



New Zealand Tech

Key Metrics

2022





HANGARAU KIA ORA TĀTOU KATOĀ | TECH FOR GOOD

The New Zealand Technology Ecosystem

NZTech is a not-for-profit collective impact association with a mission to support a values-led, nationally and internationally connected tech community that is collectively lifting equity, sustainability and prosperity for all in Aotearoa, by creating jobs, export growth and impact through tech for good.

We support fact based decision making and every year we aggregate data from across the broader tech ecosystem. In 2016, for reporting consistency, we collaborated with the New Zealand Government on an agreed definition for the tech sector (see appendix).

This document provides a summary of updated key metrics for the New Zealand technology sector and the broader tech ecosystem for 2022. This year, where possible, we have included historical data to illustrate trends.

CONTENTS

CREATING BUSINESSES	4
CREATING JOBS	7
CREATING EXPORT GROWTH	12
A GROWING MĀORI SECTOR	14
ECONOMIC IMPACT	15
ATTRACTING MIGRANTS	16
ATTRACTING INVESTMENT	17
INVESTING IN R&D	18
TECH EDUCATION	19
DIVERSITY CHALLENGES	23
DEFINITION	24

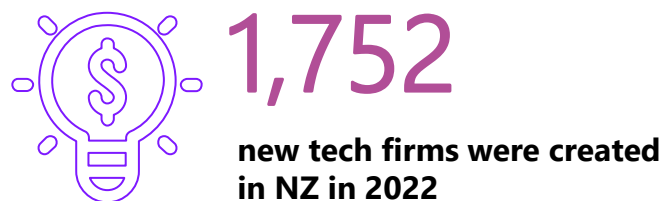
Creating businesses



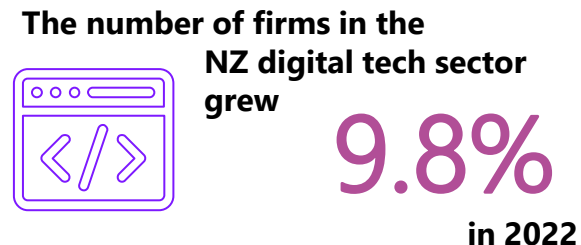
Source: Statistics NZ 2023

The New Zealand tech sector was made up of 23,433 firms in 2022, an 8.1 percent increase year on year, creating 1,752 new tech firms. Note: some of these firms consist of single employee businesses, which probably includes some tech contractors.

The largest growth was in digital technology with 1,302 new firms in 2022, a 9.8 percent year on year growth rate.



Source: Statistics NZ 2023



Source: Statistics NZ 2023

The number of firms in the
NZ tech sector grew

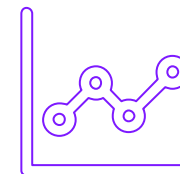
8.1%
in 2022



Source: Statistics NZ 2023

The number of firms in
Auckland's tech sector grew

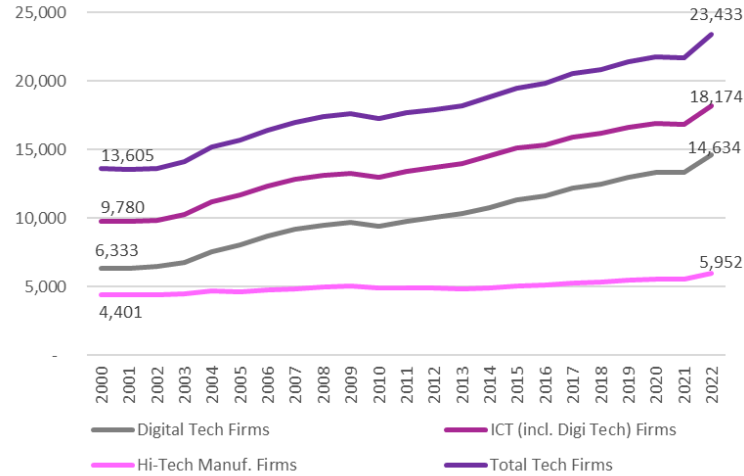
7.3%
in 2022



Source: Statistics NZ 2023

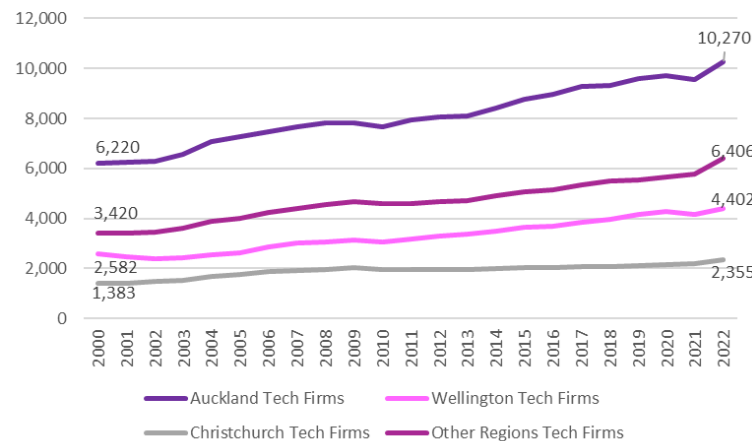


Tech Sector Firms, 2000-2022



Source: Statistics NZ 2023

Tech Sector Firms - By Region, 2000-2022



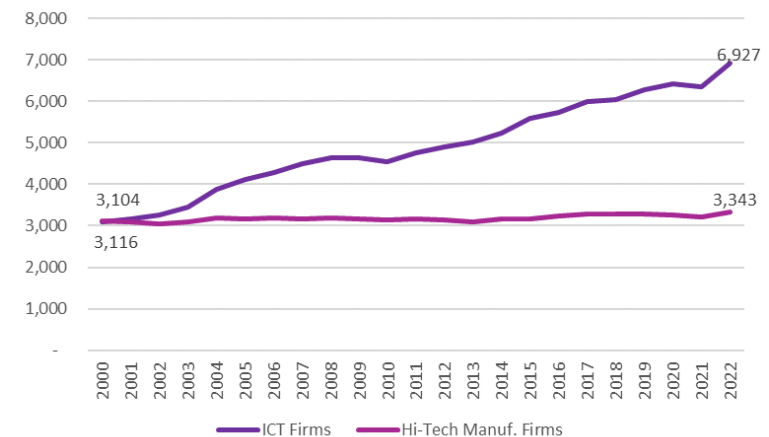
Source: Statistics NZ 2023

Since 2000, the number of tech firms in New Zealand has been increasing at a rate of about three percent a year. While the number of hi-tech manufacturing firms has only increased at a rate of one percent per annum, digital technology firms have been increasing at a rate of four percent.

