Deloitte.

Hanga-Aro-Rau

Workforce development needs in New Zealand's logistics sector

1 June 2023

Kupu Whakatau |
Welcome from the Hanga-Aro-Rau Council

We proudly present this in-depth research into the logistics sector, furthering our understanding of the challenges building its current and future workforce.

We acknowledge the logistics sector has faced extraordinary challenges since the pandemic began in 2020. Supply chain disruption and rising fuel costs, coupled with issues recruiting and retaining staff exacerbated by the immigration tap temporarily turned off, have made the last few years immensely difficult.

This research release is timely as Aotearoa settles into our new normal, and the sector can also look to the future with fresh eyes. Many exciting opportunities are highlighted within this report for the sector to address its growing kaimahi shortage by embracing diverse workforces not previously tapped into. And with this, will come the need for new and innovative ways of working and training to support these employees to have fulfilling, long-term careers in logistics.

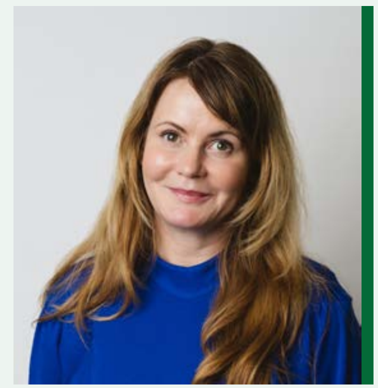
As the whakataukī says:

> He aha te mea nui o te ao
> He tāngata, he tāngata, he tāngata
>
> What is the most important thing in the world?
> It is the people, it is the people, it is the people.

The vocational education ecosystem will have a significant role to play in helping create a future-fit workforce: we relish the opportunity to help the logistics sector pave the road ahead.

Ngā manaakitanga

Dr Troy Coyle	**Renata Hakiwai**
Co-chair	Co-chair



Kupu Arataki|
Introduction from the executive leaders of Hanga-Aro-Rau

It gives us great pleasure to present this research report, which offers profound insights into the ever-changing logistics workforce in Aotearoa.

The report is the culmination of in-depth research conducted by Deloitte, who held kōrero with employers of all sizes, as well as industry associations, unions, and employees, to ensure all voices were heard. We also placed a specific emphasis on capturing Pacific employees' voices. It is important to hear their experiences as Pacific peoples now make up a larger proportion of the logistics workforce than they did a decade ago, which includes a significant cohort of Pacific female workers. This traditionally underserved group also offers industry significant opportunities to address their worker shortages.

Ngā mihi maioha to all who generously gave their time and insights for us to learn from. We also acknowledge the kaimahi of Hanga-Aro-Rau, who have strongly supported this mahi.

When commissioning this research, we aimed to gain a comprehensive understanding of the workforce challenges facing the logistics industry and offer potential solutions. The findings may be confronting, but the opportunities are myriad if we are open to and embrace new approaches to recruiting, retaining, training, and upskilling people.

We know the Hanga-Aro-Rau tīma are ready and willing to play our part in driving the transformational change to help the logistics industry be future-fit. We also know we don't have all the answers, but we hope this report will stimulate further discussions and inspire new ideas across the ecosystem that will drive the logistics industry forward. We cannot do it alone: we warmly welcome you all to come with us on this haerenga (journey).

Mauri ora

Phil Alexander-Crawford

Chief Executive

Samantha McNaughton

Deputy Chief Executive

E felelei manu ae ma’au i o latou ofaga
(Samoa)

Birds migrate to environments where they survive and thrive

Mihi | Acknowledgements

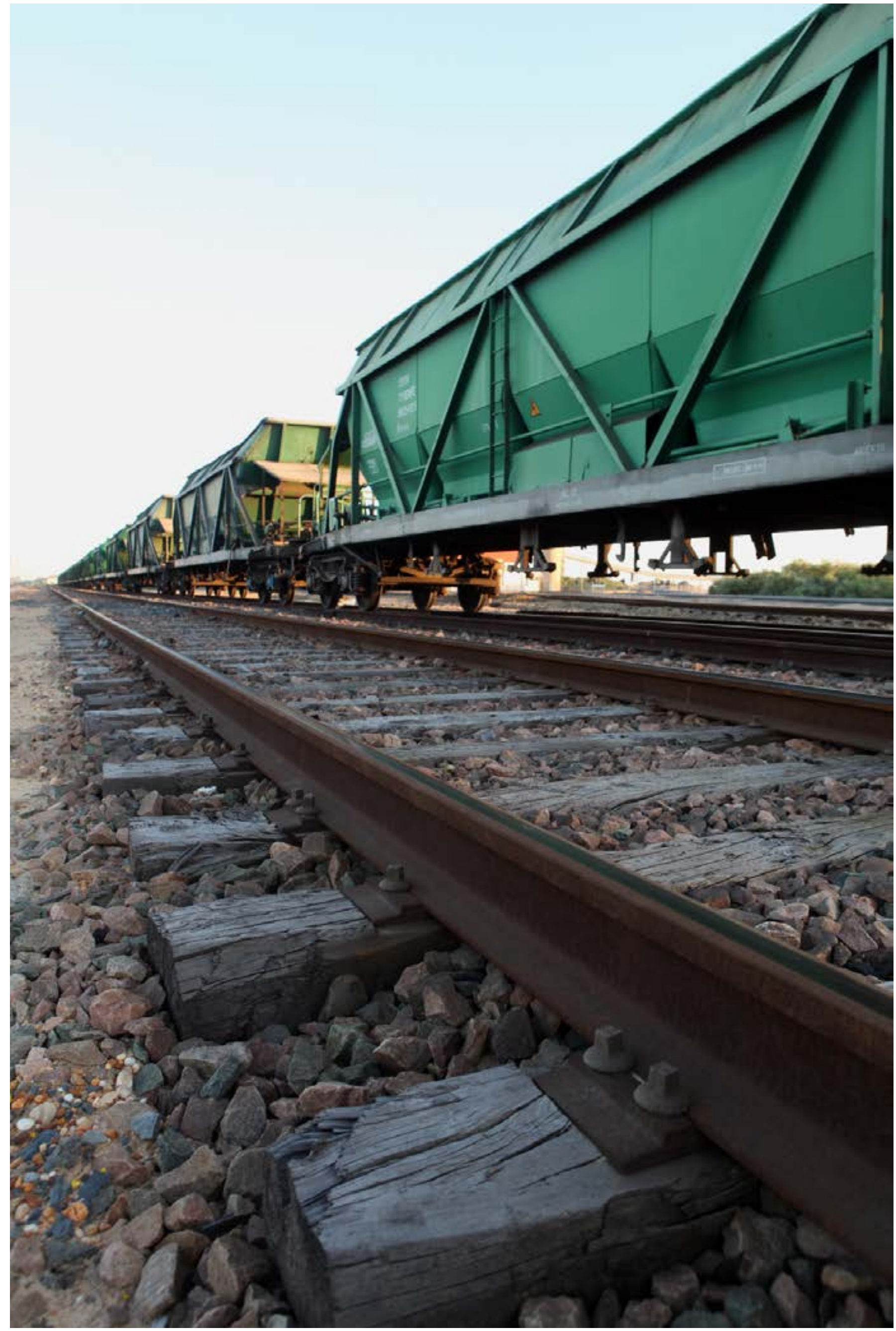
This research is conducted by Hanga-Aro-Rau in collaboration with Deloitte. Deloitte and Hanga-Aro-Rau acknowledge the significant contribution by experts and individuals who shared their views over the course of this research, including the following:

Name	Role and Organisation	Key Contribution
Philip Alexander-Crawford	Chief Executive | Hanga-Aro-Rau	Research Direction
Samantha McNaughton	Deputy Chief Executive Industry Transformation | Hanga-Aro-Rau	Research Direction and Project Leadership
Heather Geddes	Project Manager | Hanga-Aro-Rau	Research Project Manager
Hagen Tautari	Strategic Change Manager – Equity | Hanga-Aro-Rau	Subject Matter Expert and Project Direction
Morgan Toki	Māori Relationship Lead | Hanga-Aro-Rau	Industry Relationships and Communication
Croydon Smith	Industry Manager | Hanga-Aro-Rau	Industry Relationships
Karl Burke	Industry Manager | Hanga-Aro-Rau	Industry Relationships
Yanah Partsch	Industry Manager | Hanga-Aro-Rau	Industry Relationships
Mele Siakumi Kautoke	Research Analyst | Hanga-Aro-Rau	Subject Matter Expert and Project Direction
Kelly Bold	Communications and Marketing Manager | Hanga-Aro-Rau	Communications
Iraina Gibbons	Communications and Marketing Advisor | Hanga-Aro-Rau	Industry Communications
John Tan	Partner | Deloitte Access Economics | Deloitte	Project Leadership
Lisa Tai	Partner | Pås Peau Deloitte Pasifika Services| Deloitte	Pacific Lead and Quality Assurance
Nichola Bennett	Partner | Corporate Finance | Deloitte	Reporting
Sylvia Yan	Associate Director | Artificial Intelligence and Data – Planning and Monitoring | Deloitte	Project Leadership and Data Analysis Lead
Liza van der Merwe	Director | Deloitte Access Economics | Deloitte	Workforce Analysis
Alan Dent	Advisor | Deloitte	Stakeholder Engagement
Rob Tomkies	Consultant | Artificial Intelligence and Data | Deloitte	Stakeholder Engagement and Data Analytics
Seth Robinson	Analyst | Corporate Finance | Deloitte	Desktop Research and Workforce Analysis

Kuputaka | Glossary

Terminology	Interpretation
aiga	A family (Samoan)
Aotearoa	New Zealand
fono	Meeting, get together (workshop)
hapū	A kinship group, clan, tribe, subtribe - section of a large kinship group and the primary political unit in traditional Māori society
iwi	An extended kinship group, tribe, nation, people, nationality, race - often refers to a large group of people descended from a common ancestor and associated with a distinct territory
kaupapa Māori	A philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society
kōrero (noun)	A speech, narrative, story, news, account, discussion, conversation, discourse, statement, information
mahi (noun)	Work, job, employment, trade (work), practice, occupation, activity, exercise, operation, function
Māori	Māori, indigenous New Zealander, indigenous person of Aotearoa / New Zealand
ngā pou (noun)	Pillar, goalpost (used to guide the Hanga-Aro-Rau Statement of Strategic Direction)
rangatahi	Young people, the younger generation
te ao Māori	The Māori world view which acknowledges the interconnectedness and interrelationship of all living and non-living things
te reo Māori	The Māori language
Te Tiriti o Waitangi (Te Tiriti)	The Treaty of Waitangi
tikanga Māori	Māori traditional rules, protocol and culture
wānanga	A seminar, conference, forum, educational seminar
whakawhanaungatanga	The process of establishing relationships, relating well to others
whānau	An extended family, family group, a familiar term of address to a number of people – the primary economic unit of traditional Māori society

Ihirangi | Contents



He kupu whakataki I Executive summary

BACKGROUND AND CONTEXT

In October 2022, Hanga-Aro-Rau published the report *Post COVID-19 workforce development needs in New Zealand's manufacturing and engineering sectors*. Subsequently, Hanga-Aro-Rau commissioned Deloitte to extend the initial research to include coverage of the logistics sector.

The logistics sector reflects the complex supply chain of order processing, inventory management and distribution. It comprises our ports (air, sea and land), operations such as customs clearance and freight forwarding, third-party logistics and a large interconnected workforce encompassing road, rail, sea and air transport.

Since the 2022 report, the risk of further disruption from COVID-19 has reduced. However, it has accelerated disruption and changed themes that were already occurring in the sector:

- Supply chain disruption and modernisation of supply chains have an impact on how the logistics sector operates and the skills it needs for the future.
- An ageing workforce, brain drain, domestic competition and the perceptions about the industry are all contributing to the supply and demand imbalance for the industry. The sector is unable to keep up with the scale of the workforce required.
- Females employed in logistics have been impacted more by COVID-19 than men. Global trends suggest new technology changes the nature of the work, allowing more women the opportunity to work in the industry.
- New technologies and models create opportunities to grow through a more gender and culturally diverse workforce.
- COVID-19 resulted in a shift in the workforce model with employees changing behaviour and increasingly viewing roles as 'jobs' or a steppingstone rather than the start of a career in the sector.

The industry is highly fragmented and has limited branding as a meaningful career destination. With an evolving workforce and a significant pool of relatively lower-skilled labour, it can be difficult to attract or retain talent. There is a need for the industry to have better strategic alignment between the skills needed and a workforce mix.

The key purpose of this research is to understand the current workforce challenges and opportunities in the logistics sector. This will inform how the sector can work together to recruit, retain and upskill its workforce. The research and its findings are intended to inform the development of the future workforce strategy by Hanga-Aro-Rau. It is supported by data sets and tools to assist with monitoring and calibration of strategic initiatives in the future.

He kupu whakataki I Executive summary

RESEARCH APPROACH

This report adopts a similar approach to the initial research and provides an update on some of the key data trends, where relevant, since the original report was published. These include:

1. Desktop literature review of existing research compiled by Hanga-Aro-Rau, from which research hypotheses were developed
2. Engagement with key stakeholders from across the industry, including kōrero, employee fono sessions and a future skills survey to test the research hypotheses and capture primary data and insights
3. Gathering relevant data from Statistics New Zealand, other proprietary data sources and utilising Deloitte Access Economics' in-house demographic and macroeconomic models to develop an outlook on:
    - Current and future skills demand and requirements
    - Future labour demand and supply to provide insights on the potential workforce capacity gap in the logistics industry
    - 'What if?' scenarios to see the impact of flexing key data points.
4. Identifying potential opportunities based on the data, research and analysis for Hanga-Aro-Rau to advance further research or to develop into specific strategic initiatives to support the development of its Statement of Strategic Direction.
5. The research is supported by data sets and tools to support the monitoring and calibration of strategic initiatives in future, including:
    - Supplementary data sources for inclusion in the research data catalogue compiled as part of the original report
    - Supplementary graphs and analysis relating to the logistics sector to be included in the data dashboard.

RESEARCH HYPOTHESES AND THEMES FOR ENGAGEMENT

Findings from the desktop research have been distilled into four 'change hypotheses'. These hypotheses were used to shape the themes of the engagement with stakeholders.

Hypothesis 1: Automation and Industry 4.0 is changing the nature of the work involved in traditional supply chains, and the uptake of technological innovation seen in the global logistics sector is being adopted locally. An accelerated need for digital capability and literacy is expected within the sector, as well as new pathways into the sector for new employees in areas such as data and computer sciences with the uptake of automation and data analytics.

Hypothesis 2: COVID-19 drove a change in consumer preferences that have increased volume and demands on the sector. Organisations will need to put in place targeted workplace strategies that support recruitment and retention of a younger more diverse workforce to meet ongoing demand, coupled with greater use of digital solutions.

Hypothesis 3: The lack of scale and the fragmented nature of the sector means that there is no single approach to workforce development and training, and the opportunity cost of training for subject matter experts is too great. Creating clearer career pathways that enable and dedicate time to on-the-job training and skills development will reduce turnover and build workforce resilience.

Hypothesis 4: The increased use of technology will positively impact the diversity of the workforce. There will likely be greater opportunities for women as a result of less reliance on physical strength and increased flexibility in the operating models. However, to attract and retain women and other cultures to the sector, changes in behaviour are anticipated and a greater focus on hiring and training for softer skills is required.

Research Scope

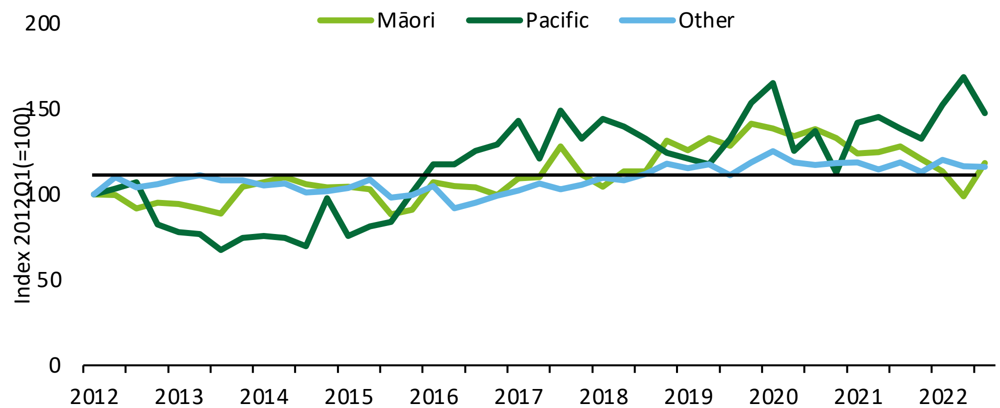
While the scope of this research has a focus on Auckland, Waikato, Bay of Plenty and Canterbury regions, many of the research insights are equally applicable for other regions. Further, given the strong focus on Māori for manufacturing and engineering, this phase of the research also focuses on the Pacific workforce experience and used dedicated Auckland-based fono sessions to better understand Pacific employee experience.

He kupu whakataki I Executive summary

People

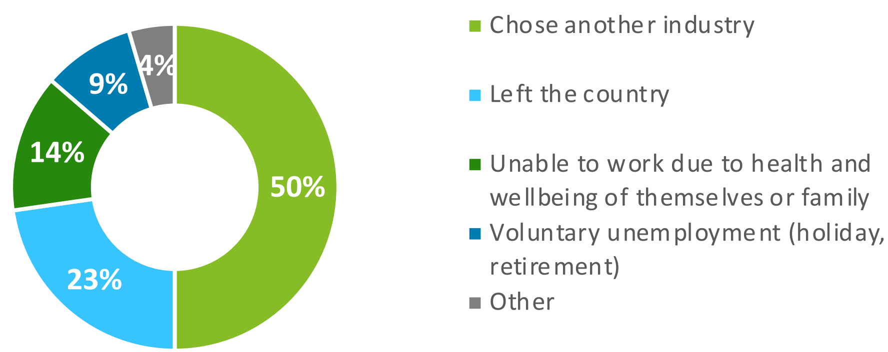
- The logistics workforce is predominantly male. It is made up of 72.2% males and 27.7% female in September 2022. Female employment rate is currently 14.8% lower than pre-COVID-19 levels.
- The recent upward trend in female employment was echoed in the stakeholder engagement process and desktop research as being attributable to multiple factors, including recent initiatives such as Women in Road Transport and technology advances changing the nature of work.
- While there are positive changes, it was not universally understood how to look after and support wāhine in the workforce. Examples shared included women subjected to inappropriate conditions or behaviours, or progression pipelines prioritising performance in physical or manual roles above soft skills.
- Pacific peoples currently make up a larger proportion of the logistics workforce (10.0%) compared to 2012 levels (8.1%). Pacific females make up a significant portion of their workforce (33%) compared to both Māori (28%) and other ethnicities (27%).
- Stakeholders highlighted that changes to the workforce model, including the use of staffing agencies, and the lack of available local and international staff post-COVID-19, have created a shift to more temporary roles. This new model has resulted in the reduction of investment in training by employers.
- In addition, employers highlighted an increasing need to build flexibility into the staffing model to better reflect the personal needs and circumstances of employees. As such, learning options that reflect this flexibility will be key to reducing barriers for training.
- Engagement with stakeholders highlighted a very competitive workforce market due to the transferable skill set, citing more social hours or casual contracts that better fit with other commitments. This perspective was reinforced by the future skills survey, with 50% of employer respondents believing that people leave for other industries.
- Engagement with employers, industry groups and employees highlighted that pastoral care and mentoring are key for successful training. Wellbeing initiatives that draw on the voice and experience of employees support retention of a more diverse workforce.

Employment in logistics ethnicity mix, indexed to 2012



Source: Statistics NZ, Deloitte Access Economics

Most likely reasons of employees leaving the sector



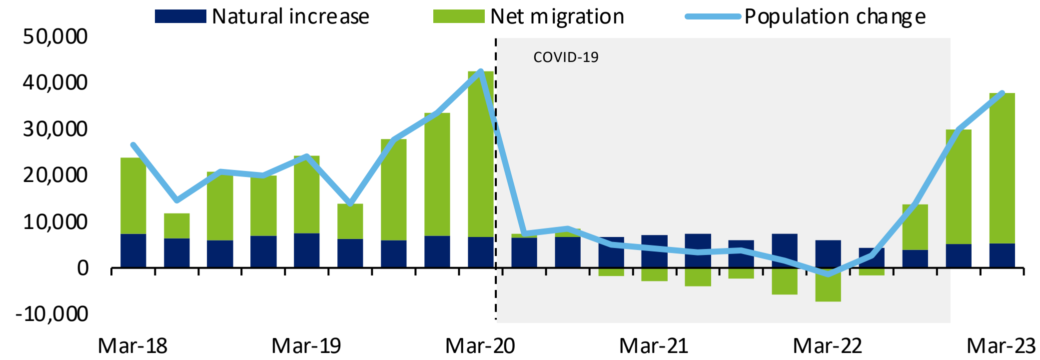
Source: Future skills employer survey

He kupu whakataki I Executive summary

Sustainability

- Between 2020 and 2022, average annual employment in the 15 to 24 age cohort declined by 22.0%. COVID-19 also crystalised decisions by some in the logistics sector aged over 65 to leave the industry or retire early.
- The looming labour shortage arising from the current workforce reaching retirement age is a serious concern for the logistics industry. Stakeholders noted that without a clear pipeline from secondary or vocational providers, SMEs will continue to struggle to attract young talent and build a sustainable workforce.
- In addition, New Zealand's reliance on net migration to fill workforce shortages is a key contributor to current pressures felt around the economy, highlighted particularly throughout COVID-19.
- In recent quarters, there has been positive net migration in the number of work visa arrivals. As net migration begins to return to pre-COVID-19 levels, it may provide some short-term relief to workforce pressures. However, this is unsustainable in the long term.
- Stakeholders acknowledged labour market constraints were making it difficult to attract and retain talent, particularly in an environment where the same set of skills could attract a higher wage or better work conditions locally in other sectors or internationally.
- Further, engagement highlighted the disconnect between the workforce training and upskilling required, and the availability of training offered. Many employees perceive the sector as a stepping stone to other jobs and therefore do not take part in training that would advance and grow the workforce over time.
- A review of the global logistics sector identified that the industry is characterised by significant change and disruption from the uncertain economic environment, changes in supply chain management, adoption of technology and an ageing workforce.
- Inter-connectedness of the job market means that competition for workforce is no longer restricted to within the logistics industry. Demand for softer transferable skills (such as communication skills or digital literacy) sees many industries all targeting the same talent.

New Zealand migration and population growth



Source: Statistics NZ, Deloitte Access Economics, Mar-23 Quarter is the final data point

Logistics industry age profile, annual average 2020 vs. 2022

# employed	*Ann. Avg. 2020*	*% of total*	*Ann. Avg. 2022*	*% of total*	*% change in employment*
Age 15-24	14,125	*10.7%*	11,000	*8.7%*	*-22.0%*
Age 25-44	50,825	*38.6%*	50,467	*39.7%*	*-0.7%*
Age 45-64	56,350	*42.8%*	55,500	*43.7%*	*-1.5%*
Age 65+	10,425	*7.9%*	10,100	*7.9%*	*-3.1%*
Total	131,700		127,100		

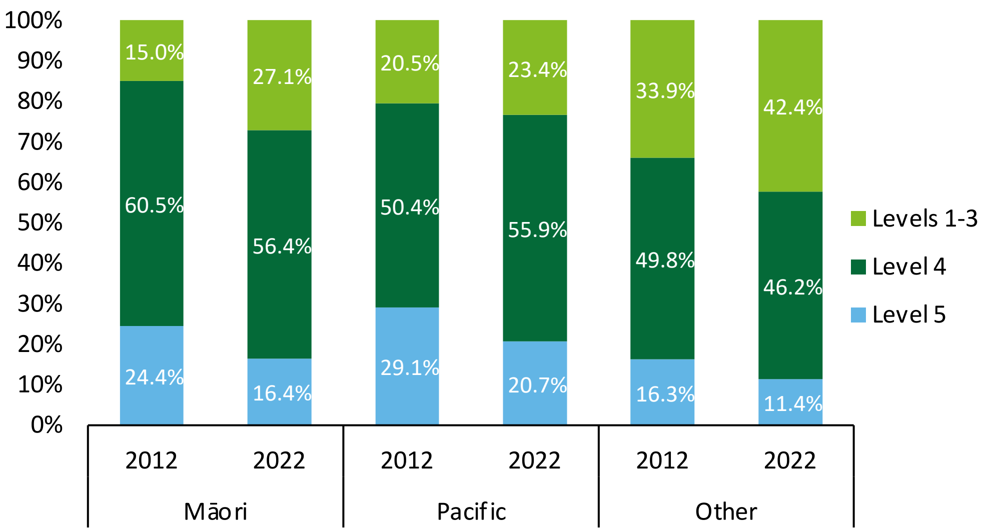
Source: Statistics NZ, Deloitte Access Economics

He kupu whakataki I Executive summary

Equity

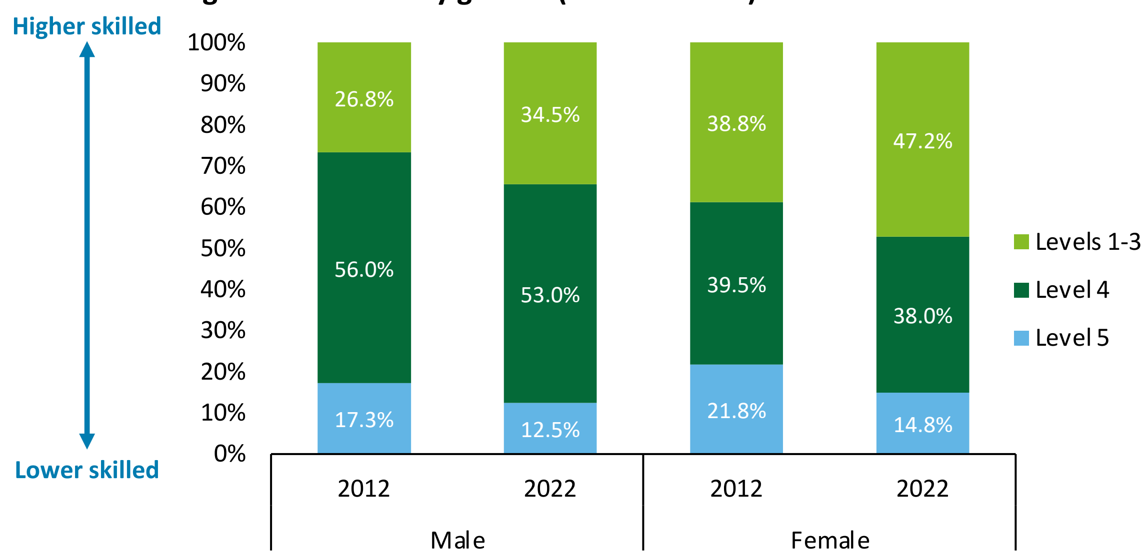
- There has been an upward shift of skill levels between 2012 and 2022 for all ethnic groups. Māori experience the highest shift with the proportion of employment in skill levels 1 to 3 growing from 15.0% to 27.1%. Whereas for Pacific peoples, this shift has been less pronounced. The proportion of skill levels 1 to 3 for Pacific peoples grew only 2.9% and the proportion of their workforce in lower skill level 4 positions has grown 5.5% over the ten year period.
- Females employed in logistics have predominantly filled roles with higher skill levels. In 2012, 38.8% of females employed in logistics filled skill levels 1 to 3 roles, compared to 26.8% for males. This proportion has grown for both genders over the past ten years, with 47.2% of females currently employed in logistics in skill levels 1 to 3 roles and 34.5% for males.
- The sector is not keeping pace with equity and diversity expectations of a modern workforce**.** Specifically, Pacific employees that this research engaged with reported instances of racism, discrimination and pay inequity. There is poor representation for Pacific peoples within senior and management roles and many Pacific workers reported a lack of clarity and information available on learning and development opportunities, progression and promotion options and career pathways.
- Pacific people' voice is under-represented in the logistics sector. 25.8% of the companies surveyed have reported that they have no Pacific employees in their company. Inequity is also found for Pacific staff development as less than a third of companies have specific Pacific initiatives to help the development of Pacific staff.

Logistics skills mix by ethnicity (2012 vs. 2022)



Source: Statistics NZ, Deloitte Access Economics

Logistics skills mix by gender (2012 vs. 2022)

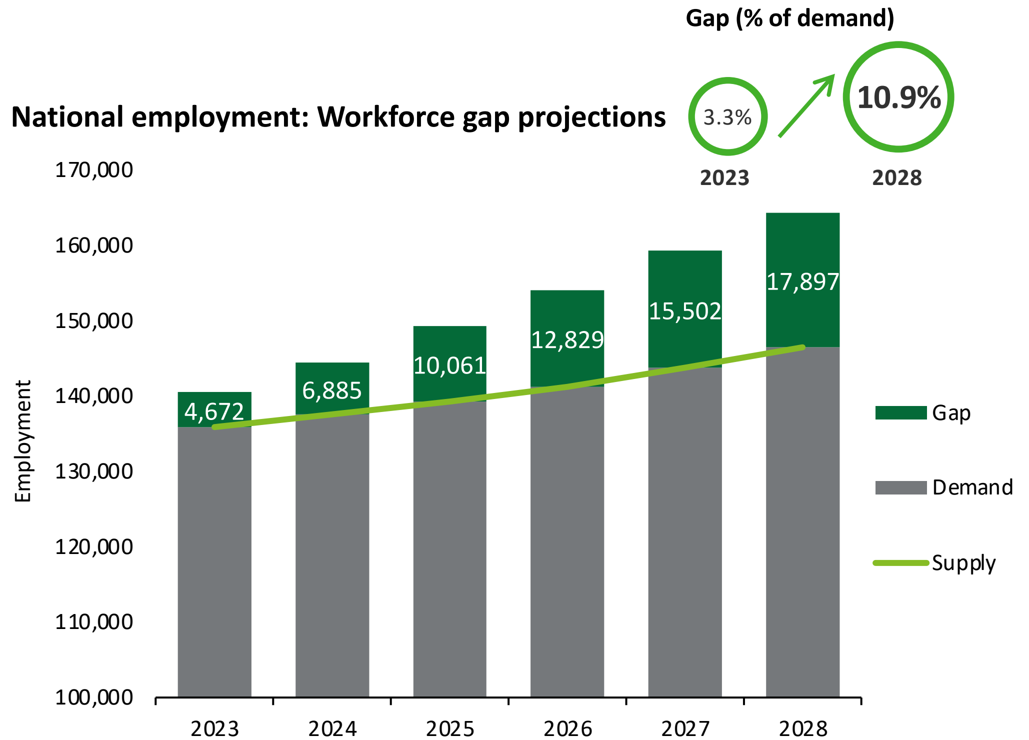


Source: Statistics NZ, Deloitte Access Economics

He kupu whakataki I Executive summary

Industry Voice

- Deloitte's labour force projections show labour demand outpacing labour supply, with the current national workforce gap of ~4,700 widening to ~17,900 logistics employees by 2028. This gap is widening faster than the manufacturing and engineering forecast.
- This gap arises from difficulties in recruiting people both locally and overseas in a highly competitive labour market. The disruption caused by COVID-19 has led to high attrition rates among the youngest and oldest cohorts of employment in logistics due to work preference changes.
- Where some employers were investing in technology for productivity improvement, they noted the importance of transitioning the current workforce to meet the changing skills required introduced by automation of some activities.
- As the sector continues to adopt new technologies and ways of working, the skills required evolve. Some employers highlighted that they fill these skills from skilled migrants. Others noted the need to increase delivery of internal training programmes, specifically in data sciences and analysis. While the approach differed across companies, there is a growing demand for skills that the current workforce is unable to meet.
- With the changing nature of roles within the sector, stakeholders highlighted the increased value on the softer skills that support teamwork, leadership and customer facing roles. With the increase in demand for these skills, businesses can see the opportunity to increase workforce diversity through recruitment or promotion into these roles, especially for women.
- In addition to technical skills, stakeholders highlighted the importance of investment in basic job-readiness skills. Many have highlighted the need to better partner with education providers to deliver the skills needed and remove barriers for young people. This includes both technical skills and life skills.
- There was an expectation from some companies for the government to fund skills training for their workforce, especially where it would support the underserved groups.



