Report objective
This report has been prepared by Technology Investment Network (TIN) on behalf of the New Zealand Ministry of Business, Innovation and Employment (MBIE).

The New Zealand Government's Investment Attraction Strategy aims to promote:
• High-quality foreign direct investment in areas of competitiveness for New Zealand;
• Overseas investment in research and development, especially encouraging multinational corporations to locate their R&D activity in New Zealand; and
• The attraction of individual investors and entrepreneurs to expand New Zealand's pool of smart capital.

Report Content
i. Opportunities to Invest
   Reasons to invest in New Zealand technology
ii. Investor Environment
   Investor activity in New Zealand continues to intensify
iii. Growth Capabilities and Areas of Competitive Advantage
   High growth exists across many industry sectors
iv. New Zealand's Investment Credentials
   A maturing business ecosystem and supportive government promote technology success
v. Learn More

Methodology
This document draws largely on public and private company data from the annual TIN100 Report (www.tin100.com) of the top 200 New Zealand technology firms (as determined by revenue). This data has been collected and aggregated by TIN over the past twelve years.

Inclusion in the TIN top 200 requires technology firms to:
1. Originate in New Zealand;
2. Retain a meaningful presence in New Zealand;
3. Operate in the High-tech Manufacturing, ICT or Biotech sectors;
4. Have developed their own technology-based intellectual property; and
5. Generate at least 10% of their revenues offshore.

Information is gathered by surveying companies that satisfy the above criteria. When a survey is not returned or is incomplete, publicly available figures are used. If none are available, revenue is estimated based on staff numbers, revenue per employee ratios from comparable companies and data supplied in previous years.

Further, interviews are conducted with leading sector analysts and firms to aid research and analysis.

All figures in this report are quoted in New Zealand dollars unless otherwise specified.

Sector Definitions
In this report the “High-tech Manufacturing” sector refers to companies that fall under the OECD definitions of High-Technology and Medium-High Technology Manufacturing.

The OECD definition for "ICT" makes it a cross-cutting sector that has some overlap with these manufacturing definitions; refer to the latest TIN100 Report (www.tin100.com) for individual company sector classifications. The OECD definition of Biotechnology has also been used by TIN to classify companies that fall within the “Biotech” primary sector.

Key Contacts
The report was prepared by the Technology Investment Network (TIN). To contact please email tin100@tinetwork.com. See page 28 for the contact details of other key information sources.

1All data is derived or sourced from TIN100 Report analysis, so that double counting is eliminated.
New Zealand offers attractive investment opportunities

The technology sector offers multiple investment opportunities in ambitious and scalable firms that are targeting global problems with market-leading solutions.

% Revenue growth (2016)

- Auckland & Northland: 12.2%
- Hamilton: 11.1%
- Central North Island: 0.9%
- Wellington: 15.3%
- South Island: 9.2%

A record year for investment (2016)

- Foreign investment: 239% increase in the past year in early stage technology companies
- Record capital raise: $1.0B raised by funds for NZ private equity and venture capital investment

A technology sector on the rise

- Speed of growth: 12% revenue growth in the past year (over $1B).
- Spread of growth: Growth is evident across every New Zealand region.
- Highest growth sectors: FinTech: 23.1%, Digital Media: 15.9%

In total, the New Zealand technology sector

- Contributes: 16.2B of national GDP*
- Consists of: 28,749 firms*
- Employing: 98,900 workers*

*Digital Nation New Zealand: From Tech Sector to Digital Nation, NZ Technology Industry Association (June 2016).
1NZ Private Equity and VC Monitor, NZVCA (May 2017).

Digital Nation New Zealand \rightarrow Digital Nation NZ

Company sizes are growing rapidly

- 21% now have annual revenues exceeding $50m.

Technology is New Zealand’s

- 3rd largest export sector.

Record capital raise

- $6.9B generated in offshore revenues.
Reasons to invest in New Zealand technology

New Zealand’s well-connected and fast-growing technology sector thrives on meeting global challenges, doing more with less and thinking differently.

