



Response to the
Ministry of Transport

**Response to New Zealand Freight and Supply Chain Issues
Paper**

Due 3 June 2022

1. Introduction
- 1.1. Air New Zealand welcomes the opportunity to submit on the consultation paper titled “*New Zealand freight & supply chain issues paper*” (Consultation Paper) issued by the Ministry of Transport (MoT) in April 2022.
- 1.2. We set out Air New Zealand’s responses to the questions raised in the Consultation Paper in the Appendix below.
- 1.3. As an introductory comment Air New Zealand broadly supports the objectives of the Consultation Paper and the Government’s commitment to developing a holistic freight and supply chain strategy that can direct public and private resources to agreed priority actions.
- 1.4. The massive disruption to New Zealand’s air connectivity caused by COVID-19 showed us the key role that aviation plays in New Zealand’s global supply chain connectivity and the risk to New Zealanders health and wellbeing when critical trade flows are disrupted. As the likelihood of regular supply chain disruption looks set to continue, it is vital New Zealand builds efficient and robust supply chains able to endure disruption.
- 1.5. Air New Zealand is keen to ensure the development of a national freight and supply chain strategy leads to clear national objectives, outcomes, and vision along with relevant regulation, policy, and incentives to drive action and investment from both private and public interests. Supply chain stakeholders across New Zealand are currently fragmented and must be brought together to operate in such a way that their interests are aligned with the interests of New Zealand’s supply chain system as a whole.
- 1.6. While we support the broad objectives of the Consultation Paper, we advocate for the strategy to focus more on facilitating the flow of ‘value’ in the supply chain, not only ‘volume’. This is key to understanding the value-drivers of the system and lends to the development of a more whole strategy that is closely aligned with the Government’s low emission, high value economic agenda.
- 1.7. You will see throughout our response a clear focus on helping New Zealand transition to a low emissions freight transport system and strong commitment for us to work with the Government on initiatives to do so. Air New Zealand has a goal to achieve net-zero carbon emissions by 2050 and is committed to decarbonising its operation. Decarbonising aviation will primarily rely on access to scalable and affordable volumes of sustainable aviation fuel. Transitioning aviation to a low emissions model presents significant challenges - working in partnership with the Government and industry will be critical to transform the sector. .

Thank you for the opportunity for Air New Zealand to provide these submissions on the Consultation Paper and we look forward to continuing to engage with you as the strategy takes shape this year. If you would like to discuss any issues we have raised, we would be happy to do so.

Yours sincerely,

Anna Palairat
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Air New Zealand

Appendix

1. Do you agree with the outlined description of the freight and supply chain system?

We largely agree with the outlined description and have appreciated the opportunity the Ministry of Transport has provided to input into this policy process as it stands. The description of the current system, however, has some shortcomings on aviation that we outline below:

- The description could better illustrate the domestic or international movement of airfreight. As 21% of the value of imports and 16% of the value of exports, aviation and the role of air cargo should be accurately depicted in the description of the current system. Maps depicting the supply chain on page 13 and 16 leave out air freight altogether, these omissions risk understating the importance of airports and aviation in the supply chain.
- As such one might expect a deeper analysis into not only the flow of 'volume' (as outlined in the visual aids), but also the 'value'. Garnering a deeper understanding of the value-drivers of the system, in addition to the volume-drivers of the system, would lend to the development of a more whole strategy, and one which is more closely aligned with the Government's low emission, high value economy agenda. Several high value sectors for example are completely reliant on airfreight imports or exports to get product to market e.g. fresh fish, cherries or cold chain pharmaceuticals including vaccines.
- The disproportional value to the economy that export or import goods shipped via air freight generate (ref: "Airlines carry 16% of our exports ... by value but only 1% by volume") is often dependent on domestic airfreight capacity to connect regional New Zealand to the international gateways in AKL, WLG, and CHC. As such stating '*domestic airfreight volumes are very small*' risks underestimating the importance to our economy of domestic airfreight and doesn't account for the multi modal or supplementary nature of much of our domestic air freight e.g. chilled salmon exports are often trucked to Auckland within shipper built units compatible with widebody aircraft, before being air freighted internationally – this could either be airfreighted or trucked.
- The description should outline the importance of cold chain logistics in the supply chain for which infrastructure will often sit in parallel to the standard supply chain – many of our exports/imports are not suitable for a standard supply chain and a shortage of cold chain availability can cripple certain exports and/or critical inputs.
- The outline of the system identifies that "our small size and remote geographical location presents a challenge in accessing reliable international transport services at competitive costs, especially when the international supply chain is experiencing disruption" but fails to offer the inextricable connection between New Zealand's tourism market and international airfreight capacity. In times of buoyant tourism, the number of air carriers operating internationally into New Zealand increases. This in turn increases the breadth of market access for exporters (and importers), improves access to capacity, and reduces the total cost of market access as air freight costs for exporters (and importers) are typically driven on a supply demand basis, i.e. increasing the market supply of capacity