Source: Statistics NZ, Deloitte Access Economics

He kupu whakataki I Executive summary

Pacific People

- There are 12,700 Pacific peoples employed in the logistics sector, representing 10% of the total workforce. Pacific peoples are the fastest growing employee cohort in logistics.
- High levels of employment growth and low overall representation in management and roles considered high skill provide the industry with a unique opportunity to target initiatives at supporting and attracting Pacific peoples entering and succeeding in the industry.
- Employers highlighted the increasing need for soft skills within the future workforce and the opportunities for career progression these skills create. Pacific people and others from under-served communities provide diversity of experience, approach, values and ways of working. Employers need to be equipped to realise the potential of the Pacific workforce and invest in their growth.
- Our stakeholder engagement found inequity in Pacific staff development. Less than a third of companies surveyed have specific Pacific initiatives to help the development of Pacific staff.
- Employers noted the lack of government funding as a barrier to putting in place Pacific workforce development initiatives. Further, a lack of representation of Pacific people in leadership and management positions made it difficult for workers to aspire to senior roles.
- There is a considerable opportunity to increase Pacific peoples' participation in the logistics workforce. There is a young Pacific population, with proximity to the key sector players in Auckland, that if targeted could have a significant positive impact on current workforce pressures in the sector.

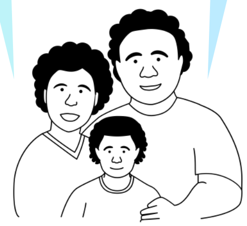
Logistics industry ethnicity profile, March 2012 vs. September 2022

# employed	*March 2012*	*% of total*	*September 2022*	*% of total*	*% change in employment*
Māori	17,900	*16.8%*	21,200	*16.7%*	*18.4%*
Pacific peoples	8,600	*8.1%*	12,700	*10.0%*	***47.7%***
Other	79,900	*75.1%*	92,800	*73.2%*	*16.1%*
Total	106,400		126,700		*19.1%*

Source: Statistics NZ, Deloitte Access Economics

Customer services
I think I can really use my soft skills, such as communication and empathy, to provide a great service to customers. Some of the roles I have been looking at are in the office and I think that these skills would be really useful for my team and employer.

A clear progression path
I've now been working on the floor of the warehouse for five years and I want to learn something more advanced and earn more but I really don't know where to go. I need my manager to explain to me what I can do next and what skills I need to be able to do that.



Pacific employee experience

Community
My family and community have really strong ties. I know that if I say I'm enjoying working somewhere others from my community will be excited to come and work alongside me.

Identity
I am a proud Fijian and want to celebrate that fact. I think creating communities that can connect and celebrate their heritage is key to a happy workplace. I think hiding your heritage, including language, hides your people and you become invisible.

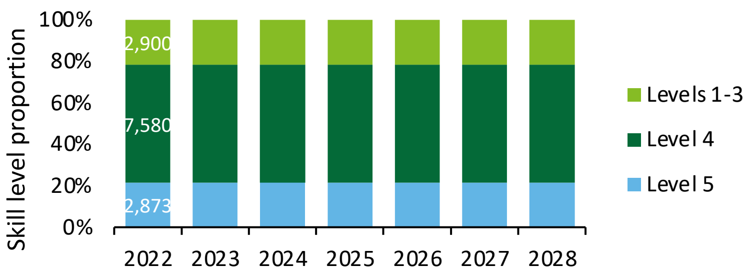
He kupu whakataki I Executive summary

Transformation

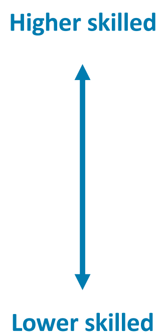
- As the sector continues to innovate, and business models evolve, there is a more diverse workforce (gender, age, location, ability, training) that could meet the projected worker shortage. The Māori and Pacific peoples workforce is growing and there is significant opportunity to ensure the sector and its employers are better equipped to realise the full potential the Māori and Pacific peoples workforce has to offer.
- To achieve an equitable skills mix for Pacific peoples in logistics, the number of Pacific peoples working in the highest skill levels 1 to 3 must increase by 10% per annum over the next six years. This is equivalent to ~2,300 more skill level 1 to 3 Pacific peoples in logistics by 2028 (shown below).
- However, there are systemic barriers that limit Pacific peoples, ability to take advantage of career progression and training opportunities. These include the current performance and assessment structures, availability of training in Pacific languages, and inequitable treatment in the workplace.
- Digital transformation and automation of traditionally manual activities is driving efficiencies in the sector but has polarised the workforce – with the simplification of manual tasks and more 'lifting and shifting' rather than less.
- Targeted recruitment approaches that are culturally and community connected are proving successful. Where done well, recruitment is designed by staff from communities and is matched with retention initiatives that focus on improving cultural awareness and competency within the organisation.
- The availability of cultural competency training will be a key tool to tacking inequity in the work place. Stakeholders highlighted cultural differences as a potential source of friction, and education on these matters had contributed to greater workplace wellbeing.
- Innovation in the sector is starting to change the nature and scale of the work. This requires a different set of skills and competencies due to modernisation of systems and processes to accommodate the increasing complexity of supply chains. With the increase in data availability, there is a move away from linear supply chains to supply networks requiring a different analytics capability and a digitally literate workforce.

Base case: Pacific Peoples' skills mix **Equitable transition outcome**

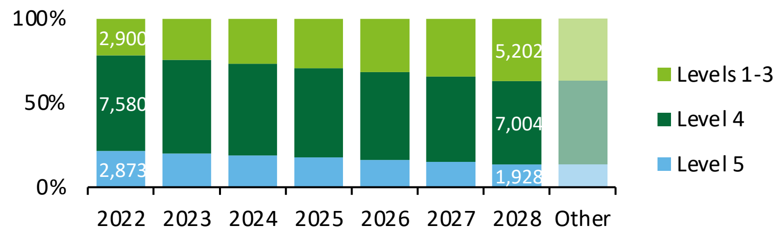
Base case: Pacific peoples skills mix forecast



Source: Statistics NZ, Deloitte Access Economics



Scenario: Uplift Pacific peoples to other skills mix



Source: Statistics NZ, Deloitte Access Economics

Arawātea matua | Key opportunities

In its stewardship role Hanga-Aro-Rau has identified a set of opportunities to support the development of a sustainable workforce. The opportunities respond to the disruption taking place in the sector and span the challenges of recruitment, retention and resilience. These opportunities are intended to help key stakeholders in the system including industry bodies, providers, iwi, Māori and Pacific partners, employers and the relevant public sector agencies to own their part of the eco-system, and work with the current and potential workforce to progress these opportunities.

Opportunities to improve recruitment and retention of the logistics workforce

Opportunity 1: Improve the attractiveness of the logistics sector to school or training leavers by researching barriers to joining the logistics workforce. The research findings would enable targeted, culturally appropriate initiatives to be implemented focussed on building a workforce pipeline, increase recruitment and start to reverse the trend of an ageing workforce.

Opportunity 2: Hanga-Aro-Rau, providers, employers, workers and stakeholders to collaborate on a sector level talent acquisition and retention strategy, accounting for sustainable connection with the environment. This includes collectively mapping out and designing pathways that cover alignment with life goals, skills development and matches, recruitment and marketing, pre-employment engagement, career paths and succession, pastoral care and mentorship, and exit experience.

Opportunity 3: Stakeholders will need to work together to re-brand the sector including identifying and removing some of the barriers for entry. Given the widening workforce supply and demand gaps, there is a need to retain and attract more staff which means addressing the perception of the sector including work conditions, work-life balance, and better articulating the opportunities in the sector across all skills and qualifications.

Opportunity 4: Identify, advertise and celebrate the benefits of a career in logistics, with a particular focus on the skills logistics competes with other sectors. The skills will include team work, problem solving, interpersonal skills and computer literacy. There is an opportunity for industry groups to identify what sets logistics apart from other sectors, clarify career pathways and promote life time learning benefits for our workforce.

Opportunities to upskill and equip the workforce for success

Opportunity 5: Work with iwi, hapū and Māori to identify how industry can adapt to the needs of Māori communities and employees. This will lead to solutions by Māori for Māori and industry.

Opportunity 6: The sector should address inequities for Pacific employees, including representation, pay, progression, promotion and access to upskilling opportunities. This will require addressing the cultural and structural barriers to enter and succeed in the sector. Cultural safety initiatives for non-Pacific staff and co-development of operating and career progression models with Pacific employees may open-up an otherwise untapped workforce and improve retention of existing staff.

Opportunity 7: Target workplace retention and upskilling activities to reduce the underrepresentation of women in the logistics industry. By addressing workplace behaviours and promoting roles that require a more diverse set of skills, there is an opportunity to attract a wider pool of female applicants and reduce the workforce gap.

Opportunity 8: Share best practice and collaboratively develop practical solutions to upskill and support the workforce as the divide between highly skilled and manual tasks in the workforce grows. Recognising that businesses are at different stages of maturity and have different access to training and resources that support the workforce to upskill, collaboration may reduce cost barriers to training identified by subject matter experts.

Opportunities to build sector resilience to disruptive change

Opportunity 9: Increase the focus on digital literacy alongside core numeracy and literacy skills within vocational training across all modes (classroom, work-based and online) to support a work-ready workforce. The modernisation of systems and processes, increased in data availability and growing complexity of supply chains necessitates an improvement in digital literacy of the workforce.

Opportunity 10: Target interventions at building resilience in the sector in response to the disruptive trends in the sector. This includes leveraging global innovation to advance local operations, training the workforce for Industry 4.0 and responding to just in case supply chain management practices.

Section 1:
Ngā whakahounga | Updates since the 2022 report

Since the publication of the manufacturing and engineering report, there have been significant shifts in global economic conditions, which are impacting households, supply chains and the logistics workforce. Employment in manufacturing and logistics is flat or declining relative to other sectors which increasingly compete for a similar workforce skills mix.

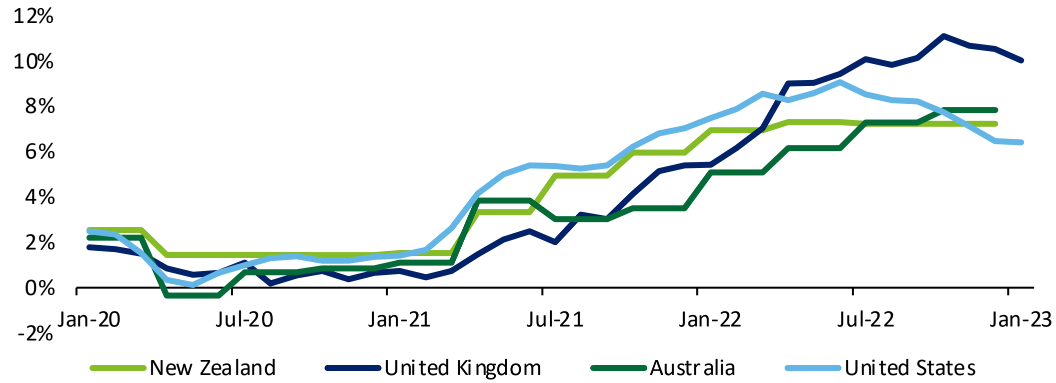
Since the 2022 report, the risk to the economy of further COVID-19 disruption has reduced. However, a different set of uncertainties have become more relevant in 2023. The return of inflation is contributing to a cost-of-living crisis for households. In New Zealand, this has been reflected in a 7.2% annualised increase in CPI in December 2023. Changes in economic conditions that particularly affect the logistics sector include:

- Global supply chains were under significant pressure in 2022 during COVID-19. Consumer demands for online delivery were met with constrained supply and supply chains struggled to extend capacity in the face of multiple disruptions, including workforce shortages. A consequence of these disruptions was a shift from, 'just in time shipping' to 'just in case.' The impact was that businesses held higher levels of inventory, driving up costs for suppliers. This put further pressure on supply chains, testing capacity and increasing levels of activity and the complexity of supply chain operations.
- Global supply chains are gradually improving, both in terms of schedule reliability and cost of shipping. However, the number of shipping services to New Zealand remains lower than pre-COVID-19 levels. For example, Maersk recently announced it would pull its national coastal connect shipping services, adding volatility and insecurity to the local supply chain.
- While the reopening of China's economy is a positive driver of economic activity in Asia-Pacific, it could again lead to short-term supply chain disruptions.

The proportion of New Zealand's total full-time employee (FTE) numbers in Hanga-Aro-Rau sectors have declined or remained stagnant since 1989.

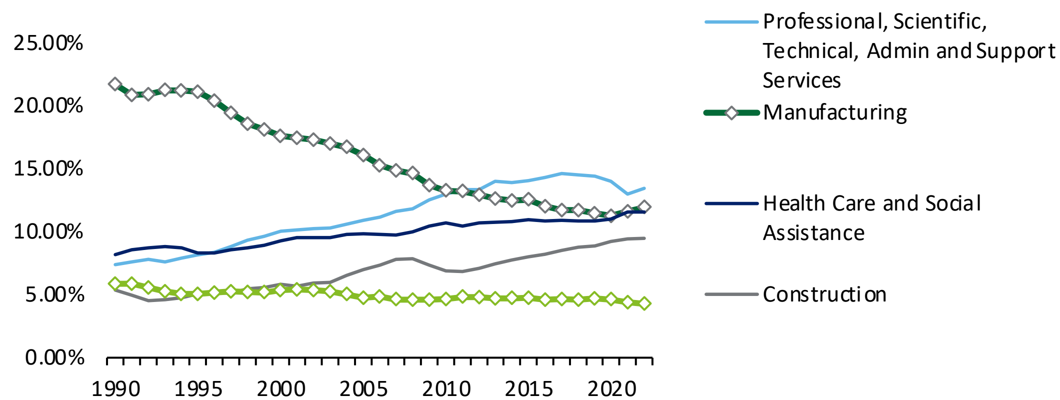
Slowing economic growth, a cost-of-living crisis and high levels of mortgage interest rates are putting extreme pressure on household income. While in the short run, workers may respond by maximising overtime opportunities in a tight labour market, in the long run, income growth will require workers to adapt to industry needs for changing skills mix and improved employment outcomes that industry training provides.

Consumer inflation, % change year-on-year



Source: Bank of International Settlements March 2023

Percentage of FTE New Zealand employees in all industries



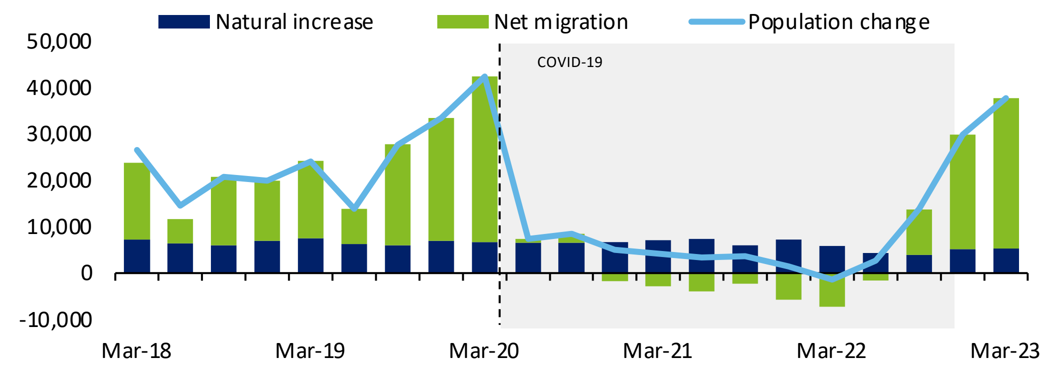
Source: Statistics New Zealand, Deloitte Access Economics

The labour market remains tight, despite a reversal of the net negative migration trend seen during COVID-19.

Since the 2022 report, the following trends have emerged.

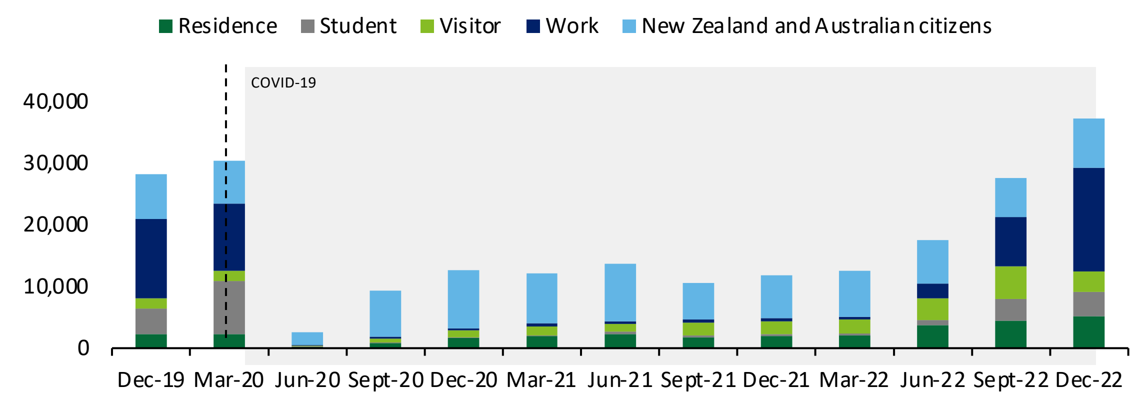
- The domestic labour market includes low levels of unemployment and a reversal of the net negative migration trend seen during COVID-19.
- Ongoing labour shortages will continue to impact supply chains. The cost of living crisis is likely to add increased pressure on wages. The combined effect of scarce labour and wage pressure impacts the sector.
- The negative net migration trend of the COVID-19 pandemic exposed New Zealand's high dependency on skilled migrant labour to sustain workforce needs across all industries. New Zealand recorded positive net migration for the last two quarters of 2022, and for the first time since March 2020 there was a considerable increase in the number of work visas being granted.
- While the net migration trend reversal will provide short-term easing of workforce pressures felt by many industries, there is still a need to develop the domestic workforce to improve future sustainability and resilience over the longer term.
- Unprecedented levels of flooding in the upper and eastern North Island have significantly impacted the regional economies, and severely disrupted domestic supply chains including infrastructure.
- Manufacturing as a percentage of total FTEs in New Zealand has fallen from 22% to 11%, and transport, postal and warehousing has fallen from 6% to 4%.
- There has been growth in FTEs in other industries such as construction; health care and social assistance; and professional, scientific, technical, admin and support services. These compete for a similar mix of 'softer skills' that also underpin the modern logistics sector workforce.

New Zealand migration and population growth



Source: Statistics NZ, Deloitte Access Economics, Mar-23 Quarter is the final data point

Permanent and long-term arrivals



Source: Statistics NZ, Deloitte Access Economics

Section 2:
Te horopaki me te huarahi | Context and approach

A complex supply chain network of order processing, inventory management and distribution channels

The logistics industry is a critical enabler for Aotearoa New Zealand. Many other industries require efficient logistics services to support their businesses. Along with the manufacturing and the engineering sectors, the logistics workforce is one of three sectors that falls within the mandate of Hanga-Aro-Rau. For the purposes of this research, logistics activities are grouped into four broad parts outlined below.

Logistics

Ports

Often the first destination for imported goods is either an air, sea or inland port. New Zealand has three international freight airports and 15 sea-ports (including nine international container ports) that enable the extended supply chain and allow its workforce to function.

Operations

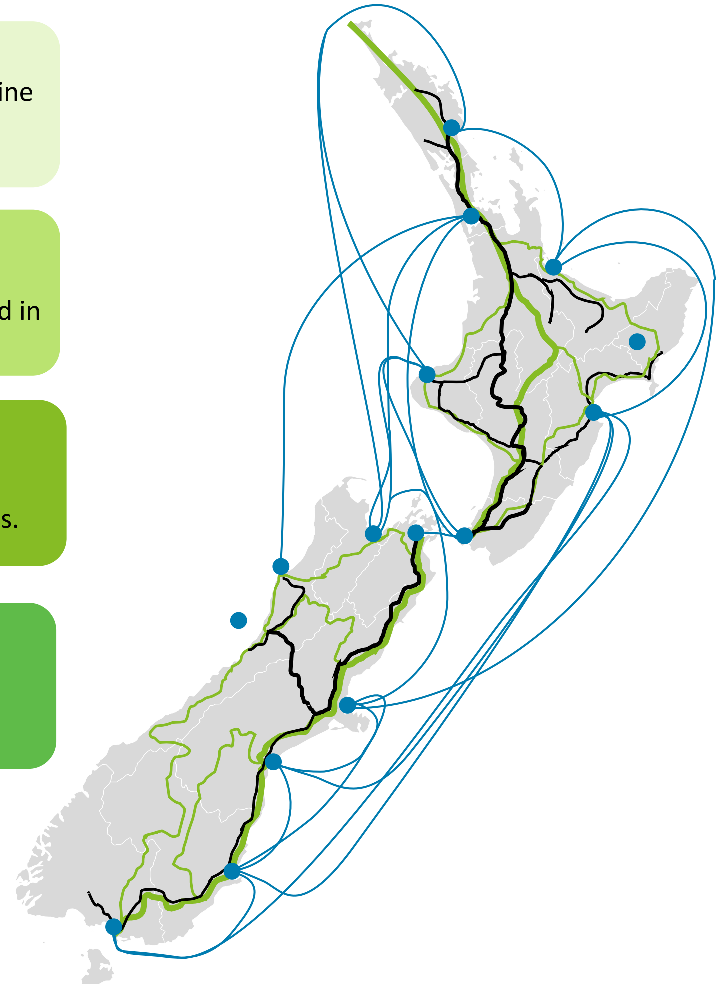
Operations and allied services play a crucial role during all stages of the supply chain, from initial customs clearance to freight forwarding brokerage services. Hanga-Aro-Rau mandate includes industries involved in documentation, such as customs clearance and freight support services.

Third party logistics

Hanga-Aro-Rau mandate includes warehousing and storage services, stevedoring and broader industries that service the entire supply chain, such as third-party logistics (3PL) companies.

Movements

In order for goods to reach their final destination, a large interconnected workforce encompassing road, rail, sea and air transport is required. Hanga-Aro-Rau mandate also includes, commercial road, rail, air, water freight and passenger transport.



The above areas broadly describes the logistics sector in this research. A list of logistics industries in the remit of Hanga-Aro-Rau is included in Appendix 1. Note that distribution is covered by the Waihanga-Ara-Rau Workforce Development Council. The following sections build-on the initial analysis to explore workforce development needs in the logistics sector.

Key research themes

There are four themes highlighting the impact of change and disruption in the logistics sector and the experience of our workforce. These themes are a continuation of the themes used for the manufacturing and engineering sector research, but have been refined to specifically highlight challenges for the logistics sector.

1. Strategic and System Alignment

- COVID-19
- Business continuity
- Relationship and engagement
- Digital capability and modernisation
- Te Tiriti o Waitangi and te ao Māori
- Equity
- Co-design
- Supply chain changes
- Market conditions
- Pacific workforce

2. Workforce Supply and Demand

- Labour supply
- Labour demand
- Workforce retention and attrition
- Skills shortage
- Skills levels
- Current and future roles
- Economic outlook and scenarios

3. Workforce Capabilities and Enablement

- Learning and working tool sets
- Learning and working environments, e.g., physical, digital, flexible
- Technology investment
- Learning initiatives
- Quality assurance and competencies
- Development pathways
- Competency development
- Workforce wellbeing
- Social welfare and financial support

4. Sector and Workforce Disruption

- Geopolitics
- Sustainability
- Innovation

The four key change hypotheses are outlined in the next page. This is followed by the next section which includes the findings from the desktop research, tested with stakeholders through sector engagement and the data analysis of the logistics workforce.

Key hypotheses

Four hypotheses were developed based on the desktop research. They were further tested in the stakeholder engagement. The desktop research and insights highlighted a range of themes that formed the basis of the engagement questions. In general, the change and disruption in the sector is accelerating the need for new skills to maintain pace with innovation in the sector to meet changing consumer preferences. This hypothesis-based engagement replicates the approach used with the manufacturing and engineering sectors. They are outlined below.

1

Hypothesis 1

Automation and Industry 4.0 is changing the nature of the work involved in traditional supply chains, and the uptake of technological innovation seen in the global logistics sector is being adopted locally. An accelerated need for digital capability and literacy is expected within the sector, as well as new pathways into the sector for new employees in areas such as data and computer sciences with the uptake of automation and data analytics.

2

Hypothesis 2

COVID-19 drove a change in consumer preferences that have increased volume and demands on the sector. Organisations will need to put in place targeted workplace strategies that support recruitment and retention of a younger, more diverse workforce to meet ongoing demand, coupled with greater use of digital solutions.

3

Hypothesis 3

The lack of scale and the fragmented nature of the sector means that there is no single approach to workforce development and training, and the opportunity cost of training for subject matter experts is too great. Creating clearer career pathways that enable and dedicate time to on-the job training and skills development will reduce turnover and build workforce resilience.

4

Hypothesis 4

The increased use of technology will positively impact the diversity of the workforce. There will likely be greater opportunities for women as a result of less reliance on physical strength and increased flexibility in the operating models. However, to attract and retain women and other ethnic minorities to the sector, a change in behaviours is anticipated and a greater focus on hiring and training for softer skills is required.

Section 3:
He tātari rangahau |
Desktop research

Approach to desktop research framed around key change hypotheses

The approach to the desktop research for the logistics sector aligns with the approach taken for the 2022 research into the manufacturing and engineering sectors. The research focuses on the impact of key change hypotheses on the industry and the enduring impact these changes may have on future workforce needs. In conducting this desktop research, an additional 40 documents were identified and reviewed, sourced both directly from Hanga-Aro-Rau and through Deloitte's own research, including industry commentaries and Deloitte Access Economics research. An overview of the approach is set out below.

Approach

Document review

Documents were reviewed and collated to synthesise the key information and insights. Information used and referenced was limited to the scope of this research. A list of documents used can be found in the bibliography.

Research themes

From the collated information a set of four key research themes were developed. Each key theme had a set of sub-themes that further break down the research areas.

Key insights

The key insights from the document review were mapped against the four key research themes. These were then used to support the research work.

Document Breadth

- Learner and community insights
- Workforce and regional plans
- Hanga-Aro-Rau plans and proceedings
- Industry and education reports
- Māori focused policies and think pieces
- Responses

Sector and workforce disruption

There are trends towards increasing transparency around the environmental sustainability of organisations' value chains, advances in intelligent automation and how the impact of geopolitics are disrupting supply chain resilience. In all these cases, the future of logistics is underpinned by analytical capabilities to manage and report on risk and a culture shift towards greater levels of automation and digitisation.

Sector and workforce disruption

The future skill set of the logistics industry is being determined by Industry 4.0 and automation

Globally, new technology is developing new roles with different skill sets compared to traditional roles. For example, real-time tracking of trucks and planes is enabling continuous optimisation of route planning and inventory flows, with robots and augmented reality assisting pickers and packers in warehouses [26]. The skill set of human input in these roles is vastly different from 20 years ago, and future roles are still being determined.

Businesses are expected to adapt to the shift from linear supply chains to digital supply networks

Traditional linear supply chains are evolving and at a time of unprecedented disruption. There is the expectation that businesses will adapt to the new way of operations. As supply chains shift from a linear supply chain nodes to a digital supply network, the implications for the logistics sector include automated logistics, direct to user delivery, driverless trucks and dynamic or predictive routing [47]. These will likely drive a different set of attributes from the workforce.

Strategic, analytical, technical and commercial skills are important to drive innovation

Global consumers and governments demand greater transparency over supply chains and their sustainability compliance [44]. In New Zealand, the external reporting board has established the climate-related disclosures framework for large listed companies, taking into account the entire value chain [45]. Data-driven decision-making will underpin sustainability outcomes and scenario planning, requiring staff with strategic, analytical, technical and commercial skills to drive innovation.

COVID-19 has demonstrated the need for supply chain resilience to mitigate the risk of disruption and supply chain vulnerabilities

To manage supply chain vulnerabilities, there is growing acceptance of the need to focus on risk in the extended supplier network. Increasing investment in machine learning and advanced analytics is occurring to provide visibility of elevated risks across the supply chain as part of how organisations respond to and manage risk (including cyber) [46]. The skills sets and capabilities required of a future logistics workforce will need to respond to the increased application of these technologies.

Increased investment in intelligent automation has the potential to significantly address driver shortages

International logistics providers are investing in warehouse robotics, drones, and port robotics. Where these technologies had previously been proofs of concept they are now moving to the piloting phase.

"By automating freight, companies can address driver shortages in the United States (over 60,000 in 2018 and expected to grow to 160,000 by 2028)." [48]

Off the back of these innovations, it is expected that organisations are re-designing their logistics systems, enhancing operating models and re-imagining roles and teams to leverage the best of both technology and the workforce. The increasing capability of the machine will change future workforce, talent models and skill sets as the integration of technology in the workplace evolves over time.

Workforce supply and demand

Ageing workforce, brain drain, domestic competition and perceptions about the industry all contribute to the supply and demand imbalance for the logistics industry. The sector is unable to keep up with the scale of the workforce required.

Workforce Supply and Demand

Net migration, lower long-term arrivals and higher skills drain are affecting labour force participation

While there has been a net migration outflow to the year ended 2021, this trend has finally started to reverse in late 2022. However, the tightening of immigration settings post COVID-19 means that work visas are "limited to a narrower set of higher-skilled occupations" [43]. In a tight labour market, migration cannot provide full relief in the short-term.

The nature and perception of the work may explain the inability to attract younger talent

The logistics industry has traditionally been physical in nature, and requires a workforce that can operate at all hours in order for the supply chain to function. Consequently, the industry has a mixed image, of unsocial hours and potential technologies replacing jobs [30]. Changes in employee preferences may also explain the industry's inability to attract younger talent, as young people seeking employment in logistics are disincentivised by the nature of the work itself [37].

The logistics workforce is ageing and struggling to attract younger people to fill the churn

New Zealand is seeing similar trends to the United Kingdom (UK) logistics sector with an ageing logistics workforce. Roughly 20% of truck drivers are expected to retire or leave in the next five years, and 25% of New Zealand truck drivers are over 60 [37]. This is causing serious concern locally. In the UK, the average age of road haulage drivers is 57, more than 80% of transport managers are over 45 [28], and the UK sector is estimated to be short by over 100,000 drivers [36].

The logistics industry is losing workforce to other industries

The proportion of New Zealand's total FTE numbers in manufacturing, engineering and logistics sectors have declined or remained stagnant since 1989. Manufacturing as a percentage of total FTEs in New Zealand has fallen from 22% to 11%, and transport, postal and warehousing has fallen from 6% to 4%. There has been growth in FTEs in other industries such as construction; health care and social assistance; and professional, scientific, technical, admin and support services, which compete for a similar mix of 'softer skills' that also underpin the modern logistics sector workforce.

