

TECH SECTOR – SNAPSHOT

VALUE OF THE SECTOR

Technology is now the country's second biggest exporter and is the fastest growing sector worth

\$20bn

8%

NZ's GDP in 2022.¹

Digital technology also enables other sectors to achieve greater productivity.

GROWTH OF THE INDUSTRIES

6.8%

Technology

VS

3.2%

VS

General Economy

Average GDP growth, 2015–2022

GDP PER FTE

\$177k

GDP per FTE for the tech sector is around one-fifth higher than compared to the whole economy (**\$177k vs \$148k**).³

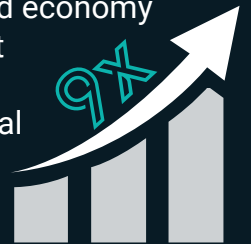
NZ average
\$148k

TECH EXPORTS

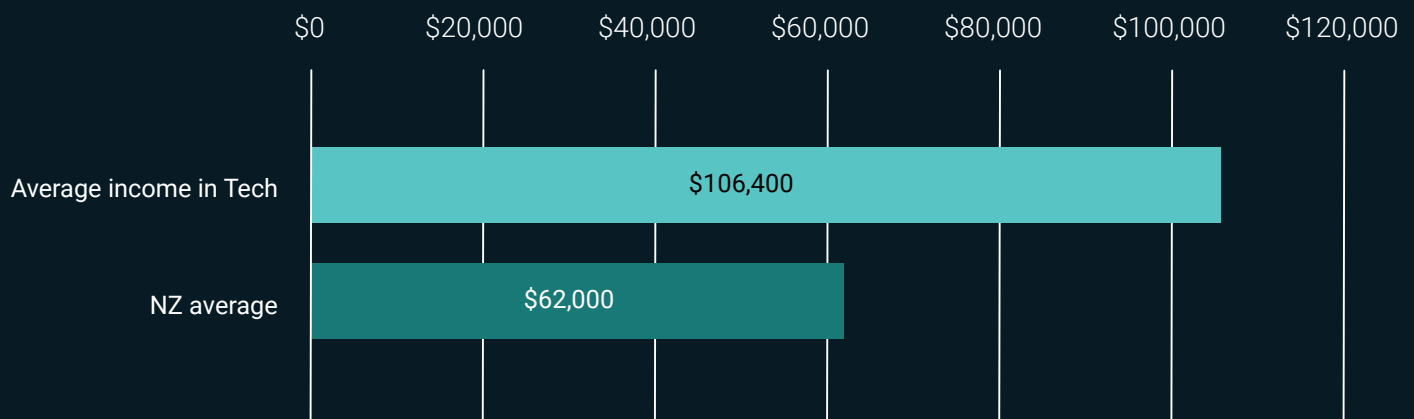
In 2022, the revenues of the **top 200** tech exporters exceeded

\$15bn

These companies grew nine times faster than the general New Zealand economy in 2022, delivering consistent and sustainable economic growth during immense global economic uncertainty.⁴



AVERAGE INCOME⁵



¹ NZ Tech, 2022

² Infometrics, 2023

³ Infometrics, 2023

⁴ NZ Tech, 2022

⁵ NZ Tech, 2022

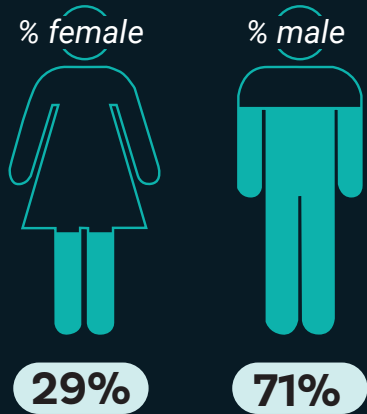
TECH SECTOR – SNAPSHOT

WORKFORCE SIZE IN 2022



The tech workforce is growing rapidly with 7,000 new, high paying jobs created in 2022.⁷

