

# THE FUTURE IS NOW: IMPLICATIONS OF COVID-19 FOR NEW ZEALAND

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## **CONTENTS**

- 2** Executive Summary
- 4** Introducing Koi Tū: The Centre for Informed Futures
- 5** Where will the virus take us?
- 8** Planning the reset: The Future is Now
- 14** The challenge of sustaining trust
- 16** Being prepared
- 17** Moving ahead

# EXECUTIVE SUMMARY

Koi Tū: The Centre for Informed Futures was established to focus on long-term thinking about the complex issues facing New Zealand's future. These issues generally involve a collision of knowledge, disciplines and expertise, intersecting with contested values. The conversations that are needed require broad trans-sectoral and transdisciplinary engagement, and trusted partnerships.

The COVID-19 pandemic has brought such issues even more rapidly to the fore. The intent of this paper is to help catalyse important conversations that are needed in the wake of New Zealand's response to the crisis. It is clear that we will not go back to a pre-COVID-19 normality, but instead will inhabit a new normal. Issues that might have taken years to consider, may now have to be considered over a much shorter time frame. New Zealand must take the opportunity from this pervasive and hugely disruptive crisis to shape its future in an informed and inclusive way.

## WHERE WILL THE VIRUS TAKE US?

The future of the pandemic remains uncertain, but to date New Zealand has had a very effective response in terms of keeping well below a damage threshold. With an opportunity to still eliminate the virus, at this moment a degree of optimism seems reasonable. But we must also be prepared for ongoing outbreaks, and be conscious that this optimistic positioning comes at the cost of an enormous amount of social and economic disruption.

There are health, social, economic and logistic considerations that have to be taken into account in loosening restrictions. This is not just a simple modelling or econometric equation – and different stakeholders already hold very different views of how things should be balanced in that analysis. A range of expertise is needed to feed into the plans for safely moving from the restrictions of the level 4 lockdown, back towards a fully functioning, though indelibly changed, society.

Discussions have clearly identified the need for high vigilance for new outbreaks, and this means adequate rapid tracing capacity. However, it is suggested that on the current trajectory, provided tight border restrictions are in place, New Zealand could move from the current level of constraint to a modified level 2 within a few weeks. This would allow many aspects of the internal economy to return to some form of normality.

## PLANNING THE RESET: THE FUTURE IS NOW

Whatever the strategy is to lift the current restrictions, the global disruption caused by the pandemic is of a scale and pervasiveness that it would be naive to imagine a return to the world of 2019. Social, environmental, business and geostrategic impacts will echo for a long time and force both global and local change. We must seize this opportunity to have urgent reflection on many issues, not just to recover from the horrific disruption but to find the opportunities for a better future. Many of the

issues this paper highlights are ones that we would have had to confront in coming decades anyhow, but the crisis accelerates the need for discussion; the future is indeed now.

## ESSENTIAL QUESTIONS FOR INFORMED CONVERSATIONS

This paper introduces a number of key questions that need to be addressed, each of which will require further detailed analysis. For example, what geostrategic consequences can we expect globally, and how will New Zealand respond? How will different sectors of our economy and society move forward from the unprecedented disruption caused by the extended lockdown and closure of our borders? How will the economy deal with an inevitable downturn in consumer spending, and supply chain disruptions? Can small businesses recover and again lead the recovery? Will entrepreneurial firms be able to take advantage of our low barriers to entry into a new market landscape? What will our export sector look like into the future? Does this accelerate change in the primary sector? How will the tourism sector have to evolve? How will employment patterns and modes of working evolve, and what skills will be needed? How do we return New Zealand to a healthy balance sheet? Can we use our success with the pandemic to leverage foreign direct investment and new business opportunities?

What lessons are there for the organisation of public services and social safety nets? What opportunities emerge for our science and innovation sectors? Will this event trigger change in education delivery mechanisms? Will it undermine or create new opportunities for higher education? What will mobility look like, internationally and locally, especially when many sectors rely on short-term and permanent migrants for labour and skills supply? And can we sustain our progress towards a more inclusive and cohesive society?

If we succeed at achieving maximum viral suppression, will our relatively unique COVID-19-free status be an advantage for sectors such as export education? And could it be used as a magnet for investment and for attracting organisations and companies to locate significant activity here?

The current opportunity for a reset offers a chance to think about how we move to deal with the other existential threats, climate change and environmental degradation. Each sector will have its unique challenges, but they operate interconnectedly and need to be considered in light of the New Zealand economy as a whole. The report briefly explores each of those sectors.

## BEING PREPARED

There is a need for urgent but reflective and multi-sectoral discussion on these issues. At the same time we must not hurry ahead without making sure we learn the lessons from the pandemic, both from national and international experience. We need to consider how the public and private sectors

can work optimally together and build better trans-sector resilience-focused relationships for more effective planning and coordination for addressing future shocks.

There is also a need to reflect on whether the most appropriate tools for risk identification and management are in place. It particularly raises questions about our national risk register, and general deficiencies in foresighting and horizon scanning.

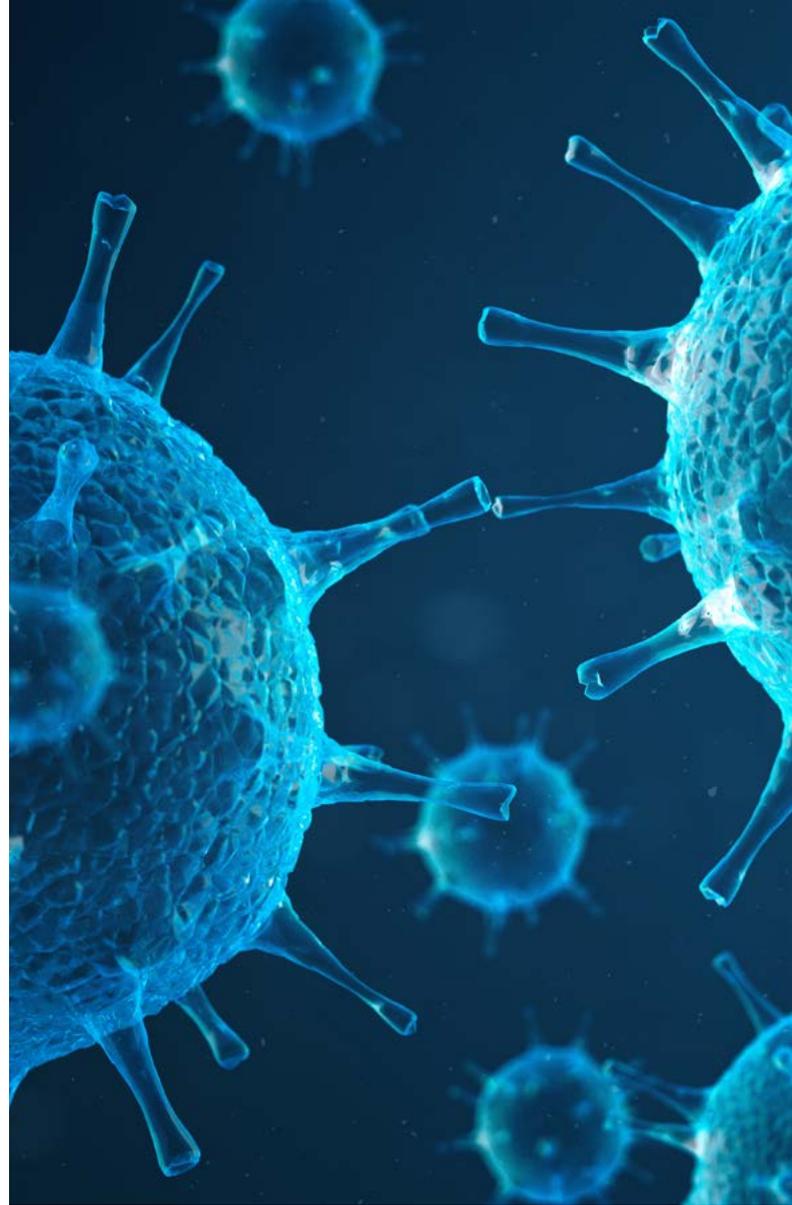
## **TRUST AND TRANSPARENCY, RECOVERY AND RESILIENCE**

New Zealand has shown itself to be quite cohesive in the face of the current adversity. In this environment trust is critical – yet inevitably fragile. While New Zealanders have trusted government decisions and have generally complied well with the lockdown, there is a pressing need to address both the economic and social impacts of ongoing restrictions, which are anticipated even if elimination seems realistic at the end of the lockdown period.

Many issues will test our resilience, cohesion and societal well-being. To maintain cohesion, there must be trust and transparency in the decision-making institutions. The Epidemic Response Committee of Parliament is seen as a particularly important innovation. But the concern remains that some evidence and data that are needed have either not been collected or released. Trust may be threatened if transparency is inadequate and if unnecessary constraint is prolonged. In turn this could affect societal resilience.