E-commerce and consumer expectations for express services are disrupting logistics models and skills mix

Part of contributing to workforce and skills mix changes is an e-commerce boom that occurred during COVID-19 lockdown globally, as consumers moved to purchasing online from home. International research into the sector saw an increase in e-commerce volumes of 40% in 2020 [28] as a result of COVID-19 lockdowns. Consumer expectations have also increased around same-day or express delivery. These trends are changing the nature of logistics operations and underpinning sustained demand for consumer goods in a labour constrained environment [30]. Consumer-led disruption has increased the volume and scale of operations resulting in more 'lifting and shifting' rather than less, despite increased automation.

Workforce capabilities and enablement

Keeping pace with the innovation and change in the logistics sector will likely require Hanga-Aro-Rau to lead a sector-wide approach to work-based learning and development. This is needed to overcome the challenge of scale and improve outcomes for the logistics workforce, in particular for underserved population groups.

Workforce Capability and Enablement

COVID-19 has increased the preference and ability for people to work remotely

The logistics industry is traditionally viewed as being reliant on physical work or site locations to operate. Potential employees now value flexible working conditions and the ability to work remotely as a result of COVID-19, and the logistics sector is not fully prepared for this transition [28]. However, this trend is driving new opportunities and growth in technological skills, such as software, allowing workers to operate robotics from any location in real time [39].

The logistics industry is launching proactive initiatives to attract potential workforce

An example of a proactive initiative in the logistics sector launched in April 2021, 'Te Ara ki Tua Road to Success' programme, a collaboration between Ia Ara Aotearoa Transporting New Zealand and government agencies. The Road to Success programme is targeted at attracting potential truck drivers by offering paid, on-the-job training through a 12-month traineeship course to achieve the necessary qualifications to continue a career in the transporting industry [38].

Modernisation and digital learning initiatives are playing an important role in theory learning

In an industry that operates 24/7, one of the primary restrictions when it comes to necessary skill development is time spent off the job in classrooms to learn. Modernisation and the ability to complete necessary qualifications electronically via e-learning is providing employees with the flexibility to complete theory elements of courses online and in their own time [35].

Success of work-based learning requires overcoming a scale challenge in a segmented logistics sector

Meeting the future skills demand requires sustained investment in work-based industry training. There are good examples of upskilling in operations, global processes and brands (KiwiRail, DHL), as well as ports where there are a concentrated logistics presence. Segmentation of the sector also results in a lack of critical mass within 3PL and freight-forwarding sectors to support work-based learning effectively and cost efficiently. As with the engineering and manufacturing sectors, leveraging the resources of larger entities or pooling resources will be required to overcome the scale challenge.

The industry has targeted initiatives to improve workplace safety but less so for cultural safety

Safety and wellbeing are "an important element for attracting a younger, more diverse workforce" [35]. The nature of logistics industries, especially road freight transport, is considered high risk in terms of health and safety. The Health and Safety at Work Act 2015 outlines employers' responsibility to their employees and public safety. Many initiatives mentioned in the desktop research are aimed at reducing accidents and improving driver wellbeing. Despite these initiatives, there were limited examples of broader investment that focus on improving outcomes for the underserved population groups, such as cultural capability, soft skills and inclusive approaches that would help to attract a broader more diverse workforce.

Strategic and system alignment

Strategic and System alignment

Modernisation of supply chains is changing how the logistics sector operates and the skills it needs for the future. While this creates opportunities for a more diverse workforce, better strategic alignment between skills need and workforce mix is required to benefit from the changes brought in by Industry 4.0 and automation.

Logistics operations and training are being transformed into a digital supply network

Automation and Industry 4.0 are changing logistics operations and training, as the traditional supply chain shifts toward a digital supply network. The nature of the work and consequently the mix of skillsets will change. Technology advancements will alter the overall structure of the workforce [27], and also the way in which businesses approach learning and development to prepare their current and future workforce for digital transformation [26].

Gender and ethnic disparity exists in achieving the necessary vocational education pathways

Achieving a Vocational Pathways Award is considered a necessary first step to employment in the trade industries, including the commercial road transport industry. Of school leavers who achieve a Vocational Pathways Award, 17% are males, compared to 1.6% for females. The disparity in achievement is also apparent for ethnicities, with Māori and Pacific school leavers making up a smaller proportion of achievers compared to Asian and Pākehā [35].

Workforce will need to be supported through the digitisation of logistics

New technologies being developed throughout the digital transformation are not only improving the efficiency of logistics, but also changing the nature of employment opportunities across the sector [30]. This change opens the sector up to a wider pool of talent with a variety of skills, which in turn eases workforce pressures. In doing so, however, the sector must ensure that all groups of the workforce are supported through the transition.

A willingness to invest in a diverse set of skills is important for the future logistics workforce

There will be more technology, enabling employment opportunities for a more diverse talent pool in a sector that is considered ‘traditional’. A willingness to invest time and capital into supporting diversity among skills, backgrounds, attributes and perspectives is essential to sustainably future-proof the logistics workforce [34]. Auckland Transport’s commitment to their Pacific workforce is a local example of investment in diversity, by developing a “thriving, inclusive and high performing culture within their organisation” [32].

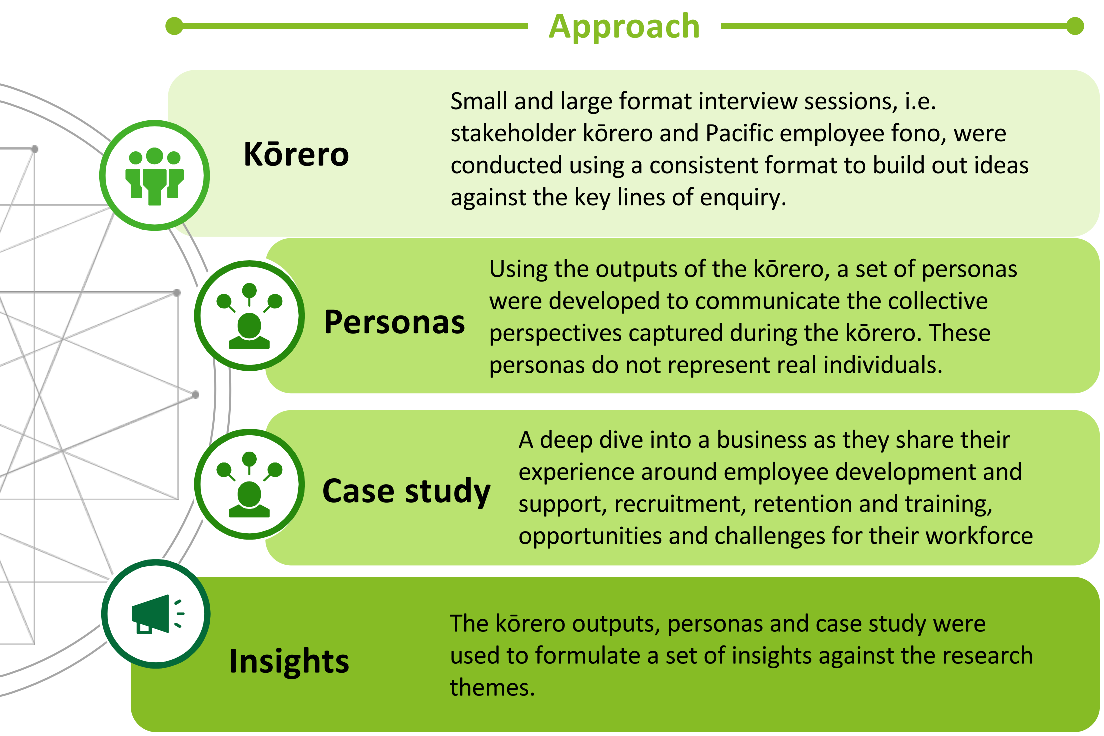
Collective effort is needed to improve Māori access to vocational education

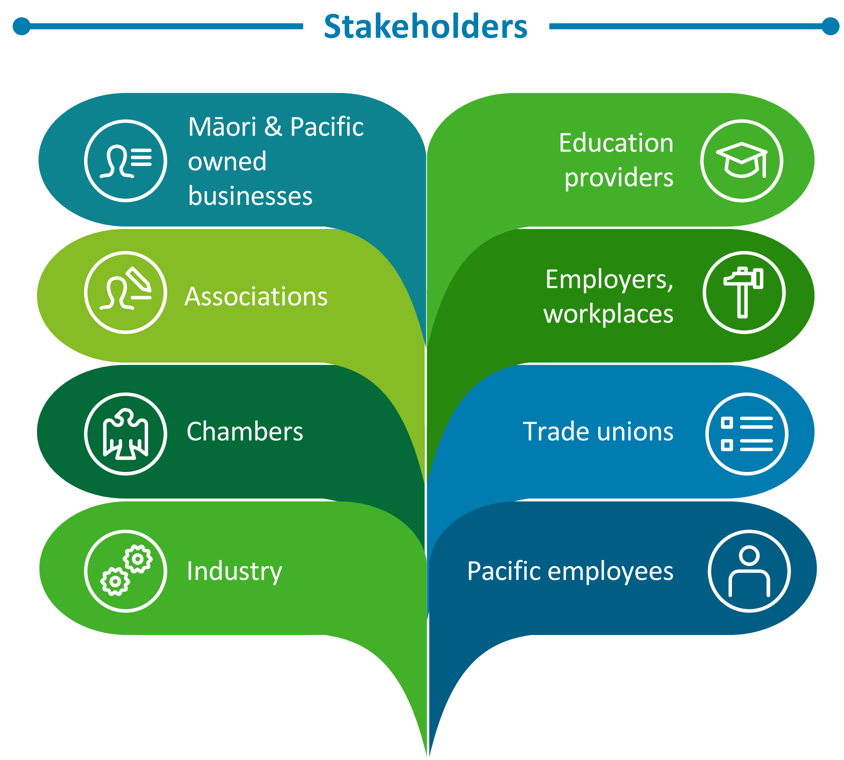
Improving the Māori workforce requires collective effort by communities, industry and the government to improve outcomes and enhance the wellbeing of Māori working within the sector. This will require active engagement between Hanga-Aro-Rau with learners, whānau, hapū, iwi and employers to increase Māori participation, influence and partnership to improve access to vocational education for the logistics sector. This is critical in a sector with declining rates of employment that has yet to recover to pre-COVID-19 levels [42].

Section 4: Te reo kiripānga | Stakeholder engagement

Te reo kiripānga approach

This research has covered engagement with 18 organisations including employers, industry associations, representative groups, employees and unions across various businesses, training providers and sub-sectors of the industry to capture and develop key insights. A full list of those organisations engaged in this research can be found in Appendix 2. The diagrams below outline the approach and the stakeholder groups for the engagement.





This chapter sets out insights from the perspective of stakeholders captured from the engagement sessions. These perspectives were tested through research hypotheses and data analysis to inform research insights for this report.

Te reo kiripānga approach| Summary

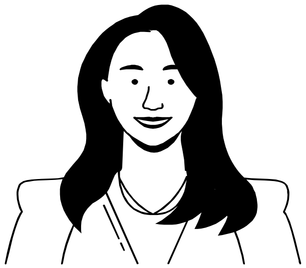
The following are the key findings from the sector engagement. These aligned to the role of Hanga-Aro-Rau in the vocational education system. It is important to note that these findings are one part of the research into the sector, and should be read alongside the future skills survey and workforce analysis set out in sections three and four respectively.

	Pacific voice	Equity	Sustainability
Observations	• Current performance assessment does not recognise the **value of soft skills** for front line workers. This unfairly disadvantages Pacific staff where humility and respect for authority is valued. • There is **poor representation for Pacific peoples within senior and management** roles. • Pacific workers reported a lack of clarity and information available on learning and development opportunities, progression and promotion options as well as career pathways.	• While **technology changes are reducing the physical barriers** to women entering the logistics sector, there are ongoing cultural barriers that are reducing opportunities for progression. • Providing **training in a single language is disempowering** non-English speakers and limiting their ability to upskill in the workplace. • A **lack of government funding** is cited as a driver for underinvestment in initiatives to support, attract and retain Pacific workforce.	• Without **direct pipelines** from secondary or vocational education providers, SMEs in the sector are struggling to recruit young talent. • There is **limited organisational loyalty** in the sector. • In a tight labour market, people with transferable skills are changing jobs for a higher wage, better hours or greater flexibility.
Opportunities	• There are opportunities for Hanga-Aro-Rau to support the sector to put in place **cultural competency initiatives** that would begin to address some of the cultural and structural barriers to Pacific peoples' progression within the sector. • It will be prudent that initiatives are **co-developed with Pacific employees.** Hanga-Aro-Rau may have a role in supporting or facilitating opportunities across the sector. This includes capturing and sharing learnings around effective approaches.	• There are opportunities for Hanga-Aro-Rau to work with the sector to **influence the design of training and development** that better reflects the unique needs of diverse groups, cultural and language requirements. • Hanga-Aro-Rau has an opportunity to provide **data and insights on gender and ethnic equity in the sector**, and to work with industry organisations and employers to target solutions and track outcomes.	• The sector needs a **logistics pipeline strategy and engagement approach** with employers, industry bodies, secondary and tertiary providers to develop a sustainable pipeline into the sector. • **Employee research** will help confirm the key reasons for reduced employee loyalty across the sector. There is an opportunity for Hānga-Aro-Rau or the sector to engage with employees to identify and test potential solutions.

Te reo kiripānga approach| Summary (Continued)

The following are the key findings from the sector engagement. These are aligned to the role of Hanga-Aro-Rau in the vocational education system. It is important to note that these findings are one part of the research into the sector, and should be read alongside the future skills survey and workforce analysis set out in sections three and four respectively.

	Industry voice	People	Transformation
Observations	• The workforce is ageing, and employers are **struggling to attract and retain younger staff** to fill the current demand. • **Training is costly in this fragmented industry,** particularly for SMEs as staff cannot afford to take time out for training. • The logistics industry is poorly understood and **not seen as attractive for a long-term career**.	• **Pastoral care** and **mentoring** determine the success of training as much of the training available is informal and on the job. • Organisations that are able to show a **clear career pathway** to staff are more successful in retaining staff. • Wellbeing initiatives that **draw on the voice and experience of employees** support retention of a more diverse workforce.	• Pathways into logistics are not well understood or communicated. • Digital transformation in the sector is **creating a polarised workforce.** • **Emphasis on data and computer skills**. • There is also increased demand for **lower-skilled jobs** that are more physical, less sophisticated. • Changing workforce models and the **rise of gig employment** means many workers miss out on the support and training an employee would receive.
Opportunities	• Orchestrating a sector-wide **campaign to promote and attract young people** to the industry. • Developing **career pathways or training maps** that show where SMEs can go for staff upskilling and training. • Supporting industry groups to understand **where to access training and aggregating demand** across the sector to overcome the 'scale' and cost barriers.	• Hanga-Aro-Rau, in its role to support the vocational education system, can work with the sector to **provide mentors with access to the skills they need to train** the next generation on the job. • Hanga-Aro-Rau could consider its role in working with employers to understand **approaches to capturing and understanding employees' voices** to inform wellbeing policies and initiatives.	• Working with tertiary providers and career counsellors to market the **career pathway** within the sector. • Hanga-Aro-Rau can support better skills alignment with demand in the sector by using its levers to **influence the training** provided. • Use of industry networks and forums to share **solutions to retaining staff** that might otherwise leave for 'gig' employment.



Industry association – “Sarah”

Sarah works for one of the transport industry associations that support the logistics sector. She grew up in Hamilton and has worked in the sector for 20 years. She regularly engages with employers around workforce shortage and sector branding. More recently, she has seen how COVID-19 and digital technologies are driving change and disruption in the sector.

HOW CAN HANGA-ARO-RAU HELP ME IN THE FUTURE

- Facilitate understanding of schools or graduates about the career pathways within logistics to help build a pipeline of potential recruits, especially with data and computer science skills.
- Work with industry organisations to engage with underserved communities as part of accessing and attracting a diverse workforce to the sector.

Needs

Modernisation
Our industry is traditional and pragmatic, and many feel that if it isn’t broken then don’t change it. But a lot of modern solutions can help improve our operations and attract more young people. We realised we can’t keep doing the same old, it needs to change.

More flexible options
There are examples of the industry adapting to be more flexible and meet the workforce needs, including job sharing. I’ve heard e-learning suggested as a game changer by employers, particularly for an industry that works around the clock.

Challenges

Industry brand
End-to-end logistics underpins the modern economy but it is not well branded or communicated. There is the perception that it is physically demanding, and the hours can be unsocial. We find it hard to attract a young and more diverse workforce or to compete with other industries.

Tight labour market
The sector has a lot of difficulty attracting and retaining staff. We know that we are losing people to other industries and countries (especially Australia), where they can earn a higher wage with better and more flexible hours.

Values

Proud of the sector
I’m immensely proud to work for this sector. COVID-19 taught us that when everything else stopped we kept working. But we don’t celebrate it enough, we need to highlight the importance of the quality and professionalism within the industry.

Workforce diversity
Women, Māori and Pacific peoples are under-represented in progression roles, management, business and owner roles. It is really important that we create an environment where anyone and everyone can see themselves in the sector.

Opportunities

Closer community connections
We think that closer community connections, where the workforce is concentrated, will help to grow and develop the Māori and Pacific workforce. There is an opportunity to work closely with Hanga-Aro-Rau to access and engage with different communities to attract more people into the sector.

Create scale for training
Our sector is fragmented and there are sub-sectors within the industry. If we could capture what training we all need, band together and create some scale, we might keep more people in the sector. The quality of training would also be more consistent.

Employers – “Joseph”

Joseph operates a medium-sized logistics company out of the Bay of Plenty region. He is part Māori and part Samoan, and his father, and his grandfather, owned this business before him. Joseph has been in the sector for over 40 years, and has seen the change in generations and modernisation, different employment expectations, along with the skills required by the sector over time.

HOW CAN HANGA-ARO-RAU HELP ME IN THE FUTURE

- Support the industry to build and re-position the brand for the logistics sector that recognises the diverse roles that are available.
- Work with funders and providers to develop clearer career and training pathways that my staff understand.

Needs

Work readiness
I am seeing young people leave school without understanding the importance of attendance and punctuality. They just don’t have the life skills or practical skills such as driving, basic number or computer skills. We need them trained up to hit the ground running.

Softer skills
I need staff with soft skills who can deal with customers and de-escalate challenging situations. Looking at the training on offer in the system, there seems to be a disconnect between the skills we need and the learning and progression pathway.

Challenges

Attracting and retaining the workforce
We are getting school leavers and some shifting from other industries. But people do not seem to want to stay. Probably due to the poor perception about the work. One can quit their job on Monday and start a new one the following Monday – people have a lot more choices.

Cost of training
We are committed to providing training that is legally required for the role, and to upskill staff in new technologies. That’s already costing quite a bit. Balancing out with everything else, we need to carefully prioritise. There is a lot of pressure on cost at the moment.

Values

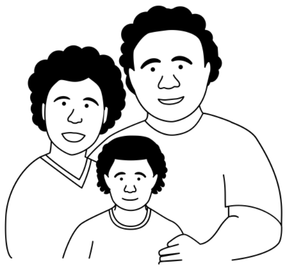
Employee wellbeing
We established a staff management committee to better understand what was important to staff. Through this we were able to put in place some new initiatives. We would never have known what actually would make a difference to people staying without this committee.

Greater workforce diversity
We used to have fathers and sons, uncles and cousins in the business. Expectation, work nature, culture are changing. Technology offers us some opportunities to attract more women as the work is not as physical as it used to be. We must adapt for a changing and more diverse workforce.

Opportunities

Digital technologies and automation
There are so many off-the-shelf digital solutions now. We have recently digitised timesheets, and we are looking at how we can automate more of our physical processes. We think this will help improve productivity, but also attract a diverse workforce.

E-learning
E-learning presents a great way to learn for staff. We are a 24/7 business so it would mean staff aren’t constrained to when training is available. I need help to understand who to go for the training, we don’t have the scale to develop our own.



Pacific employee – "Maria"

Maria is a first generation Fijian who moved to New Zealand five years ago with her husband Kent and young Jack. She came over to work at a distribution warehouse in South Auckland. She has been working on the floor the whole time, and is now ready for her next challenge.

HOW CAN HANGA-ARO-RAU HELP ME IN THE FUTURE

- Facilitate companies to develop Pacific-specific employee development initiatives to create clear progression pathways in organisations.
- Facilitate cultural awareness training for organisations to understand the subtleties of different cultures and recognise everyone's own implicit bias. Provider training for managers to ensure they are well equipped to realise the full potential of a diverse workforce.

Needs

A clear progression path
I've now been working on the floor of the warehouse for five years and I want to learn something more advanced and earn more, but I really don't know where to go. I need my manager to explain to me what I can do next and what skills I need to be able to do that.

Opportunity to train
I work to provide for my family, so taking unpaid time for training is not an option. I need my company to provide me with either paid time to upskill, or put training at the end of the day in the small amount of time I have free outside of family life.

Challenges

Cultural understanding
People think I'm shy because I lower my eyes and don't speak up about how good I am when I'm actually just being respectful. I want to be recognised for the good work I'm doing, but pay rises and promotions seem to go to louder people where I am just as good at doing the job.

Language
While I speak English, my first language is Fijian and so it can sometimes take me longer to process what people are saying. I am great at what I do. But when I head to training for new areas, the speed they speak in English makes it difficult to keep up.

Values

Identity
I am a proud Fijian and want to celebrate that fact. I think creating communities that can connect and celebrate their heritage is key to a happy workplace. I think hiding your heritage, including language, hides your people and you become invisible.

Recognition
I think if you do good work that should be recognised by leadership and those around you. My manager never comes to the floor and so does not see the amount of hard work I am putting in. I think there should be much better communication there.

Opportunities

Customer services
I think I can really use my soft skills, such as communication and empathy, to provide a great service to customers. Some of the roles I have been looking at are in the office and I think that these skills would be really useful to work in a team.

Community
My family and community have really strong ties. I know that if I say I'm enjoying working somewhere others from my community will be excited to come and work alongside me.

Case study: Social impact in the logistics sector

DNA 1st Solution is a contract packing, 3PL and staffing agency business. Serving people and social impact are key values. DNA 1st Solution employs youth, and provides support through a series of initiatives that provide youth including young sole parents without work experience, youth with diverse needs and youth in care protection with "stepping stone to get where they want to go and avoid the poverty traps of limbo"[40]. At DNA 1st Solution, they estimate that 90% of the workforce are Māori and Pacific Peoples.

Support to enable work readiness

Logistics sector employers highlighted a growing need to support work readiness amongst employees in the sector, including poor financial literacy.

Addressing this challenge, DNA 1st Solution has identified a set of support systems to upskill their workforce and prepare them to be successful members of their community.

- **Leadership:** Managers at DNA 1st Solution play a hands-on role in guiding employees, fostering their confidence, and helping them acclimate to the working world.
- **Financial literacy education:** DNA 1st Solution educates employees on financial matters such as KiwiSaver benefits. This promotes informed decision-making and long-term financial well-being of employees.
- **Tailored support for employees with diverse needs:** DNA 1st Solution provides work experience and employment opportunities for individuals with additional needs, ensuring a tailored training approach is developed for each individual's needs through an inclusive approach.
- **Organic, adaptable support structure:** DNA 1st Solution's approach to employee development is not overly formalised, allowing for flexibility in meeting the unique needs of each individual and allowing the organisation to be reactive when the needs of its workforce change.

Values-based approaches

Stakeholder engagement identified recruitment and retention as persistent challenges within the sector. DNA 1st Solution's model highlights the opportunities a values-based, people-first approach brings.

- **A values-driven recruitment focus:** DNA 1st Solution intentionally seeks out under-represented groups in the workforce such as youth, single parents and wāhine, providing them with job opportunities and an inclusive environment to grow professionally.
- **Community collaboration**: DNA 1st Solution has partnered with local colleges and community groups. This has enabled them to successfully tap into a network of potential employees who can benefit from their comprehensive support system.
- **Empowering employees with essential skills**: Beyond hands-on training for job-specific skills. DNA 1st Solution also focuses on building up employee confidence, financial literacy and life skills, preparing them for long-term success in both their personal and professional lives.

Embracing digital solutions

Stakeholder engagement highlighted the challenge of where responsibility lay for upskilling staff when many were sourced from staffing agencies.

As a staffing agency, DNA 1st Solution recognises the importance of upskilling their staff to remain relevant, through their own technology adoption, supported by dedicated training for employees.

- **Technology adoption:** DNA 1st Solution adopts innovative technology, such as QR codes for time tracking and transport logistics software, to streamline processes. They stay informed about advancements in logistics technology and continually evaluates the potential impact on its operations.
- **Investing in employee upskilling**: While acknowledging the benefits of automation, DNA 1st Solution remains committed to preserving job opportunities and growing its workforce. They dedicate resource to upskilling workers, ensuring employee skills remain relevant in a changing work landscape.

Sector and workforce disruption

Changes to the workforce model and availability of local and international staff post COVID-19 have created a shift to more temporary roles. This new model has resulted in the reduction of investment in training by employers. General shortage of trainers has also discouraged employers to work together to find a real solution.

Key:

Industry
Employers
Employees
Providers

Sector and workforce disruption

COVID-19 move from career to series of jobs

Post-COVID-19, the sector has transitioned from an employer to an employee market. With an expectation in many segments of the sector that training will take place outside of work hours, stakeholders indicated that employees are instead shifting jobs to avoid doing things they do not want to do. In particular, they highlighted the lack of loyalty to an employer, and there are examples of poaching between companies. Because training largely occurs on the job, the impact is that people will have a series of jobs within the sector.

Disruption creating new market entrants

The rise of gig employment has seen an increase in the use of recruitment and labour hire companies. Stakeholders highlighted two key difficulties with the labour hire companies. Stakeholders noted that unless there is a shift to direct employment there will not be investment in career paths, role progression or good training. In addition, one employer noted that the lack of 'loyalty in the sector' means that in a case of poor performance (such as a failed drug test) another employer will be there to take on that employee.

There is a lack of supply for training providers creating a fragmented training culture

Employers and wider sector stakeholders identified a perceived lack of training providers offering services into the sector. They noted that due to the fragmentation of the sector there have been few incentives to work together (amongst SMEs) to create scale for training programmes, and as such much of the training has been on-the-job and informal. Where training does exist, it's largely within global companies or local companies of large scale. This resulted in job - and company-specific training that is less transferable.

High turnover created by new operating models is creating a negative workplace culture

Stakeholders highlighted the disruption from organisational restructures and redundancies on the workforce. There is an increased dependency on staffing agencies that means employees may be different from week to week. People are shifting roles more often. Organisations are struggling to instil a positive workforce culture as turnover is much higher. There is also a reluctance to invest in training due to the high turnover and not being the direct employers in the case of contractors from staffing agencies.

COVID-19 created an opportunity to promote the sector as a critical industry

COVID-19 presented the opportunity to promote the logistics sector (particularly road transport) as a career where "everything else stopped and we kept working". People valued the stability and consistency of work through this period. That being said, the increased volume and a lack of pastoral support lead to large numbers of people who "decided to take a break due to it being stressful with having to keep pushing". A lot of experienced people left roles, creating challenges in the traditional 1-on-1 on-the-job coaching approach prevalent throughout the industry.

Disruption to immigration and broader policy settings has disrupted sourcing of skills

In light of border closures throughout COVID-19 and the changing immigration policies that followed, stakeholders highlighted that immigration settings were a contributor to workforce shortages for both skilled and manual roles. In the past migrant workers had been needed for short-term jobs but some stakeholders noted that this led to "lazy employers" who rely on hiring people with needed skills rather than upskilling their workforce. With greater scarcity of workforce, greater emphasis has been needed on developing skills locally.

Workforce supply and retention

Stakeholders acknowledged the labour market constraints were making it difficult to attract and retain talent, particularly in an environment where the same set of skills could attract a higher wage or better work conditions elsewhere.

Key:

Industry
Employers
Employees
Providers

Workforce Supply and Demand

There is a lack of direct pipeline for young people to enter the logistics industry

The sector is struggling to attract younger talent due to a lack of direct pipelines from education. While larger companies have been able to invest in the development of graduate programmes, competition and cost have lead to difficulty in attracting high calibre talent. Smaller companies are facing difficulty in ”locating where the skill set is being built” and also in securing people due to a general perception that, to start out, “logistics isn’t where people want to go”.

Greater opportunities to attract more wāhine to the sector due to technology advancement

There has been increasing numbers of wāhine are entering the workforce. “We’ve seen a big change. For instance, women have been under-represented in the industry for years, but in the last two years we’ve seen more women step up.” A key contributor is that technology has made previously physical jobs, such as trucking, less so. However, some stakeholders highlighted that barriers for women to enter and stay in the workforce still exists.

Competing against other sectors for the same talent pool with transferable skillset

Stakeholders highlighted that there is strong competition for prospective employees from other sectors due to the transferable skill set. Due to the 24-hour nature of the work people have “moved towards nicer hours such as Uber” or more casual contracts that fit in with their alternate commitments such as fruit picking. These affects have lead to observations that the “pool we’re trying to recruit from has certainly shrunk”.

International competition is creating difficulty in retaining staff

Stakeholders highlighted international competition of the workforce as impacting on New Zealand’s ability to retain local and attract international workers. The universality of skills means “a level 5 driver in Australia would attract a wage of $65–$70 per hour, compared to $35 per hour in New Zealand”. Further additional perks such as cars are being offered which leaves New Zealand unable to compete for the workforce.

Culturally specific recruitment programs have proven successful

To try and meet the growing demand for workforce, companies are looking to diversify the pool of people that they are advertising to. Great success and uptake has been seen in creating culturally specific recruitment strategies. This includes multi-language approaches and also connection to community groups and churches where workshops can be run. Employees talked of a whānau centric approach to work and expressed people were much more likely to want to work somewhere if someone from their community worked there also. “People head to work where their family are.”

Young people are treating the logistics roles being a stepping stone in their career

Stakeholders highlighted that retention of younger workers was challenging. Many young people the perception of the industry is as a stepping stone, treating the role as a “job rather than a career” and leaving shortly after. Conversely, the ageing workforce creates challenges for younger people. In multiple cases, “slow turnover is actually creating challenges as no one is leaving and everyone below is waiting to progress up the roles”, further disincentivising young people to remain in the industry.

Development pathways

Engagement highlighted the disconnect between the workforce training and upskilling required, and the availability of training offered. In addition, many viewed the sector as a stepping stone to other jobs and therefore did not prioritise training.

Key:

Industry | Employers | Employees | Providers

Workforce Capability and Enablement

Disconnect between training, job proficiency and progression

There is a disconnect between training, proficiency and progression. Associations highlight the need to focus on "bridging the understanding of why the qualification and learning is a really important" as organisations have not linked training to personal development. Increased focus on soft skills, such as de-escalation, is required for staff who increasingly have to deal with difficult customers. The manual aspect of many roles creates difficulty in translating training to the workplace and so many organisations do not engage.

A focus on the cross utilisation of skills will help create progression pathways

While it is clear the skills required in the workforce are changing due to modernisation and automation, stakeholders are looking to grow this skill set from within their current workforce. Successful organisations talked about a focus on the cross-utilisation of skills to create progression pathways. These may be training needs towards managerial, "how can an operator become a leader". To cross-utilise technical and physical skills, "we could put the current workforce to operate multiple cranes from a room on-site with screens around it".

Availability of training disproportionately affects those in non-corporate roles

The current availability of training does not meet the needs of the workforce. Training is often considered above and beyond job requirements with little or no time being made available within working hours. Training is for the most part in-person, which for roles with no fixed location does not create the needed time or location flexibility. No standard working hours are common within the industry, especially in blue-collar roles and so the standard hours of in-person training disproportionately affects those in non-corporate roles.