GENDER BREAKDOWN



*No data on gender diversity is available

WORKFORCE GROWTH

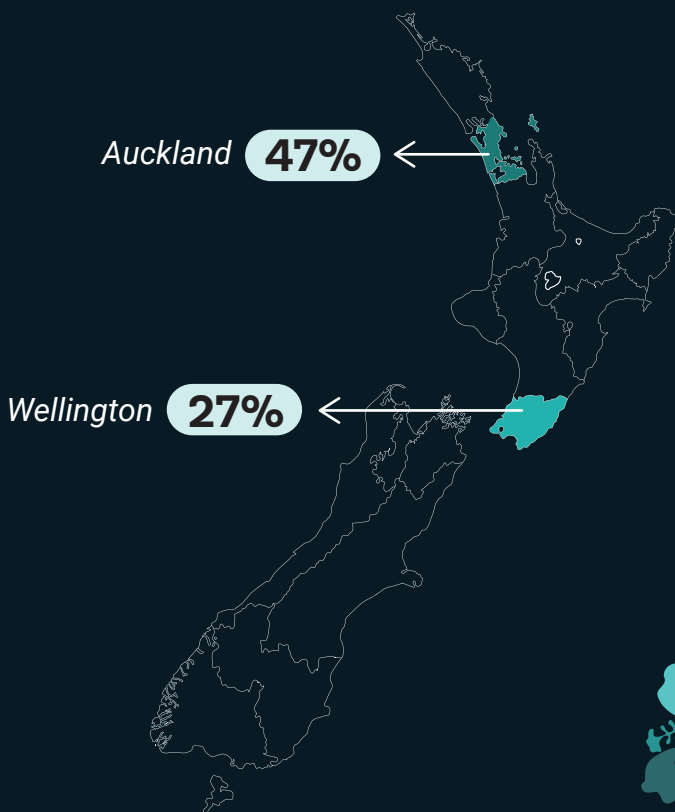
19%

Key technology occupation forecast growth 2023–2028.⁸



Total enrolment decline in digital technology courses (2010–2023).¹⁰

BUSINESSES BY REGION

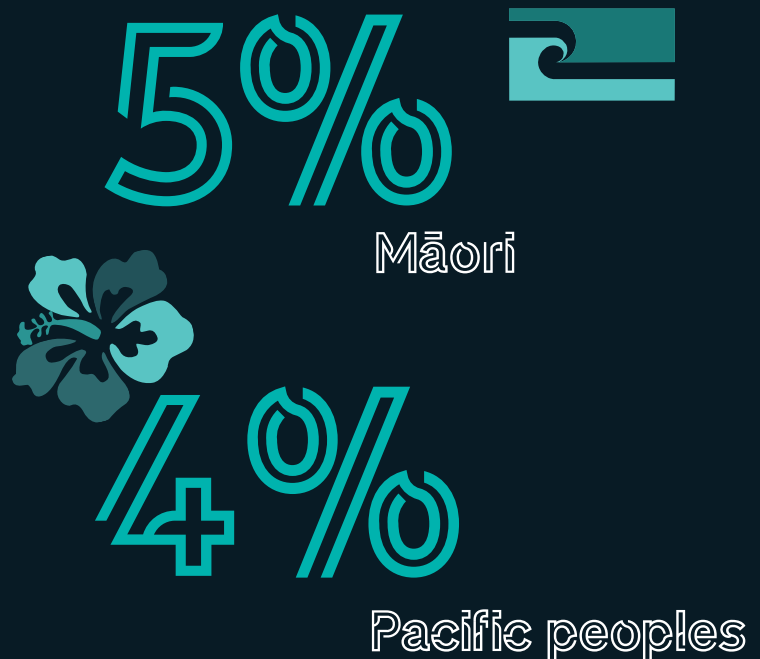


Business concentration in Auckland and Wellington but continues to grow in the regions.

