any market is generating liquidity by attracting sufficient buyers and sellers to participate – and the demand for a growth market is there. The challenge is structuring the market to meet the needs of both buyers and sellers.

But before we get into it, let’s address the elephant in the room. Previous growth markets for smaller businesses in New Zealand haven’t worked. We’ve seen unlicensed markets with lighter

regulation fail to achieve scale. We've also seen markets like NZX's NXT shut down because they didn't create good liquidity for SMEs and were too costly.

The costs and compliance of a traditional stock exchange listing can certainly be scary – but the most cited reason for why previous growth markets have failed is because being listed distracts management from running the business. Too much time gets spent answering investors' questions about daily share price movements, responding to media queries and so on. This significantly impacts key business decisions, ultimately affecting the long-term growth of the business.

#### **SO HOW IS CATALIST ANY DIFFERENT?**

One of Catalist's main differences is, instead of continuous trading, all trading is conducted using online periodic auctions.

International case studies show auctions generate better liquidity and fairer pricing for securities that don't trade very frequently (often the case with SME listings). This is because they concentrate all buy and sell orders over a fixed time, for simultaneous execution, at a single price.

As well as improving liquidity, periodic auctions lower the financial and administrative burden for businesses, with information disclosures required at each auction rather than continuously. This creates regular investor and media engagement, but between auctions, management can focus on running the business.

When investors trade, they have all the information they need to make good investment decisions, with an equivalent level of protection to that of a traditional

**“One of Catalist's main differences is, instead of continuous trading, all trading is conducted using online periodic auctions.”**

stock market. In return for providing enhanced protections to investors, businesses can raise up to \$20 million per year from the public.

It's a win-win that is already attracting both businesses and investors anticipating the first listings on the market.

After a successful launch, Catalist has had interest from around 50 businesses from a wide range of sectors, including manufacturing, agriculture, technology, social impact projects, syndications and collective investment structures – with some of them looking to raise capital and others looking to create liquidity for their investors.

Catalist is well on track to meet its targets of at least 16 public listings over the next 12 months – and aims to list over 200 businesses within five years.

In the words of Commerce and Consumer Affairs Minister David Clark: “This is a big win for Kiwi businesses and it ties in well with the Government's focus on securing an economic recovery in the wake of covid-19. Through Catalist, SMEs looking to grow into larger enterprises have a new means of getting there. It's also fantastic news for consumers, who will have fresh investment opportunities, and greater choice when it comes to diversifying their portfolios.”

As a stepping stone market, the real win for us though, will be seeing SMEs transition onto a more traditional stock exchange, like the NZX, when they outgrow our markets.

Sure, we're a small country made of mostly small businesses, but the potential for growth is huge. The time for capitalising on New Zealand's biggest business sector is now. Stay tuned. **BQ**

# Is your board at its best?

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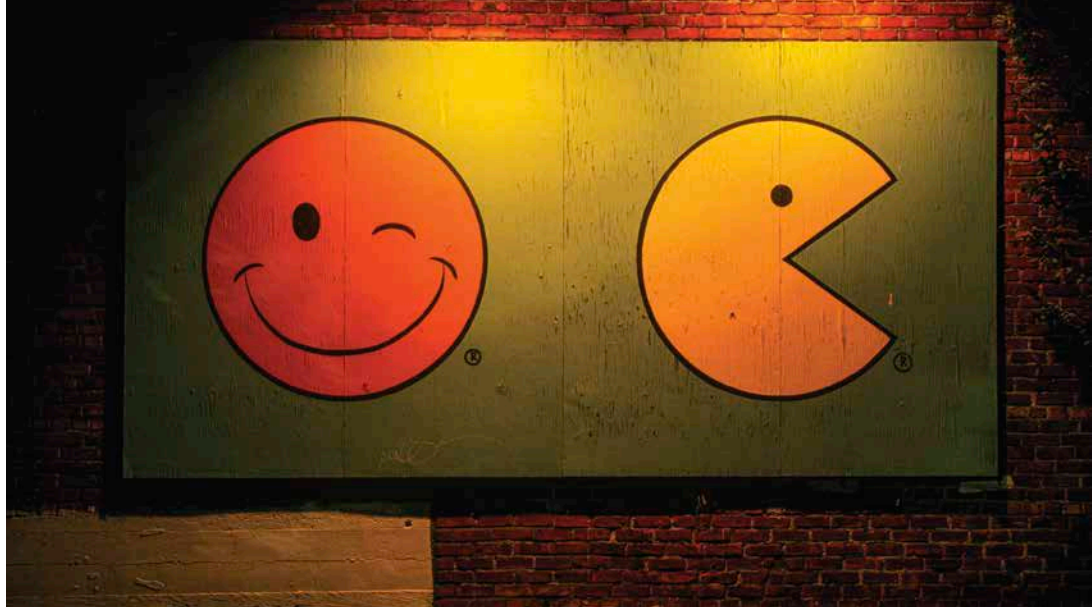
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# Your tech is your strength

Rapid migration to pandemic-driven digital technologies will continue into the recovery.

