

2022

New Zealand Supply Chain and Logistics Risks Outlook for 2022



**Supply Chain Risk
Analytics Network**



**MASSEY
UNIVERSITY**
TE KUNENGA KI PUREHUROA
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Introduction

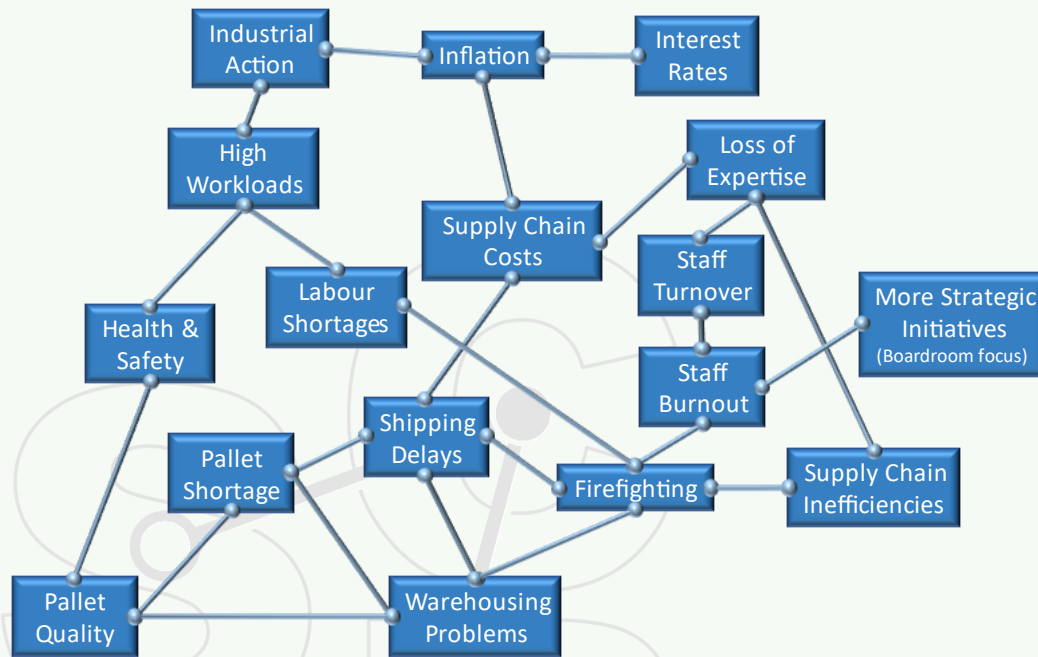
New Zealand's supply chains and logistical systems are by nature exposed to many possible threats. The country's topography, geography and climate often create challenges for supply chain operations. A relatively sparse population density and limited infrastructure over large parts of the country have also contributed significantly to supply chain disruptions in the past. On a global front, New Zealand's economy relies heavily on international trade and demand high performing shipping and airfreight solutions to serve its markets. A multitude of additional challenges posed by the fallout of COVID-19 can only be stacked on top of the usual risks that the country's supply chains often face.

This document captures the information and subsequent analyses of a panel discussion and data collection initiative to help create a 2022 risks outlook for supply chains and logistics operations in New Zealand. Thank you to the Australian and New Zealand Academy of Management (ANZAM) and Monash University, in particular Professor Amrik Sohal, who collaborated in organising the panel discussion. The information contained in this document is based on the subjective opinions of a large number of practitioners, consultants and academics. This outlook is of an advisory nature and caution is recommended before any mitigation measures are implemented. The comments captured in this document do not necessarily reflect the opinion of any of the persons or organisations named in this publication.

