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# LOGISTICS & TRANSPORT NZ THE OFFICIAL PUBLICATION OF CILT NEW ZEALAND VOLUME 23 ISSUE 1

September 2024



Road transport may have a win with congestion charges **Empty container depots: A quiet revolution** Cybersecurity in logistics: Protecting the digital supply chain



Work to replace the aging wooden

Waikouaiti Rail Bridge 202 on the Main

South Line at Karitane for KiwiRail began

in March. It is a critical piece of network \_\_\_\_\_infrastructure that is having its 147

metre structure replaced with concrete

Photo: Smith Crane and Construction Ltd

reinforced tubular piles, precast head

stocks and a steel SPG span deck.



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The Chartered Institute of Logistics and Transport

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#### In the next edition

The editorial team welcomes expressions of interest for submitting an article for the September 2024 edition of this journal, especially from young professionals (those under the age of 35). Contributors should in the first instance contact the editorial convenor, Murray King (email murray.king@xtra.co.nz) to discuss their article. **Deadline for the December 2024 edition: November 2024.** 



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# Road transport may have a win with congestion charges

#### BY MICHAEL ROTH & IA ARA AOTEAROA TRANSPORTING NEW ZEALAND

AN AUCKLAND ROADING SPECIALIST says even if freight operators have to pay congestion charges, they'll probably still make on the deal. Michael Roth, the Auckland City Lead Transport Advisor, is one of the team looking at introducing congestion charges to Auckland.

The Government announced in August it will introduce a bill to Parliament before the end of the year. The Bill will then go to select committee where New Zealanders can make a submission on the legislation.

"Congestion is a tax on time and productivity. It means that we are away from home for longer, sitting in gridlock. It results in fewer jobs being done, fewer goods being moved, and delays to services across the city," Transport Minister Simeon Brown says.

"Faster, more reliable travel times will increase productivity and lower costs for businesses and their customers. That is why we are enabling time of use schemes to be put in place. Time of use schemes will improve network efficiency to increase productivity and enable Kiwis and freight to get where they need to go quickly and safely. It is not about raising revenue."

Cabinet has agreed to a legislative framework focused on seven key components that will enable local councils to propose time of use schemes on their networks. Local councils will propose schemes in their region, with the NZ Transport Agency leading the design of the schemes in partnership with councils to provide strong oversight and to ensure motorists benefit from these schemes. All schemes will require approval from the Government.

Mr Roth says wherever it's been brought in, time of use charging cuts at least 10 per cent of traffic, and sometimes over 20 per cent in the targeted areas. The former reduction in traffic is about the same drop that occurs during school holidays, so it's a sizeable fall. He says congestion charging is working in Singapore, Stockholm, and London.

"It tends to be brought into inner-city areas where congestion is bad, and regular. This can



Indicative areas of Auckland that will be included in each phase of congestion charging as shown in The Congestion Report (boundaries are indicative only). *Photo: Ministry of Transport* 

be more than the central business district but doesn't include the outer suburbs."

He says while trucks may face the same charges for entering the downtown areas, the pay-off for the transport sector is usually higher productivity.

"I would suggest the freight industry would save a lot of money through avoiding congestion, and those benefits should be greater than the price charged. I would not expect freight vehicles to get any free rides, but they will be the major beneficiaries of the scheme, even if they have to pay money to get onto the roads."

He says the aim with congestion charges is to make it worthwhile to do a "high-value" trip into the city, and discourage "low-value" trips to the city in peak times. "There are a lot of low-value trips on our roads. Those are when people are not paid for their driving time; they don't have to make a trip to a destination at that time, but they are part of the congestion, and they are delaying everyone in the traffic stream behind them – including all the trucks.

"Trucks are all high-value trips. It's a big vehicle so it's chewing through diesel, the person driving is getting paid so there's the cost of labour, and of course, there are people dependent on that trip who want the goods at the end, or who are waiting for things to get picked up."

However, everything is still at the planning stage with Auckland Transport working on the project that the council asked them to look at in November.



"It's complicated for several reasons. One is that there's no legislation to enable it yet so we're dependent on the government implementing legislation to allow us to do this. Then there's the technology options – what tech should we choose to implement the charges and collect the charges?"

At the moment, some of the options include the NZ Transport Agency technology used to collect toll road charges in the region, or Auckland Transport's parking app.

"Then there's the policy about what should be the rules around payment – are there vehicles that might be exempted or get discounts; what hours of the day should the scheme work, how often it gets reviewed; and how much do the prices vary depending on how congested it is?"

Mr Roth says communications and engagement with the public and stakeholders, and working out what benefits people want to see, are vital. He says where charging regimes have failed, they failed before they were even introduced.

"It was where there wasn't a good enough design or communications process to get the community and political support long enough to get implemented."

He says in cities where charges have been brought in, they have all worked as planned.

"They've removed a fair amount of congestion in the area and that's meant freeflowing traffic. Once they're implemented, they've stayed implemented. So, even with changes in political cycles, elections, and new politicians, the community has supported them enough that politicians haven't decided to rip out the schemes."

Apart from better-flowing traffic, Mr Roth says the money raised can go some way towards replacing the income Auckland lost when the regional fuel tax ended on July 1. "Yes, a time-of-use charge will make some money, though the policy decisions around that haven't been made yet and we don't know what the legislation will say. But we would anticipate that money would go back to improving Auckland's transport system – although the amount of money concerned is expected to be less than what we have lost through the regional fuel tax because the focus of this scheme would be about managing traffic demand, not about making money."

## Transporting New Zealand's view

Transporting New Zealand agrees that traffic congestion is an issue that needs addressing. Pricing mechanisms can be beneficial by reducing congestion and carbon emissions provided they are applied correctly and align with the fundamentals of good practice.

Interim CEO Dom Kalasih says he certainly agrees with Mr Roth that freight trips are high-value trips. He says the fundamentals of good practice were well explained by transportation expert Sarah Kaufman, executive director and adjunct associate professor of urban planning at New York University's Rudin Centre for Transportation.

"During her keynote at the T-Tech conference in Wellington in September last year, Kaufman explained that congestion charging was a way to tackle 'unnecessary driving' which was defined as people driving recreationally or people choosing not to take public transport as it was 'inconvenient'."

Mr Kalasih says Ms Kaufman's reference to "unnecessary driving" is important because freight transport is different. Road freight is necessary transport. The Government confirmed this during COVID when it classified road freight as an "essential" service. "Therefore, slightly contrary to Mr Roth's view, we believe good practice would be that congestion pricing is not applied to trucks.

"We'd also urge any local authority considering this approach that they not only weigh up the benefits against the actual charge that the road user pays, but they also carefully consider the administrative costs to collect those charges.

"Finally, we'd like to elevate any thinking in terms of congestion pricing simply saving the freight industry a lot of money. In essence, our members are service providers to the supply chain. Rather than looking at any improvements as savings to our industry, we'd hope local authorities see that increased productivity is beneficial to NZ Inc."



Michael Roth Lead Transport Advisor, Auckland Council

Michael is working on congestion charging, emissions reductions, parking, safety and supporting Councillors. Michael has over 25 years transport policy experience in Australia. With degrees in Manufacturing Engineering and Psychology, Michael focuses on human-centred design and mobility behaviour.

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# Spinning its wheels: the new national transport plan steers NZ back to a car-dependent past

THE GOVERNMENT'S new National Land Transport Programme (NLTP) could easily have been renamed the "highway funding project", given its intense focus on road building.

Released this month, the plan outlines funding priorities for the next three years. If it comes to fruition, much of the spending will be driven into major highway schemes, and steered away from sustainable transport alternatives for the main cities.