New Zealand has the opportunity to approach these issues by establishing trusted partnerships and truly engaging society, the private sector, NGOs, academia, and government in critical conversations to work towards robust and informed decisions for the benefit of New Zealand's future. We need to reflect on what kinds of processes can best assist rapid progress on such existentially important matters.

Koi Tū sees its primary contribution as being a forum for synthesising evidence, raising questions and convening discussion towards solutions. It is inevitable that many of the issues to be considered will confront contested interests, values and worldviews that must also be considered. It is clearly for the government and policy communities, the business and NGO sectors, to work through the options that emerge to reach decisions which by their very nature are complex but critical.



# INTRODUCING KOI TŪ: THE CENTRE FOR INFORMED FUTURES

Koi Tū: The Centre for Informed Futures was established in 2019, and opened by the Governor General in March 2020, as an apolitical and engaged think tank focused on longer-term issues associated with technological, environmental, social and economic change. While based at the University of Auckland, it has associate members in many other New Zealand universities and globally ([www.informedfutures.org](http://www.informedfutures.org)).

The Centre grew out of a recognition that there is a need to strengthen our focus on long-term thinking in an era where short-termism has become the norm. Many of the issues we have to confront are inherently complex and there is an inevitable collision of knowledge, disciplines and expertise intersecting with contested values.

Even without the added and urgent burden of the pandemic, we face an unprecedented time in human history. Disruptive technologies emerge at incrementally increasing rates, with potential and demonstrated impacts on every aspect of the human condition and on our institutions. The impact of humans on the planet has become undeniable. Social systems and the way we relate to each other have been fundamentally changed by the digital world, with effects that might be perceived as both positive and negative. Profound demographic change is occurring as a result of longer lifespans and migration. Enduring social structures are evolving and so is the basis on which identities and a sense of belonging are formed. Mental health issues are rising, especially for young people. Urbanisation and globalisation have exposed us to the risk of more frequent pandemics, such as the one we are experiencing.

It is a fairly safe assumption that such change is occurring to greater or lesser degrees in every human society. As a result, societies face tough decisions that must transcend partisan politics and the political cycle. How can we genuinely engage citizens in these decisions? What approaches are needed in the face of the misinformation age? How do we decide which technologies to adopt or restrict as they come at us with tantalising promises of bettering our world, but also with unknown risks? How do we deal with the inherent incompatibilities and trade-offs between the conventional macroeconomic models, and wellbeing and sustainability frameworks? How do we sustain our resilience and social cohesion in the face of these rapid and profound transformations?

These are matters needing not only transdisciplinary academic consideration, but also incorporating the knowledge of communities, business and leaders of civil society. No longer can academics look at these issues from within an encapsulated ivory tower. Koi Tū: The Centre for Informed Futures is committed to true engagement with civil society, policymakers and the private sector as partners, and to engaging the full range of knowledge disciplines.

The pandemic and its consequences accelerate considerations of such complex interconnected trends that we have already

been observing and analysing at a global level, and create an imperative for us to consider what this means for our future. Indeed, the future seems to have arrived.

## KOI TŪ AND COVID-19

While the Centre has engaged in some aspects of the acute response (<https://informedfutures.org/wp-content/uploads/Koi-Tu-and-COVID-19-response.pdf>), largely through the expertise of some of its staff and its role as secretariat of the International Network for Government Science Advice ([www.ingsa.org/covid/](http://www.ingsa.org/covid/)), its primary focus is on the medium- and long-term issues that now need consideration in a post-pandemic New Zealand (<https://informedfutures.org/koi-tu-the-virus-and-the-future/>).

It would be naive to imagine that after such a major shock to global and domestic societies and economies that things will just revert to business as it was before the pandemic struck. Even though the pandemic has yet to play out, it is clear that modes of public management and governance, political and societal attitudes, economic and business models, social and individual priorities, have all been affected globally and will also be affected, both directly and indirectly, in the New Zealand context. Thinking and analysis that might have otherwise have been delayed now merits acceleration. Accordingly, the Centre has engaged with a number of academic and sector leaders and thinkers, in New Zealand and internationally, to consider some of the macro issues that will emerge over the coming months and years.

One strength of the Centre is its links to multiple New Zealand and international communities of leaders and thinkers. Engaging these existing, as well as new and evolving relationships and partnerships, Koi Tū has established a focus-group process called Koi Tū Conversations. This paper is informed by such a panel who have met iteratively over the past few weeks and are acknowledged at the end of this paper.

This initial paper summarises our reflections assisted by those discussions. It makes no claim to be comprehensive, nor is its intent to present answers. Rather its primary role is to help catalyse important conversations that will be needed over the coming weeks and months. Subsequent reports from Koi Tū will build on this discussion paper by convening further such conversations and focusing more specifically on these and other emergent issues.

# WHERE WILL THE VIRUS TAKE US?

We face considerable uncertainty over the coming months, both globally and nationally. The very different contexts and decisions being made in different countries in handling the acute phase of the pandemic and its aftermath will be associated with very different disease profiles and time courses. Further, much still remains unknown about the virus: the impact of seasonality,<sup>1</sup> the level and length of immunity that infection does or does not provide, and progress on effective treatment protocols is uncertain. We know little about broader asymptomatic spread and thus the levels of immunity already existing in populations. As antibody screening comes into practical use, this may become clearer. If immunisation becomes the mainstream of control, then there is a long period of more than two years before that is achieved. The flow-on effects of this uncertainty will impact on key areas of the global and key market economies and New Zealand's interests related to domains such as air travel, international education, and trade.

As of April 15, New Zealand has largely been immune from the serious medical effects of COVID-19, but at significant and growing economic and social cost. We have been lucky that the disease severity has been low, probably because of our geography and season, our early decision to close borders, and the demography of those infected. In contrast, many northern hemisphere countries have had a tragic acute wave of morbidity and mortality, and faced a massive overload on their healthcare systems. Limited evidence and epidemiological analysis, largely from China, the USA and Europe, suggests that the virus causes disease in a wave that at the moment can only be managed over several months by mandating severe societal constraints. What is unclear is whether the termination of the wave is simply due to the impact of these constraints or also has a biological component.<sup>2</sup> There are many unknowns, including whether relaxing of those constraints will be associated with major or just minor flare-ups.

New Zealand moved quickly and has essentially eliminated further entry of the disease into our population from offshore. However, there is likely to have been some (hopefully small) degree of covert community spread, which could become the source of future flare-ups. We really have no idea of the community profile given the lack of surveillance testing.<sup>3</sup> Thus, despite apparent success to date, we must be prepared for a moderate or even major episode later in the year, once constraints start to be reduced. By definition the lockdown has massively reduced the potential for community spread, and it

cannot be used as a proxy to predict what happens once mobility and interactions increase. Those unknowns reflect uncertainty over the properties and behaviour of the virus and its distribution through our population, especially given its potential seasonality. The potential remains for co-morbidity with known seasonal illnesses such as influenza which could create confusion, panic and system overload. Hence the importance of 'flu vaccination.

Provided we have adequate capacities to test using a low threshold for testing, some strategic community surveillance in place, continued border control, and the ability to deal rapidly with contact tracing in case of a flare-up (which could be geographically distributed quite rapidly across New Zealand),<sup>4</sup> we can move very quickly towards level 2+. The basic test of readiness is assurance on these capacities.

## KEEPING NEW ZEALAND BELOW THE DAMAGE THRESHOLD

The serious impediments to the economy and society will be significantly reduced, the earlier New Zealand can safely move towards level 2+ (which this paper defines as level 2 with tight restrictions at the border equivalent to those at level 4).<sup>5</sup> One of the problems is that the current definitions of the levels were developed to get hold of the situation as it emerged, but they need to be revised in their specific details as we move away from the highest levels of constraint. The order of relaxation of restrictions may not be the same as that of rapid imposition, which will happen over a different time frame.

There are health, social, economic and logistic, considerations that have to be taken into account in loosening restrictions. This is not just a simple modelling or econometric equation – and different stakeholders already hold very different views of how things should be balanced in that analysis. It is not until level 2+ is reached, that the internal economy can really start to move towards some sense of normalisation, at least for some sectors, and many people can return to their normal lives, recognising that for many sectors there will be a very distinctive 'new normal'. However, many other people face difficult times ahead due to business closure and unemployment.

While the intent of the lockdown and tight border control has been to achieve the *elimination*<sup>6</sup> of new cases appearing in New Zealand, the reality is, given that there has been some community spread,<sup>7</sup> that the most likely and hopeful outcome is a state where New Zealand remains well below the *damage*

1 Thus far all studies of potential seasonality have limitations – although experimental studies show a relationship between higher temperatures and humidity levels, and reduced survival of SARS-CoV-2 in the laboratory, this has yet to be definitively assessed in the 'real world'. See: National Academies of Sciences, Engineering, and Medicine 2020. Rapid Expert Consultation on SARS-CoV-2 Survival in Relation to Temperature and Humidity and Potential for Seasonality for the COVID-19 Pandemic (April 7, 2020). Washington, DC: The National Academies Press.