Risk Summary for 2022

There is strong agreement that 2022 will see increased supply chain costs, lower efficiencies and a continuation in capacity constraints, similar to 2021. Inflation is expected to continue rising and interest rates are due to follow. Labour availability will remain low, productivity levels may be generally low and due to rising costs and workloads, there is risk of industrial action. Shipping prices and the reliability of international freight routes may cause some businesses to focus more on the domestic front. Economic and geopolitical issues in China are also likely to create structural market changes on the international front, especially if the China / New Zealand relationship deteriorates. Stakeholders are voicing a concern regarding the availability of pallets and to some extent warehousing. A rise in demand for pallets and warehousing are likely to result in lower quality pallets and less efficient warehousing solutions, which will result in product losses and wastage, lower supply chain efficiencies and possibly higher exposure to health and safety risks. Under high demands, services and goods are normally channelled towards key account holders. Small and medium enterprises are therefore more likely to face significant supply chain challenges in 2022. "Firefighting" in the supply chain is expected to continue into 2022 with continuing risks of staff burnout, high staff turnover and loss of expertise. In addition, senior executives have become more focussed on supply chains and may drive strategic initiatives that will also impact on practitioner workloads. Wildcard risks include severe natural events and new COVID-19 strains that will not only affect supply chain capabilities but may also influence consumer behaviour.

Figure: A connectivity diagram between various supply chain and logistics risks that were identified by participants.



A Panel Discussion on Supply Chain Risks and Resilience in 2021 and an Outlook into 2022

Article by Dr Cécile L'Hermitte, University of Waikato

The year 2021 has been marked by a number of highly disruptive events for global supply chains, including the prolonged COVID-19 pandemic and the blocking of the Suez Canal. These events have exposed the New Zealand and Australian supply chains, that usually operate with high levels of efficiencies, to multiple vulnerabilities. Many issues emerged, including little buffer capacities, sudden demand surges, insufficient transport capacities, port congestion, soaring shipping prices, substantial dependence on China for

manufacturing, labour shortages, factory closures, delayed deliveries, and stockouts when goods were needed for production and sales. The list of supply chain challenges became so long that many wonder whether we have passed the point of no return and need to build a new supply chain future. These topics and others were discussed by a panel of experts hosted by Massey and Monash Universities under the banner of the Australian and New Zealand Academy of Management (ANZAM) on 3 December 2021.

Panellists:

Kari Banick
GM Linfox, Australia



Global Supply Chain executive with more than 25 years of experience. Kari currently leads the Analytics and Design Services Group as General Manager for Linfox, Australia. An engineer by trade, Kari has held leadership roles in Engineering, Operations, Finance, and Supply Chain.

Noël Thomson
CEO of SNO-Tek Solutions & Director Intent Group, NZ



Noël Thompson has over 30 years' experience in supply chains and manufacturing. He has worked with global blue-chip companies in New Zealand, across an array of industries including food, FMCG, commodities, building products, QSR, and beverages.

Dave Christie
J4 Consulting Ltd., New Zealand



Dave has a wealth of strategic supply chain logistics leadership experience, with a career in industry spanning more than 35 years. Dave consults and works alongside businesses to improve performance in all aspects of their supply chains.

Neil Sigamoney
Director-Procurement/SC, Monash Health



Neil holds degrees in Mechanical Engineering, Commerce (Economics and Business Management), and a Master of Professional Accounting. He built a career working internationally across automotive, FMCG, higher education and the health sector in Australia.

A LOOK BACK AT 2021

Efficient supply chain systems require stability and predictability to ensure smooth movements of goods. Far from this, 2021 was characterised by increased uncertainty and intensified volatility in both supply and demand. The prolonged COVID-19 crisis made businesses aware of their supply chain vulnerabilities, such as single sourcing and unreliable supplier relationships. It also brought the lack of active supply chain design and planning into focus, especially for small organisations. As a result, businesses reassessed their way of operating and adjusted their supply chain operations. For example, retailers shifted from brick-and-mortar operations towards online sales. In the process, businesses reconsidered their predominantly cost-focused strategies and opted for risk-orientated practices increasing resilience and their ability to deal with disruptions. Redundancy is now being

incorporated into supply chains in the form of buffer stock or alternative sources of supply. The panel also agreed that supply chain strategy found a prominent place at the boardroom tables in 2021, and that managing directors and CEOs are becoming far more aware of the strategic value of supply chain resilience.