Investment in training needs to be ongoing to enable staff to keep up with the systems

The sector is struggling to explain development pathways to people. Companies highlight that for younger people, logistics may not be their long-term career but the skills they learned are transferable. For example, working in the logistics sector creates opportunities for them to move overseas. Furthermore, there is a perception that people do not realise that key skills can also be transferred between industries. "If they decide supply chain is not where they want to work, the skills are entirely transferable to somewhere else."

Clear progression pathways for technical and non-managerial roles encourage retention

Engagement with the sector has highlighted that organisations that focus on creating visible internal development pathways are more successful in retaining staff. Successful companies have highlighted the importance of progression pathways towards technical specialities as some people prefers a non-managerial senior role. Most current pathways only lead to white-collar managerial roles. Currently most companies rely on mentors informally explaining these pathways.

Workforce Wellbeing

The following insights highlight the critical importance of workforce wellbeing initiatives that reflect the needs and aspirations of staff. Successful initiatives reflect cultural connectedness with the workforce and supported training. However, this fell short is where there was no dedicated strategy and corresponding investment.

Key:

Industry
Employers
Employees
Providers

Workforce Capability and Enablement

Employee voice are critical for retention and supporting wellbeing

There is often a disconnect between management and the front line staff around their experience. There are successful initiatives that create space and opportunity for the staff voice, and support wellbeing and retention in the workforce. One company has a diversity and inclusion council with elected members engaging directly with the CEO and people and culture director. The forum has lead to rostering changes to better suit lifestyle and a pay package that recognises the need to demonstrate regular income for home loan applications.

Approach to on-the job training varies and may not work for all segments of the workforce

In some parts of the sector, stakeholders highlighted the 'sink or swim' approach to on-the-job training. Those who could not make the competencies could potentially go back to the truck or leave the industry. In an environment where there is an opportunity to scale up the workforce through greater diversity, there is a need to address the culture that supports career progression and career development opportunities.

Changing workforce models to become more flexible for workers personal circumstances

An employer highlighted that there is scope to continue adapting the workforce model to provide greater flexibility and accommodate the personal circumstances of employees. "Instead of a single driver some member trucks are driven by teams… one truck is driven by four young mums and they work out who is going to drive it." Learning options that reflect the need for flexibility and balance staff requirements are critical to removing barriers to future training.

People increasingly value lifestyle and are put off by the long hours found in many roles

Many aspects of the logistics sector operate 24 hours a day and employees are sometimes expected to work up to 70 hours a week. Stakeholders identified that while opportunities were present, people valued time with friends and whānau over the potential earnings that a career in the sector could have. People "do not want to work these hours. There's good money in it but that doesn't seem to be a big driver. It's lifestyle that they really want."

There is high variation of maturity of how companies are supporting staff wellbeing

Stakeholders noted the importance of taking care of staff and the crucial link between their financial wellbeing and mental health. However, these supports were patchy across the sector and are dependent on individual companies and "how they treat their staff". Employers noted that many join the workforce already in debt from training. So they support staff to understand KiwiSaver and benefits that they are entitled to. Others highlighted that greater responsibility needs to be taken to further support the wellbeing of staff. This includes cultural support, and clarity over career progression.

Not every business in the logistics industry knows how to look after the wāhine workforce

There were multiple instances of no female toilets being present within facilities. And there are key challenges for female drivers who identified being subjected to inappropriate behaviours. Progression pipelines are generally linear and required hard physical roles before progressing towards less physical roles. Successful organisations have introduced adapted progression pipelines to allow wāhine to enter directly in to less physical roles and train them straight in.

Learning, working and technology investment

The sector is continuing to evolve and modernisation places a different expectation on the skills and training employees need. Employers are generally keen to train their staff but the cost of training and disruption of operations are a real barrier. Many staff are training in unpaid time or outside of work hours.

Key:

Industry, Employers, Employees, Providers

Workforce Capability and Enablement

Learning has often been done through unpaid time or with minimal workload consideration

Training was often considered going above and beyond your job rather than part of it. Small-scale operations struggle with both the investment cost of obtaining training materials or course entries but also the implications of having a larger portion of their workforce unavailable for the duration of the training during the day. While many organisations were keen for employees to "embrace their own development", this was either done through unpaid time or with very little support around there work-load.

Digital transformation will change the current workforce and the new skills mix

Employers noted that it was important to transition the current workforce to meet the changing skills need introduced by automation, in particular, how skills can be transferred from physical roles to a digital world. An employer noted that "some of our newest cranes can be operated remotely. We could put the current workforce to operate multiple cranes from a room on-site with screens around it." Others noted that they prefer gamers for roles for their business due to the similarity of skill required.

E-learning seen as a mechanism to increase availability and quality of training

There are real benefits in investing in e-learning given the 24/7 nature of the sector and not restricted to learning 'from 9 to 5'. For roles that have no fixed locality, the e-learning was also welcomed where people could access training flexibly around their shift pattern and location. Some have noted that there could be added benefits of reducing the variation in learning options that has existed across the polytechnics, particularly based on location.

Investment in training needs to be ongoing to enable staff to keep up with the systems

To operate in a new digital environment, businesses need to be willing to invest in the initial training and transitioning of their staff. A number of the technology improvements require basic digital literacy, but increasingly the investment in new technology requires a corresponding investment in the upskilling and ongoing refreshment of the workforce's skills to maintain current with the new systems and approaches.

Investment in technology for productivity improvements

Investment in technology is facilitating greater productivity throughout. Tools aimed at reducing the administrative burden on employees, such as modernised time sheets, are increasing efficiencies. Employees are better informed and able plan their work. Use of new materials and remote control is making many manual labour roles less physical and appealing to a wider audience. The levels of investment and its drivers, however, will depend on the size of the organisation, the size and availability of the workforce, and the sub-sector within logistics. Examples of workforce productivity enhancements included QR scanning, chatbots for customer queries, QR scanning in the warehousing sector to track inventory, parcel tracking, remote operation of cranes and use of technology to examine data from trains rather than "a person to go out and look".

Pacific peoples in the logistics sector

Engagement highlighted the importance of removing systemic barriers that limit Pacific peoples' ability to take advantage of career progression or training opportunities. Dedicated or targeted investment in recruitment and on-job initiatives that better enable Pacific peoples to engage with career opportunities in the sector are needed.

Key:

Industry | Employers | Employees | Providers

Strategic and System Alignment

Current performance assessment structures create barriers for the Pacific workforce

Progression is currently primarily driven by self-nomination, examining workers' hard skills and ability to achieve targets. It does not recognise the value of soft skills for front line workers. This unfairly disadvantages Pacific peoples who value humility and respect for authority. "It means people can't see past the hard skills and recognise that Pacific peoples are better with people, we're more empathetic." A diverse workforce requires performance assessment approaches to value the diversity in skills and experience.

Co-design of operating and development structure improves attrition

Organisations that have successfully integrated leadership development programmes for Pacific peoples show greater success in retaining their workforce and increased employee retention. Creating employee groups / committees successfully provide an understanding of the pulse of the workforce, enabling win-win solutions. The development needs of Pacific peoples are often unique and not met by standardised training, co-design of programmes to empower these groups is key.

Targeted recruitment approaches that are culturally and community connected are proving successful

Some organisations with large Māori and Pacific workforces have recognised the importance of creating pathways into the sector through community and cultural connection. Where this is done well, the recruitment is designed by the staff from these communities and is matched with retention initiatives that focus on improving cultural awareness and competency within the organisation.

Cultural competency training is a key tool to tackling inequality in the work place

Stakeholders highlighted that cultural differences created friction in the workforce. Often misunderstandings are as simple as understanding that for Pacific peoples lowered eyes are a sign of respect or that a single day is not enough bereavement leave to attend a funeral. Stakeholders noted that education on these matters greatly contributed to workforce wellbeing and a more positive employee experience. Creating community spaces has proved powerful in allowing people to express their identities and feel appreciated in the workplace.

There is an inequity of focus for the development of Pacific workforce in the logistics sector

Engagement uncovered a strong focus on development of Māori staff within the sector (within large organisations). Where this is occurring, a dedicated strategy is in place and the initiatives supported with dedicated funding. This was not necessarily replicated for Pacific staff. There is a lack of representation for Pacific peoples in management and leadership positions – making it difficult for workers to aspire to future progression.

Some employers expected funding to enable them to offer Pacific-specific development opportunities – organisations cited a lack of (government) funding that has meant initiatives targeted at developing the Pacific workforce have not been put in place in the same way. Where ethnic specific programmes were present, great success was seen not just in providing progression pathways and making people more culturally aware, but in empowering and inspiring employees to aspire to roles where they can see others of a similar background working.

Pacific peoples in the logistics sector (Continued)

Employee fono sessions highlighted the importance of cultural capability training. On-the-job and classroom education is also required to give recognition to cultural and language barriers of Pacific learners. In addition, there is a need for an ongoing focus on addressing racism and discrimination in parts of the sector.

Key:

Industry | Employers | Employees | Providers

Strategic and System Alignment

Culturally diverse values are a barrier for leadership opportunities

With the changing nature of roles within the sector, stakeholders highlighted the increased value on the softer skills that support teamwork, leadership and customer-facing roles. With the increase in demand for these skills, organisations can see the opportunity to increase workforce diversity through recruitment or promotion into these roles, especially for women. However, it was noted that there is a cultural barrier to overcome "for some Māori and Pacific peoples, they don't want to be 'bossing' people around but they would love a more skilled role". In other cases the importance of "soft skills and customer service has never been a priority" and as such there is a disconnect between what the training and the skills required to progress into dispatch or office roles.

Single language training approaches creates barriers for non-native English speakers

Stakeholders reported that where training was provided, either internally or externally, it was commonly only in a single language. Reasons for this included "wanting to avoid conflict" or simply low current head count. This disadvantages those who may be skilled at their job, but do not have English as their first language. Often employees would need to seek colleagues to translate for them or would simply not engage with the training or role. It was highlighted that "a language defines a people and if you hide your language, you hide the peoples". As such, "multi-language approaches were the best way to empower groups to develop and prevent them becoming "invisible customers on the network".

Pacific peoples are experiencing inequity of treatment in the workplace

Engagement with Pacific workers revealed that Pacific peoples reported racism, discrimination and pay inequity. Reports of the lack of clear expectation in workload led to Pacific peoples being expected to complete a greater workload for the same or lower compensation. Anecdotes of being passed over for promotions in place of less qualified or experienced staff. Informal and formal staff networks and groups have become a safe haven for those experience negative treatment, focussing on "how do we provide support for each other".

Future skills alignment

Stakeholders highlighted the importance of work readiness and the need to invest in developing soft skills in an industry that has not valued these in the past. Digital transformation will continue to shape the nature of the skills required, and may support attracting a more diverse workforce in the longer term.

Key:

Industry · Employers · Employees · Providers

Strategic and System Alignment

Polarisation of workforce skills is occurring through introduction of new technologies for manual tasks

Digital transformation and automation is having a positive impact by attracting a broader workforce, e.g. by removing some of the physical barriers to work. However, it has also changed the nature of the skills required. For example, employers noted that the workforce will become increasingly polarised. It is perceived that automation and innovation are "dumbing jobs down" and making other roles "more physical and less sophisticated" which creates fewer pathways for progression for less literate employees.

Need to focus on future skills now to transition the current workforce

Different approaches are required to attract and retain people based on the future-focused skills to support the sector's ability to transition the current workforce. Some employers highlighted that they currently fill needs from skilled migrants. Others noted the need to increase delivery of internal training programmes, specifically in data sciences and analysis. While the approach differed across organisations, it is clear that there is a growing demand for skills that the current workforce is unable to meet.

School leavers often require investment in core work ready skills

Enabling the workforce to succeed requires investment in basic job-readiness skills. Many have highlighted the need to better partner with education providers to deliver the skills needed and remove barriers for young people. This includes both technical skills and life skills. "Can they turn up for work? Can they deal with people of authority?". One employer quoted that "out of 1,000, 700 couldn't pass the numeracy and literacy test… there is a disconnect between what is being taught at school and what is required".

Change in government policies have an impact on skills mix for future

Stakeholders noted that government policy to promote transport mode shifts away from road to rail or sea, is unlikely to have an immediate impact on the sector and skills, due to, high proportion of freight moved within a region (rather than long haul). Other shifts such as changing to electric or hydrogen fuels would require re-training or upskilling as the fleet changes. Stakeholders felt this was a longer-term skills challenge due to the cost of switching and the infrastructure needs to support this fuel switch. As these are not currently not in place, it would limit adoption.

Regulations changes deprioritise formal training

Deregulation of the sector was seen as the turning point - as new entrants into the freight sector appeared to focus on managing costs to remain competitive.

Stakeholders highlighted that the lack of regulation in the industry means there is "no legal requirements on employers to train staff" (excluding basic health and safety training). Exceptions to this include sub-sectors where certification or licensing is required, i.e. Ministry for Primary Industries (MPI) certification, dangerous goods certifications or forklift licences. Where this is required, employee training is typically paid for by the organisation. However, overwhelmingly stakeholders felt the lack of training requirements meant there are few incentives to deliver classroom based training and development initiatives to upskill staff, and there is "no-one to teach them".

Stakeholders noted that despite attempts, classroom based initiatives do not "stick despite all the benefits of it" and instead staff are learning from mistakes.

Section 5: He arotake pūkenga mō āpōpō | Future skills survey

Future skills survey

Similar to the manufacturing and the engineering sectors, the logistics sector is facing a change in workforce landscape, due to a combination of modernisation, automation and a shift in social norms. It is worth noting that this survey was distributed while New Zealand was having a major weather disruption. Businesses have had to prioritise resources to help with business recovery and staff wellbeing. As such, the response rate of the survey is low. Nevertheless, it does provide a spotlight on employers' views of current and future skills needs for their businesses.

Approach

Survey focus

The focus of the survey was to compare the challenges amongst employers in relation to skills shortages, both at current state and in future.

Survey target

The survey was sent to the members of industry associations and Hanga-Aro-Rau business contacts in the logistics industries in February 2023.

Survey analysis

Analysis of the survey has been completed, comparing the average scores of the companies against the survey focus areas noted in the diagram on the right.

Survey Focus Areas

- Skills importance for employee success
- Challenges in finding the important skills
- Employee and skill shortages
- High level reasons for staff departure
- Other skills and knowledge required to be successful in future
- Effectiveness of actions in reducing impact of skills shortage

A total of 33 survey responses were received, representing employers from the logistics industry. Key insights have been summarised in the following slides for the industries, with a deeper dive into both water and land transport and distribution. The survey form with questions is included in Appendix 4.

Future skills survey | Summary

The survey results show there is an opportunity for the sector to uplift cultural competencies by working in partnership with the Pacific communities, Māori whānau, hapū and iwi to gain better workforce outcomes. There is a further opportunity to explore how to provide Pacific or Māori specific development initiatives to help these community groups be successful in the logistics industry, therefore creating less churn for the employers.

	Te Tiriti	Equity	Sustainability
Observations	• **Cultural competencies** and language skills have not been identified as important or challenging to find. This result could indicate that the sector is yet to **discover the benefits of partnering with Māori** to solve workforce issues. • The survey shows that there is **only 35.5% of companies that have specific initiatives** to support the growth and development of their Māori employees.	• **Pacific peoples' voices are under-represented** in the logistics sector. • 25.8% of the companies surveyed have reported that they have no Pacific employees in their company. • **Inequity is also found for Pacific staff development** as less than a third of companies have specific Pacific initiatives to help the development of Pacific staff. • **Inequity is found for Māori development,** to a lesser extent.	• There is a clear **shift in the skill sets** required at present and in five years' time. Without deliberate investment in upskilling of existing staff and preparing for new entrants, the logistics sector will always face **workforce shortage challenges**. • There is an increase importance of **transferable skills required i**n future. These skills are in high demand also by other industries. Businesses will not be sustainable if no change is made to recognise that **more training** is needed for staff.
Opportunities	• There is an further opportunity for the industry to partner with iwi and Māori leaders to educate the businesses on the importance and value of iwi and Māori partnerships to gain better outcomes for staff, employers and the overall industry. • Hanga-Aro-Rau, being one of the key system conduits, has an influencing role to play to ensure key stakeholders have a strategic direction to follow in strengthening its Te Tiriti obligations and partnership.	• There is an opportunity for the sector to work with Pacific communities and vocational education providers to design and deliver Pacific development programmes that provides an equitable pathway for Pacific employees. • Hanga-Aro-Rau could use its Pacific workforce strategy to provide direction to the sector on practical actions and monitor the logistics industry workforce to inform progress and effectiveness.	• Given the segmented nature of the logistics sector, it is challenging for businesses to sustain a set of business specific skills. Instead, upskilling people with transferable skills and encouraging a shared way of operations could help the overall sustainability of the industry. • Hanga-Aro-Rau could provide forums where exchange of knowledge and skills can be passed on. • Pastoral care and mentoring will be important.

Future skills survey | Summary (Continued)

Similar to the manufacturing and engineering survey, the logistics survey results emphasise the importance of people related transferable skills, particularly highlighting verbal communication needs to support better customer services. There are opportunities for the industry to articulate a clear career and development pathway so that more young people consider logistics as their long-term career destination.

	Industry voice	People	Transformation
Observations	• The survey findings of the importance of **verbal communication** and **problem solving skills** are in line with the industry's feedback on the increasing focus for **customer services** and **managing difficult situations**. • The survey suggests that employees **are leaving for another industry** or **heading overseas**. This supports the concerns the industry has with New Zealand being a tight labour market, the logistics sector finding it hard to compete.	• Team work, verbal communication, leadership, management and decision-making are all **people related transferable skills** important for the logistics sector but are **hard to find**. • Supported by stakeholder engagement findings, the development of these skills can be influenced by the **employee's culture and background**. As such, without a focus on cultural competencies training, there could be **missed opportunities to bring out the best in our people**.	• **Modernisation and automation** are transforming the logistics industry, along with the skill sets required to operate. • Businesses and employees need help to transition into new ways of working with adequate skills, such as **logistics tools and techniques,** to help them to be successful in future. • There is a need to assist people with their **work-life balance** as many are not being able to work due to health and wellbeing of themselves or family.
Opportunities	• The industry will need to work together to promote awareness of the sector. It needs to be able to articulate the opportunities and career pathways that it can offer. • There needs to be a change in the perception of the industry's working conditions, and establish a brand as a rewarding long-term career. • Hanga-Aro-Rau could help facilitate the design and implementation of a sector-wide education framework to help the industry to be agile.	• The industry has opportunities to work with underserved communities to better understand cultural needs and approaches to help them to be successful in their life and career. • Learning about this would help create a more culturally safe environment for all to strive and develop a sense of belonging and loyalty. • Hanga-Aro-Rau can help facilitate cultural uplift initiatives and monitor their effectiveness.	• The industry will benefit from an industry-wide guideline on how best for businesses to successfully transition from now into the future. • Hanga-Aro-Rau could facilitate forums where successful stories and case studies can be shared, encouraging companies that are more mature in the transformation journey to share lessons learnt.

Future skills survey | Key insights

The survey results show teamwork, verbal skills and problem-solving are the most important skills in five years time for the logistics sector. While computer literacy and big data analytics are rated the least important skills now – these skills have the highest change in perceived importance over the next 5 years. In the survey, a score of 5 indicates that those skills are the most important and 1 is the least important.

Teamwork, problem-solving and critical thinking are necessary to deal with challenging situations

- Transferable skills and life skills will remain to be the most important skills in five years from now.
- Amongst these life skills, teamwork has the highest importance rating of 4.52 at present and 4.48 in future.
- Problem-solving and critical thinking has risen in importance from 4.21 to 4.36 in five years.
- The greater focus on soft skills was mentioned earlier, e.g. de-escalation and how to deal with difficult customers.

Verbal communication is key for customer services in future

- Verbal communication has been rated as the third most important skill for the sector in the future.
- It is even more important than working with logistics tools and techniques, computer skills or written communication.
- This is consistent with the stakeholder engagement findings that the logistics sector has shifted more focus to providing good customer service.

Computer literacy will become more important in the future

- 68.7% surveyed indicated computer skills are very important or most important in future. More so than the manufacturing and engineering sectors (47.8%).
- Though employers have rated computer programming and big data analytics as being the least important skills currently and in the future, it has the highest average importance point change (increase of 0.47 point) between now and in 5 years time.

Cultural competencies and language skills are the least-focused skills for employers

- Similar to the manufacturing and logistics sectors, it is considered the least important for employees to possess language skills and cultural competencies, with an average rating of 2.64 and 3.21 respectively.
- Attention may be needed, especially as verbal communication is one of the most important skills for an increasing focus on personalised customer services and culturally diverse values are a barrier for leadership.

Employees need to upskill in leadership, management and decision-making for future success

- Leadership, management and decision-making skills will be increasingly important, as seen in the increase of 0.4 points from 3.56 to 3.97 between now and five years' time.
- This is important to note as many participants in the stakeholder engagement believe that inequity exists in progressing from more physical roles to leadership positions.
- If leadership skills are critical for future, there will be a need to upskill staff in this space for them to stay within the industry.

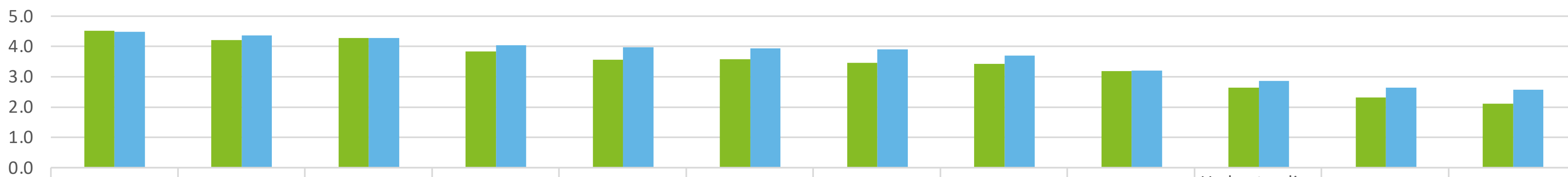
Working with logistics tools and techniques is important at present and in future

- Working with logistics tools and techniques is more important than to understand connected equipment and industrial control software, with importance scores of 4.04 and 2.87 respectively in five years' time.
- With automation being introduced, online tracking systems could manage a large part of the end-to-end process, meaning fewer steps and interventions would be required from staff. However, there still could be a need to learn different types of tools and processes.

Survey results for the importance of key skills for logistics

The graphs in this page and the following page present the average scores in order of skills importance perceived at present and in five years time for the logistics sector. A score of 5 indicates that those skills are the most important and 1 is the least important.

Logistics sector



	Teamwork	Problem-solving and critical thinking	Verbal communication	Working with logistics tools and techniques	Leadership, management and decision-making	Written communication	Computer literacy including the use of multi-media channels	Numeric and quantitative analysis	Cultural competencies	Understanding of connected equipment and industrial control software	Language skills, e.g. te reo Māori	Computer programming and big data analytics
Current Importance	4.5	4.2	4.3	3.8	3.6	3.6	3.5	3.4	3.2	2.6	2.3	2.1
Future Importance	4.5	4.4	4.3	4.0	4.0	3.9	3.9	3.7	3.2	2.9	2.6	2.6

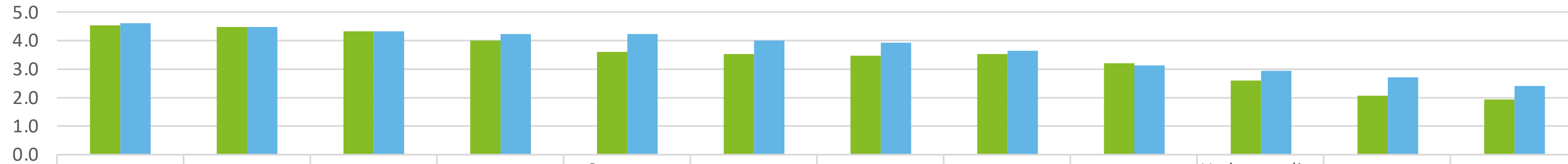
Note that there is no universal definition of transferable skills or non-technical skills. For this research, transferable skills include: teamwork, problem-solving and critical thinking, leadership, management and decision-making skills. While other skills such as verbal communication, written communication, cultural competencies and language skills are all transferable, these skills have been analysed separately.

Where non-technical skills or soft skills have been mentioned in previous sections, this research follows the definition from the source reference materials.

There is likely variation from business to business across the sector. Note that due to the relatively small sample size of 33 (15 land, 10 water, 8 others), the results presented are not statistically robust and may not represent the whole industry's experience or opinion in terms of which skills are more important than others.

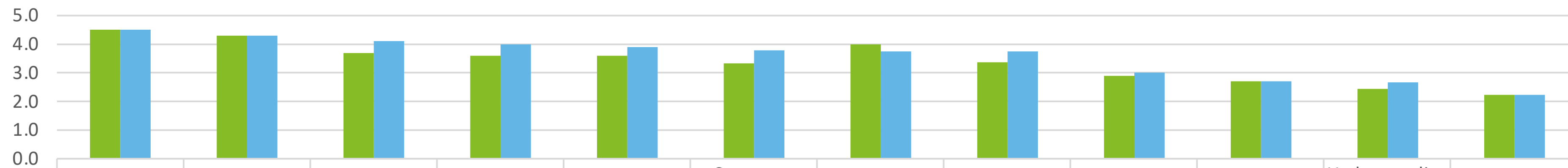
Survey results for the importance of key skills for transport and distribution

Transport and distribution (land)



	Problem solving and critical thinking	Teamwork	Verbal communication	Working with logistics tools and techniques	Computer literacy including the use of multi-media channels	Leadership, management and decision-making	Written communication	Numeric and quantitative analysis	Cultural competencies	Understanding of connected equipment and industrial control software	Computer programming and big data analytics	Language skills e.g. Te reo Māori
Current Importance	4.5	4.5	4.3	4.0	3.6	3.5	3.5	3.5	3.2	2.6	2.1	1.9
Future Importance	4.6	4.5	4.3	4.2	4.2	4.0	3.9	3.6	3.1	2.9	2.7	2.4

Transport and distribution (water)



	Teamwork	Verbal communication	Problem-solving and critical thinking	Leadership, management and decision-making	Written communication	Computer literacy including the use of multi-media channels	Working with logistics tools and techniques	Numeric and quantitative analysis	Cultural competencies	Language skills, e.g. te reo Māori	Understanding of connected equipment and industrial control software	Computer programming and big data analytics
Current Importance	4.5	4.3	3.7	3.6	3.6	3.3	4.0	3.4	2.9	2.7	2.4	2.2
Future Importance	4.5	4.3	4.1	4.0	3.9	3.8	3.8	3.8	3.0	2.7	2.7	2.2

Hard to find skills in logistics

There is an increased difficulty in finding workers with written communication, teamwork, and numeric and quantitative analysis. Employers are not confident that the sector's need for problem-solving and critical thinking, as well as leadership, management and decision-making, can easily be sourced in five years' time.

Transferable skills are in high demand as they are critical for logistics, but are the most difficult to find

- The hardest to find amongst some of the most needed skills for the future are problem-solving and critical thinking from (69.7% respondents scored 4 or 5), as well as leadership, management and decision-making skills (63.6%). These skills are in high demand for other industries as well.
- This shows a disconnection between training and meeting the businesses' needs.

Written communication, numeric and quantitative analysis are some of the harder to find skills

- Written communication, numeric and quantitative analysis are not the most important skills but they are increasingly hard to find. Their hard to find scores have increased by 0.34 from 3.28 to 3.63 for written communication and by 0.29 from 3.45 to 3.74 for numeric and quantitative analysis.
- This is consistent with the manufacturing sector but to a lesser extent.

Expecting plenty of computer programming and big data analytics skills available in future

- Although computer programming and big data analytics skills have been identified as the least important skills to have, it is anticipated that it is one of the easiest to source in future, with a score drop from 3.95 to 3.05.
- This is not surprising as these are skills that can be learned via classroom or online courses.
- These skills may be more relevant to build off-the-shelf solutions for logistics instead of on-the-job skills.

There will be more people who have language skills and cultural competencies in five years' time

- Interestingly, employers are expecting that it will be easier to find employees with language skills and cultural competencies in future. There is a score drop from 3.50 and 3.37 down to 3.07 for both in five years' time.
- This is somewhat expected given the greater focus on te reo Māori at school, change of social norms and government support.

There are still some unmet needs for workforce that have teamwork and verbal communication skills

- Teamwork and verbal communication were identified to be the most important in future but they are not the easiest to find.
- For teamwork, 45.3% respondents have reported a 4 or 5. For verbal communication, 33.3% responded that these skills would be hard to find in future.
- This shows that the sector is training some people with these skills but still not enough to fill the market needs.
- These findings, however, differ when exploring sub-industries, i.e. land versus water, in the logistics sector.

There may not be enough people who can work with logistics tools and techniques in five years' time

- Working with logistics tools and techniques was identified as a very important skill set in future and 39.4% of respondents recorded a 4 or 5 hard to find score in 5 years time.
- Employers are anticipating shortages in supporting skills such as written communication and teamwork.
- Employers are not confident that there will be sufficient people who are trained in these skills to satisfy the sector's needs in future.

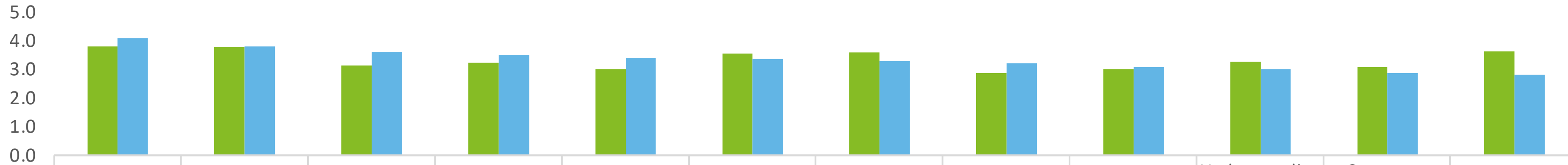
Survey results for the hard to find skills in logistics

The graphs on this page and the following page present the average scores in the order of hard to find at present and in five years time for the logistics sector. A score of 5 indicates the hardest to find skills and 1 is the least challenging to find skills.

	Problem-solving and critical thinking	Leadership, management and decision-making	Numeric and quantitative analysis	Written communication	Working with logistics tools and techniques	Teamwork	Verbal communication	Understanding of connected equipment and industrial control software	Language skills, e.g. te reo Māori	Cultural competencies	Computer programming and big data analytics	Computer literacy including the use of multi-media channels
Current hard to find	3.9	4.0	3.4	3.3	3.4	3.1	3.1	3.5	3.5	3.4	3.9	3.4
Future hard to find	4.1	3.9	3.7	3.6	3.4	3.4	3.3	3.2	3.1	3.1	3.1	3.0

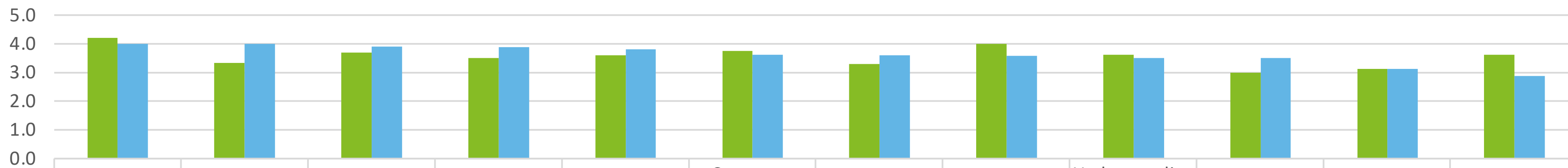
Survey results for the hard to find skills in transport and distribution

Transport and distribution (land)



	Problem-solving and critical thinking	Leadership, management and decision-making	Written communication	Numeric and quantitative analysis	Teamwork	Language skills, e.g. te reo Māori	Cultural competencies	Verbal communication	Working with logistics tools and techniques	Understanding of connected equipment and industrial control software	Computer literacy including the use of multi-media channels	Computer programming and big data analytics
Current hard to find	3.8	3.8	3.1	3.2	3.0	3.6	3.6	2.9	3.0	3.3	3.1	3.6
Future hard to find	4.1	3.8	3.6	3.5	3.4	3.4	3.3	3.2	3.1	3.0	2.9	2.8

Transport and distribution (water)



	Leadership, management and decision-making	Numeric and quantitative analysis	Problem-solving and critical thinking	Working with logistics tools and techniques	Written communication	Computer literacy including the use of multi-media channels	Teamwork	Computer programming and big data analytics	Understanding of connected equipment and industrial control software	Verbal communication	Cultural competencies	Language skills, e.g. te reo Māori
Current hard to find	4.2	3.3	3.7	3.5	3.6	3.8	3.3	4.0	3.6	3.0	3.1	3.6
Future hard to find	4.0	4.0	3.9	3.9	3.8	3.6	3.6	3.6	3.5	3.5	3.1	2.9

Open positions, uncertainty factors and other skills required in logistics

The logistics sector is losing people to other industries or overseas. The survey results confirmed the challenge to fill positions with the relevant skills since-COVID-19 and due to automation, with most employers stating the impact of COVID-19 and automation is enduring.