Centrally Positioned and Globally Connected

- Great global export base with strong connections to US and Asian markets, and a comprehensive free trade agreement network primarily in the Asia-Pacific region.
- World-class fast internet speeds.
- Timezone advantage: compatible with business hours in the US and Australia, and 12 hours ahead of Greenwich Mean Time.

Vista Group is a cluster of businesses providing technology solutions to the film industry; their flagship company Vista Cinema has software installed in over 80 countries and holds 38% global share of the Large Circuit Market (cinemas with 20+ screens).

High Growth Technology Companies with World-Leading Ambitions

- Growing number of innovative companies with scalable business models across the ICT, High-tech Manufacturing and Biotechnology fields.
- Globally focused from the outset: with a small domestic market, New Zealand’s technology firms need to develop innovations with international appeal and pursue early offshore expansion.
- Healthy startup environment with low cost barriers and high levels of entrepreneurship.

Datacom became New Zealand’s first IT company to reach $1B in revenue in 2016; it now operates from 29 locations across the globe.

Strong Technology Ecosystem

- Developed democracy, ranked first in the world for ease of doing business (World Bank Group).
- Growing, highly educated workforce, with globally competitive salary costs.
- Safe, established financial markets, with strong angel and venture capital investor networks.
- Stable, business-friendly government, with a low-compliance tax system and government funding to assist research and development, training, and international growth.

In the year to June 2016, the Government’s business innovation agency Callaghan Innovation committed over $150m to R&D grants, funding up to 40% of companies’ R&D expenditure.

Innovative “Can-Do” Culture

- Rich history of world-acclaimed innovations
- Flexible and resilient workforce with a tradition of extracting maximum value from minimal resources.
- Generalist efficiencies: the broad nature of work in New Zealand often requires employees to be generalists and typically work in smaller development teams, leading to faster response times.
- Ideal test bed for new technologies: As liberal adopters of new technology, New Zealand’s small populace are ideal “beta testers” for a growing number of IT multinationals.

Buckley Systems builds components for the machinery that produces 90% of the world’s silicon chips.
Strong and sustained revenue growth

New Zealand's technology sector continues to grow strongly each year, earning significant international revenue.

**Revenue Over Time** (Top 200 NZ technology firms)

**% of Growth by Region** (Top 200 NZ technology firms)

- New Zealand: 19%
- Australia: 18%
- China / Rest of Asia: 43%
- North America: 13%
- Europe: 13%
- Middle East / Other: 6%

*Data source: Top 200 NZ technology firms (ranked by revenue), TIN100 Report 2016.*
Many global markets

The top 200 New Zealand technology firms are driving substantial revenue growth in diverse global markets.


CAGR: The Compound Annual Growth Rate is the mean annual growth rate of an investment over a specified period of time longer than one year. *ROA: Rest of Asia.

In the FY16 year, F&P Healthcare generated more than $85m in revenue in Asia from sales of its medical devices, including respiratory humidifier systems and devices for the treatment of obstructive sleep apnea.
"This country of 4.5 million people has started to churn out some awfully polished, extraordinary products... They’re world-class technological achievements – the work of a well-educated, creative people bent on competing on the world stage".

Ashlee Vance, American business columnist, author of "Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future"
Investor activity continues to intensify

With many more emerging technology companies, investment in New Zealand is on the rise.

Private equity activity in New Zealand continues to rise steadily. While public listings have slowed recently, there has been a recent IPO by 9 Spokes and agritech startup CropLogic has also announced plans to list in 2017.

**Acquisitions and Listings in the Tech Sector**

Data sources: NZ Private Equity and VC Monitor, TIN100 Report 2016. VC Funding figures are for the 2016 calendar year. Listings and Acquisitions are for the financial year to March 2016.
Regional strengths attract investor interest

High-performing technology firms are not just an urban phenomenon: they exist throughout New Zealand.

### Auckland & Northland
**Auckland City Population**: 1.495m
The world’s 3rd best city for quality of living, Auckland is a diverse high-tech manufacturing centre, attracting a range of businesses including robotics, food processing, precision engineering, advanced materials and space technology firms. Its GRIDAKL innovation precinct forms the fast-growing hub for ICT companies including medical and fintech providers, and software, gaming and app developers.