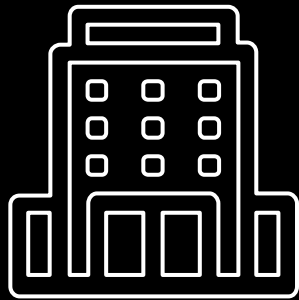
There were 14,634 digital technology firms in New Zealand in 2022, up 9.8 percent from 2021. While more complex and capital intensive than digital technology firms, there were still 402 new hi-tech manufacturing firms in 2022, up 7.2 percent from 2021.

Auckland was home to 43.8 percent of tech firms, followed by Wellington (18.8 percent) and Christchurch (10 percent). The remaining 27.3 percent are spread through regional New Zealand.

Tech Sector Firms - Auckland, 2000-2022



Source: Statistics NZ 2023



Tech Sector Firms by Region, 2022

	Hi-Tech		ICT		Total	
Northland	293	3.4%	205	1.4%	498	2.1%
Auckland	3,343	38.3%	6,927	47.1%	10,270	43.8%
Waikato	857	9.8%	678	4.6%	1,535	6.5%
Bay of Plenty	581	6.7%	530	3.6%	1,110	4.7%
Gisborne	26	0.3%	37	0.3%	63	0.3%
Hawke's Bay	299	3.4%	225	1.5%	524	2.2%
Taranaki	245	2.8%	151	1.0%	396	1.7%
Manawatu-Wanganui	376	4.3%	233	1.6%	609	2.6%
Wellington	589	6.8%	3,812	25.9%	4,402	18.8%
Tasman	134	1.5%	88	0.6%	222	0.9%
Nelson	140	1.6%	128	0.9%	268	1.1%
Marlborough	120	1.4%	51	0.3%	171	0.7%
West Coast	60	0.7%	26	0.2%	85	0.4%
Canterbury	1,136	13.0%	1,219	8.3%	2,355	10.0%
Otago	342	3.9%	345	2.3%	686	2.9%
Southland	182	2.1%	57	0.4%	239	1.0%
	8,721		14,712		23,433	

Creating jobs

NZ's tech sector employed



118,070

people in 2022

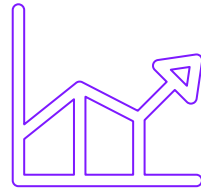
Source: Statistics NZ 2023

The companies in the New Zealand tech sector employed 118,070 people in 2022 across all roles.

This rebound in growth created 6,880 new jobs, up 6.2 percent year on year following two years of slower growth due to the pandemic.

The continuous growth of the New Zealand tech sector has created 43,377 new jobs for Kiwis between 2000 and 2022. The sector employed 4.1 percent of the New Zealand workforce in 2022, up from 3.9 percent in 2021.

NZ's tech sector created



6,880

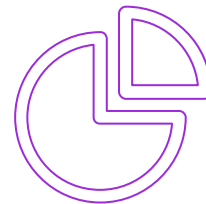
new jobs in NZ in 2022

Source: Statistics NZ 2023

The digital tech sector, a sub-sector of the tech sector and the focus of the New Zealand government's Digital Technologies Industry Transformation Plan (ITP) created 3,750 new jobs in New Zealand for Kiwis, a year on year growth of 9.4 percent.