Open positions due to a lack of relevant skills

The level of unfilled positions is lower than pre-COVID-19

- Three years ago (pre-COVID-19), 18.2% of employers responded that lack of applicants was not the reason for open positions not being filled. This is low compared with 28% for manufacturing and engineering.
- 9.1% of employers responded that more than 40% of open positions were not filled due to a lack of skills.

COVID-19 has widened workforce skill gaps

- At present, there are more unfilled positions due to the lack of skills. 30.4% employers responded that more than 40% of open positions were not filled due to a lack of skills. A similar trend was observed for manufacturing and engineering.
- This is not unanticipated as the operating approach has changed for logistics and therefore its skill sets, which are yet to be fully transitioned.

Uncertainty factors result in an enduring future impact

The employers believe climate change would have a high enduring future impact on the logistics sector

- 21.3% of employers responded with a score of 4 or 5 for climate change having an enduring impact on the future of logistics. This is similar to manufacturing and engineering.
- However, in manufacturing, there are around 17.9% of employers responded who responded unknown.
- In logistics, only 3% employers responded unknown.

COVID-19 has had a more enduring impact on the future of the logistics sector than automation does

- 24.2% of employers responded a score of 4 or 5 for COVID-19 having a relatively large enduring impact on the future of logistics. This is higher than 15.2% for automation but is much lower than the 52.9% of respondents from manufacturing and logistics.
- 27.3% of employers believes that COVID-19 has had little impact, i.e. a score of 1. This is higher than 24.2% for automation and much higher than the 8.8% from the manufacturing and logistics employers.

Perceived destination of employees that leave the industry

Close to half of the employers responded that employees left for another industry or went overseas

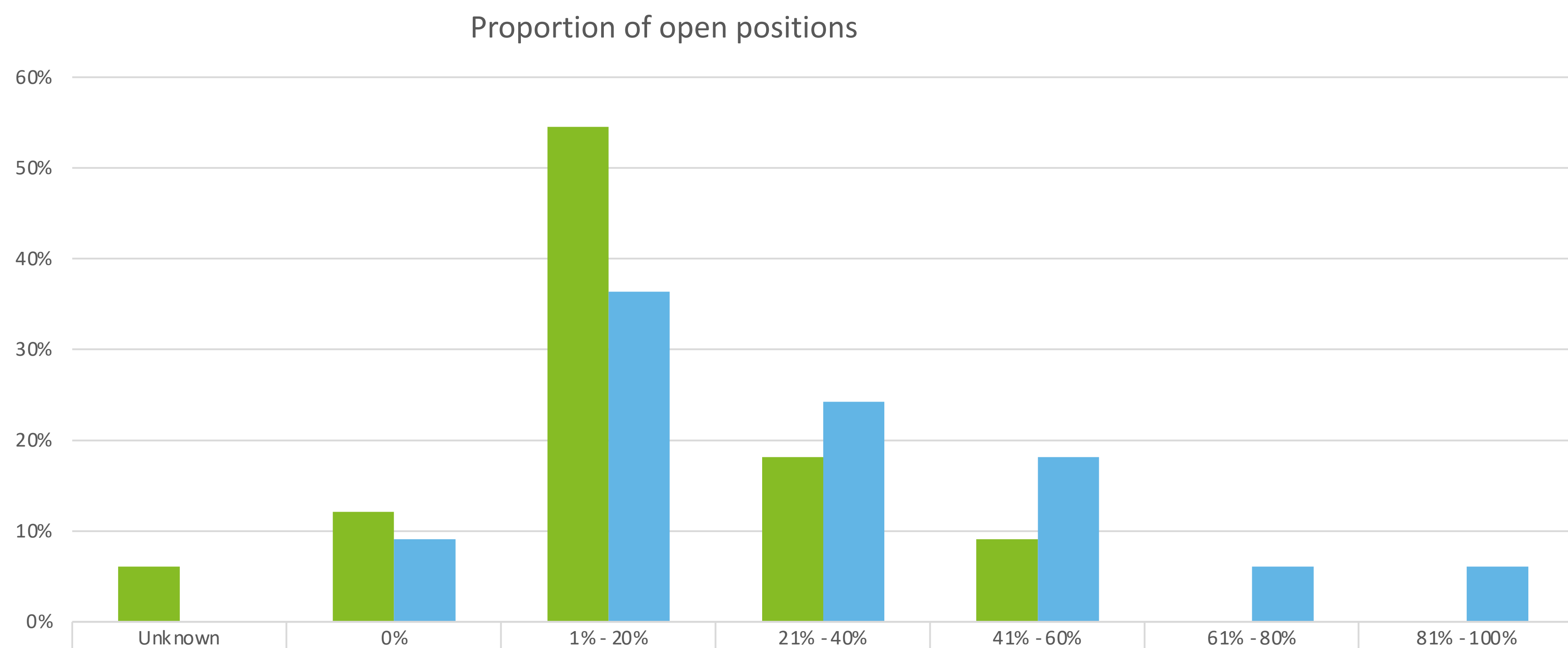
- 33.3% of employers, selected as their first choice that their staff left the industry for another industry. This is consistent with stakeholder engagement insights suggesting a highly competitive market for workforce.
- 15.2% of employers stated that employees left the country.
- This is consistent with both the research and stakeholder engagement findings that logistic sector skills are highly transferable overseas, and consistent with a worldwide shortage in the logistics sector.

18.2% of employers believes that employees left the industry for personal reasons

- 6.1% of employers in voluntary unemployment.
- 9.1% of employers selected employees were unable to work due to health and wellbeing factors.
- 3% of employers believe that staff left for other reasons.
- 33.3% of employers did not know or did not respond.
- It is possible to explore how to retain the employees who left for personal reasons to provide some level of pastoral care or mentoring support for the young people.

Survey results for open positions

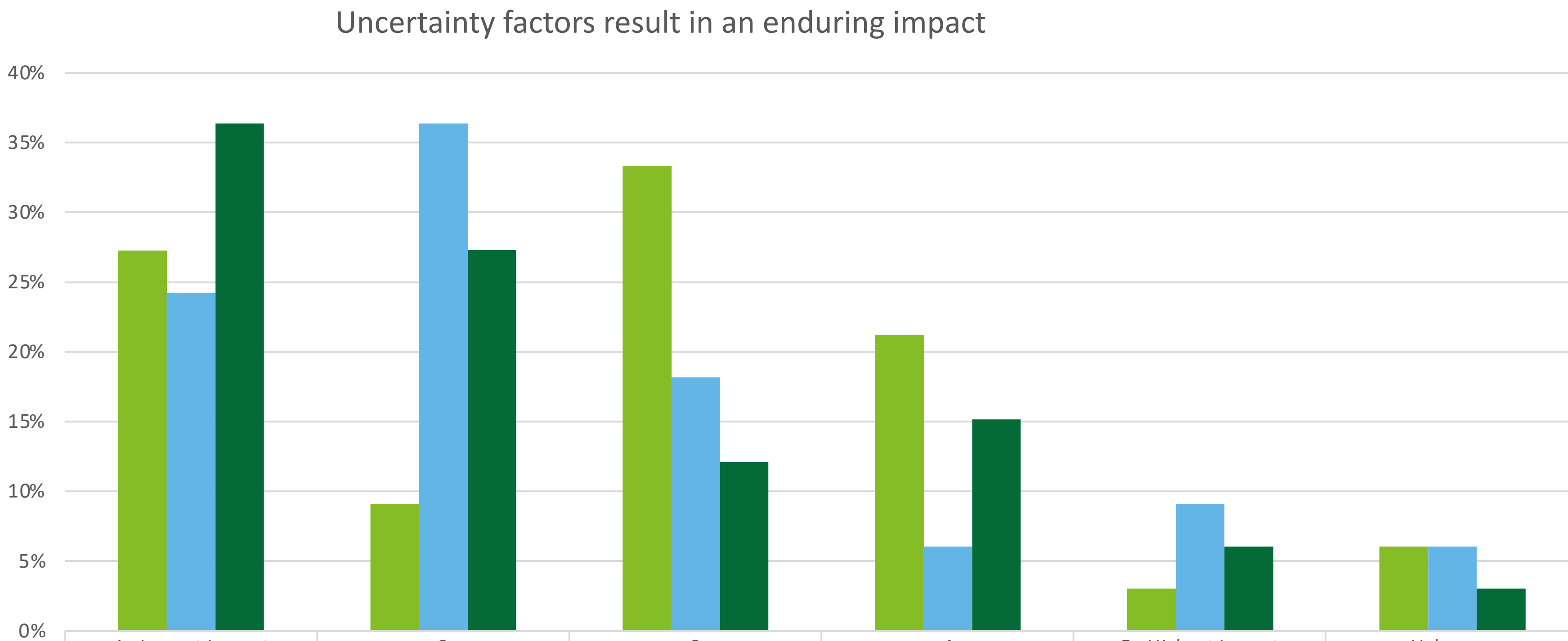
The chart below presents the percentage of open positions due to a lack of relevant skills for the logistics industry three years ago (pre-COVID-19) and at present. 18% of employers responded that they have 41–60% of open positions which cannot be filled due to a lack of relevant skills in the workforce, market compared with 9% pre-COVID-19. The survey results shows a shift to the right – suggesting that skills shortages are harder to fill post-COVID-19.



	Unknown	0%	1% - 20%	21% - 40%	41% - 60%	61% - 80%	81% - 100%
Pre COVID-19 % of Employers	6%	12%	55%	18%	9%	0%	0%
Since COVID-19 % of Employers	0%	9%	36%	24%	18%	6%	6%

Survey results for uncertainty factors

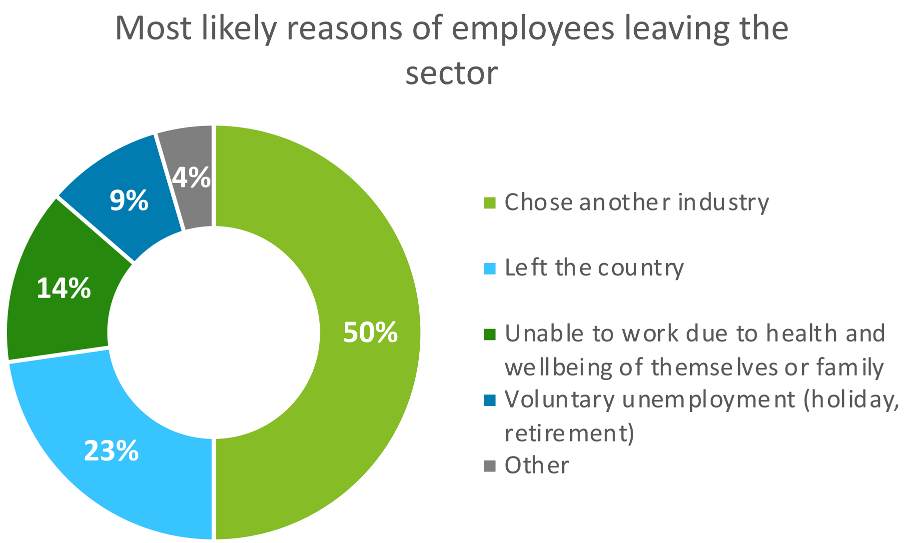
The following graph presents the average scores for the impact of disruption caused by COVID-19, automation and climate change for logistics, 5 being a very large impact and 1 being a very small impact.

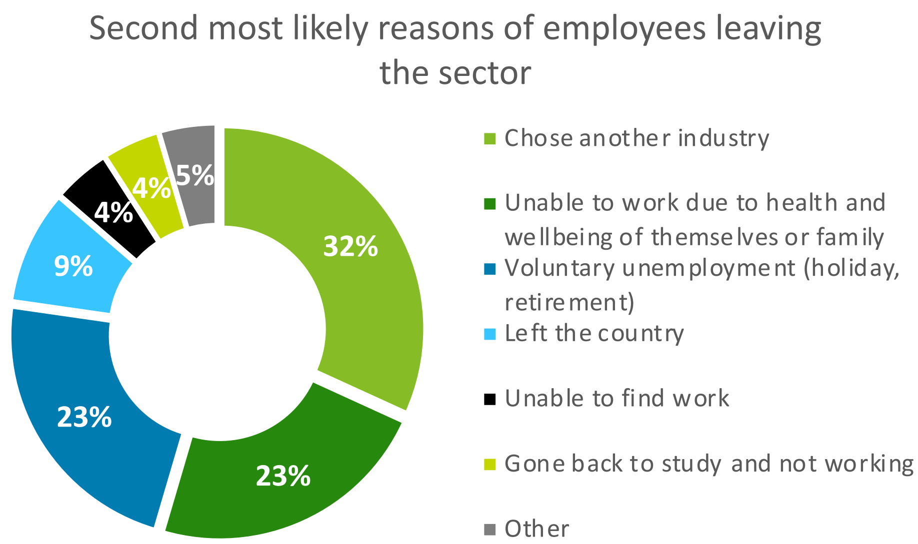


	1 - Lowest Impact	2	3	4	5 - Highest Impact	Unknown
COVID-19 % of Employers	27%	9%	33%	21%	3%	6%
Automation % of Employers	24%	36%	18%	6%	9%	6%
Climate Change % of Employers	36%	27%	12%	15%	6%	3%

Survey results for the perceived destination of employees that leave the industry

The following graph shows the percentage of responses indicating where the employers are most likely destinations are when they leave the logistics sector.





Difficulty in attracting and retaining Pacific and Māori staff and cultural initiatives

The survey provided insight on how much focus employers have on the Māori and Pacific workforce. The results have indicated that there is room for employers to do much more to promote the development of their Māori and Pacific employees.

Almost two-thirds of respondents do not have or do not think it is relevant to have Māori initiatives to support development of their Māori workforce

- 35.5% of employers have specific initiatives in place to support the growth and development of their Māori employees.
- 32.3% of companies do not have a specific Māori initiatives in place for growth and development, and 32.3% of respondents found this to be not relevant or unknown.
- This indicates a need to outline the benefits of specific Māori initiatives to promote better engagement with the Māori workforce.

42.4% of employers stated that it is not relevant or unknown how difficult it is to retain Pacific staff

- 12.1% of employers have rated a score of 4 or 5 being very difficult to attract and retain Pacific staff.
- No employers has rated a 1 being very easy, with 21.2% rating a score of 2 being easy. However, 42.4% of employers stated that it is not relevant or unknown.
- This indicates a lack of awareness and recognition of how increasing Pacific peoples workforce participation and engagement is a potential solution for sector skills shortages.

32.3% of employers stated that it is not relevant or unknown how difficult it is to retain Māori staff

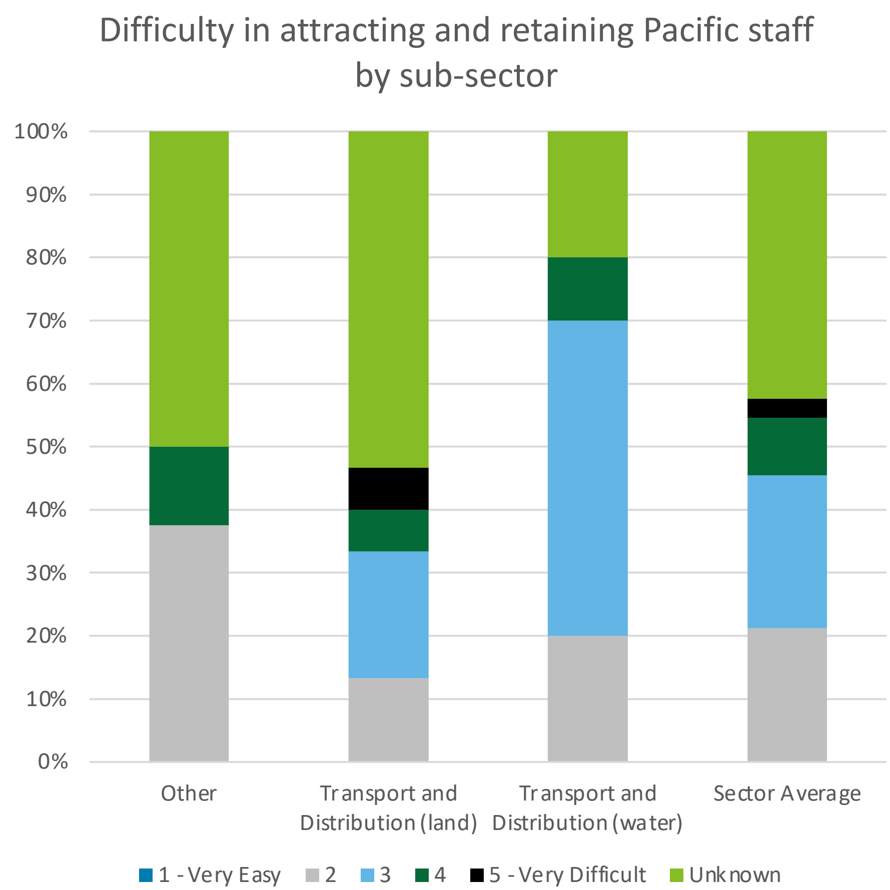
- 22.6% of employers rated a score of 4 or 5 (being very difficult) to attract and retain Māori staff.
- No employer has rated a 1 (being very easy), with 25.8% rating a score of 2 (being easy).
- However, 32.3% of employers stated that it is not relevant or unknown how difficult it is to retain Māori staff.
- More could be done to help the industry to draw more focus on tapping into Māori communities to support the sector to meet skills shortages.

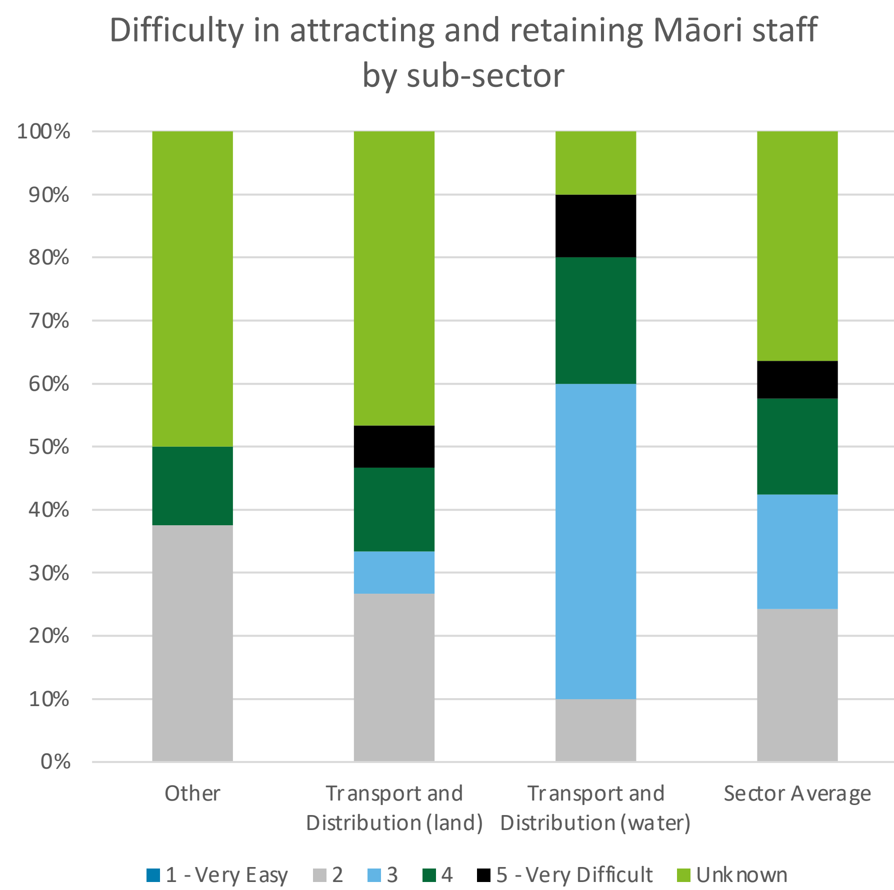
Less than a third of companies have specific Pacific initiatives to help the development of Pacific staff

- 27.3% of employers have specific initiatives in place to support the growth and development of their Pacific employees – even lower than support for Māori employees.
- 39.4% of companies do not have specific Pacific initiatives in place, and 33.3% of respondents found this to be not relevant or unknown.
- This indicates a need to outline the benefits of specific Pacific initiatives to promote better engagement with the Pacific workforce.

Survey results for difficulty in attracting and retaining Pacific and Māori staff

The following graphs present employers' response for rating how difficult it has been to attract and retain Pacific or Māori staff.
5 being very difficult and 1 being very easy.

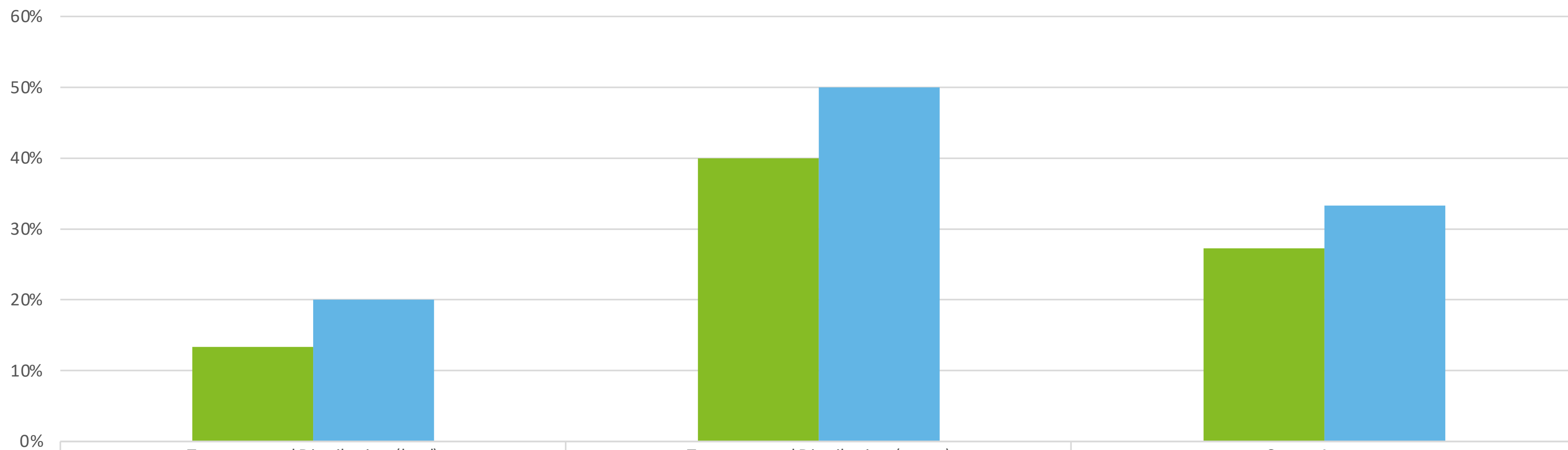




Survey results for the proportion of sub-sector with specific cultural initiatives

The following graph presents the average percentage of companies that have specific initiatives in place to support the growth and development of Pacific or Māori employees.

Proportion of sub-sector with specific cultural initiatives



	Transport and Distribution (land)	Transport and Distribution (water)	Sector Average
Pacific	13%	40%	27%
Māori	20%	50%	33%

Effectiveness of actions in reducing the impact on workforce

The survey results provided some insights into employers' perceptions of the likely effectiveness of actions in reducing the impact of skills shortages, including aligning training programmes with future skills needs and promoting sector awareness to attract future talent.

Effectiveness of actions in reducing the impact of skills shortage

Aligning training programmes with future skills needs is flagged as likely to be the most effective action for preparing for the shortage of skills

- The average scores show that aligning training programmes with future skills needs is perceived to be the most effective action in reducing the enduring future impact on the shortage of skills in their companies.
- The results show an average score of 4.4 for effectiveness, and 78.8% of employers responded a 4 or 5 score for the effectiveness of this action..
- This is similar to manufacturing and engineering.

Promoting sector awareness is flagged as likely to be an effective action for tackling the shortage of skills

- Promoting sector awareness to attract future talent is also perceived as likely to be an effective action in reducing the enduring future impact of skills shortages.
- 81.8% of employers responded a 4 or 5 score for the effectiveness of this action. It has an average effectiveness score of 4.3.
- This is also consistent with manufacturing and engineering.

Greater focus on group training is flagged as unlikely to be very effective in reducing the shortage of skills

- Employers believe that having a greater focus on group training would not very likely be effective in preparing for the shortage of skills.
- This action was flagged as the least most likely measure to be effective.

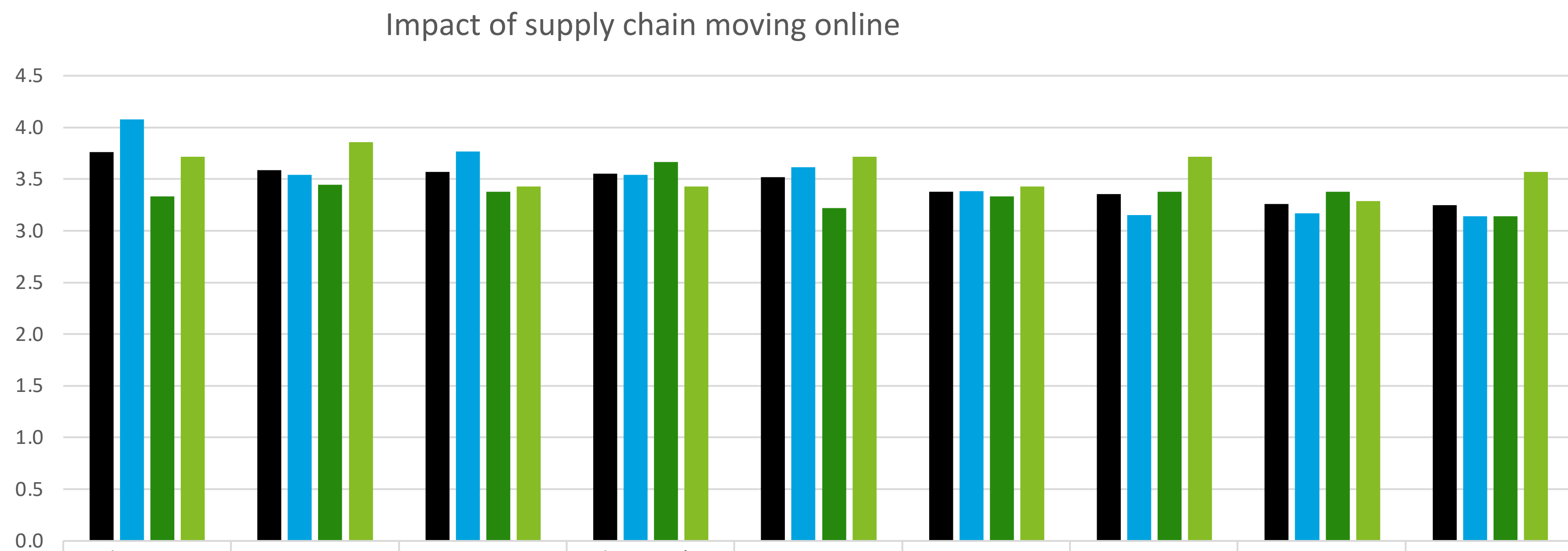
Impact of supply chain moving online

Moving to an online supply chain is seen as likely to have a high impact on the workforce

- Moving supply chain online is flagged as being likely to have a range of positive impacts to both logistics operations and the workforce.
- The three most likely impacts of moving supply chains online where that it might improve workforce planning and rostering, help to increase staff productivity and efficiency, and enable flexible work location and setting.
- While the respondents indicated that moving to an online supply chain was likely to have a reasonably even impact across most surveyed measures, the least likely impacts were seen as improving retention, increasing staff pay, or improving work culture.

Survey results for the impact of supply chain moving online

The following graph presents the average scores of the impact of supply chain moving online for logistics, 5 being a very large impact and 1 being a very small impact.

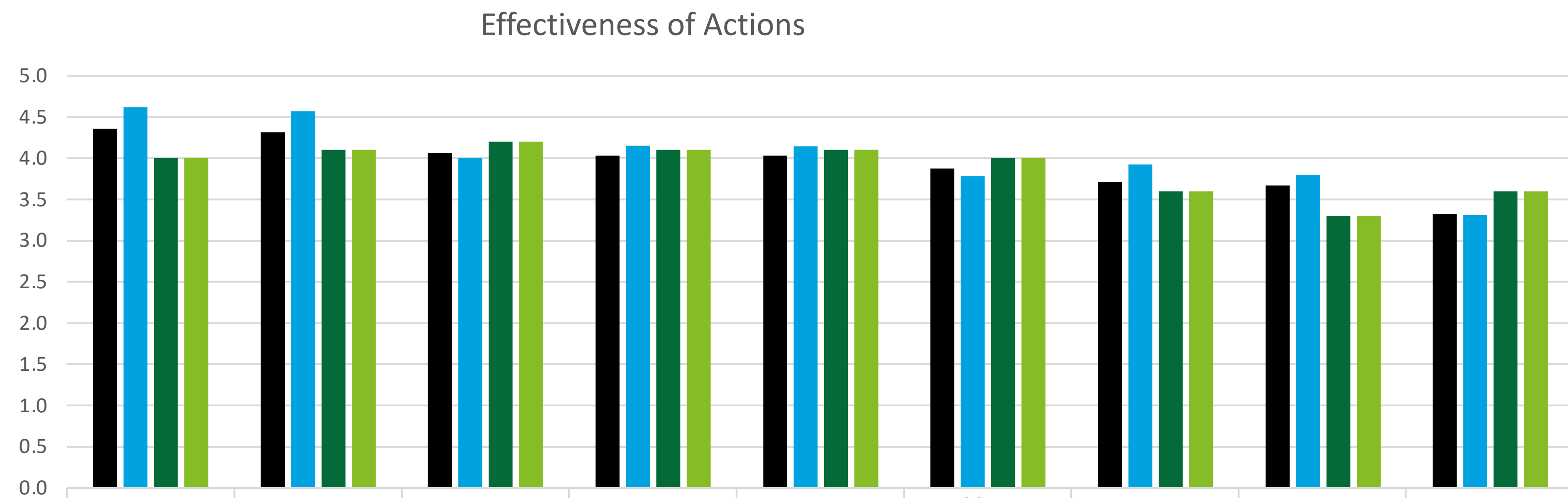


	Improve workforce planning and rostering	Increase staff productivity and efficiency	Enable flexible work location and setting	Increase in technical skills required from staff	Enhance staff communication	Increase in soft skills required from staff	Improve positive work culture	Increase staff pay	Reduce risk of staff turnover
Logistics Sector	3.8	3.6	3.6	3.6	3.5	3.4	3.4	3.3	3.3
Transport and Distribution (land)	4.1	3.5	3.8	3.5	3.6	3.4	3.2	3.2	3.1
Transport and Distribution (water)	3.3	3.4	3.4	3.7	3.2	3.3	3.4	3.4	3.1
Other	3.7	3.9	3.4	3.4	3.7	3.4	3.7	3.3	3.6

* 'Other' represents sub-sectors within the logistics sector that are not Transport and Distribution (land or water)

Survey results for the effectiveness of actions in reducing the impact of skills shortage

The following graph presents the average effectiveness of actions may have in reducing the enduring future impact on the shortage of skills in the logistics industry, 5 is the most effective and 1 the least effective.