Total provision investment decline in vocational education and training for digital technology courses (2010–2022).¹¹



ETHNICITY BREAKDOWN⁹



⁶ Infometrics, 2023

⁷ NZ Tech, 2023

⁸ Infometrics, 2023

⁹ NZ Tech, 2023

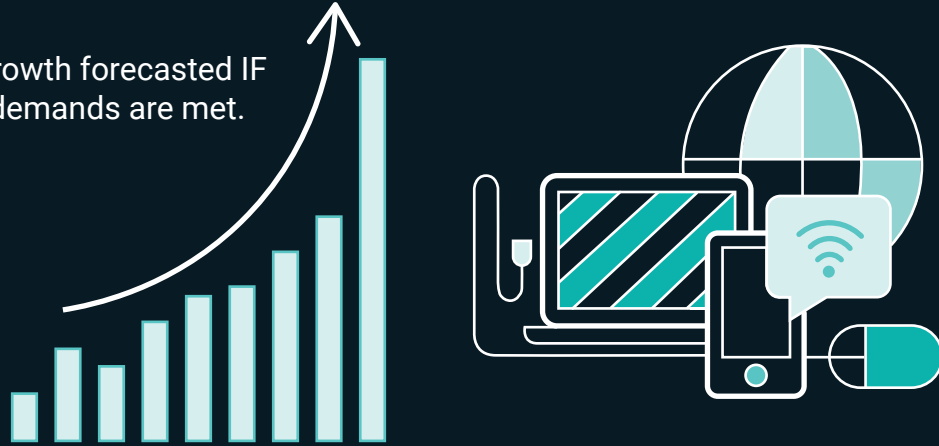
¹⁰ Ngā kete, 2023

¹¹ Ngā kete, 2023

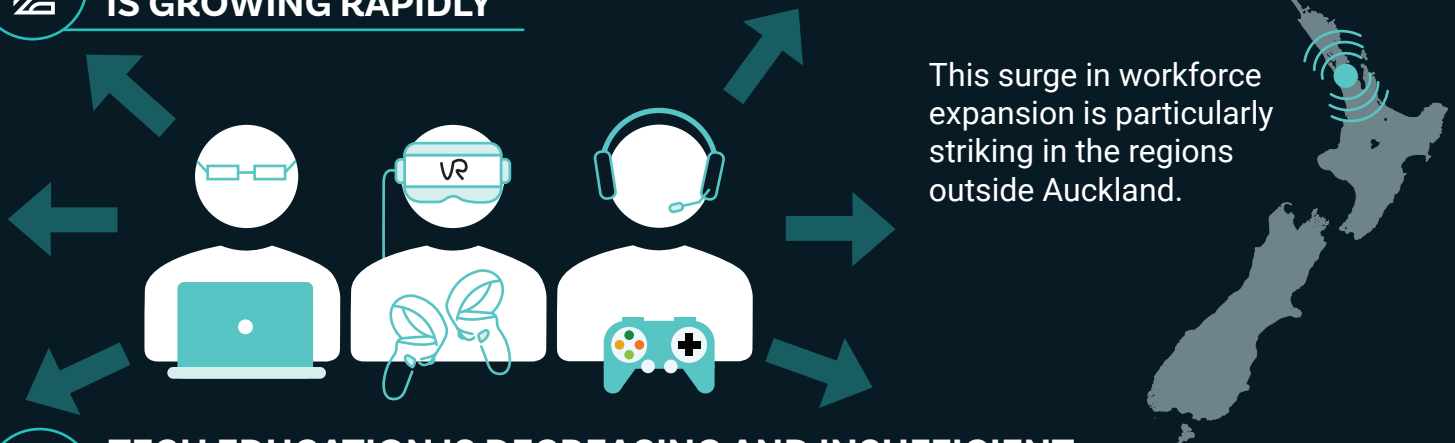
The technology workforce makes a significant contribution to the economy with potential for exponential growth

1 TECHNOLOGY IS NOW THE COUNTRY'S SECOND BIGGEST EXPORTER AND IS THE FASTEST GROWING SECTOR

There is exponential growth forecasted IF the tech industry skill demands are met.