A LOOK INTO 2022

The current supply chain issues do not show any sign of normalising in the immediate future (12 to 18 months) and new disruptive events can be expected. Firefighting will remain the norm and will trigger further changes to supply chain operations. In this context, the panel foresee that supply chain digitalisation will accelerate. In particular, the use of digital technologies enhancing supply chain visibility (e.g. tracking technologies), supporting decision making (e.g. dashboards and visual tools), and optimising operations (e.g.

warehouse automation), will increase. Supply chain mapping is also expected to become more vigilant, seeking to improve risk analyses and comprehensive and accurate monitoring of the supply chain operations.

The development of key supply chain skills will become more important than ever. The panel agreed that expertise in planning and forecasting is a critical component of supply chain resilience. Good communication with suppliers and customers, and a move from transactional to strategic relationships with key upstream and downstream supply chain partners are also essential to enhance resilience. This suggests that while supply chain professionals will continue to deal with

emergencies, there will simultaneously be a need to focus on strategic long-term solutions at the same time. This will create a significant challenge for competent supply chain professionals who will need to juggle between strategic tasks and dealing with emergencies.

The panel identified the need for new supply chain models that can enable businesses to deal with the lack of logistics capacities that are commonly experienced when supply chains are disrupted (e.g. warehouse space and transport capacity). In particular, the development of collaborative supply chain networks where resources are pooled are thought to be more resilient than dedicated supply chains.



Dr Cécile L'Hermitte is a Senior Lecturer in Logistics and Supply Chain Management at The University of Waikato and specialises in Supply Chain Resilience.



Individual Participant Views on 2022




Industry practitioners rated ten risks / uncertainties against their likelihood of increasing, declining, or remaining stable during 2022. The overall score for each risk / uncertainty is calculated in a similar approach to the calculation of an approval rating:

$$\text{Overall Score} = \% \text{ Increase} - \% \text{ Decline}$$

Supported by the World Economic Forum Global Risks Report of 2021, there is nearly a unanimous view that cyber-attacks in 2022 will increase. Participants in New Zealand rated their exposure to cyber-attacks significantly higher compared to Australia. Participants also felt that the impacts on supply chains generated by political influences and regulators are likely to increase. The likelihood for stockouts to continue into 2022 is also high. Stockouts is a key macro supply chain performance indicator and can point to any range of critical issues along the supply chain that do not work well. There is a strong expectation that firefighting various logistical issues will continue well into 2022. Participants have more divergent views when asked about the financial strength of their businesses

and upcoming import and export volumes. This suggests that different sectors will continue to enjoy different degrees of opportunities and exposure during 2022. The risks / uncertainties listed in the table below do not necessarily pose a threat to supply chains and an increase, for example, is not always negative. A rise in export volumes, for example, may be positive to a manufacturer, but may also create risks and challenges for logistics operators along the chain. Comments made by some participants were inserted below and a thematic map of risks identified by individuals are displayed on the following page.

Table: The percentage of industry participants who voted for each risk / uncertainty to increase, decline, or remain stable during 2022

Risk / Uncertainty	Overall	  		
	Score	Decline	Stabalise	Increase
Cyber attacks	91%	0%	9%	91%
Regulatory constraints	76%	0%	24%	76%
Stockouts	65%	3%	29%	68%
Shipping rates	59%	12%	18%	71%
Supply chain staff turnover	59%	12%	18%	71%
Emergencies - Firefighting	44%	6%	44%	50%
Port congestion	35%	12%	41%	47%
Export volumes	26%	18%	38%	44%
Import volumes	21%	29%	21%	50%
Financial weaknesses	15%	26%	32%	41%

COMMENTS MADE BY SOME PARTICIPANTS:

In 2022 we can expect a re-opening of retail, hospitality, tourism, travel, and manufacturing (compared to 2021 COVID-19 Alert Level lockdowns). This will increase both demand for and supply of goods. However, while code-share air cargo capacity will increase, the constraint on shipping capacity on NZ routes will become worse due to global trade prioritising other shipping lanes.

The previously finely balanced supply chains have been so disrupted and it will take 2 years at least to reset the logistics operations because of backlogs, but also because customer behaviour will be abnormal with ongoing major changes.