NZ's tech sector employed

4.1%

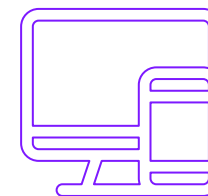


of the NZ workforce in 2022

Source: Statistics NZ 2023

NZ's digital tech sector created

3,750

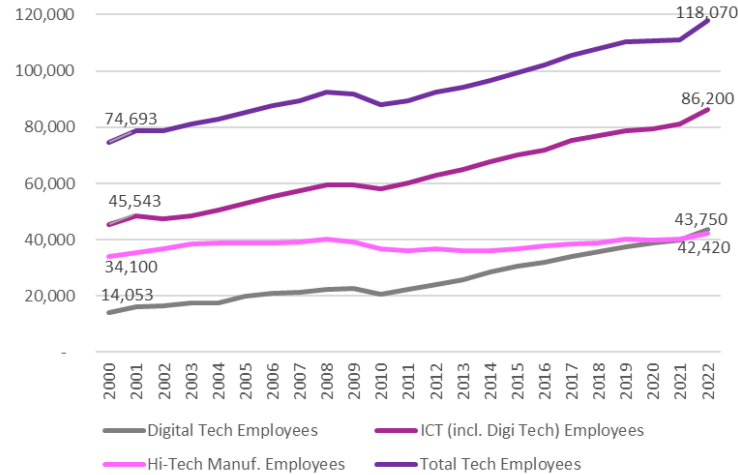


new jobs in NZ in 2022

Source: Statistics NZ 2023

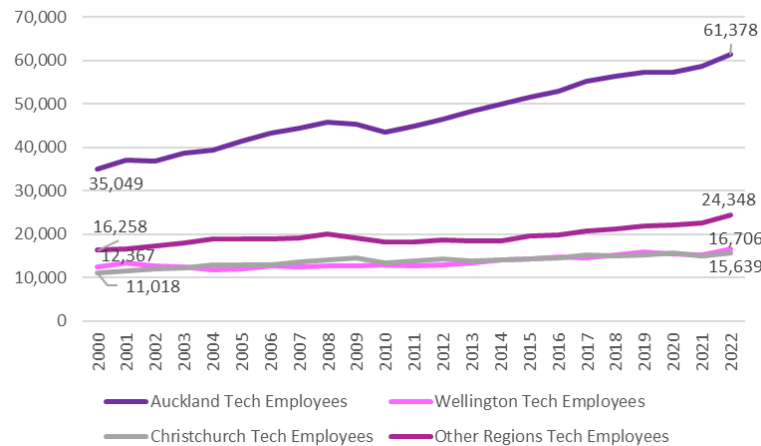


Tech Sector Employees, 2000-2022



Source: Statistics NZ 2023

Tech Sector Employees - By Region, 2000-2022

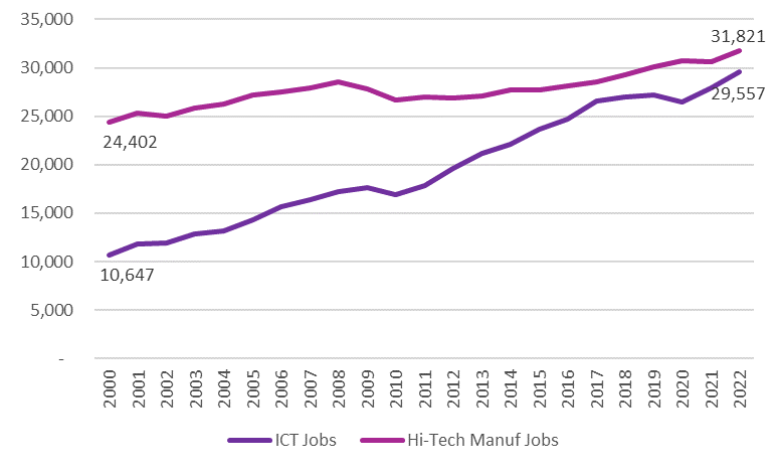


Source: Statistics NZ 2023

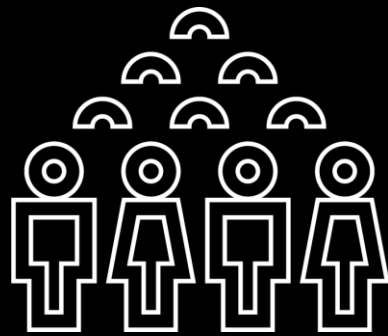
Most of the job growth is from digital technology firms that produce software-as-a-service (SaaS). In 2022, for the first time, the number of employees in the digital technology sector exceeded the number of employees in hi-tech manufacturing. Hi-tech manufacturing rebounded after a couple of years of reducing employees, to grow 5.7 percent to 42,420, creating 2,280 new jobs in New Zealand.

Auckland tech companies employ 61,378 people, 52 percent of the tech sector workforce, with ICT tech workers growing 5.7 percent year on year. More than 20 percent of the tech sector workforce are based outside the main centres.

Tech Sector Employees - Auckland, 2000-2022



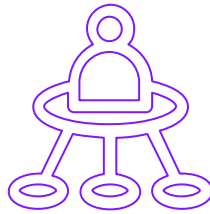
Source: Statistics NZ 2023



Tech Sector Workforce by Region, 2022

	Hi-Tech Manuf.		ICT		Total	
Northland	961	1.5%	215	0.4%	1,176	1.0%
Auckland	31,821	50.5%	29,557	53.6%	61,378	52.0%
Waikato	4,330	6.9%	2,304	4.2%	6,634	5.6%
Bay of Plenty	3,132	5.0%	1,011	1.8%	4,142	3.5%
Gisborne	193	0.3%	59	0.1%	252	0.2%
Hawke's Bay	1,300	2.1%	620	1.1%	1,920	1.6%
Taranaki	1,454	2.3%	331	0.6%	1,785	1.5%
Manawatu-Wanganui	2,132	3.4%	495	0.9%	2,627	2.2%
Wellington	3,900	6.2%	12,806	23.2%	16,706	14.1%
Tasman	442	0.7%	74	0.1%	516	0.4%
Nelson	861	1.4%	239	0.4%	1,101	0.9%
Marlborough	402	0.6%	43	0.1%	445	0.4%
West Coast	190	0.3%	28	0.1%	218	0.2%
Canterbury	9,280	14.7%	6,358	11.5%	15,639	13.2%
Otago	1,777	2.8%	819	1.5%	2,596	2.2%
Southland	774	1.2%	161	0.3%	935	0.8%
	62,950		55,120		118,070	

NZ's top 200 tech exporters employed

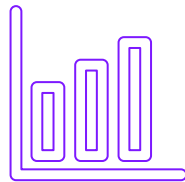


62,718

people globally in 2022

Source: TIN Report, 2022

NZ's top 200 tech exporters created



6,148

new jobs globally in 2022

Source: TIN Report, 2022

NZ's top 200 tech exporters workforce grew

10.9%



globally in 2022

Source: TIN Report, 2022

New Zealand's top 200 tech exporters (including ICT, biotech and hi-tech manufacturing companies) have growing international businesses. In 2022, the top 200 tech exporters employed 62,718 people globally, up 10.9 percent year on year, creating 6,148 new jobs.

The New Zealand fintech sectors workforce grew 23.4% year on year, creating 1,776 new jobs globally in 2022. This growth in employees was mainly driven by Xero, who added 1,142 new staff in 2022.

Other high growth tech firms included Rocket Lab who added 710 new staff to their team, Fisher & Paykel Healthcare with 478 and Datacom with 262.