The programme allocates NZ\$7 billion for state highway improvements between now and 2027, most of which goes to the newest iteration of the so-called Roads of National Significance (RoNS). On top of this massive highway bill, the programme gives another \$1 billion in contingency funding to accelerated planning of the RoNS.

But the total \$8 billion price tag doesn't actually buy new highways. The roads are several years, if not decades, away from becoming a reality. Instead, these funds will be dedicated to extensive planning, design and preparatory work, rather than actual construction.

For many of those road projects, the current NLTP period focuses on route protection, environmental assessments, property acquisition and preliminary designs.

The State Highway 1 Warkworth-to-Wellsford project, for instance, will only begin construction late in this NLTP period. Others, like the East-West Link and State Highway 29 Tauriko West projects, are still in the development and route protection stages.

Even more telling, projects such as the State Highway 16 North-West alternative highway won't see any construction during this NLTP period. Nor will the State Highway 6 Hope Bypass in Nelson, which won't break ground until 2029.

#### Funding the status quo

The approach effectively commits billions in taxpayer dollars to preparatory work without delivering any tangible infrastructure improvements. New Zealanders will likely find themselves stuck in worsening traffic, waiting for highways that may never materialise.

These projects could easily be sidelined by future budget constraints or changing political priorities. A growing recognition of induced demand – where new roads generate more traffic rather than alleviate congestion – and the looming challenges of climate change risk these carbon-intensive projects being obsolete before they even begin.

#### BY DR TIMOTHY WELCH

Meanwhile, projects that could address far more severe congestion in the main cities are being cut back or indefinitely postponed.

Transport Minister Simeon Brown's election promise to prioritise mending potholes – essentially a rebranding of standard road maintenance – will also significantly affect transport funding.

In all, a staggering \$10.06 billion will be spent maintaining and operating the overbuilt road network, including:

- \$2.07 billion allocated for state highway pothole prevention
- \$2.3 billion for state highway operations
- \$3.44 billion for local road pothole prevention
- \$2.25 billion for local road operations.

This enormous sum, mainly dedicated to preserving the status quo, raises questions about the financial sustainability and efficiency of our current transport infrastructure model

#### Cont. on page 6



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#### Back seat for public transport

The road-building focus of the new NLTP will draw funding away from projects that offer the best bet of reducing urban congestion, lowering the number of road deaths and meaningfully curbing transport emissions.

The programme pulls the plug on new cycling and walking projects, furthering the culture war Mr Brown ignited when he took the reins as transport minister. Announcing his plan, he claimed New Zealanders were "sick and tired of the amount of money going into cycleways".

A mere \$460 million is allocated for walking and cycling over the entire three-year period, a fraction of the billions earmarked for highways.

This also represents a significant decrease from previous NLTP periods, with the document merely stating there is "no available funding for new projects" in this area.

With the focus on completing already committed projects and maintaining existing infrastructure, it's a clear signal active transport modes have been pushed aside in favour of the Government's asphalt aspirations.

Public transport funding also falls prey to the new highway building programme. While the NLTP allocates \$3.73 billion for public transport services and \$2.64 billion for infrastructure, the lion's share of this is earmarked for maintaining existing services, with very little left for expansion.

#### **Roads to nowhere?**

There is no grand vision for public transport. A mere \$136 million is allocated for service improvements across the entire country. Auckland, already choking on traffic, gets a mere \$100 million. Christchurch gets \$8 million.

Even more alarming is the expectation of increased fare revenue and third-party funding for public transport. The transport plan involves squeezing more money out of commuters already struggling with the costof-living, while simultaneously starving the system of the investment it needs.

Auckland's Northwest Rapid Transit corridor has been left dangling, its fate tied to "additional funding availability". The message seems clear: highways are a necessity, but efficient urban transit is a luxury.

This NLTP isn't just a missed opportunity, it's a deliberate U-turn away from the sustainable, efficient urban transport systems the cities need. Rather than investing in New Zealanders having a genuine choice in how they move in the future, it shackles them to a car-



dependent past – one pothole-free highway at a time.

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#### Timothy Welch Senior Lecturer in Urban Planning, University of Auckland

Tim Welch specialises in transportation, infrastructure and urban modelling with a focus on the use of big data and technology. Much of Dr. Welch's research is applied with a focus on equity and climate change. His past work has included analyses of public transportation performance and connectivity; evaluating the efficacy of policies aimed at mitigating climate change; developing models to measure housing value and other fiscal impacts of transportation infrastructure investments; and investigating the travel behaviour influences of the built environment.

# Changing of the guard

#### BY CORMAC MCBRIDE

#### Chris Gunn, Life Chartered Member

WE WOULD LIKE TO FORMALLY thank Chris Gunn Life Chartered Member for his many years of service to the Chartered Institute of Logistics and Transport, to the Southern Section Committee, and (since 2019) as the National Membership Manager. Chris recently retired (again) to focus on his other interests.

Firstly, a bit about Chris. Following six weeks of jungle training at Burnham Military Camp in 1967, Chris served with Whiskey Company, the second New Zealand rifle company sent to Vietnam. After a year there he served in Kuala Lumpur for a further two years before returning home and continuing his military career until 1975.

In 1975, the Labour Government set up New Zealand's superannuation scheme and Chris set up the Dunedin office. After that, Chris was an insurance salesman for 14 years, later running his own business. In 1997, he joined Pacifica Shipping making exceptional contributions over time to the sector both through this role, his involvement with CILT, and his active encouragement and support of others in their careers.

Chris has been a member of CILT for many years and has been actively contributing to the Southern Section Council. Since July 2019, Chris has enthusiastically and tirelessly contributed to CILT's National Office as the public face of CILT NZ. He was one of the key contributors to turning CILT's finances around and lifting the organisation out of the financial crisis at that time. He has also encouraged many new members in their careers and their CILT membership.

Chris is well regarded for his active support throughout the last five years administering Council meetings, AGMs and annual CILT dinners. Chris encouraged many new members to join through COVID-19 lockdowns in 2020-21 and most recently with new style corporate memberships.

In 2024, the CILT New Zealand Council awarded Chris a Life Membership, in recognition of his outstanding dedication to the organisation over many years at both regional and national levels. The award was presented to Chris in early June, as he retired from the National Administration Manager role that he had held for five years.



Chris Gunn receiving his CILT New Zealand Life Membership Award from Past President Cormac McBride on behalf of the CILT NZ Council.

Diane Edwards, CILT NZ President, said she was delighted to both recognise and thank Chris for his contribution to CILT New Zealand in this special way.

Apart from his involvement with CILT, Chris is a model railway enthusiast, an active returned serviceman and a volunteer event organiser at the Rangiora RSA. He came up with the idea of organising the annual Vietnam Memorial Service Day at Rangiora RSA with a small committee and proceeded to do so.

The memorial day is on the August anniversary of the 1966 Battle of Long Tan, which saw three New Zealanders from a forward observation party, along with a company of 105 Australian soldiers on patrol in a rubber plantation about 5km from the combined base at Nui Dat in Vietnam, face over 2500 North Vietnamese Army personnel. The battle resulted in the deaths of 18 Australian soldiers, 24 wounded, and over 245 North Vietnamese Army soldiers dying in the three-and-a-half-hour battle. Ten gun crews from the Royal New Zealand Army's 161 Battery based nearby at Nui Dat, provided covering fire. In 2019, the battle was made into a movie, titled 'Danger Close'.

The first commemoration in 2021 was well supported with 125 veterans and family members registered. By August 2021, everyone was in Rangiora ready for the event the next day. That night the whole country went into lockdown. The RSA was not permitted to open, so everyone headed home.