**Key areas of growth**: Digital Media* 27.0%, Healthcare* 10.4%

### Central North Island
**Population**: 200k
A base for advanced biotech, engineering and electronics companies specialising in processing, health and productivity, and packing technologies to service agricultural businesses in the surrounding regions (Hawkes Bay, Bay of Plenty, Taranaki, Manawatu-Wanganui and Gisborne Tairawhiti).

**Key areas of growth**: Agritech* 12.9%, Healthcare* 2.9%

### Christchurch & South Island
**Christchurch City Population**: 389.5k
A high-tech manufacturing hub for the region’s acclaimed primary industries. Christchurch and Dunedin cities also boast a number of biotech and healthcare technology firms. The region’s many established software solutions providers address a variety of niche market needs including tourism souvenir imaging, 3D geological modeling and Board management systems. The South Island offers attractive lifestyle benefits and a highly supportive ecosystem for startups.

**Key areas of growth**: Digital Media* 45.5%, Software Solutions 23.8%

### Hamilton
**Hamilton City Population**: 229.9k
The fertile Waikato region is home to a number of well-established, privately held agritech firms specialising in high-tech manufacturing technologies for the many crop, dairy and livestock businesses in the area.

**Key areas of growth**: High Value Manufacturing 4.8%, Agritech* 2.6%

### Wellington & Lower North Island
**Wellington City Population**: 405k
Wellington city is world-renowned for producing creative screen-related technologies for movie visual effects and AR/VR. New Zealand’s largest cloud-based fintech provider and its largest IT services and support firm are also both based here. Its tech hub innovation precinct supports a growing number of tech startups including those serving the creative industries and social enterprises.

**Key areas of growth**: Financial Services Technology* 78.7%, Software Solutions 12.1%

DATA SOURCE: Revenue, regional sector breakdowns, and CAGR figures are for the top 200 New Zealand technology firms.

*Refer to pages 18-20 for regional company examples.

1Quality of Living survey 2016 (Mercer).
2Augmented Reality/Virtual Reality.
New Zealand's technology companies welcome investment

Investment drives growth: 53% of the fastest growing companies are already either VC backed or publicly funded.

3 Year Revenue CAGR (%) for a sample of high growth NZ companies
More early stage New Zealand companies are pursuing offshore investment

... and receiving unprecedented levels of local startup funding too. But many more opportunities still exist for investors.

**Domestic and Foreign Investment into early stage New Zealand technology companies (2014-2016)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Crowdfunding</th>
<th>Angel Investment</th>
<th>Foreign Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>40</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>50</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>2016</td>
<td>60</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

**NOTE:** Equity Crowdfunding was introduced to New Zealand in 2014, following government financial market reforms under the Financial Markets Conduct Act 2013. Foreign Investment figures are for the financial year to March. Angel Investment and Crowdfunding figures are for the calendar year. **Angel Investment figures source:** Young Company Finance Index (NZVIF, 2017).

"The accelerating growth in capability of NZ entrepreneurs and early-stage investors is remarkable. The eco-system for growth companies has evolved quickly in the past decade gaining momentum through angel investors, accelerators and domestic venture funds. The quality of the pipeline of startup companies is rapidly improving as global experience is reinvested in the NZ market. In a world moving towards abundant capital, challenges remain for NZ growth companies seeking the optimum capital partners. More and more, the successful raising of global capital by NZ startups affords confidence for other tech companies to find the best blend of New Zealand and international funding."

Colin McKinnon, Executive Director, NZVCA (New Zealand Venture Capital Association)

In the 2016 calendar year, a record total of $1B in capital was raised by funds for New Zealand private equity and venture capital investment.

New Zealand's investor base: global and growing

International investors, like those listed below, are impressed by the innovation and growth potential on offer in New Zealand and some are making multiple investments.
Escalating investor interest in New Zealand companies

The past five years have seen a marked increase in the number of offshore investments being made in New Zealand technology companies, as these examples show.