NZ's top fintech companies staff grew 23.4% creating

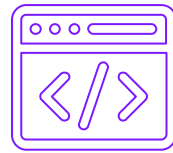
1,776



new jobs globally in 2022

Source: TIN Report, 2022

Across all sectors there were



97,070

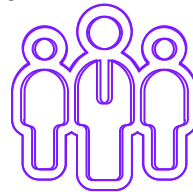
people in ICT jobs in New Zealand in 2022

Source: Ministry of Business, Innovation and Employment, 2023

The number of ICT workers in New Zealand increased

5%

in 2022



Source: Ministry of Business, Innovation and Employment, 2023

In New Zealand there were

34,341

software engineers and programmers in 2022



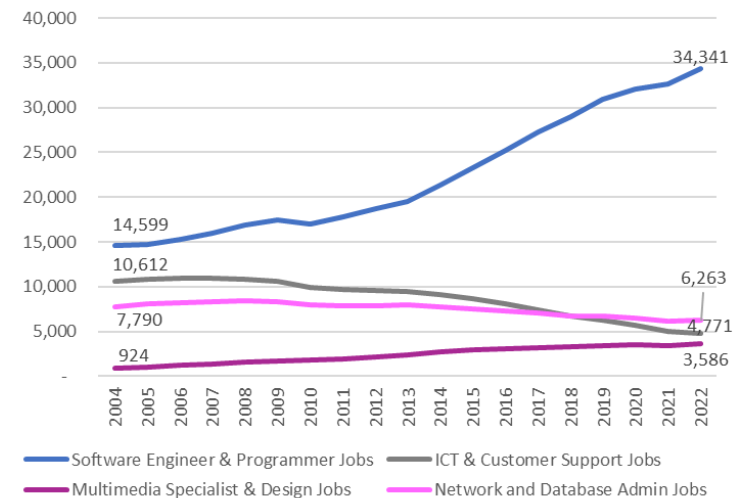
Source: Ministry of Business, Innovation and Employment, 2023

While the tech sector is growing and creating jobs, the rest of the economy is also undergoing digitalisation. This means ICT professionals are in demand across the economy.

In 2022, there were 97,070 ICT professionals working across all sector, including the tech sector. This was a five percent increase year on year, or 4,224 new jobs. Most of these jobs are computer programmers or software engineers (34,341) followed by ICT managers (project and product managers) (15,275).

Some ICT jobs are in decline, including ICT support, network and database administrators, while others are showing strong growth, for example software engineers, programmers and multimedia specialists, growing at seven percent per annum.

ICT Jobs, 2004-2022

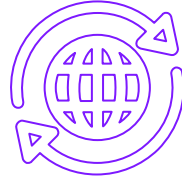


Source: Ministry of Business, Innovation and Employment, 2023

Creating export growth

New Zealand exported

\$9.8b



worth of tech goods
and services in 2022

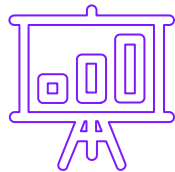
Source: Statistics NZ 2023

In New Zealand, the increasing number of tech firms is supporting ongoing growth of tech exports. In 2022, New Zealand exported \$9.8 billion worth of technology goods and services, including \$1.7 billion worth of software that helped make up \$2.9 billion worth of ICT software and services exports.

Hi-Tech manufacturing exports were worth \$6.9 billion in 2022 and accounted for 70 percent of tech exports.

Hi-Tech manufacturing is growing at a compound annual growth rate (CAGR) of just three percent. Software exports have been growing at 24 percent CAGR and now account for 17 percent of tech exports.

Software exports have been growing



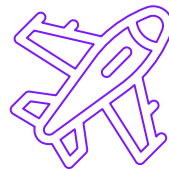
24%

CAGR annually
for over a decade

Source: Statistics NZ 2023

New Zealand exported

\$2.9b

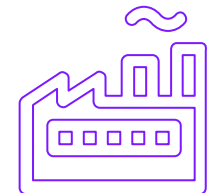


worth of ICT software
and services in 2022

Source: Statistics NZ 2023

New Zealand exported

\$6.9b



worth of Hi-Tech
manufacturing in 2022

Source: Statistics NZ 2023

Tech made up



10.9%

of New Zealand's exports in 2022

Source: Statistics NZ 2023

Tech was New Zealand's

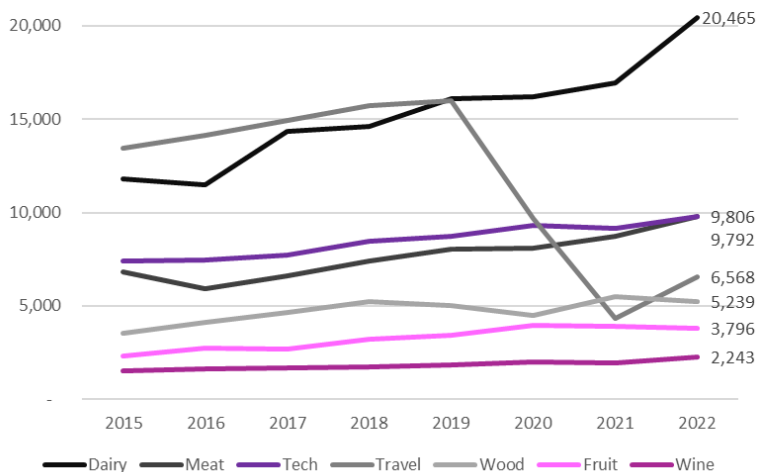
2nd



largest export after Dairy and ahead of Meat in 2022

Source: Statistics NZ 2023

New Zealand's Exports, 2015-2022



Source: Statistics NZ 2023

In 2022, tech exports accounted for 10.9 percent of all exports from New Zealand and are the second largest export category.

Dairy exports continue to grow strongly and it is expected that travel and tourism exports will rebound. Meanwhile, tech export growth continues to match that of the total meat sector.