Chris has tirelessly contributed to the community by arranging successful commemorations in 2022, 2023 and 2024. Registrations for the commemoration improved. Over 70 New Zealand veterans, others from Britain, Australia, South Africa and the USA have attended in 2022. The Vietnam Veterans' Day Commemoration includes a parade at the Rangiora Cenotaph followed by a lunch and live afternoon entertainment at the Rangiora RSA and an evening meal.



Chris Gunn saluting wreaths at Rangiora cenotaph.

In 2023, more than 250 people attended and in 2024, despite heavy rain and snow in Rangiora, around 180 people gathered indoors to remember the Battle of Long Tan and to commemorate all who served and gave their lives in the Vietnam War, and the many other conflicts since then. Some of those involved in the battle have joined the commemoration each year. Chris says: "It was great to have them all come here today for the reunion, to see old friends and not just to tell war stories." The Rangiora branch is the only RSA in the country to commemorate the battle and the sacrifices made by so many. Saturday 17 August 2024 was the 58th anniversary of the battle and the 61st anniversary of the Vietnam War.

#### Gary Hartley, FCILT

Gary Hartley started his career in transport and logistics in Napier in the late 70s as a teenager, washing trucks on the weekend at



the Freightways Road yard in Ahuriri. It was here where his love for trucks and freight began.

His first job was in Petone with Tranzealand in the early 80s before moving on to the Freightways Group to become the Branch Manager for Freightways International at Wellington Airport, many years later.

A short career at Mainfreight followed and in 2005, he joined the global supply chain standards body – GS1 NZ as General Manager, staying there for almost 20 years, including co-authoring a published research report on Digital Product Data for Lifting Productivity. Gary took early retirement in late 2023.

Gary is a Chartered Fellow of CILT and has a Masters (Dist) in Logistics and Supply Chain Management. Gary says: "I'm delighted to join CILT and am keen to drive value for our members by working with them in cultivating a vibrant and engaged community that advances our industry together."

We look forward to working with Gary.

Gary Hartley – new member services manager

# Civil construction sector in crisis, new survey shows

## JAMES PAUL TALKS TO JIM FRENCH OF TELETRAC NAVMAN ABOUT THE STATE OF THE CIVIL CONSTRUCTION SECTOR AND WHY LOCAL SUPPLY CHAIN CHALLENGES MAY PERSIST.

THE 2024 Construction Industry Survey, an annual collaboration between vehicle and asset management provider Teletrac Navman and industry association Civil Contractors New Zealand (CCNZ), reveals a civil construction sector in crisis, resulting from a lack of work in the market.

The first survey's results since the 2023 election paint a landscape of uncertainty, driven by a dramatic increase in the lack of work and a decline in confidence regarding future pipelines and revenue.

## Rising work shortages and compliance issues

The survey highlights a severe shortage of work in the current civil construction market, with 64 per cent of businesses reporting this as the main issue they face, a sharp rise from 29 per cent in 2023.

Additionally, 57 per cent of businesses face difficulties with local and central government procurement guidelines and work consent conditions, up from 36 per cent last year. Supply chain disruptions continue to strain businesses, with 71 per cent citing rising compliance costs and 64 per cent reporting project cost overruns. These factors contribute to a challenging operational environment that impacts overall industry performance.

Jim French, Construction Industry Specialist at Teletrac Navman, says construction industry supply chain disruptions are multifaceted, stemming primarily from the availability and cost of essential raw materials like aggregates, steel and bitumen.

If a project is in a remote area with no nearby batch processing facilities, sourcing these materials becomes significantly more complex and expensive, he says. The need to transport materials like concrete or aggregate over long distances, such as from the North Island to the South Island, can increase both time and costs, complicating project logistics.

"Equipment supply is another disruption. For example, if a specialised piece of machinery is

required for a project but isn't readily available because the supplier hasn't stocked it due to uncertain market demand, this can cause significant delays. This operational environment is challenging because contractors are often left at the mercy of fluctuating material costs and unpredictable lead times for equipment delivery."

The impact of these disruptions is felt directly on the ground where projects can be delayed or experience cost overruns. Mr French says, that in some cases, if the contractor does not own the supply chain, such as a quarry, they are dependent on third-party suppliers.

"This dependency can result in being subjected to the whims of the market, where prices can skyrocket due to shortages, and delays in material availability can lead to project stalls. Companies that own a significant part of their supply chain have better control over these variables but still face challenges when dealing with items outside their ownership, like imported steel or machinery."



Global supply chain disruptions could continue for several more years, affecting the New Zealand's civil construction market for some time, depending on how quickly both global and local markets stabilise and how proactive governments are in addressing these issues. *Photos: Civil Contractors NZ* 

Unfortunately, the end of these disruptions is closely tied to global demand and infrastructure development trends. Globally, the demand for raw materials and construction equipment has been exceptionally high, driven by major infrastructure projects, especially in the U.S. and other rapidly developing regions, Mr French says.

As these projects eventually taper off, one could anticipate a reduction in supply chain pressures.

"However, given the continuous growth in global population and the demand for infrastructure development, it is unlikely that these disruptions will completely subside any time soon.

"In New Zealand, the situation is compounded by local factors such as geographical constraints and regulatory delays. Even as global demand decreases, local supply chain challenges may persist.

"The disruptions could continue for several more years, depending on how quickly both global and local markets stabilise and how proactive governments are in addressing these issues." Alan Pollard, CEO of CCNZ, says the industry's landscape has dramatically changed in the past 12 months, with an acute shortage of work now being the primary challenge civil construction businesses face.

"If we conducted the survey again today, the response would be even more dire. Right now, I am fielding daily emails from our members, who are deeply concerned that their businesses may not survive. I can't stress enough the importance of a well-defined, committed, and funded pipeline of work. The government needs to act quickly to restore business confidence. Promises alone won't get things built.

"Only a committed and adequately funded programme of work will give businesses the assurance they need to invest in the people and technology required to get infrastructure works done," says Mr Pollard.

## Revenue growth and industry confidence slump

Only 37 per cent of surveyed businesses expect any revenue growth in 2024, a significant decrease from 47 per cent in 2023. Confidence in the industry's outlook has plummeted, with only 20 per cent of businesses feeling optimistic about the future, while confidence in the ability to overcome challenges has declined from 62 per cent in 2023 to 57 per cent in 2024.

Confidence in the future pipeline of civil construction work is also bleak, with only 21 per cent expressing confidence, down from 28 per cent in 2023. On a slightly positive note, confidence in New Zealand's infrastructure's ability to handle climate change impacts has improved from 7 per cent in 2023 to 13 per cent in 2024.

### Construction industry faces downsizing

The survey also reveals a noticeable softening in labour demand. A nationwide shortage of skilled workers has been the most significant issue in each previous edition since the Construction Industry Survey began in 2017. But that is not the case in this year's results.

Only 39 per cent of businesses expect an additional requirement for staff, down from 54 per cent in 2023. This trend of downsizing reflects the industry's response to economic conditions, operational uncertainties, and the amount of forward work currently available. Mr Pollard says shedding staff is a tough decision for many companies.

"Given the amount of long-term infrastructure work projected, this is a poor time for the industry to down-size, but the current market means many companies are currently left with little choice," he says.

### Technology empowers businesses to win more work

Technology remains critical to enhancing efficiency and project outcomes. Key technologies such as fleet management (77 per cent) and machine control (63 per cent) are well-integrated on-site. Businesses are increasingly prioritising technology, with almost two in five organisations (39 per cent) now mandating specific technologies for bidding on projects, up from 27 per cent in 2023. Nearly two-thirds of businesses (62 per cent) emphasise the importance of onsite technology for securing contracts.