	Aligning training programmes with future skills needs	Promote sector awareness to attract future talents	More readily structured materials for in-house training	Greater focus on transferable skills	Greater focus on peer to peer mentorship and training	More collaboration across the industry for workforce management	Greater focus on individualised tailored training	Leverage digital training technologies	Greater focus on group training
Logistics Sector	4.4	4.3	4.1	4.0	4.0	3.9	3.7	3.7	3.3
Transport and Distribution (Land)	4.6	4.6	4.0	4.2	4.1	3.8	3.9	3.8	3.3
Transport and Distribution (Water)	4.0	4.1	4.2	4.1	4.1	4.0	3.6	3.3	3.6
Other	4.0	4.1	4.2	4.1	4.1	4.0	3.6	3.3	3.6

* 'Other' represents sub-sectors within the logistics sector that are not Transport and Distribution (land or water)

Section 6: He tātaritanga kaimahi | Workforce analysis

Workforce analysis

To further the sector's understanding of the logistics workforce before and after the onset of the COVID-19 pandemic, Deloitte provided a historical and forward analysis of the industry using its own in-house economics models and Statistics New Zealand employment data. Scenario modelling for the industry was also provided to give insight into potential outcomes for the industry looking forward.

Approach

Data
To identify trends in the logistics industry, employment data obtained from Statistics New Zealand, cross-tabulated by industry, region, year, ethnicity, age, gender, disability status and occupational skill level. The period analysed was from March 2012 to September 2022.

Historical analysis
The analysis highlighted trends in the logistics industry. It also highlighted changes in demographics, age, gender, ethnicity and skill levels over time.

Workforce gap analysis
This workforce analysis develops a view on the potential future gap between workforce supply and demand and skill levels.

Scenario analysis
An outlook for industry specific labour supply and demand was provided to 2028 under a range of economic scenarios.
This research presents the possible, what if, effect if the trend of declining new entrants into the logistics sector workforce by younger workers persists. It also illustrated the pathway required to achieve more equitable skills mix for Māori and Pacific peoples.

Main Data Sources

- Custom employment dataset for Mar-12 to Sept-22 from Statistics NZ
- Education Counts data from Ministry of Education
- New Zealand population data from Statistics NZ
- Post study outcomes and tertiary provision from Ngā Kete
- Logistics gross value-added data from Deloitte
- Industry data from Infometrics

Workforce analysis | Summary

This report has identified the key workforce trends in the logistics sector and provides insights into the future state, including, for example, the ageing nature of the workforce and potential capacity constraints if participation among young people in the sector is not supported in the coming years. The analysis also highlight the disparity in skill levels across ethnicities, and what a likely skills shift for Māori and Pacific people could look like to address this inequity.

	Te Tiriti	Equity	Sustainability
Observations	• National **Māori employment in logistics has fallen** since COVID-19 and has not rebounded. • Māori employed in logistics have **a higher proportion of lower-skilled jobs** compared to other ethnicities (27.1% levels 1–3 versus 42.4%). • **Māori currently make up ~17% of the logistics workforce.**	• Pacific peoples currently make up a larger proportion of the logistics workforce compared to 2012 levels (8.1% vs. 10.0%). • **Pacific females make up a significant portion of their workforce** (33%) compared to both Māori (28%) and other (27%). • **Females** currently make up **~28% of the logistics workforce,** and this has **grown from 26% in 2012**. • **Females in logistics make up more highest skilled jobs** (47%) compared to men (35%).	• **The logistics workforce is ageing**. Average annual employment among the 15–24 age cohort numbers declined 22.0% between 2020 and 2022. • **Māori and Pacific workers aged between 15 and 24 make up a larger portion of their workforce** (~15%) compared to other ethnicities (~7%) • With net migration patterns starting to normalise, the sector may receive short-term relief to workforce pressures. However, this is unsustainable in the longer term.
Opportunities	• Hanga-Aro-Rau to develop a **partnership between iwi and industry organisations** to understand the drivers of lower participation in the sector. • Work with industry organisations and iwi on **initiatives to increase employment** in the sector. • Identify **opportunities to showcase best practice approache**s to understanding **training and wellbeing** needs and expectations of Māori staff.	• Hanga-Aro-Rau might work with the sector to **re-brand and promote the logistics sector**. This would be focussed on promoting awareness and attractiveness of logistics careers for women.	• Reaching sustainable levels will require **targeted investment in building a workforce pipeline** of school leavers. • Noting declining numbers of those aged 15–24, research into where this cohort is going or where they are choosing to start their careers instead of logistics may assist **Hanga-Aro-Rau in developing initiatives to increase the attractiveness to the 15-24 age cohort into the logistics sector.**

Workforce analysis | Summary (Continued)

This report has also drawn insights to conclude that the logistics sector has transformed over the last decade, and will continue to transform as technologies and workforce initiatives are developed and refined to address issues faced by the sector today.

	Industry voice	People	Transformation
Observations	• Deloitte estimates that there is a **current workforce shortage of ~4,700.** This capacity gap is likely to grow to ~17,900 by 2028 if current trends persist.	• **Skill level 4 roles make up the majority of the logistics workforce** (49%) in September 2022. • **Female employment in logistics was initially more impacted by COVID-19 than males** – falling 19% between March 2020 and March 2021 compared to a 2.3% drop for men over the same time frame. • **Māori and Pacific peoples employed in logistics have a younger workforce** compared to other ethnicities.	• **COVID-19 has accelerated the transition toward higher skill roles.** • Since 2016 there has been a clear **upward trend in the number of people employed in logistics with the highest-skill levels 1–3.**
Opportunities	• Addressing the workforce shortage will require an **multifaceted strategy and targeted initiatives to improve the attractiveness** of the sector to a wide range of potential candidates. Hanga-Aro-Rau might **convene a group motivated to work on behalf of the logistics sector** to design and deliver this through their networks and communities.	• **Working with the sector to understand workplace culture barriers** to increasing female participation in the workforce and identify pragmatic solutions • To attract a more diverse workforce mix, Hanga-Aro-Rau could **leverage its community connections to broker relationships with different communities** where individual SMEs in the sector do not have the scale or access.	• Maintaining the upwards trend in the number of highly skilled people in the sector will **require growing pathways out of training and directly into the sector**. Hanga-Aro-Rau could work with training providers to build awareness of the opportunities. • As the workforce **skills mix evolves to accommodate new technologies and operating models**, Hanga-Aro-Rau could **share guidance on training options.**

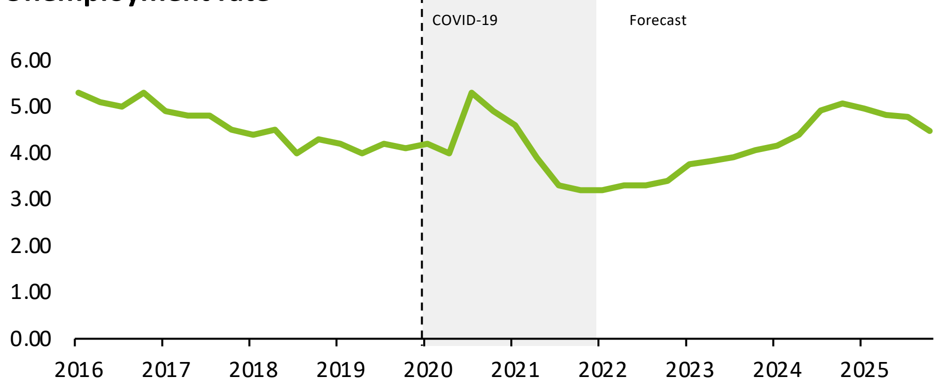
New Zealand macroeconomic environment: The labour market

Both the global and New Zealand labour markets remain tight, with low levels of unemployment and high levels of job advertisements in occupations across all industries. Net migration returning to pre-COVID levels may provide temporary relief to the labour market.

Low unemployment and high levels of job advertisement

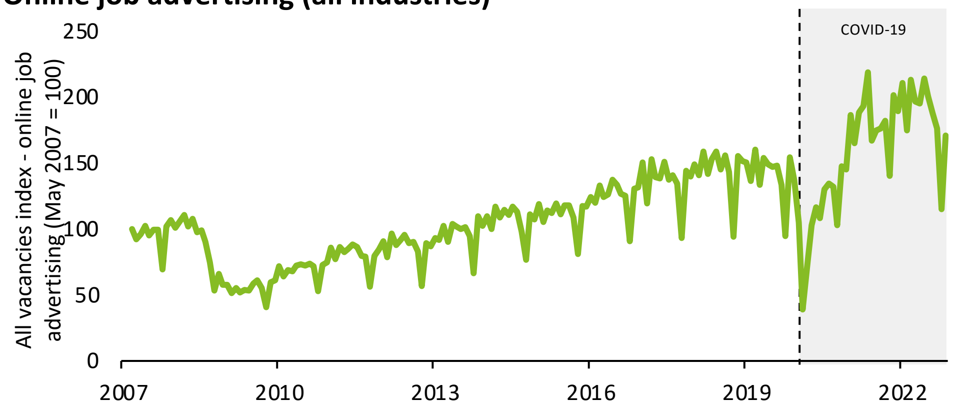
- Historically low unemployment and high levels of job advertising continue to characterise a tight New Zealand labour market resulting from COVID-19 restrictions.
- With particular focus on the logistics sector, job advertisements for machinery operators & drivers have outpaced advertisements for both trades & technical workers and manufacturing occupations for the last seven years.
- The removal of COVID-19 travel restrictions and net migration returning to pre-COVID-19 levels may provide temporary relief to the New Zealand labour market.
- As New Zealand enters into a more challenging economic environment in 2023, an uptick in unemployment is expected

Unemployment rate



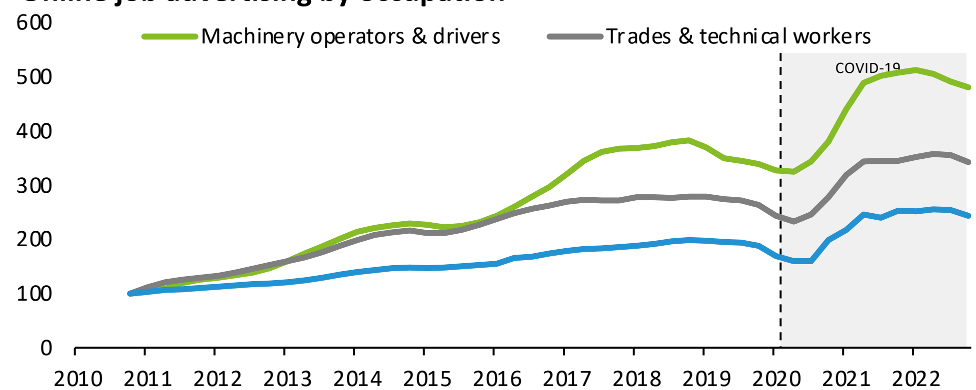
Source: Statistics NZ, Deloitte Access Economics

Online job advertising (all industries)



Source: Ministry of Business, Innovation & Employment, Deloitte Access Economics

Online job advertising by occupation



Source: Ministry of Business, Innovation & Employment, Deloitte Access Economics

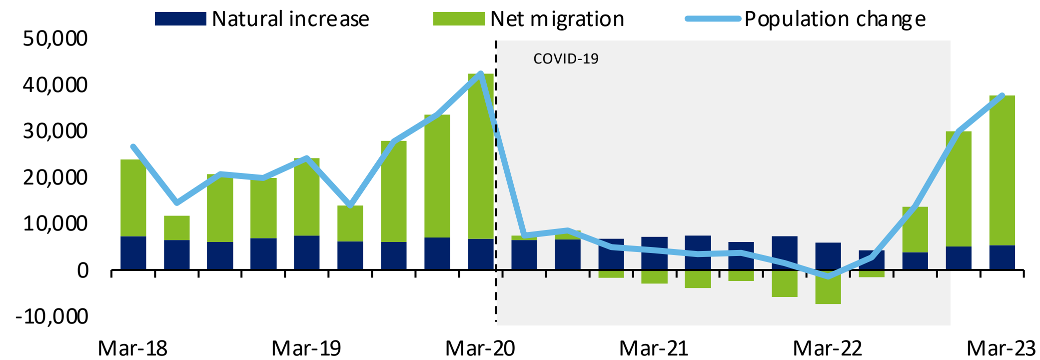
New Zealand macroeconomic environment: Net migration

New Zealand's reliance on net migration to fill workforce shortages is a key contributor to current pressures felt around the economy, highlighted particularly throughout COVID-19. While positive net migration in the most recent quarters may provide short-term relief to workforce pressures, and the number of work visa arrivals returns to pre-COVID-19 levels, there is a greater need to develop the domestic workforce to improve future sustainability.

Positive net migration and working visas may ease workforce pressures

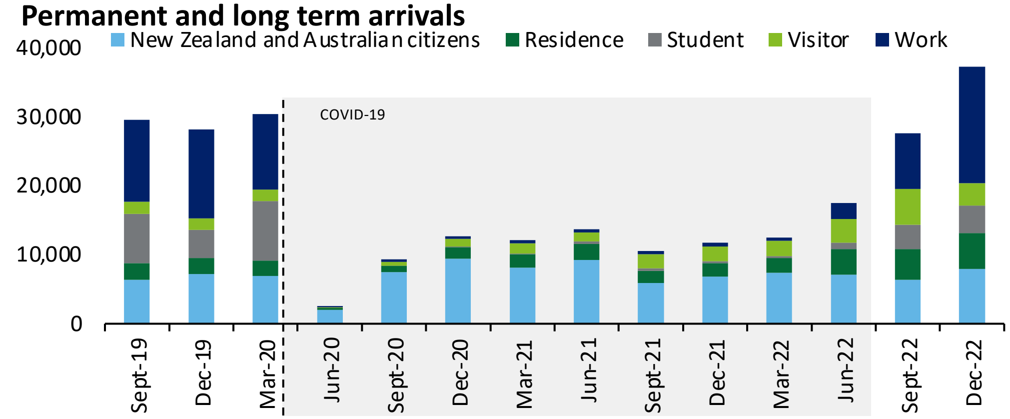
- New Zealand reported positive net migration for the final two quarters of 2022 for the first time since early 2020, reflecting a shift back to normality in international travel and potential relief to workforce pressures due to reliance on skilled migrants.
- In addition, the number of permanent and long-term arrivals with work visas have increased significantly back to pre-COVID-19 levels.
- While the migration trends of COVID-19 have reversed, there is a need to develop the domestic workforce to improve future sustainability and resilience across all sectors that currently face labour shortages.
- The opening of post-COVID-19 borders also provides the opportunities for workers, many of which have highly transferable skills, to take advantage of employment opportunities overseas.

New Zealand migration and population growth



Source: Statistics NZ, Deloitte Access Economics, Mar-23 Quarter is the final data point

Permanent and long term arrivals



Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Ethnicity profile

Other ethnicities currently make up the majority of the logistics workforce (73%), while employment in logistics among Māori and Pacific peoples has expanded by 18.4% and 47.7% respectively since 2012. High levels of employment growth and low overall representation in logistics provides the industry with a unique opportunity to target initiatives at supporting and attracting Māori and Pacific peoples entering the industry.

Long-term change in the mix of ethnicities in the logistics workforce

- The logistics workforce totalled 126,700 in September 2022.
- While other ethnicities currently make up the majority of the logistics workforce (73%), Māori and Pacific peoples employed in logistics have expanded by 18.4% and 47.7% respectively since 2012.
- These demographic and workforce participation trends reinforce why engagement with Māori and Pacific peoples are so critical to solving the sector's workforce and future skills shortages.

COVID-19 disruption in employment by ethnicity

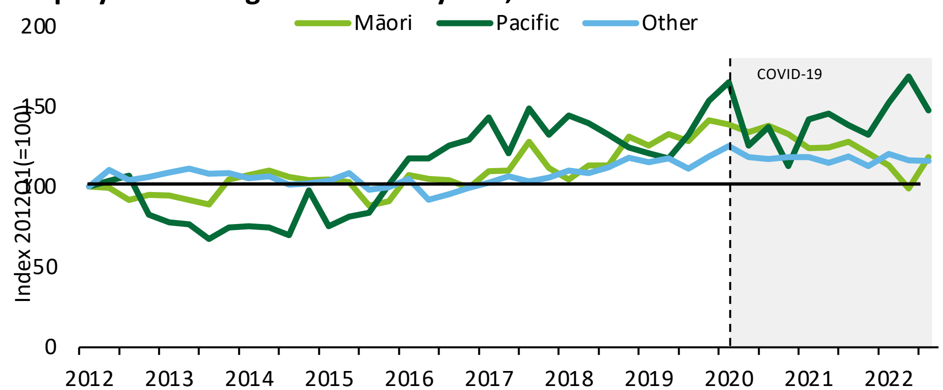
- Employment in the logistics sector peaked in March 2020 at 140,000. The disruption caused by the COVID-19 pandemic reduced the workforce to 126,700 in September 2022.
- Pacific peoples' employment in logistics has grown consistently since 2012, although there was significant volatility in employment during the COVID-19 period.
- Māori employment in logistics has steadily declined since March 2020 and currently sits 14.5% lower than pre-COVID-19 levels (24,800 to 21,200).
- Other ethnicities were less impacted by COVID-19; however they are still 7.3% below pre-COVID-19 levels (100,100 to 92,800)

Logistics industry ethnicity profile, March 2012 vs. September 2022

# employed	*March 2012*	*% of total*	*September 2022*	*% of total*	*% change in employment*
Māori	17,900	*16.8%*	21,200	*16.7%*	*18.4%*
Pacific peoples	8,600	*8.1%*	12,700	*10.0%*	***47.7%***
Other	79,900	*75.1%*	92,800	*73.2%*	*16.1%*
Total	106,400		126,700		*19.1%*

Source: Statistics NZ, Deloitte Access Economics

Employment in logistics ethnicity mix, indexed to 2012



Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Age profile

The New Zealand logistics industry workforce is ageing and shrinking, with 51.5% over the age of 45 in September 2022. This is compounded by high attrition rates among the cohort aged between 15 and 25, with numbers declining 22% between 2020 and 2022.

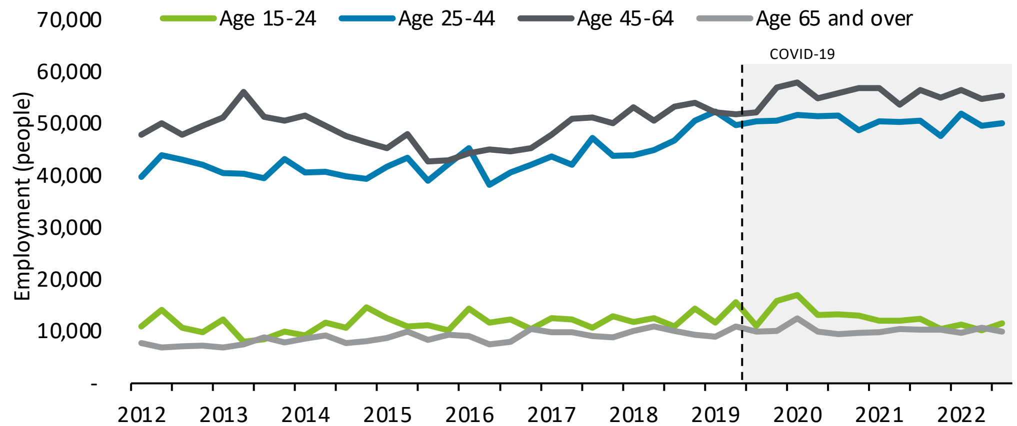
Long-term change in the age distribution of the logistics workforce

- Those aged between 25 and 64 have historically made up 82.0% of the workforce on average. In September 2022, they make up 83.1% of total logistics employment
- Conversely, those aged between 15 and 24 have historically made up 10.2% of the workforce on average. In September 2022, they make up 9.1% of total logistics employment, while employment among those over the age of 65 has remained at 7.8%.
- This data shows that the domestic logistics workforce is ageing. The industry needs to strategically rebrand itself to attract a younger demographic or workforce shortages are only set to worsen.

COVID-19 disruption in employment by age

- A major disruptor that has contributed to high attrition rates among young people employed in logistics has been the COVID-19 pandemic.
- Annual average employment in logistics among those aged 15 to 24 has fallen 22.0% between 2020 and 2022.
- Those employed in logistics over 65 also saw COVID-19 as an opportunity to leave the industry or retire early, with average 2022 levels 3.1% below 2020 levels.
- The disruption caused by COVID-19 has lead to high attrition rates among the youngest and oldest cohorts of employment in logistics. The looming labour shortage arising from the current workforce reaching retirement age is a serious concern for the logistics industry.

Employment in logistics, age distribution



Source: Statistics NZ, Deloitte Access Economics

Logistics industry age profile, annual average 2020 vs. 2022

# employed	*Ann. Avg. 2020*	*% of total*	*Ann. Avg. 2022*	*% of total*	*% change in employment*
Age 15-24	14,125	*10.7%*	11,000	*8.7%*	*-22.0%*
Age 25-44	50,825	*38.6%*	50,467	*39.7%*	*-0.7%*
Age 45-64	56,350	*42.8%*	55,500	*43.7%*	*-1.5%*
Age 65+	10,425	*7.9%*	10,100	*7.9%*	*-3.1%*
Total	131,700		127,100		

Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Gender profile

The gender split in the total logistics workforce is 72.2% male to 27.7% female in September 2022. Females employed in logistics have been impacted more by COVID-19 than men, with employment levels currently 14.8% less than pre-COVID levels. While global trends suggest new technology is changing the nature of the work, allowing more women the opportunity to work in the industry, the full potential is yet to be realised.

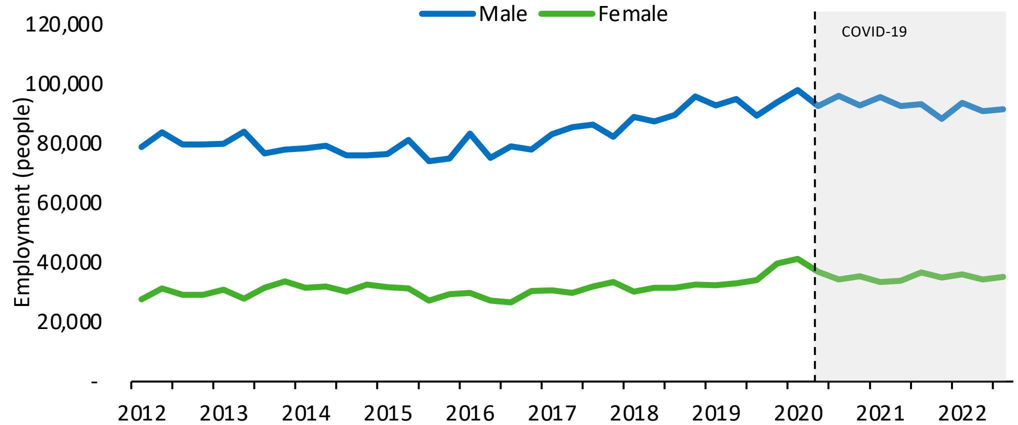
Long-term change in gender mix of the logistics workforce

- In September 2022, males make up 72.2% of the logistics workforce, and females make up 27.7%. This split is consistent with long term averages for the industry.
- The recent upward trend in female employment has echoed throughout the stakeholder engagement process and desktop research as being attributable to multiple factors including recent initiatives such as Women in Road Transport or technology advances and Industry 4.0 changing the nature of work.
- Note that when indexed to March 2012, growth in logistics employment among women peaked in March 2020 at 48.7% before being disrupted by COVID-19.

COVID-19 disruption in employment by gender

- The disruption caused by COVID-19 has disproportionately affected females more than males employed in logistics.
- Female employment in logistics initially fell 18.9% between March 2020 and March 2021, and has grown 5.1% since then, compared to an initial decrease of 2.3% in males to March 2021 and a further drop of 4.3% to September 2022.
- Neither gender has fully recovered to pre-COVID-19 employment levels.

Employment in logistics, by gender



Source: Statistics NZ, Deloitte Access Economics

Logistics industry gender profile, March 2012 vs. September 2022

# employed	*March 2012*	*% of total*	*March 2020*	*Sept 2022*	*% of total*	*% change in employment 2012 to 2022*
Male	78,700	*74.0%*	97,900	91,500	*72.2%*	*16.3%*
Female	27,700	*26.0%*	41,200	35,100	*27.7%*	***26.7%***
Total	106,400		139,100	126,700		*19.1%*

Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Skills mix

Deloitte's workforce analysis used employment data from the Household Labour Force Survey (HLFS) which categorised domestic occupations into five categories, ranging from highly skilled (level 1) to lower skilled (level 5). The skill levels are assigned based on the level of formal education, training, and on-the-job training required for the occupation and are based on the Australian and New Zealand Standard Classification of Occupations (ANZSCO).

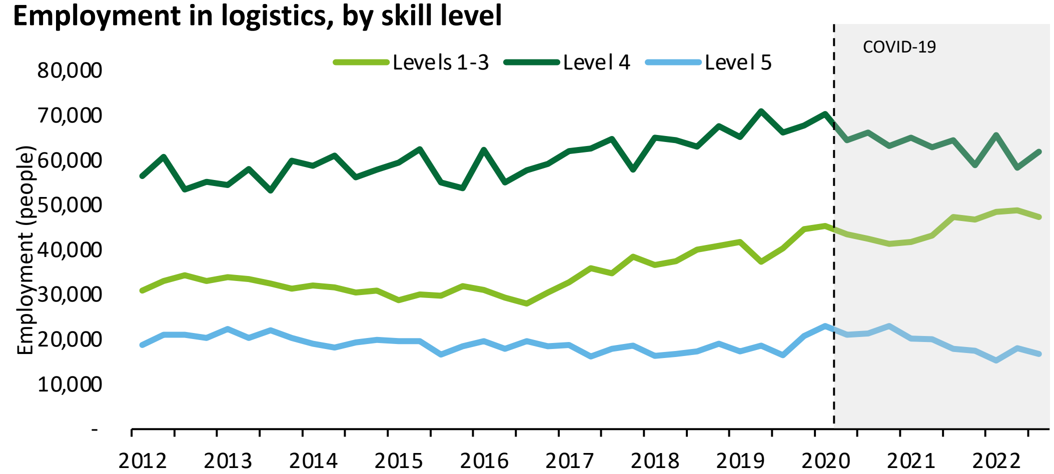
Long-term changes in skills mix

- A detailed table outlining specific definitions for each skill level is provided in Appendix 3, noting that this logistics analysis has aggregated the higher skill levels 1 to 3.
- Employment in skill level 4 roles (including road and rail drivers), make up the majority of the logistics workforce (48.9%) in September 2022.
- Since 2016 there has been a significant upward trend in the number of people employed in logistics with the highest skill levels 1 to 3 (managers, professional roles and skilled technicians).
- This diverging trend is changing the skill mix in the logistics sector, and will have an impact on the industries' approach to learning and career development.

COVID-19 disruption in employment by skill level

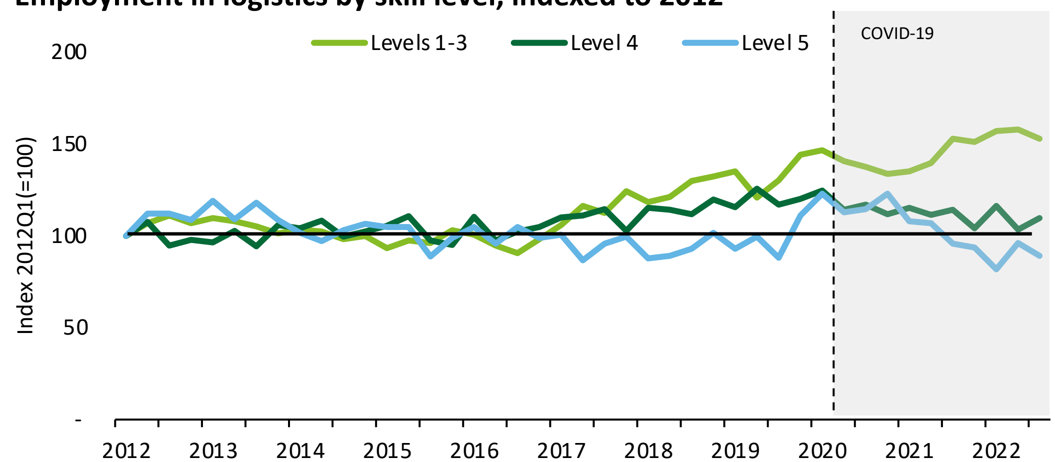
- Despite the impact of COVID-19, the transition toward higher-skilled roles has continued. In fact, employment in logistics among those with skill level 5 has fallen 27.4% between March 2020 and September 2022, while skill levels 1 to 3 have grown 4.4% over the same time frame.
- The initial disruption caused by COVID-19 impacted the majority cohort the most, with employment in skill level 4 falling 10.2% between March 2020 and December 2020.

Employment in logistics, by skill level



Source: Statistics NZ, Deloitte Access Economics

Employment in logistics by skill level, indexed to 2012



Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Shift in skills mix since 2012 – ethnicity

The shift toward higher skills has occurred for all ethnicities employed in logistics, most prominently for Māori, growing 12.1% between 2012 and 2022. While the skills mix across ethnicities is currently not equal, the rate of skills improvement for Māori over the past decade has been impressive. There is an opportunity for the industry to further support Māori and Pacific peoples in retraining and upskilling to achieve a more equitable skills mix to help address the sector's future skills mix needs and shortages.