typically reduces the overall cost to shippers (noting c. 80% of New Zealand's export airfreight was ordinarily carried in the belly of passenger aircraft). Therefore, increasing and securing New Zealand's global connectivity for passenger travel or tourism is key to improving New Zealand's supply chain efficiency, cost, and resilience, and overcomes many of the issues outlined in the quoted statement above. OECD studies flag the link between a country's global connectivity to its productivity with it improving economic growth, supply chain efficiency, and resilience.¹

- The description could also look more closely at New Zealand's current role as an Asia-Pacific hub in global freight flows rather than the end of the line. For example: we are a hub for Pacific supply chain connectivity for both maritime and air freight; we are the most efficient link between South America and Asia and a time saving stop-over between Australia and the United States. Helping grow Auckland as a global air freight hub could improve New Zealand's supply chain resilience by increasing the flow of goods and enable businesses to better integrate into global value chains. It could also facilitate opportunities for e-commerce – key for many SMEs.

2. Do you have any views on the outlined role of government in the freight and supply chain system?

- Government is in a unique position to be able to facilitate the collection and analysis of data across the supply chain system both to identify weaknesses or choke points and opportunities to introduce efficiencies. Focusing on getting an accurate digital twin for the New Zealand supply chain system could help ensure that Government investment in supply chain infrastructure is evidence based and prioritised accordingly. Government could look to provide a platform to hold and anonymise commercially sensitive cross sector data to guide infrastructure planners for example a model based on the Australian [National Freight Data Hub](#).
- Government's heavy investment into public infrastructure such as "roads, bridges, tunnels, and railway tracks", should prioritise the choke points noted above and look to advance the efficient throughput of freight at airports with robust feeder infrastructure built for growth. Government might also note its role as it relates to the investment into infrastructure relating to airfreight operations, in instances where that infrastructure is deemed to be "fundamental to the movement of goods in freight and supply chains .. important to New Zealand which may otherwise struggle to be commercially viable" this could include strategically critical airstrips in the regions for example.
- *Facilitating New Zealand's participation in global value chains* – we support a government role in improving the cross-border regulation of trade. This will be key to facilitating logistical efficiencies, reducing friction and thereby improving resilience in the supply chain. For example the digitisation of trade documentation could allow the removal of paper based trade documents that often cause delays, inaccuracies and the potential for fraud. To facilitate the digitisation of cross border trade Government agencies, together

¹ See the report 'Infrastructure Connectivity' at <https://www.oecd.org/g20/summits/osaka/G20-DWG-Background-Paper-Infrastructure-Connectivity.pdf>

with private sector actors, will need to work together on a common goal to provide a trusted and legitimised platform for trade documentation aligned with similar platforms offshore.