We are entering a hugely unpredictable season, and for many economies, a difficult one. As an ordinary citizen I am feeling the effects of an increase in food prices and services that would not have happened so quickly if not for the supply chain being severely affected. If I am struggling with the income I

presently receive (and I am a disciplined financier), then I can't imagine what corporations are going through to meet customer needs. Adjusting prices so they too remain competitive and in business; adjusting timeframes so that there is no loss in product value (perishables); mitigation of risks associated with transport (ship, air, road).

Assuming that the pandemic will be managed with greater confidence:

1. There will be a desire at macro-, meso-, and micro-levels to recover quickly.
2. There will be a desire to shorten supply chains and produce more locally.
3. There will be higher movement of materials during the first half of the year due to the backlog.
4. Overall demand for experienced supply chain professionals will increase and this will lead to above average turnover of skilled practitioners.

5. Companies may seek to build buffers, invest to become more self-sufficient, and this could lead to anxiety related to cashflows and financial security.

Waves of supply and demand disruptions caused by the pandemic added to a long running series of natural and man-made disasters, have considerably unsettled SC operations. Coupled with the hoarding of shipping containers and political gamesmanship played out on trade between nations, has all exacerbated the SC stress.

The influence from Covid-19 will be reduced, so the economy will go back to normal gradually.

Countries relying heavily on international trade for critical inputs and revenue will attempt to re-establish as much international trade as possible, putting extra pressure on weakened supply chain resources and distracting from supply chain control activities such as governance - this will take years to stabilise in my opinion.

I think we're in for very turbulent times over the next couple of years! Already we are seeing "policy" around supply chains in the US, as a means to unclogging the clogged ports. But that's probably too little, too late. We'll continue to see all kinds of disruptions in global supply chains for several years.

Current supply chain disruptions will last. Measures will be overdone as usual. So, it will get worse before it will get better.

Inflation, bad government policy and more restrictive policies for moving stock and people. Lost staff through vaccine mandates.

As the Covid-19 waves will continue to affect the world in 2022, the supply chain will be negatively influenced, by reducing the import volumes and increasing the associated costs. More regulations will be introduced aiming to increase the performance across the supply chain focussing on environmental targets. Decreasing usage in traditional energy production (coal and diesel) may generate blockages in the energy landscape and will force society to move to more clean energy.

Disruptions have become business as usual, so I believe there will be less "firefighting" needed. I believe port congestion (in New Zealand at least) has stabilised but will remain high in 2022.

Inflation will grow in New Zealand as supply scarcity accumulates. Government will need to make specific interventions due to downward pressure on GDP caused by supply chain challenges.

As global and local health controls stem the tide on COVID-19, the job market risk will lower - both for businesses to hire and for people to move jobs.

We are at the peak of the pandemic induced supply chain disruptions. As China's economy is correcting the breakbulk and container shipping will correct too.

I think we will see a shift in availability of stock with COVID restrictions easing, but also more self-sustainability in a lot of local markets.

I believe current disruptions will continue for some time and this will drive up costs. Also increased costs due to cyber threats, and political disruption will impact international supply chains.

Looking a bit further ahead, new technologies are likely to curb the upward spiral in container numbers. Social pressure to reduce carbon miles when purchasing consumer goods will change cargo flows. The impact of climate change driven weather events will disrupt supply chains on a scale not seen before.

Global Economy picking up - increasing inflation. Lack of skilled staff in NZ and poor government immigration policies impacting on productivity.

The volume of export and import will keep rising because no country is self-sufficient; they have to trade with others. Countries will try to stimulate their economies by strengthening trade after the pandemic. Further, the supply chain shocks during the pandemic have increased awareness of countries around the world on the importance of securing the supply of their critical resources. Individual countries will try to protect themselves by introducing various rules relevant to supply chain operations.

Chaos and inflation will continue for a while, especially when we see bad COVID winters in the US and EU, and tensions (trade and others) between major economic powers.

I don't believe the pressures on supply chains will ease up anytime soon. Particularly here in NZ, with new trade agreements and supply demands from the construction industry, there will continue to be pressure on ports. Huge pressure on supply chain staff will see increased staff turnover.