2 For example, development of a degree of herd immunity due to undetected community spread.

3 A starting point would be sentinel screening and testing of supermarket workers and healthcare workers in areas such as Queenstown where there is a very high prevalence. Our current testing regime effectively is the equivalent of looking for lost keys only where there is light under the lamp post.

4 Recent events in Singapore demonstrate how quickly community spread can break out after apparent control.

5 There may also need to be consideration about continuing restrictions on large gatherings. If tracer apps were in place and used by attendees, it would be easier to relax such restrictions.

6 Elimination as used by the WHO means essentially no new cases appearing in a region (e.g. New Zealand) whereas eradication is a term used to mean global elimination.

7 Given asymptomatic spread has already occurred and we have some unexplained chains of infection, some sporadic cases will almost certainly appear.

*threshold*<sup>8</sup> – that is a level of disease appearance can be managed without major stresses to or changes in the capacities of the health system over the coming months. Notwithstanding this hoped-for and highly achievable outcome, we must be prepared for, and design the exit from level 4 to ensure that we do not face a situation of rapidly rising disease numbers especially as winter approaches, which could otherwise overburden the system. We also have to remain prepared for the possibility of higher-impact outbreaks.

No part of society will cope well with a roller-coaster ride of moving up and down levels of restriction. As yet, our disease profile has been very mild, likely because of the age profile of returning Kiwis, and because of low viral loads. Multiple causal factors help explain this.<sup>9</sup> But we should not be overconfident – this may change as winter approaches and as ‘flu emerges as a comorbidity. Some limited evidence suggests that transmission rates and viral loads might rise in winter, at which point disease severity may get worse.

A significant but uncertain proportion of disease spread both in New Zealand and elsewhere appears to be presymptomatic. International reports suggest that it can occur from soon after infection (up to a week or more before symptoms appear) and particularly in the last day of the prodrome.<sup>10</sup> Globally, we have seen young people as a major group of largely asymptomatic or presymptomatic carriers, and more likely to ignore isolation/distance rules. As yet, there are no useful data on the degree of covert or sub-clinical spread in the New Zealand population, which makes foresighting more difficult. Given that perhaps 30% of the workforce was still functioning during the lockdown, and even with good control practices in place, some further spread can be expected. Indeed, several essential workers, both in the health and supermarket sectors, have been identified as having been infected. Thus we must not be overconfident and relax our vigilance too soon. As we move from level 4 to level 2+, the risks of rebound with relaxation of social distancing and increased movement around New Zealand are real and must not be discounted.

Thus maintaining New Zealand below the damage threshold will require the health system to have a low threshold for testing, and a strategy for ongoing sentinel<sup>11</sup>/surveillance testing and a focus on rapid contact tracing. Adequate capacities for this need to be in place and assured before we move to alert level reduction, and will likely need to be sustained for many months. Policies will need to be developed around testing protocols in the context of the usual spectrum of the normal increase in upper and lower respiratory infections during winter.

The current model of strict quarantine for 14 days for all arrivals has allowed us to sustain a minimal caseload, and now the only new cases emerging will be from cluster and community spread. This strict border control will have to be maintained in the near future; decision making on its longer-term relaxation will be linked to the pattern of the pandemic in other countries. Depending on how the disease progresses or attenuates, and as our understanding of the virus develops, bilateral arrangements with countries in a similar position may be possible. In time it may be that some form of biological passport<sup>12</sup> might allow gradual reopening, or it may be that until there is global control, or global herd immunity,<sup>13</sup> restrictions will have to remain in place.

## **WHAT CAN BE DONE TO MAKE THE TRANSITION TO LEVEL 2+ AS QUICK AS POSSIBLE?**

The economic and social imperatives of a quick return to level 2+ are obvious, and the actions needed to do so are multiple. They include having transparent and multi-disciplinary criteria for progressing through subsequent easing of restrictions. This requires more than modelling alone and the decisions will be impacted by health, social, economic and logistic considerations. The conundrum of our low rates of morbidity and mortality versus those of the northern hemisphere creates the impression we could move faster, but while that remains poorly understood, it is not a reason to be overconfident.

These decisions will require in-depth ongoing analysis of the pattern of disease in New Zealand to date, including ideally some knowledge of community exposure at least through sentinel surveillance,<sup>14</sup> and consideration of the possible impact of impending colder months.<sup>15</sup> Given the inevitability of imperfect elimination, and given some probable level of asymptomatic and pre-symptomatic spread, it will be critical to have rapid and highly effective and high capacity contact tracing in place before relaxing restrictions.<sup>16</sup>

Without assured capacities in contact tracing we cannot follow the chain of infection and we could end up with uncontrolled spread. We already have as yet unexplained transmission which has sadly led to deaths. Rapid contact tracing reduces the risk of second and subsequent-order transmission. Already cluster studies show that second and higher-order transmission have occurred. Contact tracing is fundamental to breaking infectious disease pandemics and will be even more important once we reach level 2+ to reduce the risk of a major flare-up. For contact tracing to be effective, especially once the population is mobile, it must be very rapid. This can be greatly aided by digital

8 Keeping below the damage threshold (a biosecurity term) means accepting some ongoing disease but at a level which does not overburden the health system at normal levels of operation – this needs to be defined, but it might be perhaps no more than 5 cases per day in winter requiring hospitalisation and no more than 25 in intensive care nation-wide at any one time and a minimal number of deaths.

9 This largely reflects our early stage in the pandemic, the state of largely young pre-symptomatic or mildly symptomatic human vectors that imported the disease, and perhaps the favourable climate to date, (both temperature and relatively low humidity – although the evidence on the importance of these effects is still preliminary). New Zealand has had a seasonal advantage but this may soon shift to being disadvantageous.

10 Period of onset of a disease before diagnostically specific signs and symptoms develop.

11 i.e. screening of populations at high risk such as health workers and supermarket staff.

12 Based on antibody testing.

13 Induced either by passive infection or immunisation.

14 We have no idea at the present time how much latent infection is present in the community which might emerge later. Biosecurity experience in agriculture in which NZ has much experience shows the importance of ongoing surveillance. AI can be used to help identify how that might be designed in an ongoing manner through the post-lockdown phase.

15 See <https://informedfutures.org/covid-19-and-the-weather/>

16 Testing and contact tracing remain far from ideal. We need to increase testing including having population-based surveillance. Health workers need to be tested so they do not become vectors. We need a baseline before the picture gets confused. ‘Flu injections will be essential.

technology, which ideally needs to be in place before mobility is allowed.<sup>17</sup> There are a number of technologies that allow rapid tracing to be assisted. Modelling<sup>18</sup> suggests that even a low uptake of such technologies offers a significant advantage and an opt-out rather than opt-in system<sup>19</sup> would be both ethical and be more inclusive.

Exiting level 4 and moving to 2+<sup>20</sup> can be done quite quickly if monitoring and tracing are in place, and the testing capacity and speed of results are sufficient, and provided that there is no significant rebound during the transition phase. There will need to be a substantive change in focus from what is labelled an 'essential service', to one focused on defining how businesses can operate in a safe manner under relaxed guidelines. One possibility is to certify companies to be allowed to reopen subject to compliance with predefined control commitments.<sup>21</sup> If no rebound in infection rate is observed after 1–2 viral cycles (14–28 days) after initially relaxing level 4, we could move quickly to level 2+ (i.e., while maintaining strict border control and control on large gatherings).

One of the biggest issues might be when to open schools, universities and preschools. Children are important vectors of viral spread, with generally mild symptoms and maintaining social distancing is more difficult, if not unrealistic over time. Beyond the health considerations there are major logistical and economic considerations – the latter relating to when parents can enter the workforce. Reopening schools is perhaps best done at entering level 2+, given that cycles of opening then shutting then reopening would be very destabilising for children and parents, and equally difficult for teachers.<sup>22</sup> Many children will have mild coughs and colds during the winter season which will fuel ongoing concern and create ongoing management issues and to avoid disruptive but understandable parental and teacher concern, a high confidence in the level of pandemic control would be desirable.

At level 2+, the only formal restriction remaining would be border control, which should stay tight<sup>23</sup> and restrictions on very large gatherings. In such a scenario there is likely no need to segment sectors or regions unless the occasional new cluster emerges, in which case local movement cessation might be needed, as has been done in Korea.



17 It seems very likely that once level 4 is broken, people will want to mingle and meet and compliance will be hard. Self-compliant tracking software will be the only way to stop a possible rebound getting out of control. This may be covert for many days before disease appearing.