- We would further support government trade officials proactively protecting the ‘global supply chain’ which in effect is a public good that needs to be maintained by all stakeholders. The last two years of ad hoc lockdowns, border closures, and the increasing introduction of export controls has been hugely disruptive to the global supply chain and can severely impact the operation of supply chains. Continuing to initiate multilateral initiatives such as the July 2020 APEC Declaration on Facilitating the Movement of Essential Goods and pushing back against unjustified restrictions that inhibit trade should be a key focus for trade officials.
- *Government will play a key role enabling decarbonisation in the sector:* aviation is difficult to decarbonise and requires collaboration across the whole economy, including the energy sector, airports, aviation, exporters, tourism, and primary industries. The private sector will not be able to decarbonise the air freight sector alone - new policies, regulations, R&D funding, and investment are needed. Industry and government must work closely together to get to net zero by 2050 while maintaining New Zealand’s international and domestic connectivity. To decarbonise aviation, a government’s noted ability to provide a system-wide longer term 30 year view will be critical.

3. Do you agree with the outlined strategic context and key opportunities and challenges?

- We provide an overview below of our position on the strategic context outlined and the opportunities and challenges that are of key concern for us:
- *Decarbonisation* – We advocate for the strategic context outlined in relation to climate change to better address the role of airfreight in the freight system, and clearly recognise the magnitude of the decarbonisation challenge for the aviation sector over the next 30 years. There are also opportunities to highlight areas where New Zealand has a unique opportunity to be a world leader in decarbonisation.

Aviation connects New Zealand to the world and enables our economic and social success. Air travel is vital to the basic functioning of our economy, our critical infrastructure and our health system. It is necessary for our exporters to distribute high-value, often perishable, goods to the rest of the world and for our country to import the critical goods and services needed to keep our economy functioning.

To this end, aviation and its infrastructure, delivers a strategic public good. However, flying creates carbon emissions, and these are currently hard to abate for an export focused island nation with limited alternatives. Even with the full deployment of aviation decarbonisation technologies, including electric, hybrid and hydrogen powered aircraft (zero emission aircraft technologies), and Sustainable Aviation Fuel (SAF), there is no current technology mix that can enable the industry to absolutely decarbonise by 2050. Furthermore, the industry’s share of emissions will continue to increase in coming

decades as other sectors decarbonise more quickly given available technologies and policy support.

Air New Zealand is committed to decarbonising its operation. The airline is striving to reach its goal of net zero carbon emissions by 2050 by reducing actual emissions as far as possible, and using credible carbon removal solutions as a last resort. Analysis undertaken by Air New Zealand, confirms the critical role of SAF in decarbonising international aviation emissions. In the period to 2050, zero emission aircraft technologies are not expected to be able to fly long haul missions.

Currently, there is no SAF supply in New Zealand, and there is a global SAF shortage – less than 1 percent of aviation fuel supplied in the world is SAF. Where it is available, it is two to five times the cost of traditional jet fuel. Accessing sufficient volumes of SAF will be a key challenge in the short term and in the period to 2050 but fundamental to the decarbonisation of our supply chain. Air New Zealand broadly has four avenues for sourcing SAF: (1) domestic SAF production; (2) importing SAF from international production facilities; (3) purchasing from international ports; or (4) via emerging trading platforms enabled by “book and claim” practices.²

With the right policy and investment settings, facilitating domestic SAF production could be made viable, and the commercial gap with fossil fuels can be narrowed, as demonstrated in California where State and Federal policy measures have reduced the gap to under two times the price of fossil fuel. Analysis carried out by the SAF Consortium (Air New Zealand, Z Energy, Scion, LanzaTech and LanzaJet) shows there is a pathway to stand up a domestic SAF industry for New Zealand to meet 50 percent of New Zealand's aviation fuel demand by 2050, supported by a domestic feedstock (raw materials) supply chain. Further consideration of the domestic viability of SAF production in New Zealand is currently being investigated via the partnership between Air New Zealand and the Ministry of Business, Innovation and Employment (MBIE). Any domestic production of SAF would likely need to be supplemented by SAF imported from offshore and emerging global trading platforms processed by ‘book and claim’. In the absence of domestic SAF production, a secure and sustainable import supply chain for SAF will need to be established.