Logistics workforce skills mix change among ethnicities

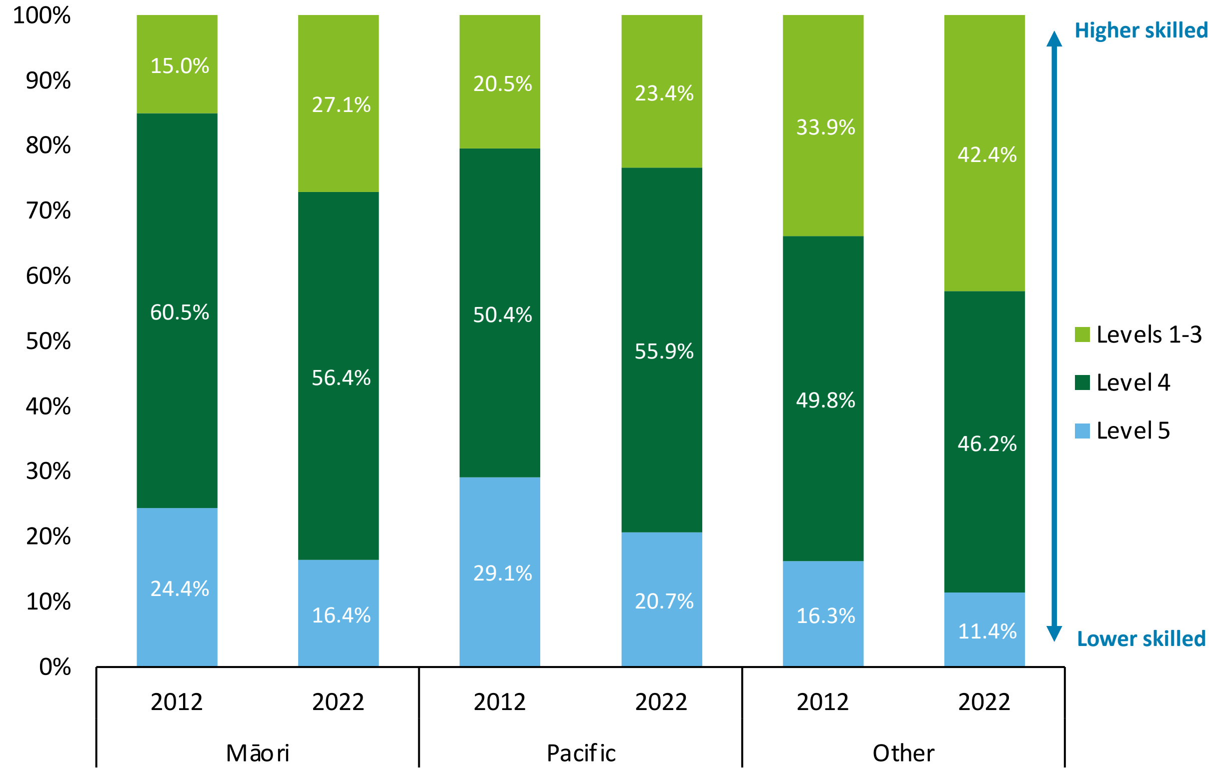
All ethnicities have experienced a shift toward higher skill levels between 2012 and 2022. This transition has been most prominent among Māori, with the proportion of employment in skill levels 1 to 3 growing from 15.0% to 27.1%.

Pacific peoples, on the other hand, have not seen quite the same transition to the highest skill levels, with the proportion of skill levels 1 to 3 growing 2.9%. The proportion of their workforce in skill level 4 positions has grown 5.5% over the 10-year period.

While all ethnicities have experienced a shift toward higher skill levels between 2012 and 2022, the data shows that Māori and Pacific peoples' employed in logistics are predominantly in lower skill level roles (levels 4 and 5).

There is an opportunity for the industry to support Māori and Pacific peoples to retrain and upskill to achieve a more equitable skills mix to aid in addressing the workforce shortage.

Logistics skills mix by ethnicity (2012 versus 2022)



Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Shift in age distribution since 2012 – ethnicity

The logistics workforce is ageing, with those aged over the age of 45 currently making up 51.5% of the overall workforce. Māori and Pacific peoples have a significantly younger workforce compared to other ethnicities and represent the future of the industry. Industry-wide initiatives aimed at upskilling and attracting younger people would be beneficial to attracting a diverse workforce.

Logistics workforce age distribution change among ethnicities

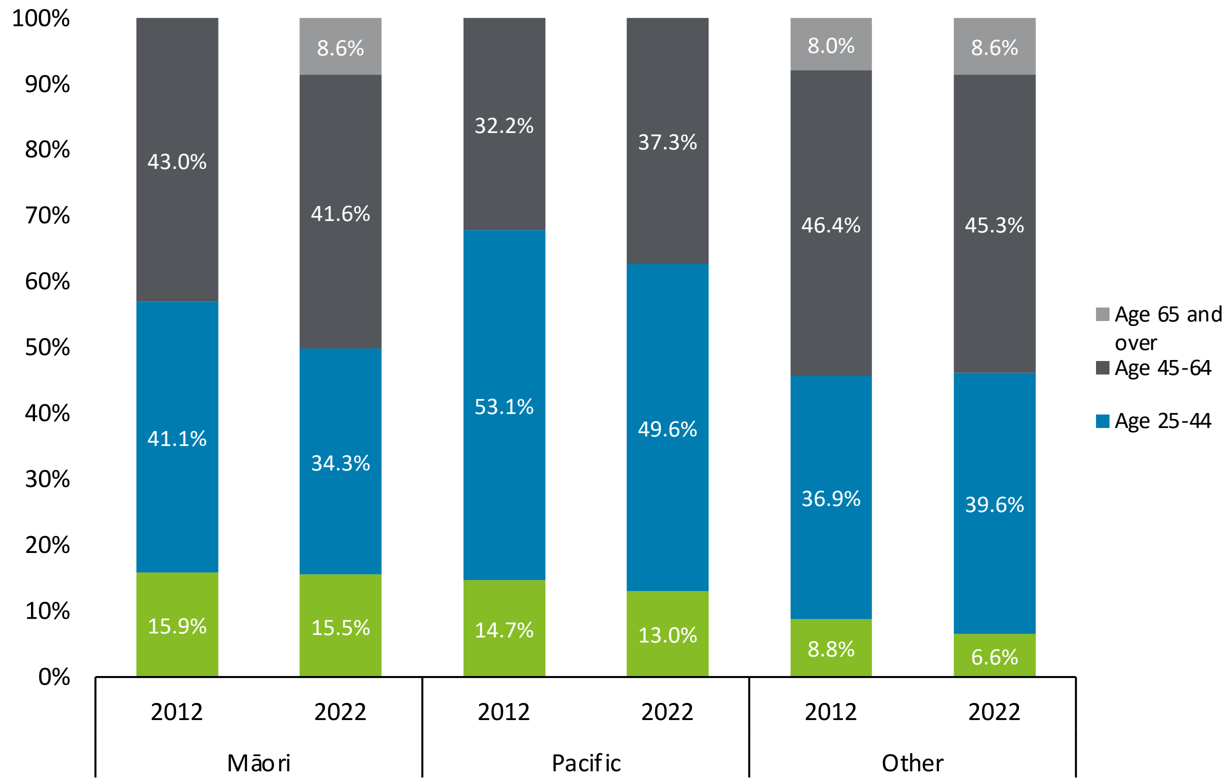
An additional focal point that was not included in the initial research is the age distribution among ethnicities, and how it has changed since 2012.

The age distribution among other ethnicities employed in logistics has not changed dramatically between 2012 and 2022. Currently 53.9% of other ethnicities employed in logistics are over the age of 45 and only a small proportion (6.6%) are aged between 15 and 24.

Māori and Pacific peoples, on the other hand, have a significantly younger workforce in logistics, with 49.8% and 62.6% aged between 15 and 44 respectively.

Interestingly, the youngest cohort proportion has decreased within each ethnicity and is a future concern in the context of an ageing workforce. It is also concerning that the majority population group of the logistics workforce (other), had the largest decrease in employment among those aged 15 to 24 between 2012 and 2022 (2.2%).

Logistics age distribution by ethnicity (2012 versus 2022)



Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Shift in skills mix since 2012 – gender

In forming a view on the current characteristics of the logistics workforce, insights on skill levels among genders are generated – an area that was not explicitly explored in the initial research. While the transition toward higher skill levels since 2012 has occurred for both males and females, a key insight this process has shown is that females in logistics currently have a greater proportion employed in the highest skill level roles compared to men. As the nature of the work is changing, the future skills demanded by the industry are also changing, which allows for more people of varying skill levels to enter the industry.

Logistics workforce age distribution change among ethnicities

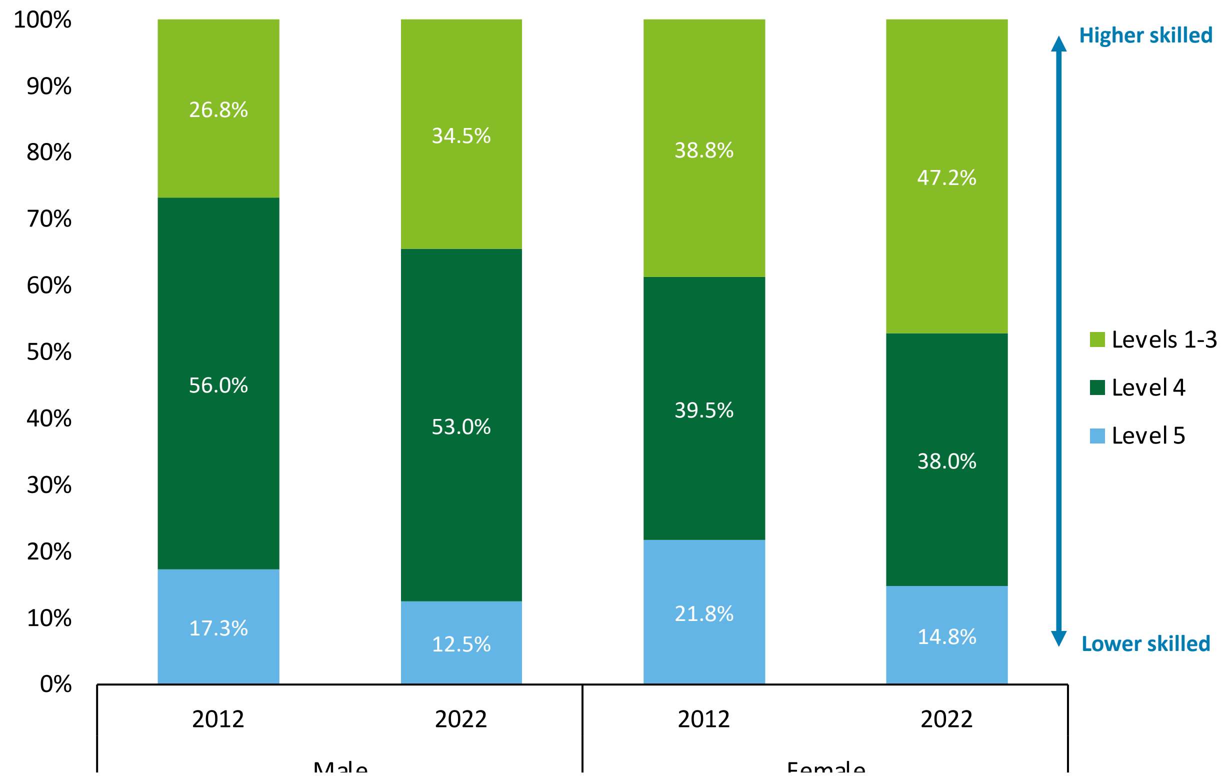
For this research extension, there is a closer look at skill levels among genders, and how skills have shifted since 2012.

In 2022, 53.0% of males employed in logistics are in skill level 4, which includes truck drivers and rail operators. Over the 10-year period, there has been an 7.7% increase in the proportion of males employed in the highest skill levels 1 to 3.

Interestingly, females employed in logistics have predominantly filled roles with higher skill levels. In 2012, 38.8% of females employed in logistics filled skill levels 1 to 3 roles, compared to 26.8% for males. This proportion has grown for both genders over the past 10-years, with 47.2% of females currently employed in logistics in skill levels 1 to 3 roles and 34.5% for males.

One of the key messages coming out of the stakeholder engagement and desktop research processes is that, advances in technology have allowed more people of different skill levels to enter the industry and fill previously physically demanding jobs.

Logistics skills mix by gender (2012 versus 2022)



Source: Statistics NZ, Deloitte Access Economics

National logistics overview: Shift in gender and ethnicity mix since 2012

The number of females employed in logistics had grown 3.6% between March 2012 and March 2020, before the disruption of COVID-19 led to female employment numbers dropping 18.9% in the following year. The data shows female employment in logistics has grown, especially among Māori and Pacific peoples', providing evidence that targeted initiatives such as Women in Road Transport have been effective in the past. Such initiatives could be helpful for the industry in rebranding and attracting other population groups in the future.

Logistics workforce gender distribution among ethnicities

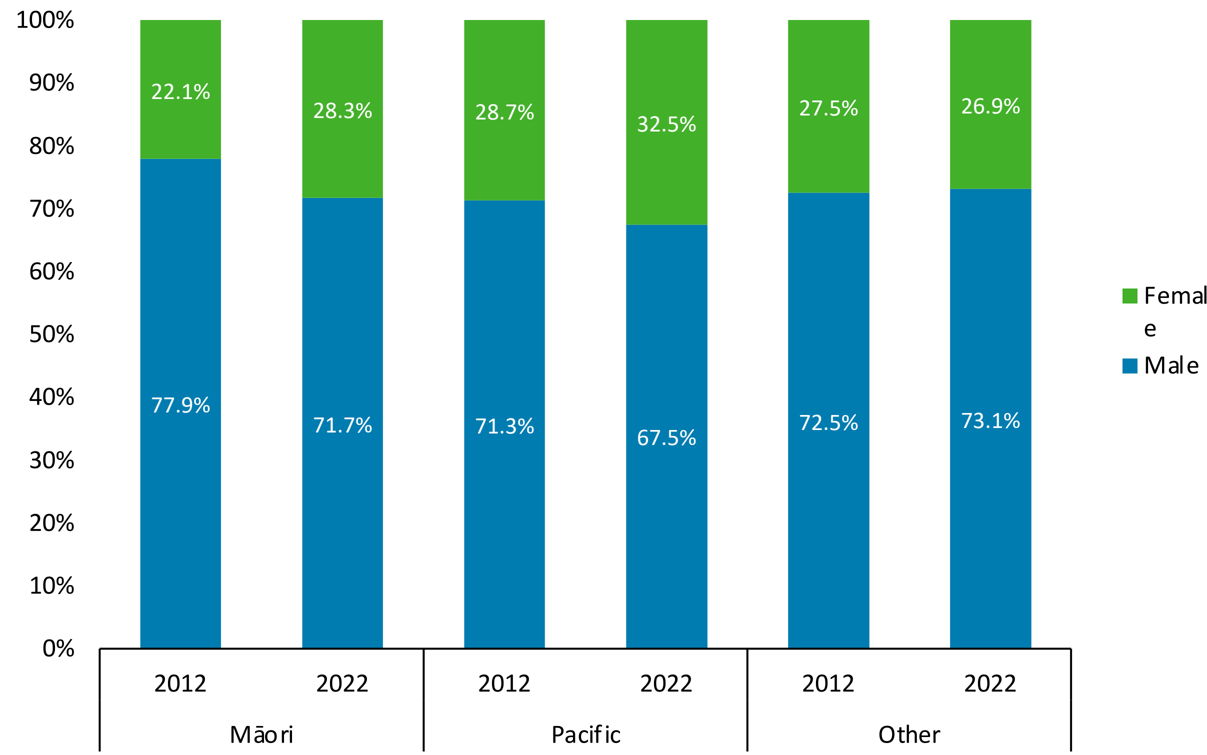
As an extension to the previous page, insights on change in the proportion of genders employed among ethnicities are generated.

There has been considerable increase in the proportion of females in the Māori and Pacific peoples' logistics workforce, growing 6.2% and 3.8% respectively since 2012. In fact, the Māori and Pacific peoples' workforce have a higher proportion of women when compared to the industry average as a whole (27.7%).

Growth in the proportion of females employed in logistics, especially among Māori and Pacific peoples' (who make up less than 30% of the total logistics workforce collectively) is evidence that initiatives, such as 'Women in Road Transport', launched in 2013 with the aim of attracting women to the industry, have been effective.

Despite this, there is still work to be done to attract and retain wider population groups in order to future-proof the logistics workforce.

Logistics gender mix by ethnicity (2012 versus 2022)



Source: Statistics NZ, Deloitte Access Economics

Logistics overview for Auckland, Waikato, Bay of Plenty and Canterbury

Auckland makes up 41.4% of the total logistics workforce in New Zealand, and is the biggest employer of Pacific peoples in the industry. Auckland transport, postal and warehousing makes up 42% of national output in the sector.

Auckland

Auckland employs 52,400 logistics workers in Sep 2022 (on average 52,533 for the year 2022) comprising 41.4% of the total NZ logistics workforce

12% (6,300) are Māori, 17.9% (9,400) are Pacific, 70% (36,700) are other ethnicities

68.9% are male, 31.1% are female

Rest of New Zealand

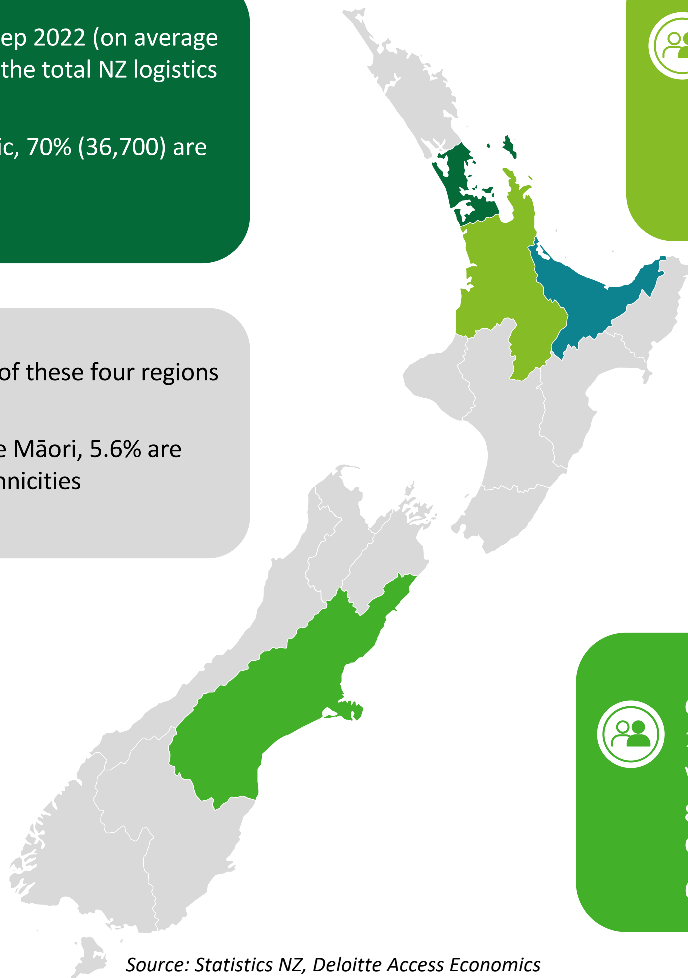
39,400 logistics workers are employed outside of these four regions (making up 31.1% of the workforce)

20.1% (7,900) of those employed elsewhere are Māori, 5.6% are Pacific (2,200) and 74.4% (29,300) are other ethnicities

75.9% are male, 24.1% are female

Auckland transport, postal and warehousing made up **41.7% of NZ transport, postal and warehousing GDP in 2020.** Other key regions include Canterbury (13.3%), Waikato (5.4%) and Bay of Plenty (6.4%).

Collectively, these four regions make **up 66.8% of total NZ transport, postal and warehousing GDP.**



Source: Statistics NZ, Deloitte Access Economics

Waikato

Waikato employs 10,800 logistics workers in Sep 2022 (on average 9,567 for the year 2022), comprising 8.5% of the total NZ logistics workforce

23.1% are Māori (2,500), < 1000 Pacific are employed in Logistics in Waikato, 75.9% are other ethnicities

74.1% are male, 25.9% are female

Bay of Plenty

The Bay of Plenty employs 7,500 logistics workers in Sep 2022 (on average 7,467 for the year 2022) comprising 5.9% of the total NZ logistics workforce

41.3% are Māori (3,100), < 1,000 Pacific are employed in logistics in the Bay of Plenty, 53.3% are other ethnicities

81.3% are male, 18.7% are female

Canterbury

Canterbury employs 16,600 logistics workers in Sep 2022 (on average 16,100 for the year 2022), comprising 13.1% of the total NZ logistics workforce

8.4% are Māori (1,400), < 1,000 Pacific are employed in logistics in Canterbury, 88% are other ethnicities

68.7% are male, 31.3% are female

Future state outlook

Similar to the outlook for manufacturing and engineering, demand for labour in logistics outstrips supply at a national level, with the workforce gap projected to increase over the next six years. This outlook reflects the already evident shortage of skilled workers in logistics and considers growth profiles in both productivity and demographics to forecast the potential workforce shortage.

Future state outlook summary

Independent projections for demand (i.e. the demand for workers from an employer's perspective) and supply (i.e. the supply of the local and international talent pool) from 2023 to 2028 were developed by Deloitte for this project.

The methodology is shown on the next page and a summary of the results follows both a national and regional perspective. Note all results are in June end years.

The labour force projections for this research show labour demand outpacing labour supply, with the **current national workforce gap of ~4,500 widening to ~17,900 logistics employees by 2028**.

This gap arises from difficulties in recruiting employees from overseas, a change in employee behaviour and a globally tight labour market. The importance of the supply chain and its workforce cannot be understated – the **current workforce shortage is not sustainable in the long run** without potentially **constraining the output of all other sectors that rely on logistics capability**.

This gap provides support for the logistics sector's need to take on new initiatives and programmes to support local workforce development, reinforce the attractiveness of the sector and increase overall participation. Particularly within key demographics such as Māori, Pacific peoples and females, this could help to bridge the capability and capacity gap.

Key assumptions underpinning the forecasts:

Baseline assumptions for demand

- Policies remain unchanged and the current COVID-19 recovery pathway persists (i.e. it is assumed that there is no new variants or likelihood of further lockdowns).
- Wage movements match the broader economy.
- There is no change in which services are delivered in the baseline; i.e. labour:capital ratio remains unchanged.

Baseline assumptions for supply

- Education policy remains unchanged and there are no new interventions.
- Propensity to leave workforce is similar.

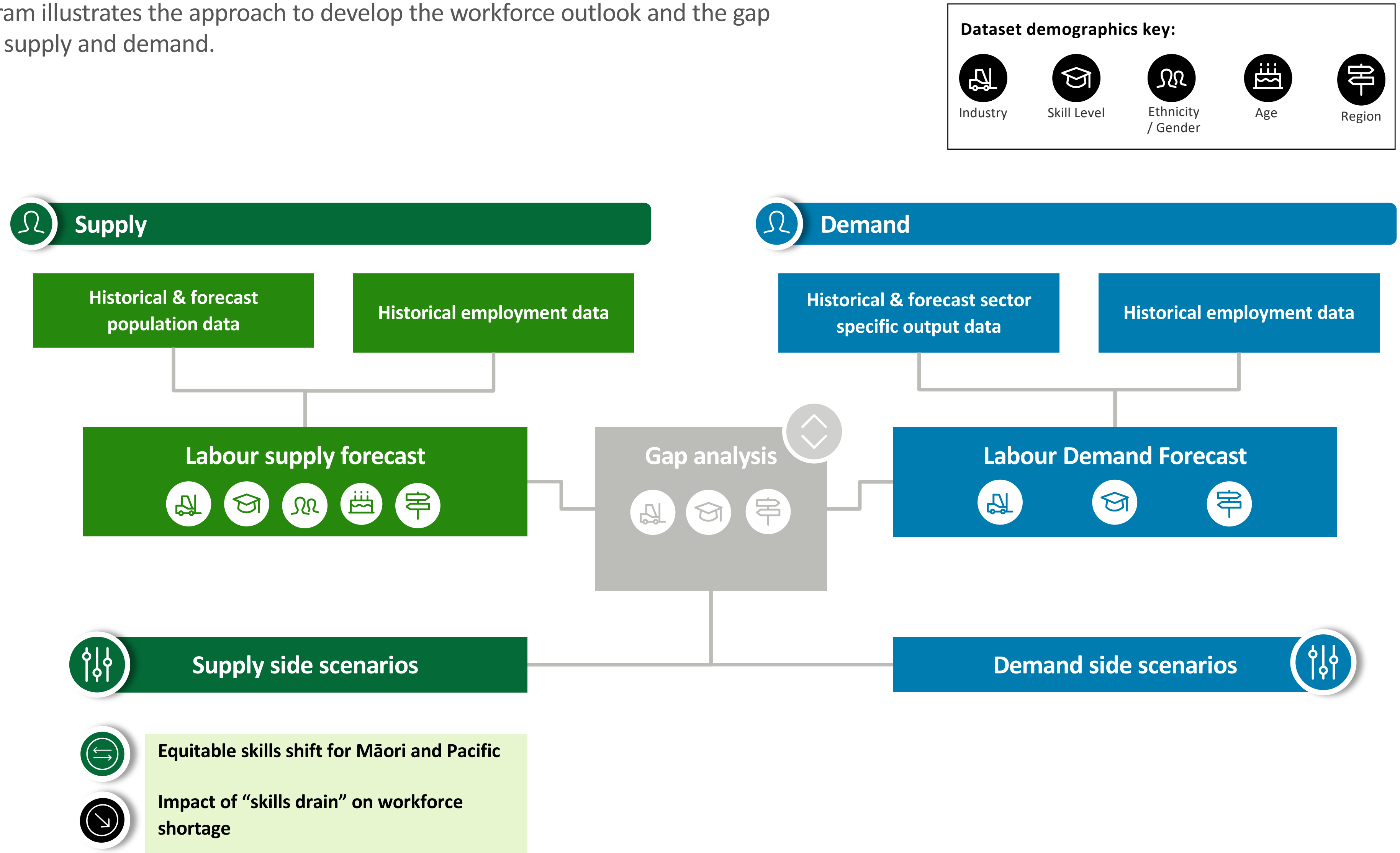
Demand for training and education

The gap between demand and supply presents an opportunity for domestic training. Overall, demand for vocational training is driven by:

- The attractiveness of working in the industry
- Skills broadening and deepening by those already in the workforce
- The need to train the local workforce in place of migrants
- The need to replace experienced retiring workers.

Methodology: Projecting workforce supply and demand

The diagram illustrates the approach to develop the workforce outlook and the gap between supply and demand.



Logistics: Future state outlook

Deloitte estimates that there is a current shortage of ~4,700 logistics workers that is expected to grow to ~17,900 by 2028 in the absence of policy change or targeted initiatives. The logistics industry will need to work as a collective to attract and retain more workers, while also balancing the shift in skills by proactively upskilling the current workforce to prevent future shortages.

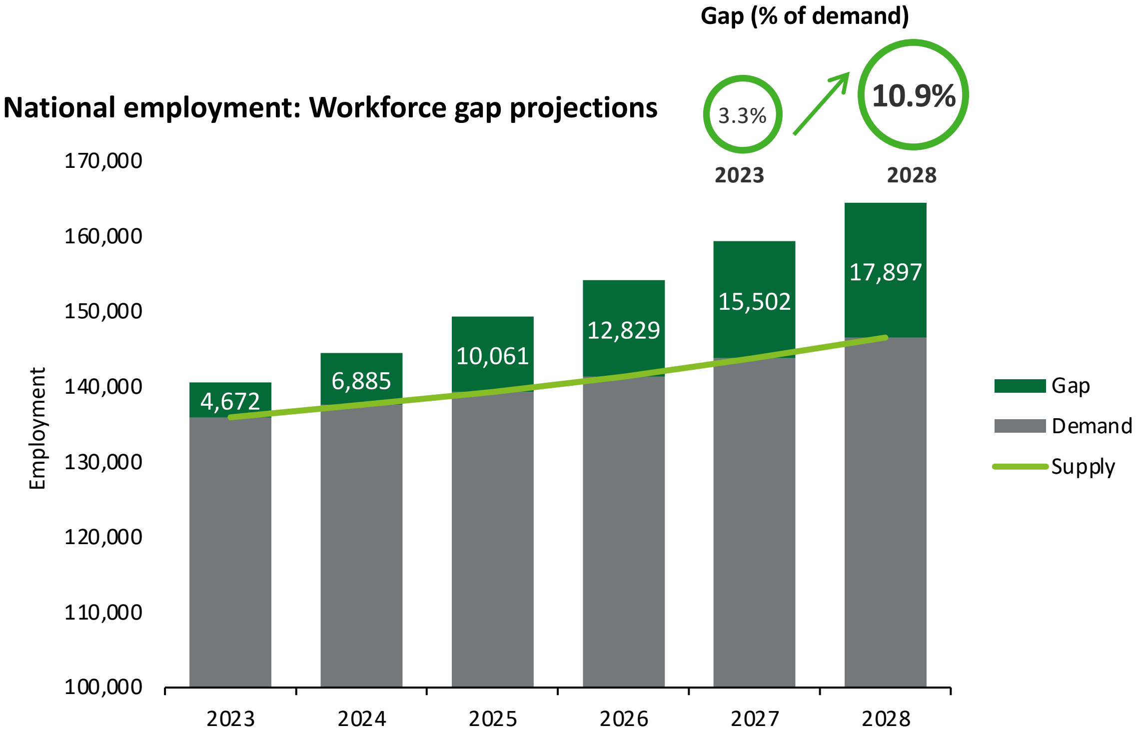
Logistics labour force gap could grow to 18,000 by 2028

This figure shows Deloitte's base case outlook for employment in logistics over the next six years. The dark green bars illustrate the gap between labour supply and labour demand based on current employment, future demographic changes, net domestic and net international migration. This difference represents the opportunity to train, upskill, reskill and develop the current workforce to meet these needs.

The labour force gap is expected to grow to ~17,900 employees (10.9% on a national level) by 2028.

The base case outlook currently reflects the tight nature of the labour market with a gap of ~4,700 as a result of slowing economic activity for the remainder of 2023. However, it is expected that the gap to grow from 2025 in line with New Zealand's economic recovery pathway, based on Deloitte's base case projections.

National employment: Workforce gap projections



Source: Statistics NZ, Deloitte Access Economics

Section 6a:
He tauira | Scenario modelling

Scenarios

This section presents three scenarios which illustrate potential outcomes for the logistics sector including equitable skills pathways for Māori and Pacific Peoples. The final "what-if?" scenario considers a continuation of the "skills drain" impacting domestic employment levels among the youngest cohort across all sectors.

Equitable skills shift scenarios

Equitable Māori and Pacific peoples' skills shift

In the baseline, skills mix for all ethnicities is stable through to 2028 based on current trends. However, the proportion of Māori and Pacific peoples within the highest skill levels 1 to 3 is relatively smaller when compared to other ethnicities.

This illustrative 'what if' scenario contemplates an equitable shift in skills mix for Māori and Pacific peoples, demonstrating a potential step change in skill mix proportions to achieve parity with other ethnic groups by 2028.

Post-COVID-19 industry trend continuation

Slower recovery in employment among youngest cohort

In the initial report, it considered a 'brain drain' scenario that demonstrated the impact of longer-term net negative migration among the youngest cohort. This 'what if' scenario extends this idea, based on specific trends seen in the logistics sector.

The logistics sector has seen a 22% reduction in employment of the youngest (15–24) age cohort since 2020. This scenario demonstrates the potential impact on the current and future workforce shortage if employment levels among those aged 15–24 do not recover to historic trends, and instead remain subdued at post-COVID-19, 2022 levels.

Equitable skill levels for Māori

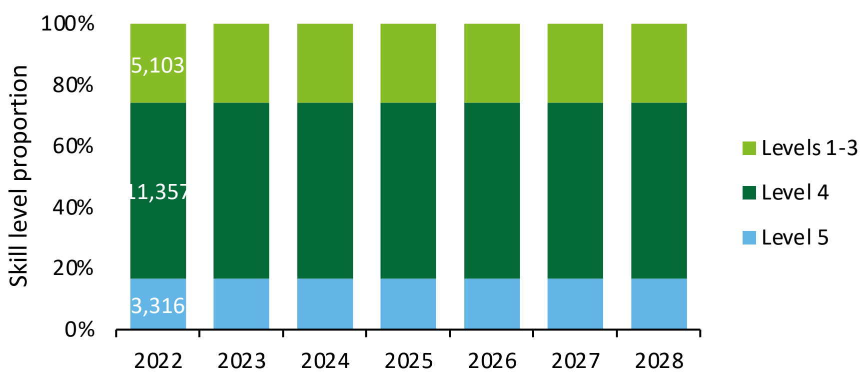
Based on current trends, the skills mix for Māori in logistics is unlikely to reach parity with other ethnic groups by 2028. This scenario demonstrates a potential pathway to achieve a more equitable skills mix for Māori over the next six years. In order to achieve this equitable outcome, the number of Māori working in the highest skill levels 1 to 3 must increase by 12% per annum over the next six years.