New Zealand's largest 200 tech exporters continue to experience consistently strong growth with their revenues growing nine percent year on year, to \$15.1 billion and their offshore revenues also growing at 9% to \$11.5 billion.

New Zealand's top 200 tech exporters had



\$15.1b

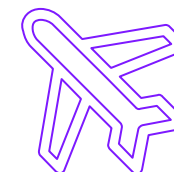
in revenues in 2022

Source: TIN Report 2022

New Zealand's top 200 tech exporters had

\$11.5b

in offshore revenues in 2022



Source: TIN Report 2022

A growing Māori sector

New Zealand had **72**



significant Māori owned technology companies in 2022

Source: Toi Hangarau Report, Pāua Interface, 2023

In the inaugural Toi Hangarau report into the emerging Māori technology ecosystem 72 significant Māori owned technology companies were identified. These companies employ 1,310 people and the oldest company is 36 years old. Together, these 72 companies contain 669 years of business experience.

Around half are earning revenues over \$1 million and nine are earning over \$5 million.

With 32 percent of the 72 companies operating internationally, the Māori tech sector is well-placed to further grow its exporting capability.

The largest Māori technology company earns over \$73 million in annual revenues. Of the top nine largest firms, 89 percent are operating in international markets.

New Zealand's Māori owned technology companies employed

1,310 people in 2022



Source: Toi Hangarau Report, Pāua Interface, 2023

Of the New Zealand Māori technology companies

81%



were small businesses in 2022

Source: Toi Hangarau Report, Pāua Interface, 2023

The top nine significant Māori technology companies are

100%



aligned with the biggest global trends – cloud, cyber, IoT and human machine interface

Source: Toi Hangarau Report, Pāua Interface, 2023

Economic impact

New Zealand's tech sector contributed

\$20b

to GDP in 2022



Source: Statistics NZ 2023

In 2022, the New Zealand tech sector contributed \$20 billion to GDP, up from \$18.8 billion in 2021.

The tech sector accounts for eight percent of New Zealand's GDP.

Research has found that for every four percent growth in the productivity of the New Zealand tech sector, it contributes an additional \$2.7 billion per year to GDP.

Additionally, for every new job created by the tech sector a further 4.8 jobs are created around that job in the local community.

New Zealand's tech sector contributed

8%

of NZ's GDP in 2022



Source: Statistics NZ 2023

Each new tech sector job creates

4.8

other new jobs



Source: Digital Nation Report, 2016

Each 4% growth in tech sector productivity creates

\$2.7b

additional GDP



Source: Digital Nation Report, 2016

Attracting global talent

There were

2,735



visas approved for
ICT roles in 2022

Source: Immigration New Zealand 2023

ICT visa approvals were



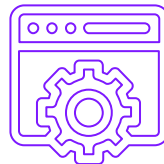
44%

lower in 2022
than 2018

Source: Immigration New Zealand 2023

Software engineers and
programmers had

501



visas approved in 2022

Source: Immigration New Zealand 2023

The largest number of new tech jobs in New Zealand are for roles that require advanced skills and experience. To keep pace with the growth of the tech sector immigration is required to access professionals.

In 2022 there were 2,735 visa approvals for people coming to work in ICT roles, including 501 software engineers and programmers. However, since the pandemic, digital technology employers have increased their focus on developing domestic talent and creating more entry level pathways and upskilling programmes to reduce their reliance on immigration for talent. Consequently, visa approvals for ICT jobs was 44 percent lower in 2022 than pre-pandemic times.

Even in specialist high demand areas, for example cybersecurity, only 60 visas were issued as local training initiatives increased.

Only

60

visas were approved for
cybersecurity professionals
in 2022

Source: Immigration New Zealand 2023

Attracting investment

Investors invested

\$726m

**into New Zealand
tech firms in 2022**



Source: Technology Investment Report, TIN 2023

There was \$726 million invested into New Zealand technology companies in 2022, up 8% from 2021.

There were 154 investments made with 143 companies, ranging from pre-Series A (Seed) funding to Series A and beyond. The average pre-Series A raise value was \$1.9 million versus a \$10.4 million average raise value for Series A and above. The largest deal was Soul Machines securing US\$70m as part of its Series B1 raise.

There was an

8%

**increase in the value
of investment into
New Zealand tech
firms in 2022**



Source: Technology Investment Report, TIN 2023

**In 2022, the average
Series A+ raise was**

\$10.4m



Source: Technology Investment Report, TIN 2023

In 2022

143



**New Zealand technology
companies raised funding**

Source: Technology Investment Report, TIN 2023

**In 2022, the average
pre-Series A raise was**

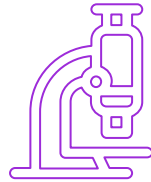
\$1.9m



Source: Technology Investment Report, TIN 2023

Investing in R&D

Over **\$1b**
was invested in **Computer
Services R&D in New
Zealand in 2022**



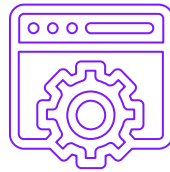
Source: Statistics NZ 2023

Over \$1 billion was invested in research and development (R&D) in computer science in New Zealand in 2022. This accounted for a third of all R&D investment by businesses across New Zealand.

The ICT sector invested \$679 million in R&D in 2022, up 9.5% or \$59 million more than 2021. This investment was made by 414 companies.

Across all R&D, wages and salaries made up 57% of R&D expenditure whereas capital expenditure only accounts for 9%.