Further options for ‘green corridors’ can extend to aviation and help advance the urgency of the decarbonisation of airfreight through tangible bilateral initiatives that set an example for the multilateral ICAO Framework. These corridors would rely on designated SAF volumes, wrap around green inflight initiatives, utilise the most efficient technology currently available (e.g. Boeing 787-9 aircraft) and could provide a sustainable alternative

² **Book & Claim is a chain-of-custody model in which the administrative record flow does not necessarily connect to the physical flow of material or product throughout the supply chain. A book and claim solution allows customers to access SAF carbon reductions without being physically connected to the supply site. The SAF supplier delivers the SAF into the supply chain at one airport location and ‘books’ the carbon reduction associated with it into a registry. Then the customer at another global location can ‘claim’ those carbon reductions by purchasing their traditional jet fuel along with the benefit of the lifecycle carbon reductions that have been registered in that registry.**

for exports that rely on airfreight. In this context, Air New Zealand notes the Sustainable Aviation Arrangement entered into between New Zealand and Singapore, which includes a study on the viability of developing 'green lanes' between New Zealand and Singapore to encourage the consumer uptake of SAF-run flights.

While SAF is currently the best solution to decarbonise long haul flights, it still produces a residual amount of carbon emissions (CO₂). Zero emissions aircraft technologies play an important role in reducing not just CO₂, but other types of emissions such as NOX and contrails. This technology is expected to mature and be a possibility for Air New Zealand from 2030 on shorter domestic and regional flights. From 2040, these technologies could enable flights to Australia and the Pacific Islands.

New Zealand is uniquely placed to lead the world in the deployment of zero emissions aircraft. The domestic network is ideally suited to adopt zero emissions aircraft with a number of short range routes suited for early aircraft demonstration, and New Zealand's largely renewable electricity grid allowing for scalable green hydrogen production and associated infrastructure.

The Emissions Reduction Plan included an action to establish a public-private aviation leadership board focused on decarbonising aviation. This platform should be established as quickly as possible and resourced appropriately to: (1) accelerate access to affordable and suitable volumes of SAF from New Zealand ports; (2) make zero emissions aircraft technologies a reality in New Zealand, including an enabling infrastructure and regulatory environment; and (3) unlock operational efficiency gains in the air and on the ground.

- *Urban densification* – We advocate that the strategic context takes the same focused approach to land use in and around airports as it does to maritime ports. Ensuring a systems approach to look at multi modal freight movements and zoning around airports. This will become even more important with the forecasted growth of e-commerce and with airport warehousing space already under pressure as retailers look to hold more supply to take account of supply chain disruption.
- *International developments will increase uncertainties faced* - Geopolitical tensions could disrupt the security of open air space and access to landing slots at aviation hubs. This could have an impact on New Zealand's global supply chain connectivity e.g. EU's recent moves to ban the use of Russian airspace for its carriers and Heathrow Airport confiscating Russian airline Aeroflot's landing slots (without payment).
- *Border closures and the decline in tourism have created uncertainties for the future of airfreight* – please see answer to question one re link between tourism and our supply chain.

4. Are there any trends missing that we should consider?

- Regionalisation and reshoring, or nearshoring of supply chains? A recent trend that market commentators have spoken to is an expected proliferation of the regionalisation

and reshoring, or near shoring, of supply chains. It would be prudent to look at whether the pandemic has seen a shift in global supply chain patterns or preferences and analyse how this could impact demands, stresses, and opportunities for the New Zealand supply chain.

- Transition risks are a trend that could pose a challenge to New Zealand's supply chain. These are business-related risks that follow societal and economic shifts toward a low-carbon and more climate-friendly future. These risks can include policy and regulatory risks, technological risks, market risks, reputational risks, and legal risks. In this respect, the emergence of mechanisms such as the European Union's Carbon Border Adjustment Mechanism and the noted criticism surrounding New Zealand's Free Trade Agreement with the United Kingdom with regards to the viability of trade with a distant country signals a trend towards greater regulation on imports/exports and changing customer sentiment. Transition risks amplify the need to decarbonise the freight system as quickly as possible.