Initiatives that result in a more equitable skills shift for Māori

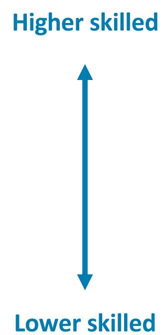
To achieve an equitable skills mix for Māori in logistics, the number of Māori working in the highest skill levels 1 to 3 must increase by 12% per annum over the next six years. This is equivalent to ~5,000 more Māori employees in level 1 occupations by 2028. The charts below illustrate a 'what if' scenario of the impact of potential new strategic initiatives to promote equitable outcomes.

Base case: Māori skills mix | **Equitable transition outcome**

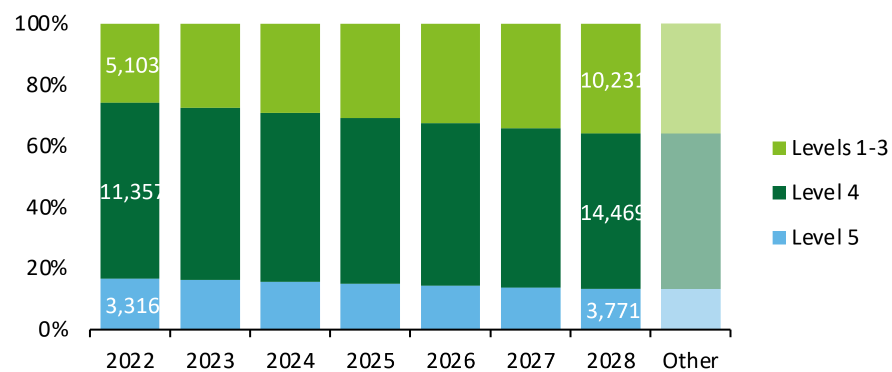
Base case: Māori skills mix forecast



Source: Statistics NZ, Deloitte Access Economics



Scenario: Uplift Māori to other skills mix



Source: Statistics NZ, Deloitte Access Economics

Equitable skill levels for Pacific peoples

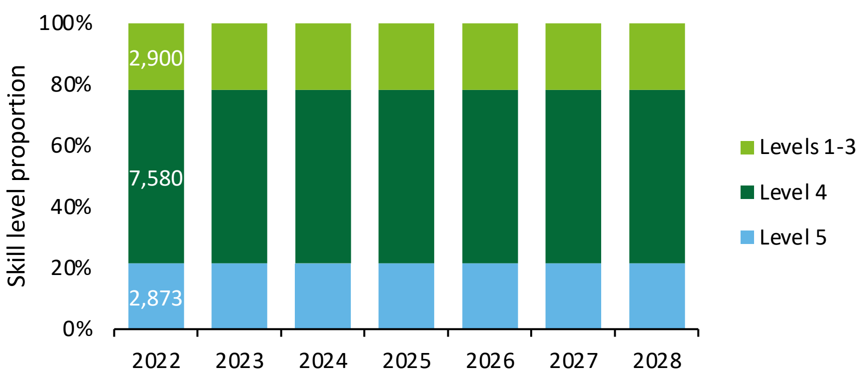
Based on current trends, the skills mix for Pacific peoples is unlikely to reach parity with other ethnic groups by 2028. This scenario demonstrates a potential pathway to achieve a more equitable skills mix for Pacific peoples over the next six years. Due to a higher proportion of Pacific peoples already with level 1 to 3 skills, the number of Pacific peoples working in the highest skill levels 1 to 3 must increase by 10% per annum over the next six years.

Initiatives that result in a more equitable skills shift for Pacific peoples

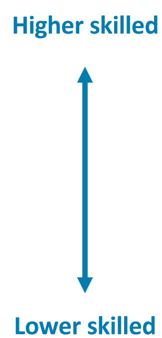
To achieve an equitable skills mix for Pacific peoples in logistics, the number of Pacific Peoples working in the highest skill levels 1 to 3 must increase by 10% per annum over the next six years. This is equivalent to ~2,300 more skill level 1 to 3 Pacific Peoples in logistics by 2028.

Base case: Pacific peoples' skills mix — **Equitable transition outcome**

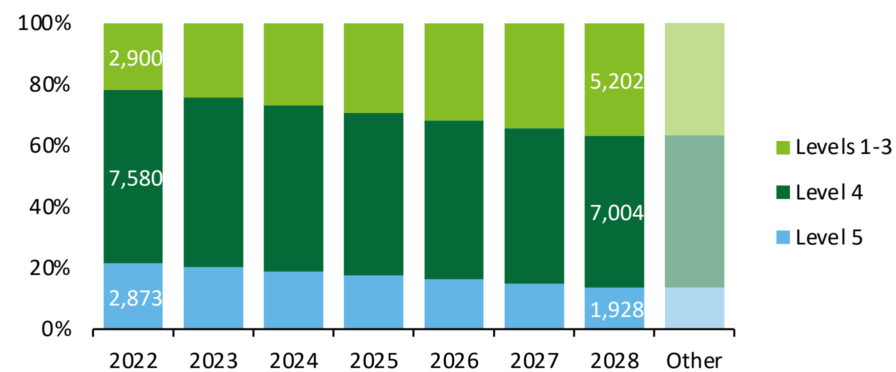
Base case: Pacific peoples skills mix forecast



Source: Statistics NZ, Deloitte Access Economics



Scenario: Uplift Pacific peoples to other skills mix



Source: Statistics NZ, Deloitte Access Economics

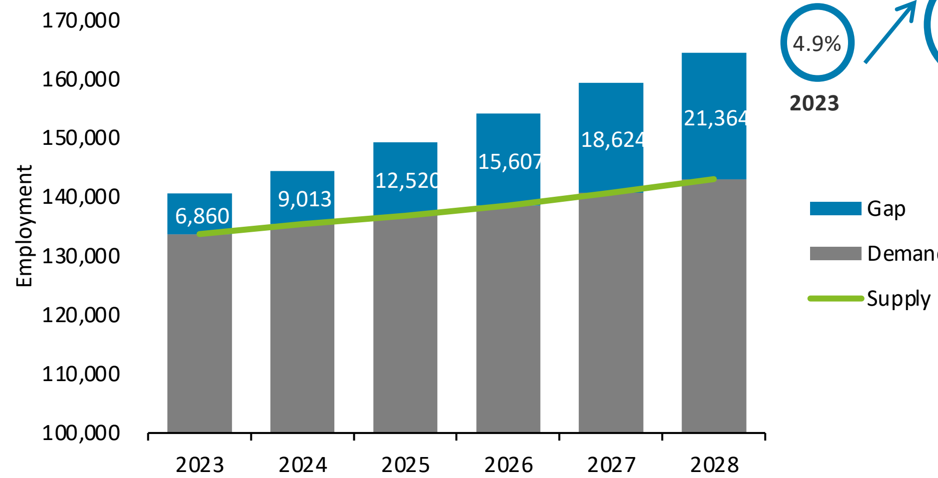
A slower recovery in employment among the youngest age cohort

Average employment of 15–24 year olds in logistics fell 22% from 2020 to 2022 and the participation rate for this age cohort has slowed consistently post-COVID-19. This scenario illustrates the potential impact if employment of the youngest cohort continues at current levels rather that returning to pre-COVID-19 trend levels. Modelling suggests labour supply could fall an additional ~3,500 by 2028 if this trend persists.

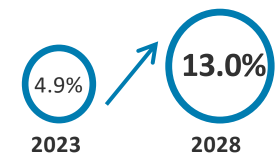
Slow recovery in employment among youngest cohort

- Average employment in logistics among the youngest (15–24 year old) cohort fell 22% between 2020 and 2022. This scenario illustrates the potential impact of fixing future employment of the youngest cohorts (15–24 and 25–44 year olds) at the post-COVID-19 2022 percent share of workforce levels (averaging 8.6% in the four quarters to September 2022) rather than the pre-COVID-19 share (averaging 10.4% between March 2012 and March 2020).
- This scenario not only captures the impact of the 'skills drain', with large numbers of young people seeking employment opportunities overseas, but also the continuation of the trend of relatively low attraction of younger employees into this sector.
- Modelling suggests that labour supply could fall by an additional ~3,500 people, widening the estimated workforce gap to ~21,000 by 2028.
- the compounding effect of an ageing workforce alongside low employment levels among the youngest cohort has not been explicitly modelled. If this were to be considered however, the estimated 21,000 shortage by 2028 is likely to worsen with an absence of younger workers to 'fill the gap' left by retirees.

Skills drain scenario - workforce gap projections



Gap (% of demand)



Source: Statistics NZ, Deloitte Access Economics

Labour supply: Slow recovery in employment among the youngest cohort

# employed	*2023*	*2024*	*2025*	*2026*	*2027*	*2028*
Base	135,900	137,555	139,262	141,275	143,794	146,494
Alt. recovery	133,712	135,427	136,803	138,497	140,672	143,027
Difference	*2,188*	*2,128*	*2,459*	*2,778*	*3,122*	*3,467*

Source: Statistics NZ, Deloitte Access Economics

Section 7:
He aronga pae tawhiti | Strategic alignment

Strategic alignment – relevant levers and initiatives

Key: ○ Little or no alignment ◐ Partial alignment ● Full alignment

LEVER OR INITIATIVE	DESCRIPTION	STATEMENT OF STRATEGIC DIRECTION FOCUSED AREAS						STRATEGIC ALIGNMENT WITH THIS RESEARCH
		Te Tiriti	*Equity*	*Transformation*	*Industry Voice*	*People*	*Sustainability*	
Te rautaki ueā me te rautaki whakawhiwhinga o Aotearoa | New Zealand freight & supply chain issues paper [30]	Te Manatū Waka Ministry of Transport has released a consultation document that outlines issues in the New Zealand freight and supply chain sector. It outlines a number of issues the sector is facing and examines these in the context of the opportunities and challenges they present in the future.	●	◐	●	●	◐	●	The paper presents a view on key issues that the freight and supply chain will face in the next 30 years and provides insight into the future workforce challenges and opportunities for the sector.
Commercial road transport workforce development strategy [35]	The Commercial Road Transport Workforce Development Strategy released in 2019 by the Motor Industry Training Organisation (MITO) outlines a framework for the industry to plan workforce development priorities in the next 5– 10 years.	○	◐	●	◐	◐	●	This report provides insight into one of the many industries that make up logistics – commercial road transport (CRT). The paper outlines the technological, environmental and governmental factors that are shaping CRT, providing strategies for CRT in the next 5 to 10 years.
Te ara ki Tua | Road to Success [38]	Te ara ki Tua Road to Success programme is an initiative from Ia Ara Aotearoa Transporting New Zealand to attract, train and retain truck drivers in New Zealand.	◐	◐	●	◐	●	◐	Te ara ki Tua Road to Success initiative will play an important role in the future development of New Zealand's truck drivers.
Pacific Peoples' Workforce Challenge: Accelerating the advancement of Pacific people in the workforce [33]	The Ministry of Business, Innovation & Employment has collaborated with The Southern Initiative and Auckland Co-Design Lab to produce this report summarising what is being done to accelerate the advancement of Pacific peoples in the workforce.	◐	●	●	◐	●	◐	This report provides insight into the types of workforce challenges and opportunities faced by Pacific peoples at a national level. This report could be used to motivate future research in Pacific workforce development, specifically in Hanga-Aro-Rau mandated sectors.

Section 8: Arawātea matua | Key opportunities

Summary of the research

In extending the previous research report, *Post COVID-19 workforce development needs in New Zealand's manufacturing and engineering sectors,* 40 additional documents have been identified and reviewed. These documents cover logistics specific insights, and research from Deloitte Access Economics to inform the stakeholder engagement. The project team contacted and interviewed 18 stakeholders from the logistics sector, including two Māori-and-Pacific owned businesses. This project distributed and collected responses from a Future Skills Survey, tailored to the logistics sector. It is then complemented by using of a custom employment dataset sourced from Statistics New Zealand to provide insights on the current and future state of the industry.

Taking the above approach and strategic themes perspectives, 10 opportunity statements have been developed and are described in the next page.

Arawātea matua | Key opportunities

In its stewardship role Hanga-Aro-Rau has identified a set of opportunities to support the development of a sustainable workforce. The opportunities respond to the disruption taking place in the sector and span the challenges of recruitment, retention and resilience. These opportunities are intended to help key stakeholders in the system including industry bodies, providers, iwi, Māori and Pacific partners, employers and the relevant public sector agencies to own their part of the eco-system, and work with the current and potential workforce to progress these opportunities.

Opportunities to improve recruitment and retention of the logistics workforce

Opportunity 1: Improve the attractiveness of the logistics sector to school or training leavers by researching barriers to joining the logistics workforce. The research findings would enable targeted, culturally appropriate initiatives to be implemented focussed on building a workforce pipeline, increase recruitment and start to reverse the trend of an ageing workforce.

Opportunity 2: Hanga-Aro-Rau, providers, employers, workers and stakeholders to collaborate on a talent acquisition and retention strategy at a sector level, accounting for sustainable connection with the environment. This will include collectively mapping out and designing pathways that cover alignment with life goals, skills development and matches, recruitment and marketing, pre-employment engagement, career paths and succession, pastoral care and mentorship, and exit experience.

Opportunity 3: Stakeholders will need to work together to re-brand the sector including identifying and removing some of the barriers for entry. Given the widening workforce supply and demand gaps, there is a need to retain and attract more staff which means addressing the perception of the sector including work conditions, work-life balance, and better articulating the opportunities in the sector across all skills and qualifications.

Opportunity 4: Identify, advertise and celebrate the benefits of a career in logistics, with a particular focus on the skills logistics competes with other sectors. The skills will include team work, problem solving, interpersonal skills and computer literacy. There is an opportunity for industry groups to identify what sets logistics apart from other sectors, clarify career pathways and promote life time learning benefits for our workforce.

Opportunities to upskill and equip the workforce for success

Opportunity 5: Work with iwi, hapū and Māori to identify how industry can adapt to the needs of Māori communities and employees. This will lead to solutions by Māori for Māori and industry.

Opportunity 6: The sector should address inequities for Pacific employees, including representation, pay, progression, promotion and access to upskilling opportunities. This will require addressing the cultural and structural barriers to enter and succeed in the sector. Cultural safety initiatives for non-Pacific staff and co-development of operating and career progression models with Pacific employees may open-up an otherwise untapped workforce and improve retention of existing staff.

Opportunity 7: Target workplace retention and upskilling activities to reduce the underrepresentation of women in the logistics industry. By addressing workplace behaviours and promoting roles that require a more diverse set of skills, there is an opportunity to attract a wider pool of female applicants and reduce the workforce gap.

Opportunity 8: Share best practice and collaboratively develop practical solutions to upskill and support the workforce as the divide between highly skilled and manual tasks in the workforce grows. Recognising that businesses are at different stages of maturity and have different access to training and resources that support the workforce to upskill, collaboration may reduce cost barriers to training identified by subject matter experts.

Opportunities to build sector resilience to disruptive change

Opportunity 9: Increase the focus on digital literacy alongside core numeracy and literacy skills within vocational training across all modes (classroom, work-based and online) to support a work-ready workforce. The modernisation of systems and processes, increased in data availability and growing complexity of supply chains necessitates an improvement in digital literacy of the workforce.

Opportunity 10: Target interventions at building resilience in the sector in response to the disruptive trends in the sector. This includes leveraging global innovation to advance local operations, training the workforce for Industry 4.0 and responding to just in case supply chain management practices.

K are e ara i roto i te mata ora o te ng aka u aro a m eita ki

(Cook Islands)

There is no negative intent in the joy of a giving heart

Tohutoro | References

Reference	Source
[1] – [24]	For references [1] to [24] please refer to the initial report published 2022: 'Post COVID-19 workforce development needs in New Zealand's manufacturing and engineering sectors'.
[25]	National Skills Commission. (2021). The state of Australia's skills 2021: now and into the future.
[26]	Deloitte Insights. (2018). Delivering digital talent: Preparing the logistics and distribution workforce for Industry 4.0 and the connected supply network.
[27]	Deloitte Access Economics. (2018). The future of work: Occupational and education trends in supply chain and logistics in Australia.
[28]	The Adecco Group. (2023). The future of workforce and talent in the logistics & supply chain industry.
[29]	Employers and Manufacturers Association (EMA). (2023). People experience trends – workforce development: Equipping the workforce for the future.
[30]	Te Manatū Waka Ministry of Transport. (2023). Te rautaki uea me te rautaki whakawhiwhinga o Aotearoa | New Zealand freight & supply chain issues paper.
[31]	Hanga-Aro-Rau. (2023). Our Pasifika peoples: Hanga-Aro-Rau opportunities to support transformation and wellbeing.
[32]	Auckland Transport. (2020). Pasifika Strategy.
[33]	Ministry of Business, Innovation & Employment, & the Southern Initiative. (2017). Pacific peoples' workforce challenge: Accelerating the advancement of Pacific people in the workforce.
[34]	Deloitte Insights. (2020). Inclusion as the competitive advantage: The case for women in supply chain.
[35]	Motor Industry Training Organisation. (2019). Commercial road transport workforce development strategy.
[36]	Deloitte. (2023). Transforming logistics: A sector fit for the future.
[37]	Te Waka & EY. (2023). Waikato & Bay of Plenty Freight Action Plan 2023.
[38]	Ia Ara Aotearoa. (n.d.). Te ara ki Tua | Road to Success https://www.roadtosuccess.nz/employers/about-the-scheme
[39]	DHL. (2023). The Logistics Trend Radar 6.0
[40]	DNA 1st Solution – Social Impact Social Impact | DNA 1st Solution
[41]	Deloitte. (2023). New Zealand Ports and Freight Yearbook 2023: Navigating the new normal New Zealand Ports and Freight Yearbook 2023 | Deloitte New Zealand
[42]	Hanga-Aro-Rau. (2022). Operational Plan | Whakamahere Nekehanga.
[43]	Infometrics. (2022). Labour market pressures here to stay.
[44]	Deloitte Finland. (2022). ESG risk assessment in supply chains.
[45]	Te Kāwai Ārahi Pūrongo Mōwaho External Reporting Board. (2023). Aotearoa New Zealand Climate Standard 3: General requirements for climate-related disclosures.
[46]	Deloitte Insights. (2022). Supply chain implications of the Russia-Ukraine conflict.
[47]	Deloitte University Press. (2016). The rise of the digital supply network: Industry 4.0 enables the digital transformation of supply chains.
[48]	Deloitte (2021). The journey toward a touchless network through intelligent automation – The future of movement of goods.

Section 9: Tāpiritanga | Appendices

Appendix 1: List of logistics industries in the remit of Hanga-Aro-Rau

Logistics Industries
1. Air and Space Transport
2. Commercial Road Transport
3. Customs and Freight Support Services
4. Digital Infrastructure
5. Driving Skills
6. Forklift
7. Maritime and Marina Operations
8. Postal and Courier Services
9. Rail Transport
10. Resource Recovery and Efficiency
11. Road Passenger Services
12. Stevedoring and Ports
13. Supply Chain
14. Warehousing and Storage
15. Water Freight and Passenger Transport

Source: Hanga-Aro-Rau, Our industries - Hanga-Aro-Rau (hangaarorau.nz)

Appendix 2: Key stakeholder list

List of stakeholders engaged during engagement sessions:

Employees

1. Auckland Transport
2. NZ Post

Trade Unions

1. First Union
2. E Tū

Industry Associations

1. Ia Ara Aotearoa Transport NZ
2. National Road Carriers Association
3. Trucking NZ Association

Employers / Workplaces

1. Neptune Pacific Direct Line
2. DHL
3. Port of Tauranga
4. Ports of Auckland
5. Auckland Transport
6. DNA 1st Solution
7. DSV
8. KiwiRail
9. Fliway
10. Move Logistics
11. NZ Post
12. First Global
13. Pacific Haulage

Appendix 3: Skill levels definitions

The below table outlines Statistics New Zealand's definitions from the Household Labour Force Survey, which categorises domestic occupations into five categories, ranging from highly skilled (level 1) to lower skilled (level 5). The skill levels are assigned based on the level of formal education, training and on-the-job training required for the occupation. They are based on the Australian and New Zealand Standard Classification of Occupations.

Level 1: Highly skilled	Level of skill commensurate with a bachelor degree or higher qualification. At least five years of relevant experience may substitute for the formal qualification.
Level 2	Level of skill commensurate with one of the following: • NZ Registered Diploma or • AQF Associate Degree, Advanced Diploma or Diploma. At least three years of relevant experience may substitute
Level 3: Skilled	Level of skill commensurate with one of the following: • NZ Registered Level 4 qualification • AQF Certificate IV or • AQF Certificate III including at least two years of on-the-job training. At least three years of relevant experience may substitute.
Level 4	Level of skill commensurate with one of the following: • NZ Registered Level 2 or 3 qualification or • AQF Certificate II or III. At least one year of relevant experience may substitute.
Level 5: Lower skilled	Level of skill commensurate with one of the following: • NZ Registered Level 1 qualification • AQF Certificate I or • Compulsory secondary education.

Source: Aria, Statistics NZ

Appendix 4: Survey questions

Hanga-Aro-Rau collaborated with the industry associations to distribute the survey to employers from the logistics sector. Displayed below are the questions within the survey.

HANGA-ARO-RAU
Manufacturing, Engineering and Logistics
Workforce Development Council

Deloitte.

Hanga-Aro-Rau Logistics Sector Future Skills Survey

The survey will take approximately 5 minutes to complete. Thank you for taking part in this short survey to help Hanga-Aro-Rau to understand the most relevant current and future state skill requirements for the logistics industry. Please note that your answers will only be presented at a summary level.

* Required

Your Details

Please tell us about your organisation and industry.

1. Your name

Enter your answer

2. Your email address

Enter your answer

3. Your organisation *

Enter your answer

4. Which subsector do you work for? *

- Storage and Warehousing
- Transport and Distribution (land)
- Transport and Distribution (water)
- Transport and Distribution (air)
- Postal and Courier
- Digital Supply Chain Management
- Other

Pacific and Māori Workforce

Please answer the following questions relating specifically to your organisations Pacific and Māori workforce

5. What percentage of your workforce identify as Pacific or Māori peoples?

	0%	1% - 20%	21% - 40%	41% - 60%	61% - 80%	81% - 100%
Pacific	○	○	○	○	○	○
Māori	○	○	○	○	○	○

6. Rate how difficult it has been to attract and retain Pacific or Māori staff.

	Very Easy 1	2	3	4	Very Difficult 5	Not relevant / Unknown
Pacific	○	○	○	○	○	○
Māori	○	○	○	○	○	○

7. Do you have any specific initiatives in place to support the growth and development of Pacific or Māori employees?

	Yes	No	Not relevant / Unknown
Pacific	○	○	○
Māori	○	○	○

Appendix 4: Survey questions (Continued)

8. Please rank the following skills by importance for employee success **at present.**

	Least important 1	2	3	4	Most important 5	Not relevant / Unknown
1. Problem solving and critical thinking	○	○	○	○	○	○
2. Leadership, management and decision-making	○	○	○	○	○	○
3. Teamwork	○	○	○	○	○	○
4. Verbal communication	○	○	○	○	○	○
5. Written communication	○	○	○	○	○	○
6. Numeric and quantitative analysis	○	○	○	○	○	○
7. Working with logistics tools and techniques	○	○	○	○	○	○
8. Computer literacy including the use of multi-media channels	○	○	○	○	○	○
9. Computer programming and big data analytics	○	○	○	○	○	○
10. Understanding of connected equipment and industrial control software	○	○	○	○	○	○
11. Cultural competencies	○	○	○	○	○	○
12. Language skills e.g. Te reo Māori	○	○	○	○	○	○

9. Please rank the following skills by importance for employee success **in 5 years time**.

	Least important 1	2	3	4	Most important 5	Not relevant / Unknown
1. Problem solving and critical thinking	○	○	○	○	○	○
2. Leadership, management and decision-making	○	○	○	○	○	○
3. Teamwork	○	○	○	○	○	○
4. Verbal communication	○	○	○	○	○	○
5. Written communication	○	○	○	○	○	○
6. Numeric and quantitative analysis	○	○	○	○	○	○
7. Working with logistics tools and techniques	○	○	○	○	○	○
8. Computer literacy including the use of multi-media channels	○	○	○	○	○	○
9. Computer programming and big data analytics	○	○	○	○	○	○
10. Understanding of connected equipment and industrial control software	○	○	○	○	○	○
11. Cultural competencies	○	○	○	○	○	○
12. Language skills e.g. Te reo Māori	○	○	○	○	○	○

10. Please rank how hard the following skills are to find **at present?**

	Easy to find 1	2	3	4	Hard to find 5	Not relevant / Unknown
1. Problem solving and critical thinking	○	○	○	○	○	○
2. Leadership, management and decision-making	○	○	○	○	○	○
3. Teamwork	○	○	○	○	○	○
4. Verbal communication	○	○	○	○	○	○
5. Written communication	○	○	○	○	○	○
6. Numeric and quantitative analysis	○	○	○	○	○	○
7. Working with logistics tools and techniques	○	○	○	○	○	○
8. Computer literacy including the use of multi-media channels	○	○	○	○	○	○
9. Computer programming and big data analytics	○	○	○	○	○	○
10. Understanding of connected equipment and industrial control software	○	○	○	○	○	○
11. Cultural competencies	○	○	○	○	○	○
12. Language skills e.g. Te reo Māori	○	○	○	○	○	○

Appendix 4: Survey questions (Continued)

11. Please rank how difficult you anticipate it to be to find the following skills in **5 years time?**

	Easy to find 1	2	3	4	Hard to find 5	Not relevant / Unknown
1. Problem solving and critical thinking	○	○	○	○	○	○
2. Leadership, management and decision-making	○	○	○	○	○	○
3. Teamwork	○	○	○	○	○	○
4. Verbal communication	○	○	○	○	○	○
5. Written communication	○	○	○	○	○	○
6. Numeric and quantitative analysis	○	○	○	○	○	○
7. Working with logistics tools and techniques	○	○	○	○	○	○
8. Computer literacy including the use of multi-media channels	○	○	○	○	○	○
9. Computer programming and big data analytics	○	○	○	○	○	○
10. Understanding of connected equipment and industrial control software	○	○	○	○	○	○
11. Cultural competencies	○	○	○	○	○	○
12. Language skills e.g. Te reo Māori	○	○	○	○	○	○

Impact of Future Skill Sets

In this section we explore how has broader changes impacted the workforce in your organisation and industry.

12. What was the percentage of open positions that were not filled due the lack of applicants with relevant skills **3 years ago (pre COVID-19)**?

	0%	1% - 20%	21% - 40%	41% - 60%	61% - 80%	81% - 100%
Estimation only	○	○	○	○	○	○

13. What is the percentage of open positions that have not been filled due to the lack of applicants with relevant skills **at present**?

	0%	1% - 20%	21% - 40%	41% - 60%	61% - 80%	81% - 100%
Estimation only	○	○	○	○	○	○

14. Please rank where you think the majority of people who have left the logistics industry moved to?

- Unable to work due to health and wellbeing of themselves or family
- Voluntary unemployment (holiday, retirement)
- Unable to find work
- Left the country
- Chose another industry
- Gone back to study and not working
- Other

15. How much will the following uncertainty factors result in an enduring future impact on the shortage of skills in your organisation, based on what you already know now?

	Little impact 1	2	3	4	Large impact 5	Unknown
COVID-19	○	○	○	○	○	○
Automation	○	○	○	○	○	○
Climate change	○	○	○	○	○	○

Appendix 4: Survey questions (Continued)

16. How effective would the following actions be in reducing the enduring future impact on the shortage of skills in your organisation?

	Not very effective 1	2	3	4	Very effective 5	Unknown
1. Aligning training programmes with future skills needs	○	○	○	○	○	○
2. More readily structured materials for in-house training	○	○	○	○	○	○
3. Leverage digital training technologies	○	○	○	○	○	○
4. Greater focus on individualised tailored training	○	○	○	○	○	○
5. Greater focus on group training	○	○	○	○	○	○
6. Greater focus on peer to peer mentorship and training	○	○	○	○	○	○
7. Greater focus on transferable skills	○	○	○	○	○	○
8. More collaboration across the industry for workforce management	○	○	○	○	○	○
9. Promote sector awareness to attract future talents	○	○	○	○	○	○

17. What is the level of impact of the supply chain moving online for logistics?

	Very Small Impact 1	2	3	4	Very Large Impact 5	Unknown
1. Improve workforce planning and rostering	○	○	○	○	○	○
2. Increase in technical skills required from staff	○	○	○	○	○	○
3. Increase in soft skills required from staff	○	○	○	○	○	○
4. Enable flexible work location and setting	○	○	○	○	○	○
5. Reduce risk of staff turnover	○	○	○	○	○	○
6. Increase staff pay	○	○	○	○	○	○
7. Increase staff productivity and efficiency	○	○	○	○	○	○
8. Enhance staff communication	○	○	○	○	○	○
9. Improve positive work culture	○	○	○	○	○	○

18. Are there other comments you wish to raise regarding current or future state of workforce for logistics in New Zealand?

Enter your answer

Statement of Responsibility

Restrictions and limitations

- This Research report is commissioned by and in accordance with the scope agreed with our addressee client Hanga-Aro-Rau.
- The reader acknowledges that this Research report was prepared at the direction of Hanga-Aro-Rau and may not be appropriate for the purposes of the reader. This Research report is based on the specific facts and circumstances relevant to our addressee client.
- This Research report includes a compilation of evidence from desktop research, stakeholder engagement and data sources. Some of the evidence presented, particularly from the desktop research and stakeholder engagement, are perspectives provided from third parties, which may not necessarily represent the view of Deloitte.
- Hanga-Aro-Rau consents to the use of its brand and images for publication in this Research report, but not for any other purpose. The images of people used in this Research report have been provide by Hanga-Aro-Rau, with the permission of the subjects.
- Deloitte, its partners, principals, employees, and agents make no statements or representations whatsoever concerning this Research report, and the reader acknowledges that it may not rely on any such statements or representations made or information contained within this Research report .
- The work contained within this Research report is provided for the exclusive benefit of our client, Hanga-Aro-Rau, in accordance with our terms of engagement and Deloitte disclaims responsibility or liability for losses occasioned by any other party.

Reliance on information

- In preparing this Research report we have relied upon and assumed, without independent verification, the accuracy and completeness of all information that is available from public sources, from Statistics New Zealand and all information that was provided to us by Hanga-Aro-Rau.
- We reserve the right to review the analysis and conclusions included or referred to in this Research report and, if we consider it necessary, to revise our work in the light of any information existing at the current date which becomes known to us after the date of this Research report.
- This Research report has been prepared with care and diligence and the statements and conclusions in this Research report are given in good faith and in the belief, on reasonable grounds, that such statements and conclusions are not false or misleading. However, in no way do we guarantee or otherwise warrant any statements, forecasts or scenarios. Forecasts are inherently uncertain. They are predictions of future events that cannot be assured. They are based upon assumptions, which may be beyond the control of Hanga-Aro-Rau and its management. Actual results will vary from the forecasts and these variations may be significantly more or less favourable.