<table>
<thead>
<tr>
<th>Year</th>
<th>Xero</th>
<th>Rocket Lab</th>
<th>Vend</th>
<th>90 Seconds</th>
<th>8i</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>NZX</td>
<td>$15m</td>
<td>F</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td>SeedInvestor, Mark Rocket</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td>Seed and angel investments $1m</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>F</td>
<td></td>
<td></td>
<td>First round - led by Point Nine Capital (Europe based) $1m</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td>Further fundraising led by Point Nine Capital $2m</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td>Further fundraising attracting new NZ &amp; Australia investors led by Point Nine Capital (Europe based) $1m</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
<td></td>
<td>Received Callaghan Innovation growth grant</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
<td>Raised funding from new investor Punakaiki Fund &amp; from existing investors $12m</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td>New funding from Square Peg, Jasmine Investments and Movac $13m</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
<td>Series A Fundraising led by Sequoia Capital $11m</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td>Further fundraising attracting UK, SEA and JP investors $1.8m</td>
<td></td>
</tr>
</tbody>
</table>

**KEY:**
- **TIN Hot Emerging Company AWARD RECIPIENT**: (for being a high growth company, ranked between 101-200 on TIN’s revenue rankings for that year)
- **TIN Ten to Watch Company AWARD RECIPIENT**: (for being a high growth company, ranked between 1-100 on TIN’s revenue rankings for that year)
- **IPO**: Founded
- **Investment Round**: Amounts stated in NZD unless otherwise specified. **ASX**: Australian Stock Exchange.
### Acquisition activity

Global leaders have also acquired a number of New Zealand technology companies in the past five years, as these examples show.

<table>
<thead>
<tr>
<th>TARGETS</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>Purchase Price</td>
</tr>
<tr>
<td>Diligent Corporation</td>
<td>$941m</td>
</tr>
<tr>
<td>F&amp;P Appliances</td>
<td>$927m</td>
</tr>
<tr>
<td>Endace</td>
<td>$157m</td>
</tr>
<tr>
<td>Banklink</td>
<td>$136m</td>
</tr>
<tr>
<td>Compac Sorting Equipment</td>
<td>$70m</td>
</tr>
<tr>
<td>Phitek Systems</td>
<td>$60m</td>
</tr>
<tr>
<td>MCom</td>
<td>$52.5m*</td>
</tr>
</tbody>
</table>

*Estimated Purchase Price

---

All figures reported in New Zealand Dollars using the exchange rate at time of sale.
What foreign investors are saying...

A number of existing investors are now actively seeking more opportunities to invest in New Zealand founded technology firms.

“We’re proud to continue supporting the team at Vend. Vend is adding value for retailers around the world by providing an outstanding product at an attractive price, combined with world class support.”

— Barry Brott, Square Peg Capital. Investor in Vend.

“The thing we really like is that as a small and remote country, New Zealand companies almost from conception think globally, and are structured to achieve that objective.”


“We are excited to back the extraordinary team at 8i and help bring its superior holographic experience to mass audiences in China. At Baidu we envision a future where VR and AR can be applied in numerous industries that serve more than one billion monthly active users.”

— Daisy Cai, Baidu Ventures. Investor in 8i.

“The 90 Seconds team has done a terrific job in building the leading global marketplace for video production. In the large and rapidly growing video market, they offer creative talent and agencies a unique workflow platform to work together on global projects. This has enabled them to build a fast growing and rapidly scaling model.”


“With our team’s history of investing both in NZ and in virtual reality, we were thrilled to back 8i in solving one of the holy grails of VR: volumetric capture. Our firm’s approach is to invest in world-class teams solving hard problems, and I believe these companies will increasingly be located in hubs of local expertise. Given Wellington’s history in CGI and the technical talent there, 8i’s choice of a Wellington HQ made perfect sense and was a clear competitive advantage.”

— Scott Nolan, Founders Fund. Investor in 8i.

“CRG welcomed the opportunity to partner with AFT Pharmaceuticals due to its diverse product portfolio as well as its compelling research and development pipeline... We are actively seeking other opportunities to partner with similar companies.”


“We are excited to back the extraordinary team at 8i and help bring its superior holographic experience to mass audiences in China. At Baidu we envision a future where VR and AR can be applied in numerous industries that serve more than one billion monthly active users.”