Shippers and importers have realized and accepted the new norm, will adopt and adapt their practices and strategies to cushion and safeguard against the effects of uncontrollable and unforeseen external forces. This includes: Increasing stock cover, applying longer lead times, developing agile and responsive multi-modal solutions, harnessing tech and data to understand trends and make informed decisions.

I believe that with the increasing coronavirus vaccination rate in every country, country borders will soon be open. Together with government policies to recover the economy, economic activities will fully resume. Supply chain activities will be busier to meet the demand of the economy in the recovery stage.

Cyber-criminal activity has been on the increase over the last year. This has involved theft

(particularly of cryptocurrency), data breaches and malicious malware. Without massive investment in cyber security this is unlikely to change.

I feel shipping rates, port congestion, export volumes and import volumes will start to decline as we are meant to be heading into a recession. Feel that cyber-criminal activities will increase along with cashflows and financial security declining. People will be less secure financially and more likely to move towards criminal activity.

Global congestion in the supply chain driven by more online shopping. Reduced exports in many countries due to production being constrained by lockdowns and social distancing within plants. This will cause an imbalance between containers in and containers out at ports. Higher workloads for staff to deal with disruptions, leading to higher turnover and operating costs.

Low resilience enables knock-on effects from COVID-19 to continue rippling through supply chains. Issues are compounded by new strains, increasing e-commerce pressure, and the time required to build additional capacity, let alone redundancy. I hesitate to suggest the future appears bleak, but good things take time.

Expecting a slowdown (and some liquidations) in the Chinese manufacturing sector.

Figure: This image depicts a range of risk drivers that were identified by individual participants. Larger printed words were more prevalent across many participants.



Group Session Discussions

Eleven groups of industry representatives and academics were asked to reflect on the current issues that prevail in supply chains in New Zealand and Australia, and to explore possible future issues for 2022. The list below briefly summarises these discussions. Larger printed items enjoyed more attention. The impacts of **blue** printed items are already becoming evident in today's supply chains and are expected to prevail into 2022. **Orange** printed items are new issues that may affect supply chains and logistics in 2022. There is a high degree of connectivity between many of the risks listed below and this requires further unpacking within a specific supply chain context.

Labour Availability – Lack in Capacity – Cost of Labour - Industrial Action – Waves of New Technologies - Strikes in the Transport Sector (Rail / Shipping / Ports / Road Haulage)

Port Congestion – Long Leadtime – Stockouts & Stock Shortages – Structural Changes in Operations – Accelerated Deglobalization - Pallet Shortages - High Demand on Couriers – Bottlenecks – Raw Material Shortages – Supply Demand Mismatch – Unavailable Containers – Perishable Stock Losses - Shortage in Warehousing - Severe Weather Events - International Suppliers Prioritise Large Key Customers (at expense of NZ)

Geopolitical Risks – Trade Agreement Changes – Increased Geopolitical Tension - Unpredictable Government Policy - NZ / China tension - Trade Wars / Sanctions - Accelerated Deglobalization - Stockpiling Safety Inventories

Pandemic Uncertainty – Consumer Behaviour – Lack of Accurate Forecasts – e-commerce - Demand Uncertainty – Supply Demand Mismatch – Unpredictable Government Policy - New COVID Strains - New Lockdowns & Social Unrest

Loss in Specialized Staff – Limited Staff Skill Sets – Lack in Supply Chain Visibility – Waves of New Technologies - New Technology Hype (Technology Bubbles) - Changes in Work Practice (employment rules / impacts of working from home)

Supply Chain Costs – Freight Costs - Cost of Labour - Cashflow – Rising Inventory Costs - International Suppliers Prioritise Large Key Customers (at expense of NZ)