5. Which of the opportunities and challenges do you believe will be most important in shaping the future of the freight and supply chain system in New Zealand and why?

- Value lens - to enable a transition to a higher value export economy, the supply chain system should be considered through a 'value' lens, not only 'volume' – which is currently the predominant lens in this overview. Air New Zealand is keen to ensure that the importance of aviation in the NZ supply/value chain is well understood, so far as the value of NZ trade that is enabled via Air Freight (c. 16% of all exports and 22% of imports value, vs <1% in volume).
- We need to ensure that we create an interconnected NZ supply chain with interoperable systems: geographical and modal connectedness between both international and regional airports is critical, along with the end-to-end digitisation and interoperability of supply chain systems across the participants involved. This will help ensure all actors in the supply chain can better plan for a surge in demand and/or disruption to supply minimising the disruptions to the economy that could otherwise occur.
- Decarbonisation: the greatest contributor to aviation decarbonisation in the period to 2050 will be SAF. Currently SAF is not produced in New Zealand and where it is produced, it costs 2-5x the price of traditional fossil fuel derived jet fuel. While currently made from biomass feedstocks, advanced biofuels and power to liquid (PtL) SAFs are required to enter the market at scalable levels by around 2030 for the industry to achieve net zero by 2050 – there is need for New Zealand to urgently move on this to meet our climate ambitions and protect our supply chain. Globally, SAF production needs to scale rapidly in the period to 2030, which will be challenging as it typically takes around 5 years to build a new SAF plant and get it to full operation. Since the availability of sustainable biomass resources is limited, priority access to produce biofuels should be limited to sectors like aviation which have few other alternatives to decarbonise.

Transitioning the Freight sector to a low emissions economy will require large volumes of renewable electricity generation. This will unlock green hydrogen production and the creation of PtL fuels. Done correctly, this transition could unlock opportunities beyond decarbonisation, including skilled jobs, regional development, enhanced fuel security, exportable IP and potentially exportable green hydrogen and PtL SAF.

Working towards decarbonisation across New Zealand's domestic and international supply chain system will be critical to Aotearoa meeting its net zero 2050 goal.

6. Do you agree with the outlined vulnerabilities of the current system?

We agree with the vulnerabilities outlined. We outline several further vulnerabilities to consider below.

7. Is there any key information missing in understanding the vulnerabilities of the current system?

Access to key decarbonisation technologies: Decarbonising the airfreight sector will require significant volumes of SAF and green hydrogen. New Zealand does not produce SAF (which is already oversubscribed for offshore) and is producing very small volumes of green hydrogen. If these technologies are not supported to scale rapidly, the lack of access to key decarbonisation technologies will be a vulnerability and a material barrier to decarbonisation objectives in the context of our global supply chain connectivity.

Internationally governments have supported the establishment of SAF industries and provided enabling policy environments to acknowledge the urgency of the need to address climate change while maintaining their global connectivity and improving productivity. SAF supply offshore is already oversubscribed and pressure on the future procurement of SAF will continue unless countries look towards the enabling policy environments for SAF production demonstrated in the United States (notably California), the United Kingdom, Singapore, and the EU.

The vulnerabilities could better outline the reliance New Zealand's supply chain has on a global pool of specialised labour such as pilots, air crew or crane drivers, and how border closures, onerous health or testing requirements, and travel/border restrictions have a massive debilitating impact on both New Zealand and global supply chains.

A further vulnerability is the inextricable link between tourism and air freight capacity in New Zealand, matched by the low desirability of freighters operating in New Zealand (high cost to serve, highly seasonal, trade imbalances on inbound and outbound lanes). It appears from the overview that New Zealand's tourism strategy to move to target higher value tourists will be set independent to this analysis on a national freight and supply-chain strategy. To improve resilience in the supply chain co-development of strategies should be considered given the obvious link.

8. Do you agree with the proposed outcomes? If not, please explain why.

Low Emissions - New Zealand's freight and supply chain system is underpinned by a low emissions freight transport system

We support this proposed outcome and look forward to working with government and industry to decarbonise aviation and airfreight.