18 L. Ferretti et al., *Science* 10.1126/science.abb6936 (2020).

19 As is done for cervical screening.

20 The goal must be to get to level 2+ rapidly to minimise collateral harm. In a sense level 3 is simply one way of describing what must be a managed transition. The focus should be on the steps to level 2+ rather than detailing a defined intermediary level.

21 These could for example include: staff having a contact-registering app operating, staff wearing face-masks, frequent hand sanitising or gloves, provision for paid sick leave for all with any symptoms (this helps ensure staff do not come to work with mild symptoms), temperature and health checking at the worksite entry, social distancing supervision, and possibly sentinel testing of some fraction of the workforce.

22 Children of parents/caregivers at particular risk (e.g., immunocompromised) might need ongoing online teaching for some time to reduce parental risk.

23 While the global situation is so worrisome, it is difficult to see how to open the borders without quarantine or self isolation until biological immunity can be demonstrated – e.g., an antibody test. There may be an intermediate position where borders can be opened to selected countries that achieve a similar position to New Zealand.

# PLANNING THE RESET: THE FUTURE IS NOW

Looking beyond the many decisions needed to transition out of lockdown while ensuring disease spread is controlled, there are numerous complex, longer-term issues to be addressed.

Many of the trends we were already observing around the world, prior to the emergence of COVID-19, have been accelerated by the pandemic. The global lockdowns have revealed many vulnerabilities of current social, technical and economic systems. Nonetheless, the speed with which numerous companies have reconfigured their operations to work remotely, and much of society's rapid shift to fully-online modes of communication and participation have shown what is possible. The closing of our borders to international travel and the profound shrinking of our national airline signal a very different future than we might have imagined just two months ago. In a matter of months, the world changed. And it will not return to a pre-COVID normality when we come out of this: *the future is here – now*.

High levels of constraint to business operations, and the level 4 lockdown in particular, have been estimated to have a potential negative effect of more than 30% of GDP (the estimates vary according to scenario), for any given time period, relative to business-as-usual.<sup>24</sup> But there will be compounding effects following release of the lockdown because of irreversible impacts on many businesses. In some cases the negative impact may last for years – as the higher education export sector saw after the Christchurch earthquakes. The longer the period of suppression, the greater the structural damage to the economy.

The already recognised need to reduce our global greenhouse gas emissions and the environmental impact of consumption-based economies has coincided with an economic shutdown that has thrust those changes upon us, with perhaps a long-overdue but necessary force.

This is an extremely challenging time and many decisions are urgent, but it is also an opportunity to transform positively for a better future. Will the world be likely to reintegrate or de-integrate as a result of these changes? Will the recognition of our global interdependencies and connectedness translate into more willingness to address climate change and sustainability challenges with urgency? What will be required? In future, how can we ensure high-impact/low-frequency risks such as pandemics are properly evaluated as both private and public sectors take stock of risks?

Beyond the operational challenges of the here and now, what are the imperative questions confronting different groups, and New Zealand society as a whole, that require discourse and consensus building?

## GEOSTRATEGIC CONSIDERATIONS

The pandemic probably has a long time yet to play out, and it will most likely play out differently in different countries and regions.

We really cannot be sure what its longer-term impacts will be in Australia, Europe, Asia and North America. The impacts in those regions will compound whatever is happening domestically over the next 2+ years.

New Zealand has had the advantage of geographic isolation in managing the pandemic to date, but it will not be immune from a multitude of geostrategic consequences. It is reasonable to assume that the current levels of disruption in the northern hemisphere will echo over several months, and may be followed by smaller waves. It remains uncertain whether the spread into other regions such as India, Africa and Latin America might lead to more catastrophic outcomes.

Many matters of direct interest to New Zealand will be influenced by the impact of the pandemic and the first wave's aftermath on societal cohesion and political outcomes in the US, UK, Europe and Asia. There are alternate scenarios and we need to be prepared and be thinking about the range of possibilities ahead. This will require adaptive thinking at many levels.

It is well understood that a society's uncertainty and fear often translate into support for quite conservative and strong leadership. But when fear is particularly pervasive or acute, it can also be exploited by authoritarian leaders. At the same time, fear can fuel a loss of social cohesion, the divisiveness of which is another tool that, history tells us, authoritarianism exploits. In this, there is the fear that the coronavirus will compound populist tendencies. We have already seen the President of the United States refer to COVID-19 as "the Chinese virus" and use its outbreak as justification for other political objectives. Others have been quick to racialise the virus and attack those they deem "responsible" for it. Some may think to exploit current anxieties and uncertainties to advance extreme agendas or, as has already been observed in some countries, to advance authoritarian rule.

It is possible that the financial and health challenges raised by the pandemic might reinforce the move away from multilateralism, at least in the short term. This might be driven by prolonged border closures, a move to self-sufficiency in key staples such as food supply, and the centralisation of political power in some countries in response to the scale of the challenges presented.

It is conceivable that the event will fundamentally alter global geostrategic balances and fuel further economic instability. Disruption in key markets and their level of economic uncertainty may compromise current and desired trade negotiations. It certainly has weakened the European Union (EU) as a cohesive entity, with consequences for both the European economy and social and strategic stability. Both the EU's and UK's ability to move on trade negotiations may be severely impaired. As noted above, the US may move to a

<sup>24</sup> *Economic Bulletin* 19 March 2020, Westpac <https://www.westpac.co.nz/assets/Business/Economic-Updates/2020/Bulletins-2020/Forecast-Update-19-March-2020-Westpac-NZ.pdf>  
The Treasury, *COVID-19 Information Release*, April 2020, <https://treasury.govt.nz/system/files/2020-04/c19-4265378-t2020-973-economic-scenarios-v2.pdf>

greater isolationist and nationalist position. The World Trade Organisation (WTO) may be further weakened.

New Zealand's position within global value chains will undoubtedly be affected by a greater move to self-reliance and trade barriers in some markets, but this will depend on the level of fundamental change in global trading that occurs. The New Zealand economy depends on China, Australia, the USA and Europe for much of its commodity-based trade and services-based exports (tourism and education). What will the new norm be in a world where attitudes to travel are very different? How will global consumer demand change? Will China ever return to growth rates of the past? Will the China-USA trade and economic relationship be fundamentally altered, and with what impact on the rest of the world? Could this have further geostrategic implications in how China or another major power advances its interests?<sup>25</sup> Nimbleness will be required to protect New Zealand's external economy in this context, and difficult geostrategic choices may emerge.

The COVID-19 pandemic is further challenging the international rules-based order which in turn will impact our national security sector. COVID-19 related cyber-attacks and cybercrime are on a rise at a time we are fully embracing the digital environment. Factors such as the anticipated global recession, increased geopolitical instability in regions, distrust in democratic institutions, social cohesion or lack thereof, and moral and ethical differences, will exacerbate some and lead to some new security challenges. This will become more pronounced as the COVID-19 crisis endures.

On the other hand, and with a more optimistic lens, different political outcomes in the northern hemisphere may create a window of opportunity in the next five years to examine, and even advance, the multinational rules-based order and its global institutions, which need updating from the post World War II era. While again these are matters largely outside the New Zealand sphere of influence, our standing in the world, elevated further by our globally recognised handling of this and other recent crises, may allow us to have disproportionate influence. We will need to be ready to engage if such opportunities arise; indeed the need for a broad base of research capacity and infrastructure as a defensive and offensive resource has already been amply demonstrated by the pandemic.

## WHAT ARE SOME OF THE ESSENTIAL QUESTIONS FOR NEW ZEALAND SECTORS LOOKING FORWARD?

The New Zealand economy is already fundamentally changed, and will change further as the country emerges from level 4 and begins to reopen for business. Finding paths to cooperation within and across sectors, and in ways that promote rather than stifle private sector innovation, will be critical. It would be an unfortunate waste of an opportunity if, in the rush for individual players to find their own solution, a broader framework did not emerge. This cannot simply be centrally-driven; the skill set and insights of sectors outside the public service need to be harnessed. The nature of the conversations needed to help

New Zealand as a whole to move to a more secure, sustainable and resilient future requires innovative thinking from multiple perspectives.

### What are some of the key questions that need to be addressed?

How will different sectors move forward from the unprecedented disruption caused by the extended lockdown and closure of our borders?

How will the economy deal with an inevitable downturn in consumer spending, and supply chain disruptions? Will small businesses lead the recovery?

Will entrepreneurial firms be able to take advantage of low barriers to entry into a new market landscape? What will our export sector look like into the future?

Does this accelerate change in the primary sector?

How will the tourism sector have to evolve?

How will employment patterns and modes of working evolve, and what skills will be needed?

How do we return New Zealand to a healthy balance sheet?

Can we use our success with the pandemic to leverage foreign direct investment and new business opportunities?

What lessons are there for the organisation of public services and social safety nets?