Investment in
**Computer
Science R&D
accounted for**



33%
of business
R&D in 2022

Source: Statistics NZ 2023

ICT companies invested

\$679m



in R&D in 2022

Source: Statistics NZ 2023

R&D investment by ICT
companies grew

9.5%



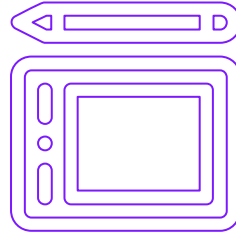
in 2022

Source: Statistics NZ 2023

Tech education

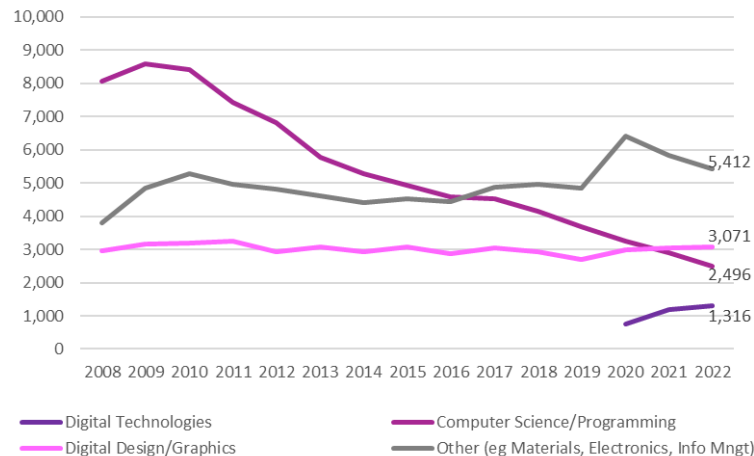
12,295

Year 13 ākonga took NCEA technology subjects in 2022



Source: Ministry of Education, Education Counts 2023

Secondary School Enrolments Year 13 Students, 2008-2022



Source: Ministry of Education, Education Counts 2023

In 2022, 2,295 year 13 ākonga taking technology NCEA subjects including computer science, programming, digital design, graphics, electronics, information management and materials. This data excludes food technology and textiles technology subjects.

There was a five percent year on year decline in participation of NCEA technology subjects in 2022, including a 13 percent decline in participation in computer science and programming courses.

Underrepresented populations are already emerging at school with only 29 percent female, 13 percent Māori and nine percent Pacific Peoples in year 13 NCEA technology.

Across years 11-13 there is a -5.5 percent CAGR decline in Māori participation and -4.3 percent CAGR decline in Pacific Peoples participation in NCEA technology subjects from 2017.

29%



of Year 13 students enrolled in NCEA technology courses in 2022 were female

Source: Ministry of Education, Education Counts 2023

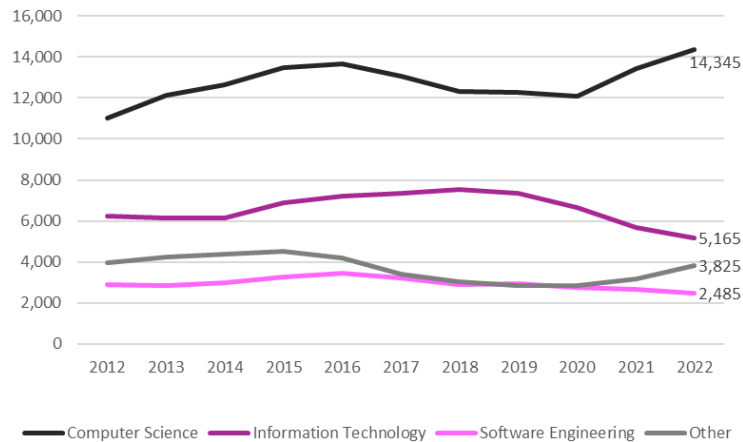


25,820

students were enrolled in tertiary level IT qualifications in 2022

Source: Ministry of Education, Education Counts 2023

Enrolments in Tertiary Level IT Courses 2012-2022



Source: Ministry of Education, Education Counts 2023

9,075

domestic student were enrolled in IT degrees in 2022



Source: Ministry of Education, Education Counts 2023

In 2022, from certificates to PhDs, there were 25,820 students taking tertiary information technology (IT) courses at any level. This was a three percent growth from 2021, mainly due to returning international students. Of these, 14,345 were taking Computer Science, 5,165 were taking IT and 2,485 software engineering.

Only 9,075 domestic students were taking any form of IT degree level study in 2022, including computer science, IT and software engineering, a decline of one percent from 2021.

Study of artificial intelligence (AI) increased 6.5 percent in 2022, with 330 domestic students taking degree level courses. Computer programming enrolments increased 3.6 percent from 2021.