Resilience - New Zealand's freight and supply chain system is resilient, reliable, and prepared for potential disruptions.

Given the gravity of recent disruptions to global and domestic supply chains we understand a focus on resilience will be front of mind as an outcome, but Air New Zealand would advocate for resilience being only one of many goals for the supply chain where a constant balance between efficiency, speed, cost, reliability, and resilience has to play out for an economy to remain competitive and productive. Many of these factors are interdependent of each other – for example focusing on the efficiency of the supply chain in effect creates a more resilient supply chain. Enhancing digital capabilities to improve efficiency and forecasting capabilities while building better hard infrastructure capacity/capability – will in turn also build supply chain resilience for New Zealand. To achieve the stated agility and adaptability outlined in the ambition above – and for supply-chains to truly operate as a 'system', then we are critically dependent on the interoperability of systems and modes of transport (e.g. rail-to-air/air-to-rail).

We should therefore try to write a new narrative where resiliency and efficiency can occur simultaneously, with the end goal being a supply chain that allows our economy to be resilient, competitive, and productive. This will ensure New Zealand exporters are better able to integrate themselves into global value chains and help facilitate the current Government agenda for a low emission, high value economy.

Government should therefore focus on where it can really make a difference e.g. infrastructure capacity to meet growth levels, decarbonisation, data collection and improving or protecting against cross border regulations/risks.

Productivity and Innovation - New Zealand's freight and supply chain system is highly productive and innovative, and performs well when measured against global standards

As above.

Equity and safety - We agree with this proposed outcome. Focusing on the future of work in the supply chain is also key in this context i.e. will we have the skills needed to support the transition to a low emission, resilient, productive and innovative freight and supply chain system.

9. Are there more outcomes the strategy should focus on? If so, please explain what they are.

As above.

10. Do you agree with the potential areas of focus for the strategy?

Decarbonisation: we agree with the low emissions focus areas, noting that the roadmap must include a pathway for aviation emissions and specifically identify the technologies the airfreight sector will rely on to decarbonise, as well as the steps the sector and Government must take to roll out and support access to these technologies. Those parts of the freight sector deemed “hard to abate” must be supported and granted prioritised access to bioenergy and green hydrogen.

11. Which of these areas of focus would be most important to prioritise?

Low emissions: the focus areas identified in the low emissions outcome, particularly the roadmap and clearly signalled government support are very important and should work in tandem. We support prioritising these focus areas. Clearly signalled policy support for SAF and green hydrogen (both production and enabling infrastructure) will unlock greater private sector investment, interest and will attract innovators to New Zealand.

As previously outlined, to achieve the desired agility and adaptability, and therefore resilience, outlined in the ambition, and for New Zealand’s supply chains to truly operate as a ‘system’, we are critically dependent on the interoperability of systems and modes of transport (e.g. rail-to-air/air-to-rail). Prioritisation should be given not only to a cohesive digitalisation plan but also planned infrastructural cohesiveness.

12. What would successful stakeholder engagement on the development of the strategy look like from your perspective?

Successful stakeholder engagement would include a public private working group that meets regularly at both working level (monthly) and executive level/ministerial level (quarterly) to provide a regular feedback loop for policy makers and the private sector on supply chain policy and issues including a Road Map for the role out of the National Freight and Supply Chain Strategy and its recommendations. It would be important to have representation across all sectors in the supply chain including aviation, maritime, freight forwarders, rail, key exporters/importers, offshore actors. would need buy in from a cross section of Government agencies critical to build an agile and resilient supply chain – e.g MoT, Customs, MFAT, MPI, DIA, MBIE, MoH, DPMC, NZTE, CAA, and MaritimeNZ with dedicated time and resource applied.

We note that the public-private leadership board for aviation decarbonisation approved in the Emissions Reduction Plan could support work of this nature and we also note the action in the Emissions Reduction Plan to develop and set specific targets for decarbonising domestic aviation. This work must be complementary and aligned.