“The thing we really like is that as a small and remote country, New Zealand companies almost from conception think globally, and are structured to achieve that objective.”

— Barry Brott, Square Peg Capital. Investor in Vend.

“We are excited to back the extraordinary team at 8i and help bring its superior holographic experience to mass audiences in China. At Baidu we envision a future where VR and AR can be applied in numerous industries that serve more than one billion monthly active users.”

— Daisy Cai, Baidu Ventures. Investor in 8i.

“The 90 Seconds team has done a terrific job in building the leading global marketplace for video production. In the large and rapidly growing video market, they offer creative talent and agencies a unique workflow platform to work together on global projects. This has enabled them to build a fast growing and rapidly scaling model.”


“With our team’s history of investing both in NZ and in virtual reality, we were thrilled to back 8i in solving one of the holy grails of VR: volumetric capture. Our firm’s approach is to invest in world-class teams solving hard problems, and I believe these companies will increasingly be located in hubs of local expertise. Given Wellington’s history in CGI and the technical talent there, 8i’s choice of a Wellington HQ made perfect sense and was a clear competitive advantage.”

— Scott Nolan, Founders Fund. Investor in 8i.

“CRG welcomed the opportunity to partner with AFT Pharmaceuticals due to its diverse product portfolio as well as its compelling research and development pipeline... We are actively seeking other opportunities to partner with similar companies.”

What New Zealand investors are saying...

Lance Wiggs, Puniakai Fund.
“We’ve seen a jump in VC community activity, but with just 3 or 4 active local funds we have a long way to go. We need help to address the hundreds of millions of dollars of high quality investment opportunity each year.”

Chintaka Ranatunga, Sparkbox.
“We believe New Zealand is now producing a critical mass of high growth technology companies which are emerging global leaders in a niche, but lack the capital to really scale sales and market expansion. We are actively looking to help with that.”

Matthew Slater, Ngai Tahu Holdings Group.
“[Waikato Milking Systems operates in]... a sector where NZ should have a natural skill-set. It’s a company where there had been considerable IP development and a differentiated product line, with an international market that we believed had potential to grow and replicate the strength that existed domestically.”

Phil McCaw, Movac.
“It’s been a pleasure to invest in and support companies like Aroa Biosurgery and PowerbyProxi over many years. These companies are great examples of the quality and depth of the intellectual property being developed in New Zealand, and the outstanding calibre of the management teams that we work with. We continue to actively explore and invest in established New Zealand businesses with great intellectual property and outstanding international growth potential.”

Randal Barrett, Pioneer Capital.
“We have invested in a wide range of New Zealand technology businesses (nine TIN100 companies) and co-invested with a number of international investors. The common theme we see and hear is that they are ‘born global’ – developing their products, plans and people for large global markets practically out of the gate.”

Brook Bone, Milford Asset Management.
“Vend is a young exciting cloud-based business with a strong management team and significant future growth potential. We are actively looking for investments in established businesses with the ability to deliver high growth rates.”
Growth Capabilities and Areas of Competitive Advantage

“We’ve answered the question of whether a company based in New Zealand can become a global business. This year we hit more than 1 million subscribers in more than 180 countries, doubling subscriber numbers in less than two years and quickly growing to become a global accounting platform leader. We’re also excited about building one of the biggest small business ecosystems in the world with more than 500+ app partners growing alongside us.”

Rod Drury, Xero CEO and Founder
Rising numbers of early stage, innovative companies support highest growth sectors

New Zealand's top 200 technology companies include many highly scalable and globally focused firms.

"New Zealand is becoming one of the world's best-kept secrets for entrepreneurial activity."

Gary Bolles, Entrepreneur, Co-founder of eParachute & Silicon Valley technology thought leader.

"We find we can attract great tech talent from across the globe to work with us in NZ, and our home-grown tech talent is world-leading, but we can keep our development costs very competitive."

Anne Fulton & Jo Mills, Co-founders, Fuel50.
A strong pipeline of promising startups will drive continued growth

Here are examples of companies contributing to four of New Zealand's highest growth. A burgeoning number of startups are following their lead.