What opportunities emerge for our science and innovation sectors?

Will this event trigger change in education delivery mechanisms?

Will it undermine or create new opportunities for higher education?

What will mobility look like, internationally and locally, especially when many sectors rely on short-term and permanent migrants for labour and skills supply?

And can we sustain our progress towards a more inclusive and cohesive society?

The current opportunity for a reset requires much thinking about how we move to deal with the other existential threats, climate change and environmental degradation. Each sector will have its unique challenges, but they operate interconnectedly and need to be considered in light of the New Zealand economy as a whole. Future papers in this series will address some of these questions in more detail. This paper serves to highlight some of the issues.

**Towards a greener economy:** There has been much discussion in the period prior to the pandemic of the need for New Zealand to move towards a more sustainable and carbon neutral economy. Trade-offs that may have seemed impossible prior to this crisis may now be seen in a more credible light. This period of disruption could encourage entrepreneurs and innovators working alongside government to create opportunities and businesses that can thrive in a green economy.<sup>26</sup> A related

<sup>25</sup> For example, China's interests in the South China Sea.

<sup>26</sup> This is the subject of a further Koi Tū panel that is currently meeting.

question is whether this crisis will prompt a faster move towards building a **circular economy**, with a stronger focus on repair and reuse, and on what we can produce from within our borders in a sustainable way. The post-pandemic reset should allow environmental and green economy projects to flourish – rather than a hasty build-back of business models that were essentially ticking time bombs in the face of climate change and ecological limits. How can this be coordinated across the economy, to take maximum opportunity of new ways of working, consuming, travelling, and living sustainably?

The **food sector**<sup>27</sup> is central to our economy, and will likely fare differently to many other sectors. New Zealand is fortunate that it can feed its people. Other countries demand our products, but in the post-COVID world, does our role as commodity food exporter need a rethink? Will high-value products still be in demand with a prolonged economic downturn? What are the possibilities for more sustainable forms of agriculture? This sector could be seen as our most significant opportunity. While the pandemic will see countries try to secure supply domestically (e.g., Singapore's investment in factory produced plant-based proteins), our reputation for safe, high quality, natural food products should create a strong foundation for demand and growth. How does the food industry use the reset to rebuild itself with health and environmental concern at its forefront, while retaining (and increasing) the market share it has globally? In the short to medium term, the experience of our leading food companies in marketing our food products to the world and the strength of our brands and international relationships should support significant growth.

Some sectors, for example many **retail and consumer care** businesses, may return quickly to business with little apparent change from before the pandemic started. But, sadly, others will have closed irreversibly as a result of the financial strain. However, like all other sectors, those that do survive will need to think more long-term about the nature of their businesses. Will they be encouraged away from marketing throw-away goods, and towards more sustainable product lines?

Other sectors may have to make transient changes in operation that persist over some months, but then will return to something like the pre-COVID normality. An example is the **construction** industry and **manufacturing**, but the mix of companies surviving and thriving may be very different. Global supply line issues may create fundamental changes in how these sectors need to operate. Reduced cross-border mobility may constrain the supply of workers, both skilled and unskilled – can these be mobilised from the pool of newly unemployed? The current stasis affects numerous small sub-contractors (who are largely small businesses) and suppliers, and flow-on effects into other sectors will remain (e.g., in forestry, which has also been hit by reduced demand from China).

The effects of the crisis on our **heavy industries** may be deep and irreversible. Will this make it more likely that the Tiwai Point aluminium smelter will close permanently? New Zealand Steel and the Marsden Point refinery are also challenged. Will these industries cease, leaving New Zealand reliant on external

sources? What does this also mean in situating us towards a lower carbon emissions future? Deindustrialisation will have impacts on other sectors – without Tiwai operating, there would be an excess of electricity that can be used in other ways, perhaps inviting innovation in fuel cell technologies, allowing New Zealand to transform its entire vehicle fleet. The excess energy could lead to unanticipated opportunities in fuelling our IT and creative content industries.

Some large sectors of the economy, for example **export education** services, may face a very new normal in which the opportunities, modes of operation and competition are very different and irreversibly changed from the past. For the foreseeable future, the New Zealand export education system can no longer base its model on attracting foreign student fees. But in the longer term, if we succeed in keeping the virus out, will it actually promote New Zealand as a favoured destination compared with other English-speaking countries (Australia, the UK, Canada and the USA) for education? Universities worldwide have quickly moved towards remote working and learning for the remainder of the school year – this is disruptive, but it can be seen as a critical opportunity for digital learning? Distance learning is already operating successfully for some providers (e.g., Massey); can other tertiary providers now follow their lead and help make New Zealand a global leader in online education? But what would be something that would give us an advantage? Is this an opportunity to review the tertiary education model, rationalise the university system and look to novel approaches that would give competitive advantage (e.g., transdisciplinary teaching, micro-credentialing, online credentialing of international students, bespoke mentoring, and so on)?

The extent of long-term change in the **tourism and travel** sector is speculative but could be very large and indefinite. It along with small business is now the hardest and fastest hit sector of the economy. Thriving in such circumstances will require significant innovation. In the face of complete shutdown of international tourism for the foreseeable future, and an inevitable, potentially lengthy downturn in the New Zealand domestic economy, even domestic travel and tourism may be somewhat reduced. Both the international and domestic convention industry will be severely impacted for some time. What options are there for the future tourism industry? Will it focus on high-value/ecotourism? How do we facilitate global travel and allow some porosity at the border? This will require global discussion and agreement on criteria (e.g., antibody test that indicates immunity).

The devastating but necessary cuts to services and employment by our national air carrier, Air New Zealand, have dealt not only a financial blow but also a psychological one for New Zealand. The airline symbolises and empowers our connectedness to the world, for business travel, overseas experiences, and fulfilling Kiwi wanderlust. The impacts are both economic and culturally profound, and reflect the different lives we will have to lead for the foreseeable future.

The domestic **transport sector** more generally will face major changes – although most notably in air travel. Grounding of international flights to travellers also reduces freight capacity.

27 This is the subject of a further Koi Tū panel that is currently meeting.

External market uncertainty adds to this complex picture. While domestic transport and freight logistics have reduced demand beyond the immediate period, it is unclear how their markets will change. An economic downturn will have impacts on this sector, which relies heavily on the performance of other sectors.

Commuting and domestic travelling patterns may not return to their pre-COVID state once lockdown is lifted. For **commuter transport**, in the short-term as we leave lockdown, if people are reluctant to use public transport because of crowding, could we end up with even more road congestion than before? Or will people continue to work from home, reducing commuter travel demand? What about the future of electric cars? Is this an opportunity to move the sector more rapidly towards electric fleets? What long-term effects will there be for the shared mobility sector (ride hailing, scooter sharing)? How can the reset be used to prompt the use of alternative travel modes such as cycling?

**Housing** has been a long-standing concern in New Zealand – issues of supply and cost have dominated political discourse for more than a decade. The pause brought about by COVID-19 may allow a broader rethink of the sector, and a more holistic approach to housing, transport and cities that better consider the transition to carbon neutrality. The image of a 1960s nuclear family home ownership with a quarter-acre section close to all amenities is no longer tenable. What have the pandemic and lockdown revealed to us regarding people's housing situations? As a society, New Zealand is more diverse, more urbanised and living longer than ever before, and the housing sector needs to evolve to meet these needs. What kinds of solutions are possible to ensure access to safe and comfortable owned, rented or social housing for all New Zealanders? With regard to supply, one way of rapidly mobilising the internal economy and employment would be to focus on domestic housing as a major opportunity, alongside the commitment to a public infrastructure spend. But it is clear that to make progress, a more holistic and depoliticised approach is needed. Issues of planning remain, sources and costs of construction materials need to be evaluated, regulations reviewed, and the potential for modular and at scale approaches all need integrated and systematic evaluation. How do we take lessons learned and bring them together with the need to plan climate-resilient, energy-efficient and accessible housing?

The **Māori economy** is largely clustered around a few industries, relying mainly on primary industries and tourism – the latter being hit particularly hard by the pandemic. For example, forestry has had a huge downturn, with employment affected, and crayfish exports are also down. These industries do not have much financial buffer. But one of the strengths in the Māori economy is the focus on collective and intergenerational transfer of wealth and knowledge. At the macroeconomic level this is important, though of course does not address the immediacy of economic decline. The Tūhoe model is a future-oriented one that does not take current practices as the norm to be indigenised, but rather seeks fully sustainable practices that allow collective flourishing and have elements of an 'enoughness' paradigm. Some iwi are looking to invest in innovation and this may be an

acceleration of that diversification, which will further enhance the importance of the Māori economy to New Zealand's future, with the opportunity to adopt its underlying principles more broadly. In fact, iwi are significant investors with a very wide reach into areas of opportunity and the economy, and as such need to be a core part of economic debate on areas of key iwi interests. Iwi incorporations have a very high exposure to areas of great social and economic need and have existing high-quality structures to care for Māori. These structures should be acknowledged and iwi incorporations and rūnanga should be at the heart of social assistance, welfare, mental health and other initiatives with impacts on Māori.