Domestic enrolments in IT degrees declined by



-1%

between 2021 and 2022

Source: Ministry of Education, Education Counts 2023

Domestic enrolments in degree level algorithm and AI courses grew



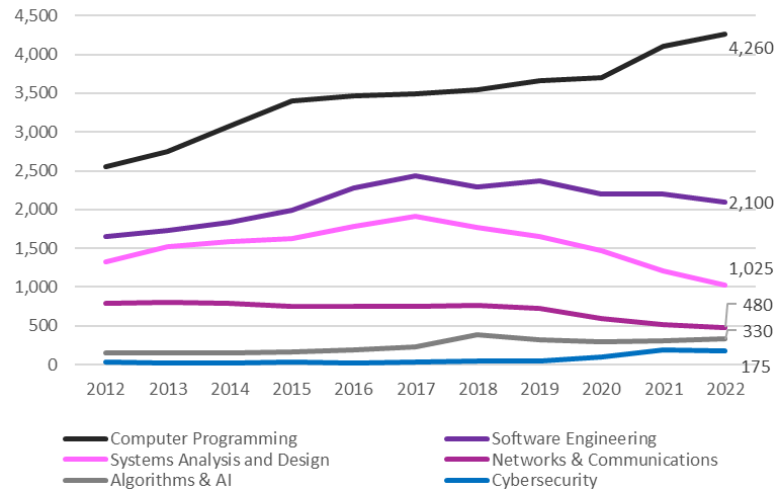
6.5%

between 2021 and 2022

Source: Ministry of Education, Education Counts 2023

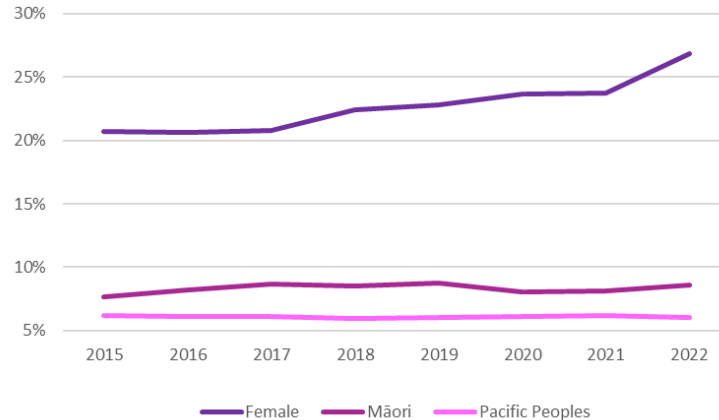


Domestic IT Degree Enrolments by key subjects, 2012-2022



Source: Ministry of Education, Education Counts 2023

Domestic IT Degree Enrolments Percent Female, Māori & Pacific 2015-2022



Source: Ministry of Education, Education Counts 2023

Of the 9,075 domestic students taking IT degree level courses, 4,260 were studying computer programming and 2,100 software engineering.

In 2022, there were 2,400 domestic students who transitioned from school to IT degrees, down 14 percent from 2021.

The number of domestic students taking IT declined 14.2 percent from 2021 due to 15 percent decline in systems analysis enrolments and a 25 percent decline in database management.

There continues to be low levels of enrolments by females, Māori and Pacific Peoples in IT degree level courses. Female enrolments of IT degrees have been improving slowly, from 20 percent in 2015 to 27 percent in 2022.



2,400

students moved from school to begin IT degrees in 2022

Source: Ministry of Education, Education Counts 2023

27%

of domestic students taking IT degrees in 2022 were female



Source: Ministry of Education, Education Counts 2023



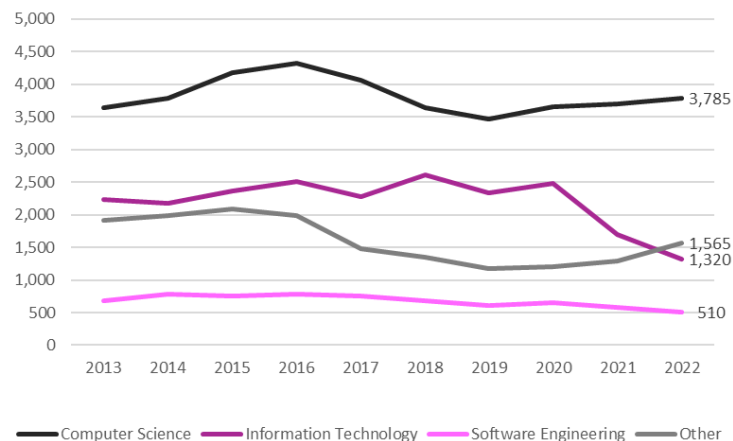
7,180

students graduated from any tertiary level IT qualification in 2022



Source: Ministry of Education, Education Counts 2023

Graduates of Tertiary Level IT Courses 2013-2022



Source: Ministry of Education, Education Counts 2023

2,190

domestic students graduated from IT degrees in 2022



Source: Ministry of Education, Education Counts 2023

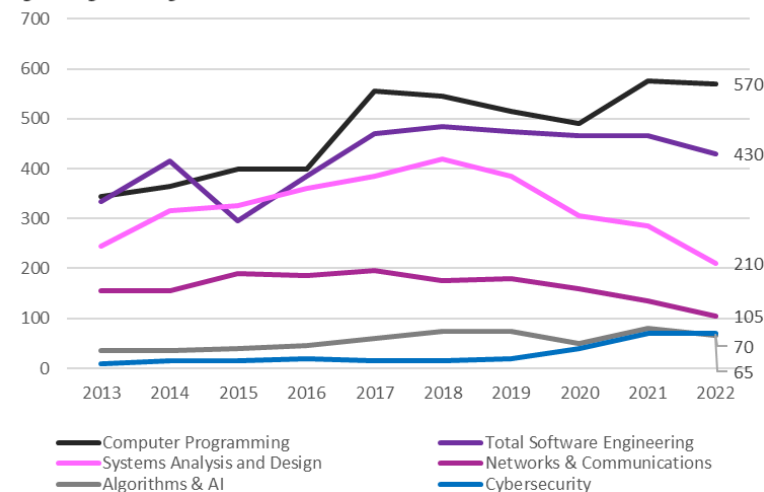
Students graduating with tertiary qualifications in IT declined by 1.2 percent in 2022 to 7,180 graduates. There was a 22 percent decline in graduates in information technology to 1,320 with fewer students taking systems analysis and database management.

There were 2,190 domestic students graduating with IT degree level qualifications, a 13 percent year on year decline.

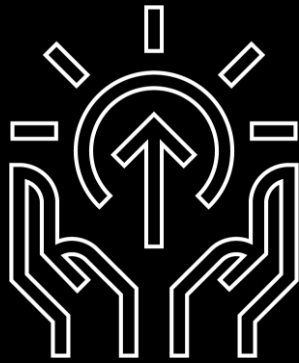
Even in areas of supposed high demand there were only a small number of graduates. There were 65 degree level domestic graduates in algorithms and AI, 70 graduates in cyber security, 570 in computer programming and 430 in software engineering.

Diversity remains an issue with only 105 Māori IT degree graduates in 2022, 65 Pacific Peoples and 445 females.

Domestic IT Degree Graduates by key subjects, 2012-2022



Source: Ministry of Education, Education Counts 2023



Diversity challenge

Diversity and inclusion continues to be a challenge for the tech ecosystem in New Zealand, resulting in a significant under-representation of female, Māori and Pacific Peoples in tech jobs. This issue begins early and is amplified throughout the education process.