Mr French says that the trends we're observing in New Zealand's construction sector are reflective of global challenges.

"In this environment of uncertainty, businesses must proactively accelerate their digital adoption to stay competitive. Advanced technologies such as fleet management, machine control, health and safety monitoring software are crucial allies – as they increase the chance of securing contracts and planning for the future," he says.

### Solutions: Strategic focus on technology and diversity

Addressing the current challenges requires strategic focus. A clearer pipeline of government projects is essential, with 56 per cent of respondents anticipating positive impacts from such clarity. Embracing diversity initiatives is also crucial, as 61 per cent of professionals believe diversity positively affects productivity.

Although areas like business intelligence and cost management are still underutilised, adoption rates are increasing. Cost management technology usage has risen to 67 per cent in 2024, up from 59 per cent in 2023, and location tracking has jumped to 72 per cent in 2024 from 53 per cent in 2023. This growing adoption demonstrates a proactive approach to improving operational efficiency and securing competitive advantages among businesses.

Exploring sustainable energy solutions, such as hydrogen, is also gaining traction. Over a quarter (26 per cent) are exploring hydrogen as a future energy source, aligning with broader sustainability goals and preparing for a multienergy future within the industry.



Significant erosion to about 136 metres of the Whanganui River bank threatened the integrity of the road. Waler beams were welded to the newly installed sheet pile wall along the Whanganui River to stabilise the area. *Photo: Downer NZ* 



#### **Jim French**

Jim joined Teletrac Navman as a Heavy Construction Application specialist. He has over 20 years of experience in the construction, mining and survey industries, with particular focus on GPS products, fleet and construction telematics systems and machine control and guidance.



# Empty container depots: A quiet revolution

#### BY KEN HARRIS

EMPTY CONTAINER DEPOTS, like so many other activities in logistics, are an underappreciated link between importer and exporter. Representing the "dehire" point for an importer, the depot receives each container individually, before cleaning, repairing, and storing it, ready for an export booking.

Container surveyors work ceaselessly, performing Ministry for Primary Industries (MPI) checks on every 'box' and determining how aggressively to repair and wash the container based on customer forecasts. Up to 65 per cent of containers entering New Zealand require repair or upgrade, and 1.4 million containers – not TEU, but containers – pass through the depots collectively each year.

During peak, the largest facilities – MetroBox in Auckland, the Wiri Inland Freight Hub, and the collective depots of Sulphur Point in Tauranga – can hold above 7,000 containers on a single site and discharge them one at a time onto road and rail carriers for reuse or evacuation, while simultaneously receiving many thousands more. The dwell time for a typical dry "Dairy Board"-grade (Fonterra) container during peak can be as little as eight days.

This activity is vital and only grows more critical as ships grow larger, and the share of containerised freight increases. Whereas once a handy-sized ship might have carried 1,500 twenty-foot equivalent units (TEU), and discharged 400 into any one market, ships of 5,000 regularly call at Ports of Auckland and Port of Tauranga, discharging a bulk-lot of 1,000 TEU into the chain at once.

Since 2017, the depots have become reliant on modern vehicle booking/reservation systems (VBS or VRS) to manage this flow.

Prior to VBS, the depots suffered from the inability to predict when containers would be dehired. This represented a major, existential problem. Importers are allowed a set amount of days to devann their cargo, and afterwards choose the transporter of their choosing to transport the empty container back to the depot on their schedule.

From the depot's perspective, there was an information gap; effectively a container would arrive at random, and shipping lines authorised individual containers to be dehired at specific places. This necessitated each and every container needing to be checked against an acceptance authority from the line, and independent of the depot's capacity. Often transporters would ring the depots to find this information out.

Without understanding what containers were flowing into the parks in real time, it was impossible to efficiently select which containers required more aggressive intervention. Without publicly available dehire information, depot phone lines were jammed. Wasted trips were common, with transporters accidentally queuing up in the wrong depot. It was also impossible to restrict the inflow of containers to a depot already completely full. Finally, depots suffered from the natural ebb and flow of importer work schedules, leading to significant queues during peak times, and major impacts to local traffic and transporter pricing.

The result was trucks turned away at the gate. It caused importers to hold responsibility for containers longer than might be expected. It also caused angst for exporters if the depots predicted incorrectly, as this sometimes led to a constrained supply of the grade and type of containers most needed to move goods offshore.

VBS tell transporters when and where their container should go; it reassures them that responsibility for the container is transferred as soon as the handler locks onto the corner-castings; it reports back to the lines immediately, meaning instructions for upgrades can be sent in real time; and it gives some indication of what containers will be arriving in the coming hours, meaning high-priority containers (such as reefers) can be pulled off the truck and worked immediately for export bookings. In 2021, these improvements saw a Pacifica reefer was needed for a booking that afternoon; it was promptly identified by the system and pulled from a truck. This was made ready by the team at ContainerCo Oak Road inside four hours.

The collection of information also had unexpected benefits. For depots, a single Container Controller was able to handle many times as many containers as before; instead of transporters coming inside the office to hand over paperwork, now a quick glance out the window can check the container against the booking, moving trucks efficiently through the gate. Transporters (ordinarily) move through that gate faster and require less information, as their dispatchers input information in advance, and peaks being smoothed by timeslot disciplines. On a macro-level, shipping lines could finally see "end to end" how their container was moving through the supply chain, alongside detailed reporting about inventory. They could then use this information to give not only depots, but their own ships and transporters more dynamic and efficient instructions.

So much for the old problems. VBS have become foundational tools for depots, and without them it is no exaggeration to suggest modern container volumes would not be possible. However, the full value of VBS, and their underpinning depot operating software (DOS), are still being fully unlocked. As the first generation of VBS software ages and becomes less efficient at delivering automation, companies are moving to a partnership model in order to get those innovations they now know they want.

Take ContainerCo, one of the largest empty container services firms in New Zealand. It partnered with OneStop Australia to build the most modern system currently available to depots, VBS/MODAL. Unlike previous systems, this was built to accept modules to this platform via foundational API. ContainerCo's ambitious plans include digitising many aspects of depot life that currently operate manually including AI yard planning, semi-autonomous equipment operating in sectioned areas, and a fully automatic gate driven by Optical Character Recognition (OCR). Many of these projects would have been impossible with previous generations of depot software. The OCR project has generated some interest and is in its final stages. It will allow trucks to pass seamlessly through into the depot without needing to stop for manual verification - or if they have an issue, be pulled aside for exception management. Cameras will verify the container's condition on entry, sending condition reports to shipping lines in real time and giving comfort to importers worried about being pinned unfairly for damages caused after the container left their custody.

The type and size of plant depots are operating are also changing. As the demands for container services grow, and land becomes increasingly expensive, new types



ContainerCo has partnered with OneStop Australia to build the most modern system currently available to depots, VBS/MODAL. *Photos: ContainerCo* 

of plant – both intensive and electric - are being introduced. These initiatives often dovetail with the desire of the supply chain to decarbonise. Qube New Zealand, for instance, (formerly both SCS Container Services and ISO) have set a facilities target of 100 per cent renewable energy by 2030. Reliance Transport have innovated their equipment mix, introducing Sany electric top-lifter container handlers in 2021. Driven by customer demand for end-to-end zeroemissions options, ContainerCo introduced electric trucks into its fleet in 2020, taking advantage of short, flat, low-speed routes to shuttle containers to nearby railheads and terminals. All the above initiatives place highspeed industrial chargers at major logistics nodes, building experience and comfort with the technology into the industry as a whole. This is necessary, as electric equipment is becoming more readily available, in many new shapes. Mimicking "big brother" terminals such as the Port of Tauranga, and electric gantry cranes are being actively investigated by several depot providers for denser, more efficient stacking and FIFO opportunities.