The **health sector**, not surprisingly, has been subject to questions of capacity and elasticity in light of the current crisis. There have been long-standing issues around cost, organisation, infrastructure, coordination and integration. Some of the short-term questions include whether there is a need for a "critical intelligence unit" that allows for an evaluation of pandemic health and related data independent of management responsibilities. This could evolve into a longer-term role. Is there a need for a health equipment supply chain facility for the country, likely using private sector expertise in the first instance, operating at scale? Longer-term questions include whether the structure for public health is right – do we need a separate public health agency, such as those that were prompted in some jurisdictions after SARS?

Have we got the right structure for secondary and tertiary services? Fractured healthcare has been shown to be very problematic overseas – are District Health Boards sufficiently integrated to handle the pandemic? Does the Ministry of Health have the right skills profile for the 21st century – e.g., in big data analytics and technology assessment? How can we improve the use of digital health systems both in service delivery and in data gathering?

What is the future of primary care: general practice which has been shown to be both critical but compromised in the pandemic? How can we take advantage of lessons learnt about distance and tele-medicine? Clearly our already-stretched mental health services will be further tested in the pandemic aftermath with an anticipated rise in post-traumatic stress disorder (PTSD), and consideration could be given to greater use of e-mental health delivery and pre-emptive mental wellness delivery through schools.<sup>28</sup>

Health, social welfare and broader social dimensions are all intimately linked. Are there sufficient linkages to create an integrated and person-centred paradigm? Related issues in the **welfare sector** include our persistent failure to understand the high rates of family violence and the continued disaffection of sectors of our community, especially those who are young and from relatively disempowered minorities. The crisis has highlighted issues in welfare support; will this lead to more fundamental changes?

Does the pandemic change thinking around **primary and secondary education**? Will this experience irreversibly change the nature of learning – changes that were likely inevitable in

28 Mental health will be the subject of a separate report.

future decades? There are opportunities here to shift more to teaching skills such as critical thinking and emotional self-regulation, move towards precision education and create leadership and export opportunities. Schools need to focus on transportable and generic skills so that pupils can later navigate a more fluid labour market. Is there a place for technology teaching streams as in Germany and Switzerland? Could this be a circuit breaker that allows for a substantial change in pedagogy?

**The arts, entertainment and cultural sector** has been severely impacted: museums are closed, concerts of all types are suspended, and opportunities for many forms of creative activity severely limited. Once large gatherings are again possible, some forms of cultural activity will rapidly return. But some, such as the museum sector, will be severely hit by the loss of tourism and conference and convention activity. These are likely to be long-term changes that incentivise some parts of the sector to move into a more digital world.

The **sports sector** has received much attention as globally and domestically; it has ground to a halt. Its fiscal vulnerabilities have been highlighted and this is likely to lead to code-specific rethinking that is required even if live sport returns after a relatively short interval. At the elite level, much depends on the future of international air travel. In turn, this is linked to changes in the **media sector** that started long before COVID-19 appeared. The lockdown has accelerated the move to streamed services but it has also shown how important quality and reliable news services are.

## DIGITAL ECONOMY AND THE FUTURE OF WORK

Irrespective of the immediate recovery phase, the lockdown has demonstrated the critical place and potential of an expanded digital environment for business, leisure and sustaining relationships. Many meetings that were previously thought to require face-to-face interaction have been shown to be able to be replaced by Zoom. Home-based work may have been incentivised, and many white-collar workers may wish to continue in this mode. How much will that spill over into long-term business practice?

There will be equity issues emerging, with higher-skilled/higher-paid workers being more able to work from home, and also more able to sustain brief unemployment spells. Those who are on the wrong side of the digital divide have been seriously disadvantaged. Education clearly will have new opportunities in this situation. Gender- and care-related issues have come to the fore in the work-from-home environment, especially when no childcare is available and homeschooling is required. We will need to address what the future of work means for lower-paid, blue-collar workers whose role as essential workers has been amply demonstrated.

As so many activities have rapidly moved from in person to online, the issues of digital governance, oversight, and ethics are also thrown into sharper focus. New Zealand will need to take a more systematic approach, both in the public sector (see discussion on tracker apps) and the private sector.

## SCIENCE AND TECHNOLOGY

The crisis has shown the critical importance of diverse knowledge disciplines to the protection of New Zealand. While most of the focus has been on virologists, epidemiologists, clinicians and public health practitioners and statisticians, in the path ahead economists, innovators, technologists, food scientists, engineers and many others will have critical roles to play. But environmental scientists and social scientists, including psychologists, sociologists, Māori and Pasifika scholars and educational scientists, and others will also be key to future societal innovation. This profile of needed expertise does not fit well with the balance of current science investments or its funding mechanisms, wherein social science is very poorly represented. Further, there is enormous need to integrate and develop multidisciplinary modes of investigation and translation. A major rethink in many parts of New Zealand's social, environmental and business sectors is needed. Broader thinking is needed in how to apply all the knowledge disciplines to New Zealand's benefit. The university sector and Crown Research Institutes both need a considerable rethink, potentially even structurally. Both will need support to move their focus to the opportunities ahead while continuing in their critical educational and defensive roles. Sadly New Zealand remains relatively low in both its public and private sector investment in science and scholarship in too many sectors where it can help. Surely this is a time to look at the integrated reset needed – institutions, funding mechanisms and incentives.

## UNEMPLOYMENT, UPSKILLING OR RESKILLING

The New Zealand Treasury has estimated that unemployment could peak at between 13% and 26%, depending on how the pandemic plays out, and the scenarios chosen around length of time in the different alert levels. This is unprecedented for the country, and will obviously have rippling effects on the whole of society. There will be new opportunities in the 'new normal', but resolving the unemployment issue will require a massive rethink of how we manage our workforce in terms of upskilling, reskilling, and modes of working.

An ongoing issue for New Zealand is how to get the right skills in the right place at the right time. The usual linear progression of compulsory schooling, tertiary education/training and then entry into the labour market, is long gone. The OECD assumes that most people will have 10+ jobs over a working life but they will not simply be jobs albeit with different employers, they will be very different jobs in skills and nature. Given the labour market disruption that is a consequence of, or made more obvious by COVID-19, we need to think about both the skill sets required and the quantum – and to have systems to ensure a flexible (i.e., mobile) labour market. We need to give more attention to what is effective retraining and recognise the same approach is not necessarily appropriate across the lifespan.<sup>29</sup> With a foreseeable wave of unemployment and with shifting business models and profile, this question is ever more salient. The new economy is now here, but we have not done a good job in anticipating labour and skill needs. It is now likely to shift even further and faster.

<sup>29</sup> There is growing evidence to suggest that retraining requires quite different approaches to simply providing certificate courses and that as workers age they prefer other approaches.

## **MIGRATION, POPULATION AND LABOUR MARKET ISSUES**

Population policy in New Zealand has revolved around migration to supplement natural population growth, age distribution and skills in the face of diverging regional age profiles. This has been supplemented by temporary work visas to support the primary sector – in turn this supports the remittance economy to Pacific nations and New Zealand’s global relations through young people’s working visas. In the near term such arrangements cannot continue because of restrictions on international entry to New Zealand although Pasifika entry is likely to be possible at an earlier stage than from other countries if they, like New Zealand, appear to have eliminated COVID-19.

This pause creates an opportunity to rethink the strategy for New Zealand’s future. There are many questions. For example: What should we do about regional population stagnation or decline? Do we want 40% of New Zealand’s population to be living in Auckland (which it will be within a decade)? What should we do about declining entry:exit (into and from the labour market) or dependency ratios? What should be the retirement age? We need to have an evidence-based and forward-looking discussion about what a population policy or plan (or direction) might look like for New Zealand.

## **THE PUBLIC SERVICE**

The crisis will promote reflection, changes and innovation in the public service, just as it is doing in other sectors. In particular, it will hold many lessons, and questions for the policy community. For example, is the national crisis management system designed to optimally handle such broad-ranging emergencies crossing agencies and moving at speed? Are the methods of sharing and integrating information between siloed ministries and agencies optimal? Did we have the right inputs at the right time from the right experts, both from across government and beyond? Was there contestation on key issues and was there a diversity of inputs? Is there a need to institutionalise red team<sup>30</sup> and private sector liaison approaches? Was science diplomacy used optimally? Are there trusted data and digital governance oversight arrangements for the public sector, such that the needed data can be accessed and utilised to the best extent possible? What problematic procedures and habits of policymaking have been brought to light during the crisis, and what needs to be overhauled in the post-COVID world?