2 THE TECH WORKFORCE IS GROWING RAPIDLY



3 TECH EDUCATION IS DECREASING AND INSUFFICIENT IN SUPPORTING WORKFORCE NEEDS

Investment in tech education and overall course enrolment has declined since 2011 despite industry demand for tech skills, particularly in the regions.

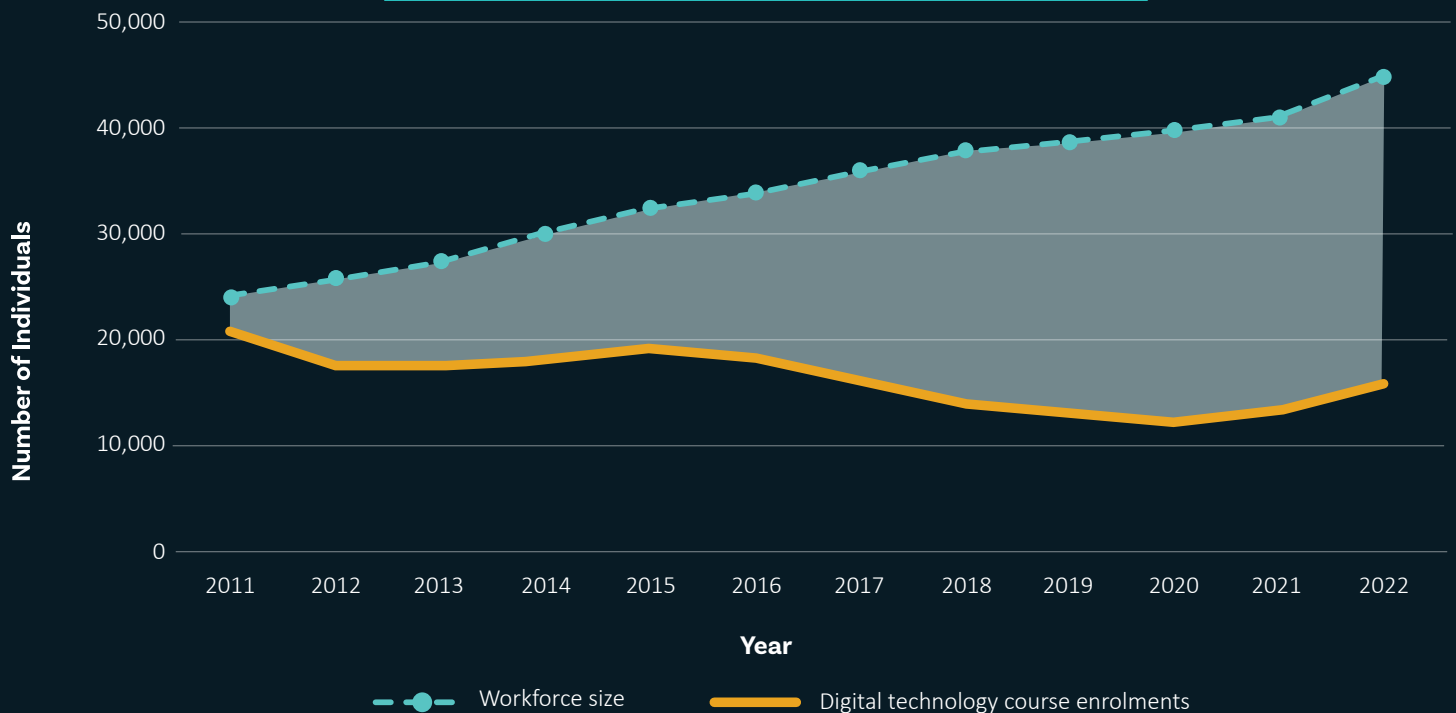


The declining educational opportunities in this field raise concerns about the sustainability of the domestic workforce.