This innovation has come at a time when government – shocked by the trauma of COVID-19 - is increasingly watching the supply chain and actively attempting to understand it. MPI now seeks to track containers from "ocean inwards to ocean outwards," monitoring the complete journey. Legacy MPI standards for physical plants such as washing areas and surveying pads are being progressively upgraded to new and stricter standards. MPI itself is rebuilding its database to be able to accept electronic updates about container movements, which will transform the industry again. Customs  always a valued partner – is working even more closely with depots to identify and clear high-risk containers.

However, digitalisation and clever uses of machinery cannot solve a more fundamental problem. Containers are physical objects and require space to store. As the number of containers grows in the supply chain, and ships consolidate onto the "fewer but larger" model, depots inflow containers until they bulge, before disgorging them at top speed, requiring much more of both transporters and gate staff.

Looking back, the innovation journey of the last seven years has profoundly altered how depots interconnect and service the supply chain. The future holds equal change and challenge, with depot operators rising to meet it.

#### Ken Harris

Ken's work in the port and maritime sector has included time at the coal face stevedoring and as CEO at Port Nelson, CentrePort Wellington, and P&O Ports NZ Ltd. Ken has also had senior leadership roles leading supply chain management businesses, a shipping company and a number of Government projects. In 2006, Ken led a management buy-out of NZL Group, and in 2012 the merger of NZL and UCL to form ContainerCo. Ken holds a number of directorships in the supply chain sector and is a beneficial shareholder in ContainerCo.

# New government infrastructure agency a potential game-changer, say industry professionals

#### **BY JAMES PAUL**

**INFRASTRUCTURE AND ASSET** management professionals are lauding the Government's 30-year National Infrastructure Plan.

The president of Āpōpō Gary Porteous says it's long past due that New Zealand has a bi-partisan, strategic view about infrastructure development and management.

Āpōpō is the lead association for infrastructure asset management professionals for Aotearoa New Zealand. With over 1,000 members from local and central government, suppliers and consulting firms, Āpōpō provides guidance, learning and accreditation to enhance our nation's capability in asset management.

The Government's new National Infrastructure Agency will be established this year, unlocking access to more capital for infrastructure and strengthening the Government's private finance and commercial capability, Infrastructure Minister Chris Bishop announced in August.

"From 1 December, Crown Infrastructure Partners (CIP) will be repurposed to be the new National Infrastructure Agency (NIA)."

The cabinet has agreed that the NIA will:

- Act as the Crown's 'shopfront' to receive unsolicited proposals and to facilitate private sector investment in infrastructure,
- Partner with agencies, and in some cases, local government on projects involving private finance,
- Administer Central Government infrastructure funds, and
- Continue the work CIP is already doing.

"The NIA will help facilitate private capital into New Zealand's infrastructure to help close our infrastructure gap faster," Mr Bishop says.

"The NIA will also administer central government infrastructure funds. CIP currently administers around ten funds – but we will explore the NIA doing more in this space once we complete our review of all existing grants and funds across government."

From 1 December:

 The Infrastructure Commission will retain its role as the Government's independent strategic advisor on infrastructure matters

 focusing on long-term strategy.



Photo: Michelle Hoffmann, E.N. Ramsbottom Contractors

- The Treasury will assume the Commission's responsibility for Public-Private Partnership (PPP) policy, and take primary responsibility for supporting the Minister for Infrastructure
- Rau Paenga (Crown Infrastructure Delivery) will be mandated to provide project delivery services to Crown agencies that have low infrastructure delivery capability.

Mr Porteous says the ongoing maintenance and management of the country's major infrastructure assets has been on a downward spiral of under-investment for years. It's a trajectory that's created a number of major long-term issues for NZ Inc, and it will be hard to turn around.

As a consequence, and because of ongoing uncertainty and the lack of construction, the sector has lost skilled people and muchneeded expertise to deliver these projects.

The recent Āpōpō member sentiment survey found that one of the top three challenges for asset managers is the reliability of planning direction across election cycles. Increased funding and new funding sources were also cited as top priorities for the future of New Zealand's infrastructure.

"Something really needed to change, and the Government's new plan has the potential to be that game-changer. But we desperately need immediate and decisive action and to see an urgent timeline around projects rolling out."

Mr Porteous agreed any infrastructure development plan needed to be truly bi-partisan and long-term in vision. The 30-year life cycle that's been proposed is appropriate given infrastructure assets last for generations.

The NIA also needs to deliver innovative funding models, both to finance new infrastructure assets and address the massive infrastructure deficit the country now faces.

"Our asset management professionals have been working hard on their Long Term Plans, to improve the data and predict trends like population growth, regional development, and community requirements as well as finding efficiencies. We understand the risks associated with New Zealand's geology and we are increasingly aware and conscious of the growing impacts of climate change and the need for adaptation.

"Having a strategic plan that takes those and other considerations into account, that is properly funded, and that isn't subject to a three-year election cycle, is something that our members, as infrastructure and asset management professionals, support wholeheartedly."

He said Āpōpō members will be keen to submit to the Infrastructure Priorities Programme.

# A necessity for good policy or a reminder of an inconvenient truth?

AFTER SIX AND HALF YEARS, DR SIMON KINGHAM SHARES HIS VIEWS ON HIS TIME AS THE MINISTRY OF TRANSPORT'S FIRST CHIEF SCIENCE ADVISOR.

#### What is a Chief Science Advisor?

In February 2018, I was appointed the first Kaitohutohu Matua Pütaiao | Chief Science Advisor to the Te Manatū Waka | Ministry of Transport. This position was a two-daya-week secondment from my regular job as a Professor of Geography at the University of Canterbury in Christchurch, with the Ministry paying the University for my time. The contract was fixed term, and the Ministry renewed it twice. I finished at the end of May 2024, which was my choice. After nearly six and a half years I felt I had done enough. I was about to become a koro and wanted to spend less time travelling.

The job description says the purpose of the role is to "provide advice to the Ministry on areas that would benefit from scientific input" and champion "the Ministry's use of evidence throughout the policy process and its development of wider sector strategies".

There are two main parts: advising on the evidence base of transport policy, and connecting policy developers with the scientific community and their research. In addition, I was part of the Chief Science Advisor Forum | He Rauhinga Tohu Putaiao.

### Advising on the evidence base of transport policy

This part of the role ultimately entailed ensuring policy recommendations were based on sound scientific evidence. It took many forms, such as formal meetings, topic-based working groups, informal conversations, commenting on documents, etc. As my role covered a range of topics, I regularly sought the opinions of other researchers when a particular subject was beyond my area of expertise.

I provided advice on a range of projects, including emissions reduction, Auckland housing and urban growth, COVID recovery, climate adaptation, road safety penalties, mobility as a service, travel demand management, drug testing, future revenue, green freight, air pollution, hydrogen as a fuel,



National Party

Auckland Light rail, micro-mobility, naturebased solutions, the NZ Upgrade Programme, speed management, Roads of National Significance (mainly halting some of them based on science and evidence), Superblocks and Placemaking.