New Zealand will need to look at its capabilities and capacities in foresighting and horizon scanning (outside security and related areas) that might have allowed for better preparation of various sectors for the transformative changes now necessary in the face of major disruption. Is our policy community compromised by an overall lack of technology assessment capacities? More innovative public-private-academic sector partnerships may need to be formed. While such partnerships are needed to help us through the immediate and near-term situation (e.g., supplies, testing and tracing innovations, and so on), they will also be needed to face the longer-term challenges.

## **THE BROADER POLITICAL ECONOMY AND ROLE OF GOVERNMENT**

Sustained global crises in the past have had substantive direct or indirect influences on how financial policies and social systems within countries operate. They create opportunities and indeed the necessity for reflection, analysis and decision making. This pandemic, while still evolving, looks as if it will create a similar need. It is of a scale and pervasiveness that is very different to, say, the Christchurch earthquake, to which New Zealand largely responded by looking to return to the pre-earthquake status. But with COVID-19 we have both global and domestic considerations, many discussed above, that force deep conversations.

Ultimately such decisions reflect back onto three domains – the role of government in delivering services, the nature of the economic settings that create the environment in which government, business and individuals operate, and the many decisions that individual businesses will make. For example, will there be a need in the short term to look at tax policies? How will we attract and incentivise foreign direct investment? Do we now have an advantage to do so given our low COVID-19 status? Will policy settings on issues such as retirement age and benefit structure need revision?

Different interest groups may have very different perceptions of the answers to these questions. From the outset, balancing health, economic and social needs has been at the heart of every government’s response to the pandemic. We have seen different decisions being made in the eye of the storm, and no doubt this variation will continue into the recovery period. Like other countries, New Zealand will be in a state of flux for some time but this phase creates both difficulties and opportunities: most of all it creates a pressing need for such discussions.

<sup>30</sup> A red team is a concept well developed in the military whereby an independent team with no line responsibilities critically appraises, in real time, decisions made by those with operational responsibility. It can be thought of as a formalised ‘critical friends’ group.

# THE CHALLENGE OF SUSTAINING TRUST

In all these considerations, the issues of trust and confidence in decision making become paramount. This is true for all groups in society, including and especially those who feel marginalised or disadvantaged. Transparency around the evidence base for decisions is particularly key for the private sector if we are to move from lockdown and into a future that will be transformed in multiple and indelible ways by this pandemic. The crisis is going to persist in one way or another impacting directly on New Zealanders for at least 2 years – some suggest the airline industry will take much longer to recover. It will have a long tail affecting many sectors (tourism, education, trade, domestic economy, and so on).

Over the coming months, even if New Zealand maintains a path towards elimination, many choices will have to be made, none of which are easy. Decisions are needed around when and how to move to level 2+, when to reopen schools, what to do when flare-ups occur, how to support businesses, when to relax border controls, and so on. Trust in the proportionality of the measures taken will be critical to their success. At the same time, both progress in the science of understanding and battling the virus, and decisions made in other jurisdictions in their own battles, will impact on and inform some of the choices we can make.

The decisions made in answer to many questions posed in this discussion will involve hard economic and personal issues, including those affecting personal freedoms and personal or economic loss. The legal foundations for such decisions should be clear, and as far as possible be based on normal legal processes. Parliament should be enabled to function as soon as it is feasible to do so safely. Decisions by Parliament and the Executive should be as open and consultative as possible. Rules, and the legal sources for them, should be clear. Emergency powers should be subject to time limitations and review, and proportional to the problem. Clear distinctions should be made between rules, and suggestions or statements of the desirable. To maintain trust, the rules should be clear.

## THE NEED FOR TRANSPARENCY

The New Zealand response has been characterised by a relatively high level of central control over information and decisions. This can make sense for the acute phase of the crisis. Over time, however, centralised decision making can create frustrations that could spill over, not only for the public and business sector, but also for the academic community, which should be engaged to provide insights into the next stages of the battle and beyond. The ground-breaking Epidemic Response Committee of Parliament (ERC) is assisting in ensuring confidence is sustained at all levels of the response, beyond the highly competent messaging from Wellington, and shows the value of putting partisanship aside in crises. This is a model that may have long-term and global significance. But trust could erode very

quickly especially if post-lockdown recurrences and winter weather threaten the level of disease control we currently have. Previously contested issues (border controls, testing, supply lines of PPE, tracking capacity and approach) could return.

Communication needs to be seen as objective – and to this end, transparency is key. The ERC is intended to enhance accountability. But its constitutional role will become more complex with an impending election. The government will need to sustain its current very high level of trust, not just by communication management but by greater transparency in what it is doing, making the system more accessible and accountabilities clearer. Some big decisions, whatever they are – over the pandemic's levels of management, management of recurrences, health system crises, border control, sector support and so on – will be contentious. In other situations, adopting a 'red team approach' has helped to clarify issues and increase transparency and trust.

## INCLUSIVE DECISION MAKING

Adding to the transparency issue is concern about the meaningful involvement of Māori, experts and leaders in decision making addressing the pandemic. Māori remember the devastating impact of past pandemics and infections such as tuberculosis and smallpox introduced by Pākehā. And the 1918 influenza pandemic had a massively disproportionate impact on Māori, with their mortality estimated at nearly eight times the rate of the Pākehā population. Pacific communities similarly remember the impact of both the 1918 flu pandemic, brought to their shores by New Zealanders, and more recently measles in Samoa. As yet, the impact on different sectors of New Zealand of the current pandemic is not fully understood, but we can assume greater impact on disadvantaged components of society.

The need to respect the obligation encapsulated in the Treaty of Waitangi to consult with Māori on issues that affect them has been voiced by a number of Māori leaders and scholars. In fact, there is a need and an obligation to allow a co-determination process to evolve, so that Māori have a strong say in determining their futures. The same inclusivity should apply to other vulnerable communities including Pasifika.

## IMPACTS ON SOCIAL COHESION<sup>31</sup>

In general, societal cohesion is greater when there is a commonly held perspective of 'the enemy' or 'the challenge' (e.g. in early stages of war), as in the acute phase of an emergency, but once this shifts towards a chronic phase, it is often replaced by grievances, anger, PTSD, anxiety, and a sense of winners and losers.

If social cohesion is lost it is difficult to restore. In this environment where trust is critical – yet inevitably fragile – there is an immediate imperative to address both the economic and

<sup>31</sup> Koi Tū, in partnership with INGSA, is leading a global project exploring the factors that strengthen or undermine social cohesion and societal resilience: <https://informedfutures.org/societal-resilience-unpacking-the-black-box/>

social impacts of ongoing restrictions, which are anticipated even if elimination seems realistic at the end of the lockdown period. In the face of ongoing or recurrent constraints to movement, social interactions and business operations, there is a potential over time (especially as winter approaches and election season appears) for social cohesion to be tested. The cohesion we see now in the immediate response may be replaced by anger, frustration, depression, anxiety and sad human stories. Depending on the road ahead, it may be difficult to sustain social harmony between the employed and the unemployed and across generations.

In emergencies, it is necessary for governments to make a number of decisions that can be seen as limiting freedoms and rights of individuals. But the success of the lockdown depends on a high level of compliance with these transient restrictions, which has generally been observed in New Zealand. On the other hand, it is likely that monitoring technologies will have to be used to assist tracing of contacts into the foreseeable future. It will be critical to sustain trust by appropriate oversight on such technologies and to ensure that traditional rights and freedoms are not unnecessarily restricted beyond the immediate needs of eliminating the virus.

The response after the Christchurch earthquake sequence showed that social cohesion is strong in the acute phase but then becomes more fractured and anger emerges as the crisis drifts on through a prolonged recovery phase. After the Christchurch terror attack, a very different type of event which directly affected a small group of New Zealanders, there was a very different response – one that brought very diverse New Zealanders together in a cohesive and globally impressive manner. Similarly, the lockdown has been widely accepted, exposing a collective determination to beat the virus in a way that may be globally unique. But it has come at enormous emotional and financial cost to many. The challenge and the opportunity lies in whether we can maintain that cohesiveness through massive changes ahead and the difficulties of the recovery. This will require more than partisan political leadership: it will require a collective effort which is broadly based, transparent and credible, and forward looking. The question is what kind of process could be developed to look at such a challenge; what does leadership mean in such an environment?

## **SOCIETAL WELLBEING AND MENTAL HEALTH**

Even when we ultimately have suppression or elimination of the virus, the social and health issues will last a long time. And the social impacts will not be equal across New Zealand society. How will sociological and demographic factors affect recovery and resilience? This is an area Koi Tū is directly examining, and will be the subject of a separate report.

At least two demographic dimensions need consideration. The age cohort effect has been said to be associated with a different values spectra.<sup>32</sup> This may be exacerbated if the young see themselves as having made further sacrifices for the old. Blue- and white-collar workers have had different experiences during the lockdown, and the social and economic impacts will

be differentiated as well, extending significantly beyond the health impacts.