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Photo by:  
**Mick Haupt** on Unsplash

**T**here's no doubt that technology has played a huge role to enable New Zealand's response to and recovery from covid-19.

In terms of health, technology has allowed New Zealand to improve healthcare capacity at speed through the enablement of a seamless tracking, tracing and testing cycle, mass communication, and a vaccine roll-out. As far as livelihoods go, technology has preserved many jobs, whether it's digitising products and services, enabling a work-from-home culture or safeguarding and redeploying labour. Technology has made a difference.

However, the covid-19 pandemic is far from just a bump in the road — it has compounded longstanding challenges but also unleashed opportunities to create an entirely different landscape. While the pandemic will pass, many changes we see today, whether intensified from existing trends or a direct result of covid-19, will remain.

## A CONSTANTLY CHANGING ENVIRONMENT

History has shown us that disruption is a driver that forces businesses, governments and communities to focus on what's most essential. Recent events have proven that disruption can come from anywhere – from changes in technology, industries, governments and societies, and now global pandemics.

Many organisations are increasing their investment into digital transformation and accelerating their journeys to the future – companies that invest now into new and emerging technologies will be the ones to move ahead.

While it might sound counterintuitive, lessons from the past two recessions suggest companies that balanced growth and investment outperformed their competition in the aftermath.

The new normal will be far more tech-driven and present different challenges,



but many believe life will be better in a new normal world where workplaces, healthcare and social activity will improve. A lot can be achieved by focusing on innovation, flexibility and embracing change, enabling organisations within New Zealand to emerge stronger and more resilient.

#### **FIGHTING FIT**

Amid the challenges and uncertainty, innovation has taken many shapes and forms including fashion designers producing masks for frontline healthcare workers, auto manufacturers switching assembly lines from cars to ventilators, and small distilleries producing hand sanitising products for consumers.

Organisations that pivot and achieve results enabled by people, processes and technologies demonstrate innovation in action. It is often portrayed as technological advancement, but it's actually a capability that needs to be enabled.

They need to maintain the confidence and momentum brought on by the pandemic by shifting their focus to becoming more digitalised and expediting digital transformations.

They need to reimagine everything from their people to data, technology, architectures and ecosystems - changing focus to the customer and their evolving needs to guide them through this process. As the world begins to reopen and we return to a new version of normal,

organisational needs will be different along with the ways to address them.

#### **DISRUPTIVE TIMES REQUIRE RE-IMAGINED WAYS OF WORKING**

Technology will need to work for us and facilitate new ways of working that rely less on physical interaction and reduce costs. Post-pandemic, going "back to work" will not be the same and many organisations and sectors are moving into a new future, one where work can be done from anywhere.

This step-change in remote adoption is now arguably substantial enough to reconsider current business models.

There's evidence that remote work can support long-term needs and many believe productivity was sustained or even improved during the pandemic.

Remote working also opens up the market for difficult-to-find talent and expands the competition for talent among organisations. It's a shift that many organisations helped set in motion to keep operating during the height of the pandemic. But even as organisations around the world embraced this change to keep moving, many didn't have time to appreciate the more significant ramifications of the shift.

New Zealand has relatively strong employment and economic growth prospects but also has a historical reliance on international labour markets to address short-term skills shortages.

“Organisations need to maintain the confidence and momentum brought on by the pandemic by shifting their focus to becoming more digitalised and expediting digital transformations.”

Additionally, recent media reports have indicated the New Zealand jobs market is at maximum sustainable employment. Effective strategies to support a “new ways of working” reality is critical for meeting the new demand.

Successful organisations will be those that invest in rethinking their workforce model – balancing workforce benefits and outcomes. A few years from now, the most effective organisations will be physically distributed, creatively connected, empowered by technology and able to innovate from anywhere.