For the first six years of the job, I was encouraged to deliver research-related presentations at meetings, workshops and conferences, raising research awareness in the wider transport sector. For example, on two occasions, I spoke at the Transport Sector Board forum; an annual meeting of all the Board members of the entities within the Transport folio (e.g. NZ Transport Agency, Maritime New Zealand, the Civil Aviation Authority, the Transport Accident Investigation Commission, Met Service, etc). To raise awareness of transport issues even more widely, I was also encouraged to write articles for The Conversation about topical transport-related issues. These included pieces on COVID's impact on greenhouse gas emissions, road building and emissions, investing in cycle infrastructure and speed limits

For the first six years, every four to six weeks I met the Ministers(s) of Transport. These

informal meetings included discussing future plans, and I would comment on relevant evidence. These meetings stopped after the change of government last year, although, in defence of the Minister, I do not know if this was at his request. I believe if they had continued, we may have averted a public discussion of a tunnel under Wellington!

#### Connecting policy developers with the scientific community and their research

I engaged with the broader science community by:

 Helping to organise the Transport Knowledge Hubs (https://www. knowledgehub.transport.govt. nz/). In essence, these are a series of communities of practice, but a significant part is running a series of workshops and seminars. For example, one of the best ones I helped organise compared the future of EVs vs Hydrogen for road transport in NZ (https://vimeo.com/manage/

videos/892122820/981637ae2d). Spoiler, don't put your money on hydrogen!

#### Journey of injured people

The below figure represents the flow of patients among various services related to road injury. As the flow is not linear, patients move through services in multiple overlapping permutations so the figure shows only the major flows for simplicity.



The inaugural report of the SORTED study, which Simon Kingham sponsored, describes the patterns of injury for everyone who has been injured on New Zealand roads over a twoyear period. By combining transport and health data, the study team has produced unique information on road trauma which is not captured through current data sources, yet is enormously useful in showing who is injured, where, and how. *Photo: NZ Transport Agency Waka Kotahi* 

- Helping to organise the Transport Knowledge Conference, which is held in Wellington each year.
- Being involved in leading and developing the Ministry visits to the universities. These were usually annual, and the purpose was to share the Ministry's priorities and hear what the university research community was working on.
- Helping to establish the MoT Masters Scholarships, sadly now suspended, and supported the NZTA Masters Scholarships.
- Helping review NZTA's research program.
- Being part of the organising committee for the 2024 2WALKandCYCLE Conference in Wellington, specifically inviting Salvador Rueda, the inventor of Barcelona's Superblocks. In addition to the conference, Salvador also visited Queenstown, Christchurch, and Auckland to deliver a series of workshops and presentations.
- Zooming regularly with my British and Canadian equivalents to share knowledge.
   One of the more entertaining outcomes of this was the *Stuff* headline *Coronavirus: UK scientists call New Zealand for advice on quarantining overseas travellers*. This arose from a conversation with my British counterpart about mandatory isolation for people arriving in NZ during the COVID-19 epidemic.

#### Chief Science Advisor Forum | He Rauhinga Tohu Putaiao

The role also included being part of the Prime Minister's Chief Science Advisor Forum (most recently headed by Dame Juliet Gerrard). It was a forum of Chief Science Advisors from several government departments and additional co-opted members. The forum was held regularly to discuss cross-government issues and share notes on the science advice process. This was particularly valuable during COVID.

#### Reflections

In New Zealand, the public expects government policy to be evidence-based. The Department of Prime Minister and Cabinet's guidance says: "Good policy advice is underpinned by good evidence. This means that the advice is informed by up-to-date data, contextual and other knowledge, people's experiences and research from New Zealand and overseas" (https://www.dpmc. govt.nz/our-programmes/policy-project/ policy-advice-themes/evidence-andevaluation). For the first six years of my time in the Ministry of Transport, my advice was sought. It was not always acted on but was

always welcomed. No Minister should be able to say, "Nobody said this might happen". The openness to my scientific advice diminished in the last few months. I became increasingly frustrated as the Ministry rebuffed my offers of help and I was sidelined. The Ministry is not replacing me as their Chief Science Advisor. Although I would like to think I was irreplaceable, I know this is not true. My fear is that scientific advice has become 'an inconvenient truth'.

For the vast majority of my time in this role, I was fulfilled and believe I made a difference to the quality of transport policy. Since leaving, my daughter has had a son, and I am thrilled to have more time as his koro.



#### **Dr Simon Kingham**

Simon is Ahorangi o te Matawhenua | Professor of Geography at Te Whare Wānanga o Waitaha | the University of Canterbury in Ōtautahi | Christchurch, Aotearoa | New Zealand. His research primarily focuses on the impact of the urban environment on health and wellbeing, with a particular focus on transport, community and streetscape. A body of his research uses geospatial science including some done through the GeoHealth Laboratory, of which he was the Director from 2008 to 2024. His research is generally applied and carried out with end users with a strong community engagement focus.

# Cybersecurity in logistics: Protecting the digital supply chain

**CYBERCRIME IS SET TO COST** global economies more than \$20 trillion U.S. dollars by 2026.

16

The logistics industry has been forced to adapt to an increasingly digital world. New technologies like AI and automation promise to streamline operations and enhance operations, but digitisation creates vulnerabilities as cybercriminals seek to exploit these advances for their own financial gain.

Sensitive information, like financial transactions and client data, is valuable to criminals. A single attack can cause significant disruption across supply chains by compromising systems and forcing downtime.

Balancing the benefits of digital transformation with the need for robust cyber security is one of the key challenges facing the logistics industry today. Organisations need to be aware of the threats facing them and what they can do to protect their operations and partners.

## The importance of cyber security in logistics

The global logistics network forms an intricate, interdependent system where

delays or interruptions in one part can ripple across the entire chain. Cyber-attacks threaten this delicate balance. Ensuring robust cyber security measures to protect these digital supply chains is more than just a proactive approach – it's an absolute necessity.

#### **Operational disruption**

A cyber-attack can cause significant operational disruption. When key software applications or digital tools become compromised, logistics firms may struggle to track inventory, manage transport, or even communicate effectively internally.

NotPetya was one of the most damaging and widespread ransomware attacks in history, causing around \$10 billion in damages and affecting companies around the world, including FedEx's European subsidiary, TNT Express and Maersk.

Maersk was effectively rendered inoperable after a single company computer was compromised in the Ukrainian port city of Odesa. From there, the ransomware spread throughout Maersk's network. Its entire booking system was shut down, loading systems went offline, port facilities were closed and tens of thousands of truckloads of goods were turned away. Maersk couldn't process shipping orders until its servers were rebuilt, causing global disruption for weeks.

#### **Financial losses**

The average cost of a data breach in 2022 was \$4.35 million.

The direct costs include response and recovery efforts, which can involve system repairs, data recovery, and possibly paying a ransom in the case of ransomware attacks. Indirect costs can be even higher, with losses stemming from interrupted operations, contractual penalties, or lost business opportunities.

The aforementioned NotPetya attack resulted in losses of around \$300 million for Maersk.

#### Damage to reputation

In a highly competitive industry like logistics, trust is paramount. Customers entrust logistics providers with their valuable goods and sensitive data, and a cyber breach damages this trust.

A loss of trust can lead to customers taking their custom elsewhere and potentially

damage relationships with stakeholders and partners. The associated loss in business could compound financial losses suffered in the attack. Rebuilding this trust can take significant time and resources, with no guarantee of regaining lost custom.

## Common cyber threats in logistics

#### PHISHING

Phishing attacks take the form of malicious emails disguised as coming from a legitimate source. Cybercriminals impersonate companies, charities, or even individuals, and typically try to get the victim to take a second action, such as downloading a malware file (disguised as something else) or clicking a link to a spoof website.

Phishing is the most common form of cybercrime. An estimated 3.4 billion spam emails are sent every day, and while many are caught by filters, plenty fool cyber defences to end up in the inboxes of unsuspecting victims. 83 per cent of UK businesses that suffered a cyber-attack in 2022 reported the type as phishing.