Disadvantaged and socioeconomically deprived communities are particularly at risk: unemployment, housing issues, dealing with the winter ills all disproportionately affect Māori and other marginalised communities. Can we take this opportunity to truly explore the issues that confront these communities? Māori experts and leaders feels that they have not been sufficiently employed or drawn upon. While there has also been inadequate consultation in many cases, we should be moving beyond consultation and looking to ways that we co-determine our futures. While Māori and other sectors are more at risk if the virus takes hold, Māori communities have already demonstrated their capacity for adaptation and innovation in the face of lockdown.

At a more immediate level, as the lockdown proceeds, the high rates of family violence will rise further. The deeper issues around this continue to be avoided and need to be addressed. Lockdown decreases the number of ‘societal eyes’ in play. A decrease in reports of concern to Oranga Tamariki is much more likely to be due to the fact that school closures, limited general practice, restricted neighbourhood oversight, absence of sports activities and so on, means that many children at risk are socially invisible under the conditions of lockdown.

A lockdown creates new social configurations that are usually found only in institutions where sleep, leisure, work, education, and meals all occur in the same place. Normal conflict resolution mechanisms are put to real test under these new social configurations, where income and food security and generalised anxiety are also in play.

Of those directly affected by income loss, unemployment, or ill health, about 5–10% are likely to have prolonged PTSD. As the recession deepens, this number may grow. Already we have very high rates of mental health morbidity in young people and issues of acting out, depression, anxiety, and suicidality will grow.

We must, however, also be mindful that the virus may have more tricks to play. This could lead to a prolonging or reestablishment of restrictions. In such situations trust in institutions of governance could be undermined, especially if transparency in the rationale for decision-making is inadequate. If demographic tensions rise as the recession deepens, and there is a growing sense of unfairness and inequity, and if the viral challenge persists and leads to greater fearfulness, then social cohesion could be undermined. At the moment New Zealand is privileged in this regard, which will be to our long-term advantage. This must be closely monitored and preemptive actions taken to promote it.

<sup>32</sup> P Norris, R Ingelhart; *Cultural Backlash*; CUP 2019

# BEING PREPARED

Managing risk is a core part of governance, both in the public and private sector. Governments make many decisions about preparedness. For example, in New Zealand we are well prepared for dealing with natural disasters, and many countries prioritise defence and civil-defence spending on the basis of managing perceived threats, but there can be no doubt that governments around the world were ill prepared for this pandemic. New Zealand was not overtly better prepared than many others.

Risk analyses and registers<sup>33</sup> are core to risk preparedness and are extensively used in both the private and public sectors globally. Many countries have well developed tools for foresighting and technology assessment. Indeed, technology assessment will be important not only in identifying future risks but also in thinking through issues such as diagnostics and digital contact tracing as discussed above. Increasingly countries are publishing their risk registers; New Zealand's, while well developed, remains unpublished. There is obvious value in alignment of understanding and preparation across many parts of society. Despite all the effort that has gone into developing these tools of foresight, the pandemic suggests that governments around the world have not been good at acting on said foresight. Why? There are many lessons to learn in considering possible explanations which are discussed elsewhere.<sup>34</sup>

Risk registers should not be seen as an end in themselves, but rather as live documents against which governments and agencies should test themselves constantly to be sure that adequate and appropriate preparation is being made for high-impact and high-probability events. They need to identify accountabilities and responsibilities and where research and preemptive coordination are needed. In the main, risk registers should be produced outside the political process by a partnership between the expert and policy community. They should then be published in some form<sup>35</sup> to build trust and consensus for preparations, and so that all actors (local authorities, business, NGOs, individuals) can understand the risks and themselves be prepared. Publishing national risk registers also allows inputs from the diverse elements of any society that might lead to better analyses and impact assessments. Further, because any crisis affects different components of any society differently, it allows diverse groups, such as Māori, to be sure that their perspectives and interests are included both in identifying risk and impact and in the response recipes that are part of any risk register.

Policymakers should explore how other countries are approaching similar analyses and test their own priorities and assumptions against others. There is also a critical need to understand and learn from how other countries have dealt with similar emergencies in the past. It is notable in the current context that the jurisdictions that had to confront SARS appear

to have been better prepared and have handled this pandemic with greater urgency and success.

After any disaster there is always some form of retrospective inquiry and that will always focus on the levels of preparation as well as the response. A well-developed, transparent risk register helps to demonstrate that appropriate preparations have been made, and reduces the risk of political blow-back at the time of any post-crisis review. But most importantly, the registers ensure a country or organisation is prepared for what may well be the next existential threat – one that can be forecast and prepared for, thus reducing the impact on people and the cost to society.

33 A risk register is a tool for identifying and documenting risks, and actions to manage them.

34 Gluckman and Tyler: in press.

35 Except for those parts of risk registers that use classified information although even here much can be made public and the inclusion of security risks is inherent in any risk register.

# MOVING AHEAD

We need a broad consensus of what an effective medium-term recovery, and the long-term future, looks like for New Zealand. Many will inevitably hold the view that most things can return quickly to the pre-COVID norm. But as is detailed above, for many individuals and companies, there will be a 'new normal' and this new framing will need to pervade much of the country. New Zealand can be thought of as a complex system; it has been perturbed to the extent that new emergent properties will appear. These create both new opportunities to grasp and challenges to address.

This discussion paper has highlighted the need to identify how, and in which sectors, significant change is not only possible but desirable – and indeed essential – for a better future for New Zealand. A holistic approach is clearly required. We can, and should, take advantage of this crisis to “build back better” (to use a popular phrase invoked after the Christchurch earthquake). Resilience is not only about coping with stress, it is also about taking advantage of crises and coming out stronger. Already, many sectors and individuals are defining a new normal and seeking new directions and opportunities, and this must be encouraged. It would be unfortunate if the imperative to get back on our feet and the exigencies of the political cycle undermined such an opportunity. Yet New Zealand has few institutions designed for both the informed foresight and the inspired visioning conversations that are needed now more than ever. Indeed, this was the very intent of Koi Tū, well before the virus struck. Such discussions take time, but this will have to be compressed – as the title of this paper suggests, discussions that might have occurred in future years need to start now.

New Zealand starts in a very enviable position and with a 'unique selling point' compared with other countries. Provided we do not have an awful rebound in coming months, we stand virtually unique as the first country to defeat the virus and with the lowest direct human costs, thanks to decisive leadership and public support when it was most needed. This gives an advantage to be rebuilding rapidly. Our leadership and societal response, both in the March 15th tragedy and now in the COVID-19 pandemic, have shown that we can be more united and cohesive as a society. We should not be embarrassed to stand tall. That leadership extends to the innovation we have shown in establishing the Epidemic Response Committee. Can we extend that to thinking about what processes for collective dialogue might show how a nation can move forward in a positive way from difficult times, repair social and economic damage and take advantage of new opportunities?

Our standing may also make us highly attractive to international firms to consider having critical personnel and operations based here, if the immigration policy settings are right. This could be a game changer for New Zealand if we move fast. How could we strategise to become such a magnet? What policies, regulations and assistance could we offer? What approaches should be made?

There has been considerable bipartisanship in managing the crisis to date. Given the paths we must choose will determine much for the coming decades, ideally this strategic discussion needs to transcend the inevitable partisanship of healthy democracies. Constructive and inclusive dialogue with business leaders, academics, government scientists and community stakeholders is needed.

At the same time we must not hurry ahead without making sure we learn the lessons from the pandemic, both from national and international experience. It will be important to better anticipate issues through the use of foresight, horizon scanning, and technology assessment and risk registers. Such future-looking tools have largely been lost from the New Zealand public sector. We need to consider how the public and private sectors can work optimally together and build better trans-sector resilience-focused relationships for more effective planning and coordination for addressing future shocks. There is a critical need for transparency and engagement for multi-sector decision making on many of the issues discussed above. Doing so will help sustain cohesion through the complex times ahead of us.

This paper has highlighted many areas where urgent reflection is desirable. Koi Tū sees its primary contribution as being a forum for raising questions and convening discussion that will help to identify solutions. Our approach will generally be to use the practices of 'brokerage' whereby we convene multi-stakeholder conversations and synthesise evidence from across domains, involving experts from multiple and diverse disciplines. This process produces an accessible synthesis for decision makers that takes account of what is known, what is not known, and the caveats that must surround any analysis of incomplete evidence. It is inevitable that many of the issues to be considered will confront contested interests, values and world views that must be considered. Our approach will be to define the options as we see them, from the evidence as we analyse it. It is clearly for the government and policy communities and the business and NGO sectors, to work through these options to reach decisions which by their very nature have much to consider.

In our coming papers, we will continue to build the conversation with deeper evaluation of particular sectors.



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