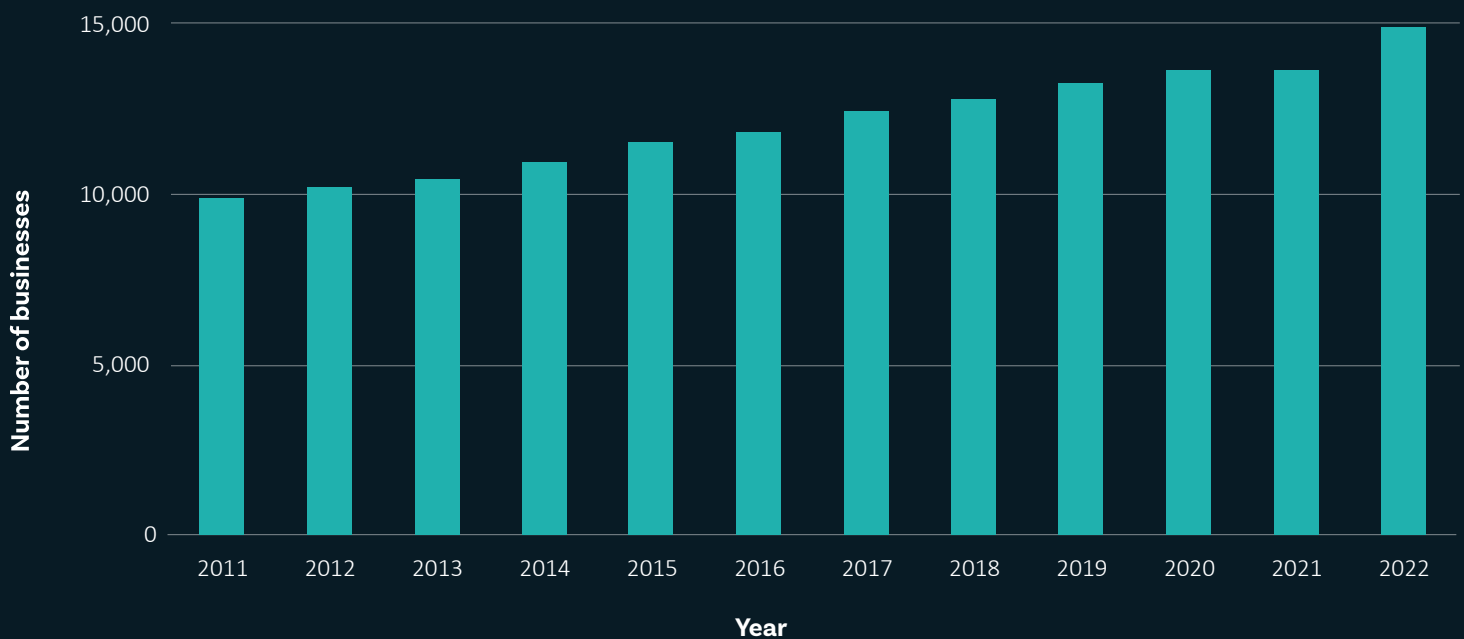
TECH SECTOR – TRENDS

Workforce Size and Digital Technology Course Enrolment by Year



As workforce since 2011 has grown year-on-year, enrolments in digital technology courses has continued to decline.

Nationwide Business Count by Year

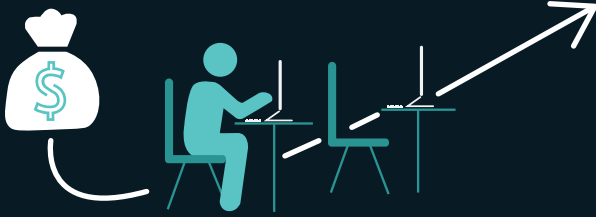


Similar to the trend in the workforce, the number of businesses has increased 51% between 2011–2022.

We need to develop a domestic tech workforce to build resilience and grow the sector over the mid-long term

1 FOCUSED INVESTMENT IN TECH SKILLS COULD ACCELERATE NEW ZEALAND'S GROWTH AND POSITION US AS A WORLD LEADER IN TECHNOLOGY

Focused investment in tech training is needed to meet the forecasted exponential growth.