#### MALWARE

Malware is malicious software designed to infiltrate and damage or disrupt systems. This broad category includes viruses, worms and trojans. In logistics, malware can be used to interrupt supply chain processes, steal sensitive data, or provide a backdoor for future attacks.

#### RANSOMWARE

Ransomware is a type of malware that encrypts a victim's files, with the attacker then demanding a ransom to restore access. The logistics industry has seen a rise in such attacks due to the critical importance of timely information and operations.

DNV, a world-leading classification society, suffered a ransomware attack in early 2023 that targeted its ShipMaster software. ShipMaster allows shipping customers to monitor their fleets, checking technical, operational and compliance features. It's used by more than 7000 vessels globally.

The ransomware attack forced DNV to shut its servers down. While ships could still use ShipMaster's onboard, offline functions, full functionality was reduced. Around 1000 vessels were affected in the attack.

#### **INSIDER THREATS**

Insider threats refer to security threats that originate from within an organisation. This includes employees who intentionally misuse their access and those who unintentionally cause a breach, for instance downloading malware from a phishing email.

In one example, an employee at Boeing risked the data of 36,000 of his coworkers after emailing a document containing the information to his spouse. This wasn't a malicious act; the employee simply wanted help formatting the document. While the data wasn't compromised, it's still a lesson in how seemingly innocent actions can pose significant risks.

### Best practices for enhancing cyber security in logistics

Protecting logistics operations from cyber threats is complex. No single measure can provide complete security. Robust cyber security requires a comprehensive, layered approach that combines various strategies and measures.

#### **Employee training**

Employee carelessness directly contributes to 48 per cent of cyber-attacks. Employees are often the first line of defence against cyber threats, so they need to understand the importance of maintaining stringent cyber security practices. Effective training programs equip them with the knowledge to identify and respond to threats like phishing or suspicious behaviour.

If employees understand the benefit of using strong passwords, know how to handle data and can recognise suspicious emails and other forms of phishing, they become crucial assets in an organisation's cyber security strategy.

#### **Robust cyber security policies**

Developing and implementing robust cyber security policies is crucial in protecting digital supply chains. These policies should define acceptable and safe use of internal systems, outline procedures for identifying and reporting threats, and establish protocols for regular updates and patches to software systems.

Measures like Zero Trust ensure that employees only have access to the data and systems relevant to their jobs. If their account is compromised, Zero Trust policies minimise the damage criminals can do to that account.

Organisations should also include partner and supplier vetting when creating their cyber security policies. By 2025, an estimated 60 per cent of organisations will use cyber risk as a factor when determining transactions and business engagements with third parties.

#### **Encryption and firewalls**

Encryption is one of the strongest cyber security measures available – it's even used by hackers as a way to ensure victims can't access their data. Encryption scrambles data into unreadable code that can only be unlocked with a key. As such, it's perfect for protecting valuable and sensitive data.

Firewalls monitor and control incoming and outgoing network traffic based on predetermined security rules, providing a first line of defence against threats. Firewalls are a basic form of defence but still have value.

#### **Regular security audits**

Regular security audits can help identify vulnerabilities before they can be exploited. This might include penetration testing, where an authorised simulated attack is carried out to evaluate the security of the system, or regular assessments of practices and procedures to ensure they align with current best practices.

#### Incident response plans

Unfortunately, it's a matter of when, not if, an organisation will suffer an attempted cyberattack. Robust cyber security measures can prevent its success, but having an incident response plan to prepare for the worst-case scenario is essential.

An incident response plan prepares an organisation to effectively manage a breach, minimising disruption and damage. This includes clearly defined roles and responsibilities, communication plans, and procedures for identifying and isolating the breach.

Cybersecurity has become an integral component of logistics infrastructure. As digitisation increases, so does the potential for cyber threats. The consequences of these threats are far from trivial – disruption and downtime can cripple organisations.

However, with proactive investment in cyber security measures and training, logistics organisations can safeguard their digital infrastructure and supply chains, ensuring continuity of operations and peace of mind.

Emerging technologies like AI and blockchain are opening up new frontiers in cyber security, helping to detect and prevent threats with greater speed and accuracy than ever before. At the same time, fundamental practices like employee training and incident response plans are more important than ever.

Cybersecurity is an ongoing process that requires vigilance, adaptability, and proactive planning. Cybersecurity will play an essential role in the logistics industry as digital transformation takes place. Robust protection will ensure that the logistics industry is prepared for a digital future.

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# Proposed Emissions Reduction Plan: A weak response to a weak target

#### SEVERAL SENIOR SCIENTISTS DISCUSS THE EMISSIONS REDUCTION PLAN ON BEHALF OF THE PUBLIC HEALTH COMMUNICATION CENTRE.

THE GOVERNMENT has released its second greenhouse gas Emissions Reduction Plan for consultation. The proposed plan removes major policies developed by the previous government that were likely to be effective in reducing emissions. It relies instead on emissions trading and technological advances, the latter of which are highly speculative and uncertain.

Even if the proposed policies are effective, overarching government policies in transport, agriculture and the environment will lead to increased emissions so are working against the ERP2.

As a result, Aotearoa New Zealand (NZ) is unlikely to meet its emission reduction target, and there will be negative consequences for our environment, population health, and ultimately our economy.

This briefing summarises the weaknesses in the proposed approach to emissions reduction and suggests alternatives. Public submissions on the ERP2 closed on 25 August.

The context for the ERP2 is our international commitment under the Paris Climate Agreement (2016), the Nationally Determined Contribution (NDC). Our NDC means we have committed as a country to reducing net greenhouse gas emissions to 50 per cent below gross 2005 levels by 2030 to support the international community's efforts to reduce the impact of climate change.

The NDC, endorsed by successive governments, relies on purchasing ~100 million tonnes of CO2-equivalent offshore carbon credits to meet the target. This is a risky and potentially very expensive approach. It is safer and preferable for the NDC to be met to a far greater degree from domestic emission reductions, which are more secure, measurable and verifiable.

This being the case, the current domestic emissions reduction targets are not sufficiently ambitious. The Climate Change Commission has already reviewed the proposed ERP2 and concluded that based on the current approach, Aotearoa is unlikely to meet its targets.

The Commission warns that "there is an urgent need to strengthen policies and

strategies to put Aotearoa New Zealand (NZ) on track" (see sidebar).

## What does the proposed second Emission Reduction Plan include?

The proposed ERP2 contains a number of tactics that will delay clear decarbonisation targets and mechanisms to enable NZ to meet its emission targets. This is a high-risk strategy for the country as it will result in increased costs for the offsetting that will be needed.

It lacks ambition and the direction needed to create an appropriate environment for innovative, mitigation and adaptation policies. The suggested approach relies heavily on emissions trading and is projected to be inadequate to achieve the domestic 2050 emissions targets.

Transformational changes in social and political arrangements are required in order to achieve sufficient emissions reduction and a just transition. The main proposals for emissions reduction technologies are speculative and unproven. For example, the ERP2 assumes that carbon capture and storage (CCS) will be commercially and technically viable from 2027 for gas production and from 2030 for the petrochemical industry.

But CCS is many times more costly than reducing emissions in the first place. After 40 years of development, few CCS projects exist globally and storage of liquid CO2 into deep oceans has been aborted. Yet the plan assumes this speculative technology will account for more than 30 per cent of total emission reductions within a very few years.

In a similar vein, assumed reductions in methane from livestock may not eventuate. For dairy farming, it is assumed that methane inhibitors with 45 per cent efficacy will become available in 2028 with a peak adoption of 69 per cent by 2041.