Severe Weather Events

Cyber Security - Opportunistic Behaviour

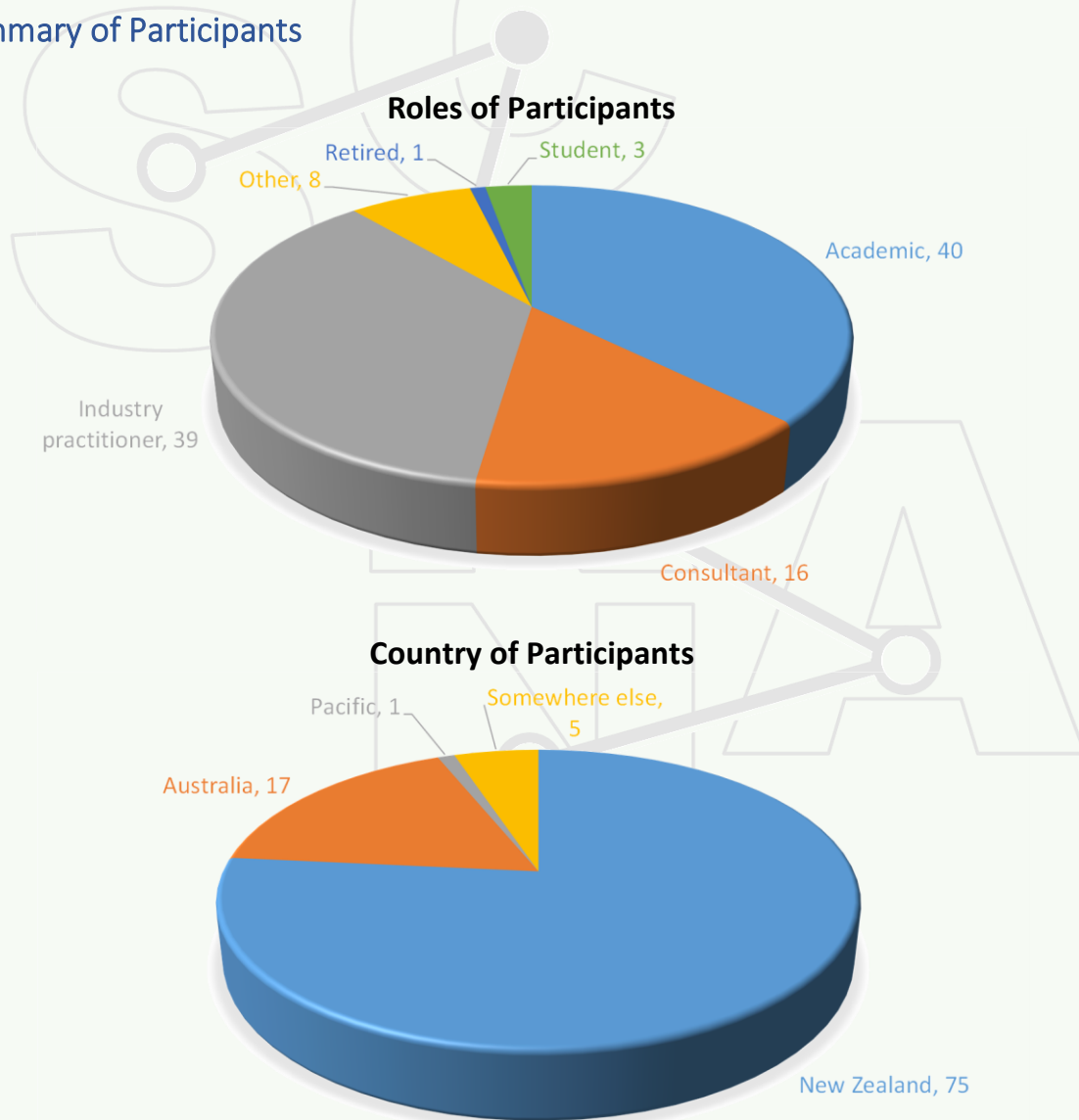
Energy Crunch

Global Recession - Economic Instability: Credit, Inflation, Local Recession

Upcoming Events that may impact Supply Chain Performance in 2022

- February 4 – 20 February, Beijing Winter Olympics
- March 9, South Korean presidential election
- March 27, Hong Kong Chief Executive election
- April 10, French presidential election
- June 24, first Matariki public holiday
- October 2, Brazilian general election
- November 21 – December 18, FIFA World Cup in Qatar

Summary of Participants





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