**Revenue % Growth by Secondary Market Sector (2016)**
(for Top 200 NZ technology companies)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Large Companies</th>
<th>Mid-Tier Companies</th>
<th>Startup Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>48.0%</td>
<td>6.5%</td>
<td>IEFTPlus, Latipay, Sharesight, Insured HQ, PocketSmith, Debtor Daddy</td>
</tr>
<tr>
<td>Technology</td>
<td>9.1%</td>
<td>10.2%</td>
<td>BioLumic, RipeTime, Ripetime, Engender, Technn Group, Invert Robotics</td>
</tr>
<tr>
<td>Agritech</td>
<td>21.4%</td>
<td>25.3%</td>
<td>8i, kin2kin, Postr Media, QuiverVision, Geo AR Games, Pukeko Pictures, Rush Digital Interactive</td>
</tr>
<tr>
<td>Digital Media</td>
<td>18.6%</td>
<td>11.7%</td>
<td>Pictor, Quantec, Hi-Aspect, Breathe Easy, Caldera Health, Aroa Biosurgery, Performance Lab, Proactive Lifetime, Health NZ</td>
</tr>
<tr>
<td>Healthcare</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Investor Focus: High growth sectors that are making waves

Innovation, diversity and growth are demonstrated in New Zealand’s Healthcare and Agritech sectors.

**Healthcare**
Top 200 New Zealand Technology Companies:

<table>
<thead>
<tr>
<th>SECTOR GROWTH IN NEW ZEALAND PROMOTED BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Innovation friendly compliance environment supporting greater product speed to market.</td>
</tr>
<tr>
<td>+ Highly educated workforce.</td>
</tr>
</tbody>
</table>

5 YEAR REVENUE GROWTH: $582m  
5 YEAR CAGR: 8.8%

**Agritech**
Top 200 New Zealand Technology Companies:

<table>
<thead>
<tr>
<th>SECTOR GROWTH IN NEW ZEALAND PROMOTED BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Strong primary industry.</td>
</tr>
<tr>
<td>+ Large regional centres of innovation.</td>
</tr>
<tr>
<td>+ Access to foreign markets.</td>
</tr>
</tbody>
</table>

5 YEAR REVENUE GROWTH: $203m  
5 YEAR CAGR: 5.0%

**Healthcare**

Auckland | Home to established global companies like F&P Healthcare and Orion Health, this region also hosts a range of technical institutions producing top engineering and software talent. Auckland healthcare innovators include:

- **Aroa Biosurgery**: Developers of regenerative tissue substitute technology. This company is scaling rapidly and reinvesting 75% of its revenue into R&D.
- **Douglas Pharmaceuticals**: One of Oceania’s fastest growing generic pharmaceutical companies, employing 450 staff and supplying to over 35 countries.

South Island | This region boasts Otago University medical school and a resourceful talent pool. Innovations range from 3D scanning and informatics systems for amputees (ARANZ Medical), to power wheelchair controls (Dynamic Controls). Other examples include:

- **Pacific Edge (Dunedin)**: Ground-breaking bladder cancer detection technology. With a three year CAGR of 141%, this company is gaining excellent market traction, especially in the US.
- **MARS Bioimaging (Christchurch)**: Pioneering new spectral molecular imaging technology to improve upon traditional x-ray techniques.

**Agritech**

Prevalent throughout New Zealand, agritech firms are creating innovative solutions to improve the productivity and efficiencies of the country’s important farming, fishing, food, animal welfare, biosecurity, and forestry industries.

Hamilton | The fertile Waikato region is home to the annual National Agricultural Fieldays show, claimed to be the biggest show of its kind in the southern hemisphere. The region has produced globally successful firms such as:

- **Gallagher Group**: disruptive solutions for animal control, security and fuel systems.
- **Simcro**: animal health pharmaceutical delivery systems.
- **NDA Group**: high-tech engineering, manufacturing and servicing of industrial storage and process vessels for the dairy, food processing, chemical, gas and wine industries.