This proposal is again extremely optimistic, as it is for other ruminant livestock. Delaying the pricing of agricultural emissions to 2030 in the emissions trading scheme, as put forward in the plan, will also make it harder to meet domestic emission targets and international commitments under the NDC. Given a petrol or diesel vehicle purchased today will produce emissions over its 20 years or more lifetime, the removal of the Clean Car Discount will lead to a substantial increase in transport emissions, especially in the second and third emissions budgets. Investments in public transport may not be sufficient to offset increased emissions from road building outlined in the Government Policy Statement on Land Transport.

The plan mentions the restoration of wetlands as an example of a "nature-based solution" that could support emissions reduction. This is a worthwhile area to develop, however, the Government has introduced a policy that would weaken the protection of wetlands to allow for increased coal mining.

These policy decisions undermine the idea of nature-based solutions as a potentially important pillar of emissions reduction.

#### What should be done?

Rather than the reductionist sector-by-sector approach proposed, we recommend adopting a whole-of-society approach to climate change policies.

This direction would imply:

- Developing adaptation and mitigation policies together, with improved health and wellbeing as important considerations in determining the policy mix;
- allocating resources more equitably;
- reducing wasteful and ecologically unsustainable fossil fuel exploitation;
- promoting clean, efficient energy sources for heating, transportation, buildings and industry;
- strengthening vehicle emission standards;
- promoting active mode shift for transportation;
- promoting predominantly local plant-based agricultural production and diets; and
- protecting natural environments that buffer adverse climate impacts.

These measures would have substantial health co-benefits while putting us on a path towards a just transition.

## Climate Change Commission review findings

The Climate Change Commission has recently concluded that the ERP2 is insufficient, and that:

- more work is needed to meet the country's climate goals and international commitments, both of which have been endorsed by successive Governments with broad support
- there is an urgent need to strengthen policies and strategies to put NZ on track to meet future emissions budgets.
- there are significant risks to meeting the second and third emissions budgets and the 2030 biogenic methane target. The agriculture and transport sectors show the largest risks
- insufficient action to reduce emissions in these sectors will put the second and third emissions budgets at risk. If there are insufficient reductions in gross emissions for the second emissions budget (2026–2030), this cannot be made up by increased removals of carbon dioxide through forestry.
- the New Zealand Emissions Trading Scheme (NZ ETS) is an essential part of an effective policy package for reducing emissions, but it cannot itself ensure the emissions budgets will be met.

#### AUTHORS

Prof Simon Hales, Department of Public Health, University of Otago Wellington, and Public Health Communication Centre

Marnie Prickett, Department of Public Health, University of Otago Wellington, and Public Health Communication Centre

Dr John Kerr, Science Lead, Public Health Communication Centre, and Department of Public Health, University of Otago Wellington

Prof Sara Walton, Department of Management at the Otago Business School, University of Otago

Prof Ralph Sims, Emeritus Professor of Sustainable Energy and Climate Mitigation at Massey.

Prof Michael Baker, Department of Public Health, University of Otago Wellington, and Public Health Communication Centre

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# Transport Research and Educational Trust – Research Grant

THE CILT'S TRANSPORT RESEARCH AND EDUCATIONAL TRUST (TRET) IS CALLING FOR APPLICATIONS FOR A RESEARCH GRANT OF UP TO \$15,000 (OR TWO SMALLER GRANTS).

The Trust aims are to promote, encourage and coordinate the study and advancement of the science of transport within New Zealand. Provided these aims are met, and the grants are within the educational and charitable purpose of the Trust, there is no limit on the nature of the research project, or the industry branch or discipline the applicant is involved with.

As transport touches on many aspects of New Zealand society and economy, the Trustees encourage applications from all disciplines and individuals with an interest in transport.

Applications are now open and will close on Friday 24 January 2025.

The TRET brochure and application form are available at: https://cilt.co.nz/transport-research-and-educational-trust/

# Opening up about mental wellbeing in the transport sector

#### SIR JOHN KIRWAN AND GREG MURPHY DISCUS MENTAL WELLBEING.

BREATHING, WALKING SLOWLY and savouring your morning coffee may not sound like a revolutionary medical treatment, but if you're a truck driver struggling with your mental health, it may just be the lifeline you need.

In an AutoSense podcast hosted by Greg Murphy, former All-Black and mental health advocate Sir John Kirwan (JK) says transforming ordinary tasks like these into daily rituals can help safeguard mental well-being—and in an industry rife with anxiety and depression, that's got to be good news.

"My biggest thing is preventative mental health," he says. "I've been at the bottom of the cliff, and it's way harder to come back once you are down there. Putting some simple pillars into your day is scientifically proven to be preventative mental health - don't let yourself get unwell before you learn this."

Truck drivers are at heightened risk of anxiety and depression. Faced with isolation, long hours, stress to make deliveries on time and, in many cases, average physical health. Mr Kirwan says tapping into his six pillars of mental wellbeing – chill, do, connect, move, celebrate, enjoy - could be game-changing.

"The norm is that your brain is always rushing – you don't have breaks, you're looking at your phone, dispatch is telling you there are more deliveries. Breathe, take microbreaks and walk slowly. Leave your phone in the cab when you stop for a coffee because your brain needs a break; eat your sandwich slowly, and drink your coffee in a real cup if possible, not a takeaway cup. Time is money, but it's just three or four minutes. When you're in a bad place, you think about the future and the past. Instead, smell the roses; stop and enjoy the moment you are in.

"It's doing all these little things that will give you 10 per cent more energy."

The first step to addressing mental wellbeing is working out when you are feeling good. Mr Kirwan describes this as being in your 'Groov', referencing his digital workplace wellbeing platform.

"Next time you stop your truck, write down when you're in your Groov. That's really important because you need to know when



In an industry rife with anxiety and depression, Sir John Kirwan tells Greg Murphy that transforming ordinary tasks into daily rituals can help safeguard mental well-being. *Photo: AutoSense* 

you are not in your Groov. I call it my triple-A battery: first, you have to be aware if you're not in your Groov, then you have to acknowledge it, and then you have to act. If you're feeling anxious about something, use that triple-A battery and build things into your day that will reset you. Breathing is a good one – you can breathe as you drive your truck or pull over and breathe."

Mr Kirwan admits that Kiwi truck drivers are hard to crack, given their demographic. The average age for our drivers is 45 – 59, and 20 per cent are over 60.

"I'm in that age bracket myself, and we've been brought up to have three emotions: happy, sad, and don't cry. We've been taught to harden up and not talk about our feelings, but we need to change that because that's hurting us.

"Being vulnerable is the biggest strength you will have as a male. That doesn't mean going around hugging trees – you'll still have to work hard, provide for your family, and be tough and resilient in times of turmoil. But that doesn't mean you can't show emotion, be vulnerable and say, 'I'm struggling today."

Leaders and managers play a critical role when helping drivers to open up. Mr Kirwan, who

dubs this practice 'performance care,' says that if a manager is worried about the mental state of someone on their team, they need to keep stepping in.

"It takes a long time for us to trust people with what's going on in our lives, so don't just ask once. Keep stepping in and building that psychological safety bridge, which is just trust, and don't be an expert. The best thing you can do is listen, don't comment, and walk next to them when they need help. Ask, 'What do you need? Do you want to go and see someone? Do you want me to come with you?'. Communication is really important, so make sure that you listen and they feel like they've been heard. Sometimes sharing will be enough for people, but others may need more help."

> To read about JK's six pillars and to watch or listen to the full-length podcast discussion between Greg Murphy and Sir John Kirwan about mental wellbeing in the transport sector, click here: https://www. autosense.co.nz/thedepot.