Lifting investment in work-integrated and sub-degree tech education is needed to grow our domestic tech workforce.

Potential growth as a weightless export. Contributing to NZ's low-emissions future.



2 DIVERSITY IS CRITICAL FOR NZ TECH SECTOR'S FUTURE

Increasing diversity in the tech workforce would help grow the domestic workforce and bring further benefit, such as increasing business success and raising incomes for diverse groups.

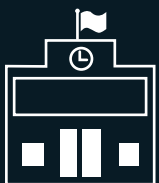


More visible pathways into tech for diverse learners, graduates and career changers would help meet workforce needs and create a more sustainable, local workforce.



3 A BETTER INTEGRATED TECH CURRICULUM IS NEEDED

The tech curriculum needs to be better integrated through introducing digital skills into the primary, intermediate, and secondary curriculum. This would broaden the pathways into the tech sector.



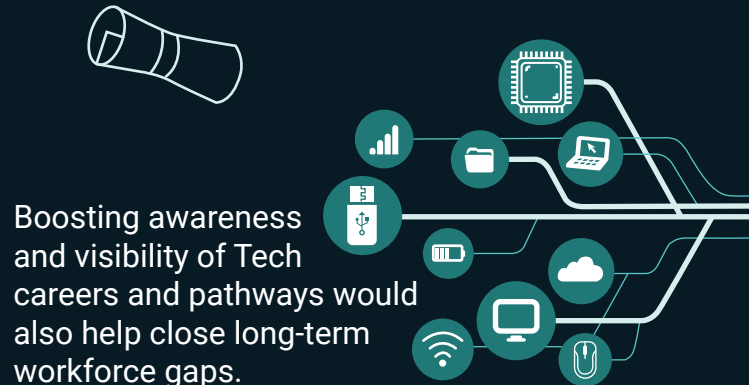
PRIMARY



INTERMEDIATE



SECONDARY



Boosting awareness and visibility of Tech careers and pathways would also help close long-term workforce gaps.

0.5%

the proportion of 12-year olds consider any sort of tech career.¹²

¹² McKinsey, 2020

NZ Tech firms are reliant on overseas recruitment at the mid and senior level to address immediate skill shortages

1 THERE IS AN UNMET SKILL DEMAND IN THE TECH SECTOR

Especially for people with advanced digital skills and experience.¹³ These tech roles require 5+ years of experience.



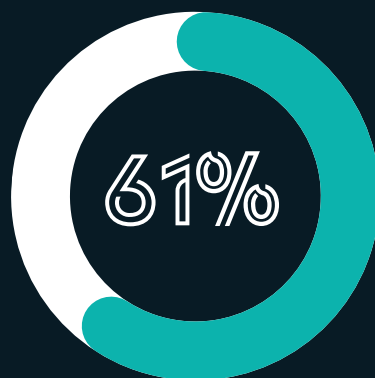
5+
years
of experience

2 NZ STRUGGLES TO TRAIN TECH WORKERS AND KEEP THEM

Toi Mai engagement with the tech industry tells us that tech firms are currently advised to relocate overseas when they reach 9 FTE as it is too difficult to recruit tech roles in NZ. Accessing funding to support expansion is also a factor.

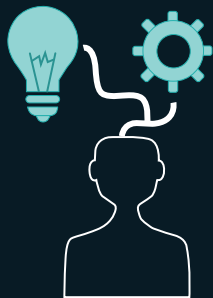


9 FTE



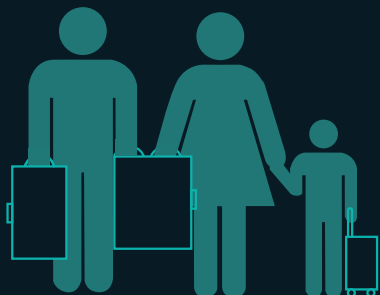
retention of new entrants of workforce in sector within 2 years.¹⁴