**CONTINUE THE MOMENTUM FOR CHANGE**

For many, the pandemic accelerated the pace of change. It has been a tipping point for technology adoption, digital disruption and precipitated the largest and fastest human behavioural change in history. Its impact has raised change to a new level and more will be required as the economic and human situation continues to evolve.

The pandemic can also be the catalyst for effective and positive change if leaders set up guardrails for innovation and help their people to focus energy in the right direction. Giving employees and teams the freedom to explore possibilities, motivate them and offer praise when they fail fast will help to unleash a better and more resilient organisation for the future.

The importance of learning, tactically, in making specific changes to businesses (which technologies to use, and how), and organisationally (leveraging agility and managing change at pace) will be

“Organisations that made early investments in digital transformation are already reaping its benefits as customer attitudes and workplace norms change.”

critical going forward. At this moment, organisations should embrace and accelerate change to better position themselves for the challenges and opportunities ahead.

In summary, the rapid migration to pandemic-driven digital technologies will continue into the recovery, globally. Organisations that made early investments in digital transformation are already reaping its benefits as customer attitudes and workplace norms change.

Despite the challenges the pandemic has presented us with, organisations should not lose sight of the value of innovation when considering how the organisation spends its time and resources for greater flexibility, change and resiliency for a better future ahead. **BQ**

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*(Director Sentiment Survey 2020)*

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# Did you know...?

## Is crisis planning in crisis?

Globally, only 37% of directors in 2020 felt their boards fully understood their company's crisis management plans, according to PWC's *Annual Corporate Directors Survey*.

Nevertheless, those same boards were happy with the crisis response to the pandemic they saw from their management teams.

PWC recommends boards should take the time to revisit crisis plans and revise them in light of recent experience of what worked – and what didn't.

## Fees are rising for directors in New Zealand

The *Directors' Fees 2021/2022 Report*, produced by the Institute of Directors (IoD) in partnership with Ernst & Young (EY), has found fees are on the up.

Non-executive chair fees increased by 7.9% over the past year, while non-executive director fees rose 7.1% over the same period.

Not seeing a rise in your fees? The *Report* shows the trend is not spread evenly across all types of organisation or industry.

Property and real estate businesses, and the construction industry saw the largest lifts. But accommodation and food services, administrative and support services, arts and recreation services, government administration and safety, mining, retail trade, and wholesale trade were all flat. Agriculture, forestry and fishing saw just a 0.1% increase.

## No all-male boards on ASX 200

In August, the Australian Institute of Company Directors (AICD) reported that, for the first time, every ASX 200 company had female representation at board level. In 2015, when the AICD began reporting on gender diversity among the top 200 boards, there were 28 that were all male.

The milestone was reached in August when the last two all-male boards, both involved in the mining industry, appointed female non-executive directors.

## Board diversity disclosures in the US

The US Securities and Exchange Commission (SEC) has approved a rule requiring Nasdaq companies to disclose board diversity.

Under the new rule, each Nasdaq-listed company must have, or explain why it does not have, at least two members of its board of directors who are “diverse”.

What does “diverse” mean? In this case it includes at least one director who self-identifies as female, and at least one director who self-identifies as an under-represented minority or LGBTQ+.

The exchange has around 3,400 companies listed worth some US\$22 trillion.

## Shareholders and stakeholders

Directors’ duties need to be reviewed in light of increasing questions about the overarching purpose of boards.

That’s the conclusion of the whitepaper *Stakeholder Governance*, produced by the Institute of Directors and MinterEllisonRuddWatts.

The whitepaper argues that stakeholder governance is one of the top issues in global governance. However, New Zealand’s Companies Act was drafted with a shareholder focus, 30 years ago when the business and regulatory landscapes were quite different.

While there are a number of initiatives around the world aimed at helping boards navigate changing regulatory and social expectations, there are still unresolved questions as to a board’s responsibility around maximising shareholders’ returns, creating long-term value, and the extent that various stakeholders’ interests should be considered or prioritised, the whitepaper says.



### **Really big data**

In Chongqing, China, multi-story data centres drive a city that lives online.

China's Leading Smart City 2020, Chongqing is part way through an attempt to create a fully-automated city. From traffic control to the opacity of apartment windows in response to light, the city is monitored and adjusted in real time through the interconnected internet of things.

Driverless cars, wardrobes that recommend your outfit based on the weather and office robots that deliver you coffee are all being implemented in this city of the future.

Descriptor: An employee walks at an exhibition hall for the Chongqing New Type Internet of Things Big Data Service Platform for Digital Transportation in Chongqing, China.

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