Central Region | Packing, picking and processing technologies for the dairy and horticultural industries are a key regional strength. Company examples include:

- **Haden and Custance (Hastings)**: automated handling systems to handle and prepare bulk cheese and butter.
- **BioLumic (Palmerston North)**: ultra violet (UV) light technology to improve crop yields for large crop and horticultural growers.
**Investor Focus: Digital Media**

New Zealand has established an international reputation for excellence in creative screen-related technologies.

### Digital Media

**Top 200 New Zealand Technology Companies:**

<table>
<thead>
<tr>
<th>5 YEAR REVENUE GROWTH</th>
<th>$198m</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 YEAR CAGR</td>
<td>15.9%</td>
</tr>
</tbody>
</table>

### SECTOR GROWTH IN NEW ZEALAND PROMOTED BY:

- Creative, highly educated workforce.
- Large regional centres of innovation.
- Globally recognised for innovation in digital media and entertainment technologies.

Many world-leading innovators in this sector choose New Zealand as their creative home base, with companies ranging from Magic Memories (digital imaging for the tourism sector) in the South Island to award-winning game developers such as Ninja Kiwi in the North.

### New Zealand’s Digital Media Hotspots:

**Auckland** | Offers a diverse mix of creative technology companies including cloud-based video producer 90 Seconds, and ‘Internet of Things’ advertising innovator Plexure. Others include:

- **Soul Machines**: Oscar winner Mark Sagar’s early stage company is at the forefront of humanizing AI technology. To date it has raised $7.5m in seed funding from foreign investors.
- **Vista Group**: Provider of enterprise solutions to the global film industry, this company operates in over 80 countries and has a 5-year CAGR of 22.1%.

**Wellington** | An expansive support network of creative incubators, associations and investors supports this vibrant cultural hub. Some of its world-leading innovators include:

- **Weta Digital**: Responsible for developing Oscar winning special effects for CGI-forward movies like Lord of the Rings, Avatar and Ghost in the Shell.
- **8i**: This startup has developed software to 3D render digital video to create quick and efficient photorealistic human holograms for AR/VR and mixed reality headsets. It has raised over $40m across 28 investors, exemplifying the growing international interest in New Zealand’s Digital Media scene.

### New Zealand’s Game Development industry grew 13% (YE March 2016), earning $88.9m in revenue, with 92% of that revenue coming from exports.*

* NZ Game Developers Association, [www.nzgda.com](http://www.nzgda.com)
Investor Focus: FinTech disruptors build on international successes

Based predominantly in New Zealand’s two largest cities, FinTech companies are redefining the way we borrow, lend, save, spend, store and transfer money.

---

**Financial Services Technology**

<table>
<thead>
<tr>
<th>Top 200 New Zealand Technology Companies:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5 YEAR REVENUE GROWTH</strong></td>
</tr>
<tr>
<td><strong>5 YEAR CAGR</strong></td>
</tr>
</tbody>
</table>

**SECTOR GROWTH IN NEW ZEALAND PROMOTED BY:**

- A business friendly, agile regulatory system that is favourable to innovators and investors (such as the recent reforms allowing crowdfunding and peer-to-peer lending).
- A long history in FinTech (Boards and management teams with experience bringing companies to maturity).
- Highly competitive domestic environment – driving innovation and process automation.

---

**New Zealand’s FinTech Hotspots:**

**Auckland |** Home to a number of ICT companies specialising in global payment technologies, including: Transaction Services Group, Invenco, Payment Express, Wirecard, Talkingtech and Pushpay. Notable high growth companies include:

- **Latipay:** After just one year of phenomenal growth, Latipay recently attracted a $4.27m investment from Jubilee Capital (Singapore). The company provides global businesses with payments across five main Chinese e-wallets and nineteen main Chinese banks.
- **Vend:** A cloud-based point of sale solution for retail businesses, in over 20,000 stores globally. The company has attracted investments of $63m since 2010.

**Wellington |** Base for a diverse range of FinTech startups focused on portfolio and account analytics, insurance and government technology. Other more established examples include:

- **Xero:** Targeting revenues exceeding $1B in the near future, this cloud based accounting software provider has enjoyed meteoric global growth and challenged regional incumbents in both Australia (MYOB) and the US (Intuit).
- **DataTorque:** With solutions that allow emerging nations to reduce costs and implement tax law transparently, DataTorque is now trusted by governments internationally to collect billions of dollars in tax revenue.