3 WE RELY HEAVILY ON IMMIGRATION TO FILL MANY SENIOR TECH ROLES

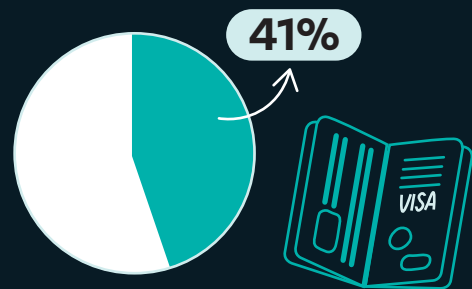


A lack of advanced tech skills limits the sector's ability to mature.

Instead of developing a domestic pipeline for a skilled workforce we continue to rely heavily on immigration.



Graduates struggle to enter the workforce as they require work experience and there are limited internship/junior tech jobs offered by tech firms.



the workforce across key tech roles are on a work or resident visa.¹⁵

¹³ Digital Skills Research

¹⁴ Te Mata Raraunga, Workforce Skills Data and Insights, 2023

¹⁵ Te Mata Raraunga, Workforce Skills Data and Insights, 2023

OPPORTUNITIES TO BOOST PRODUCTIVITY IN THE TECHNOLOGY SECTOR

To achieve exponential economic growth, the tech sector requires improved education pathways, development of work-based training and promotion of Tech careers.

1.

Technology is now the country's second biggest exporter and is the fastest growing sector. The tech workforce is growing rapidly

- In recent years, the NZ tech sector has experienced exponential growth, notably marked by a surge in the number of professionals in the field.
- Around 7,000 new, high paying jobs were created in 2022.

2.

There is a persistent skills shortage that is currently met by overseas recruitment, which will continue without intervention

- There is an unmet skill demand in the tech sector for mid and senior roles and NZ struggles to train tech workers and keep them.
- We rely heavily on immigration to fill many tech roles with almost half of all workers on an employment visa.
- Investment in tech education has been decreasing annually, particularly in the regions.

3.

There's an opportunity for NZ to develop a domestic tech workforce to build resilience and grow the sector over the mid-long term

- Focused investment in tech skills could accelerate New Zealand's growth and position us as a world leader in technology.
- Increased internship and work-based provision would grow a domestic tech workforce.
- A better integrated tech curriculum is needed introducing digital skills into the primary, intermediate, and secondary curriculum.
- Increasing diversity in the tech workforce would also help grow the domestic workforce and bring further benefits.

Vocational Education and Training Provision

The investment in vocational education in technology subjects has significantly fallen between 2011 and 2022. The value has dropped **by 48% to \$35m** when adjusted for inflation. At the same time, degree-level investment in tech qualifications has increased by around 90%.¹⁶

DISCLAIMER FOR STATS NZ DATA

Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers.

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) and Longitudinal Business Database (LBD) which are carefully managed by Stats NZ. For more information about the IDI and LBD please visit <https://www.stats.govt.nz/integrated-data/>

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

FULL REFERENCE LIST

Infometrics. (2023) Toi Whānui – Enabling Technologies Sector Profile. Available at: <https://industry.infometrics.co.nz/12149/Toi%20Whanui%20%E2%80%93%20Enabling%20Technologies/>

McKinsey (2020). Diversity wins: How inclusion matters. Available at: <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-wins-how-inclusion-matters>

Ngā Kete (2023). Available at: <https://ngakete.tec.govt.nz/>

NZ Tech. (2022). Overview of the New Zealand technology sector. Available at: <https://nztech.org.nz/wp-content/uploads/sites/8/2023/08/Tech-Sector-Key-Metrics-2022.pdf>

NZ Tech. (2022) Diversity critical for NZ tech sector's future. Available at: <https://nztech.org.nz/2022/06/15/diversity-critical-for-nz-tech-sectors-future/>

Te Mata Raraunga (2023). Sector Insights. Available at: <https://www.workforceskills.nz/sector-insights/toi-mai/>