Females account for 40 percent of ākonga taking NCEA technology subjects, dropping to 24 percent of IT degree enrolments. However, the number in the workforce has improved to 29 percent by 2022. Māori drop from 21 percent of the learner population to 14 percent in NCEA technology, to eight percent of IT enrolments and five percent of the workforce.

	Female		Māori		Pacific Peoples	
	2017	2021	2017	2021	2017	2021
Yr 11-13 all students	50%	50%	20%	21%	9%	10%
Yr 11-13 NCEA tech students	40%	40%	15%	14%	9%	8%
IT Degree enrolments	21%	24%	9%	8%	6%	6%
IT Degree graduates	18%	22%	7%	7%	4%	5%
Digital tech workforce	27%	29%	4%	5%	3%	4%

Sources: Ministry of Education 2023; NZTech Digital Skills Survey, 2023

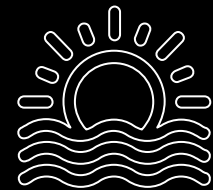
4.8%

of the digital technology workforce in 2022 were Māori



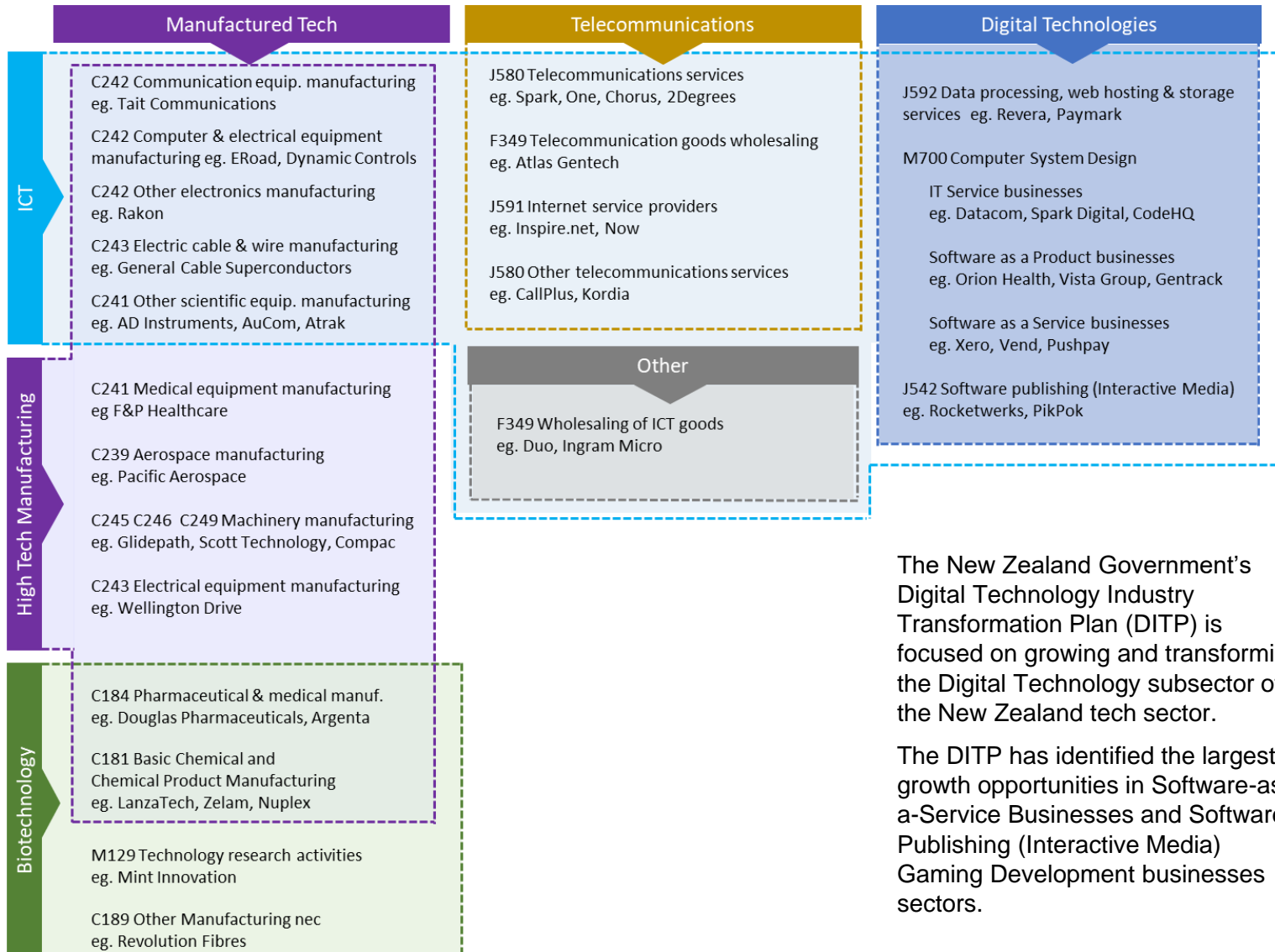
4.4%

of the digital technology workforce in 2022 were Pacific Peoples



Definition

The Tech Sector is made up of ICT and Digital Technology, Interactive media and Gaming, Hi-Tech Manufacturing and Biotechnology firms. While not perfect, using standard ANZSIC codes enables international comparison and long-term tracking.



The New Zealand Government's Digital Technology Industry Transformation Plan (DITP) is focused on growing and transforming the Digital Technology subsector of the New Zealand tech sector.

The DITP has identified the largest growth opportunities in Software-as-a-Service Businesses and Software Publishing (Interactive Media) Gaming Development businesses sectors.

Helping to create a more
equitable, sustainable
and prosperous
Aotearoa New Zealand
underpinned by
good tech.



techweek