---

In Asia-Pacific, FinTech investments in 2016 grew to **$11.2B**, making it the biggest region for growth, surpassing North America (**$9.2B**) and Europe (**$2.4B**)\(^1\).

\(^1\) Accenture 2016. Note: A list of FinTech startup companies is available in the 2016 TIN100 Report.
"New Zealand's regulatory environment, IP protection regime and quality research universities are a big plus for tech investors."

Deepak Natarajan, Former Director - Intel Capital, Singapore.
An innovative heritage

New Zealand’s technology sector has a long tradition of combining intellectual smarts with deep practical skills. Most of the world’s population has benefited from technology pioneered in New Zealand. There are many examples, here are just a few:

**NEW ZEALAND: A beta “Test Bed” for new technologies**
- First country in the world to trial **EFTPOS**
- Facebook and LinkedIn have both tested new features in New Zealand before launching globally
- **Google Loon**: test site for balloon-powered internet delivery to remote regions
- **Rocket Lab**: will be testing its 17m tall Electron Rocket from its Mahia Peninsula launch site during 2017.
- **Autonomous vehicle testing**: Volvo recently tested its self-driving car in Tauranga, and HMI Technologies ran its driverless shuttle trial at Christchurch Airport.

---

1873

**JOSEPH NATHAN** forms “Glaxo” - later Glaxo Smith Kline (GSK)

1903

**RICHARD PEARSE**
- First uncontrolled powered flight
- Pacific Aerospace
- Martin Jet Pack

1936

**BILL GALLAGHER**
- Invents the electric fence
- Gallagher Group
- ISL Animal Health
- Simcro
- Tru-Test
- Waikato Milking Systems

1944-1976

**BILL PICKERING**
- Heads US Jet Propulsion Lab (US outer space exploration)
- Rocket Lab
- Rockets to launch small satellites

1954

**BILL HAMILTON**
- Develops his own version of a water jet propelled boat
- Hamilton Jet
- Waterjet propulsion systems

1966

**COLIN MURDOCH**
- Invents the disposable syringe
- Fisher & Paykel Healthcare
- No.1 globally in respiratory humidification

1966

**BRUCE MCLAREN**
- Forms racing car Team McLaren
- McLaren Automotive (UK)

1993

**RICHARD PEARSE**
- First uncontrolled powered flight

2017

**SIR PETER JACKSON, SIR RICHARD TAYLOR & JAMIE SELKIRK**
- Form Weta Digital - visual effects for blockbuster movies like The Hobbit & Avatar

---

**NOW**

**JOSEPH NATHAN** forms “Glaxo” - later Glaxo Smith Kline (GSK)

**NOW**

**DOUGLAS PHARMACEUTICALS**
- AFT Pharmaceuticals

**NOW**

**RICHARD PEARSE**
- First uncontrolled powered flight
- Pacific Aerospace
- Martin Jet Pack

**NOW**

**BILL GALLAGHER**
- Invents the electric fence
- Gallagher Group
- ISL Animal Health
- Simcro
- Tru-Test
- Waikato Milking Systems

**NOW**

**BILL PICKERING**
- Heads US Jet Propulsion Lab (US outer space exploration)
- Rocket Lab
- Rockets to launch small satellites

**NOW**

**BILL HAMILTON**
- Develops his own version of a water jet propelled boat
- Hamilton Jet
- Waterjet propulsion systems

**NOW**

**COLIN MURDOCH**
- Invents the disposable syringe
- Fisher & Paykel Healthcare
- No.1 globally in respiratory humidification

**NOW**

**BRUCE MCLAREN**
- Forms racing car Team McLaren
- McLaren Automotive (UK)

**NOW**

**BILL GALLAGHER**
- Invents the electric fence
- Gallagher Group
- ISL Animal Health
- Simcro
- Tru-Test
- Waikato Milking Systems

**NOW**

**BILL HAMILTON**
- Develops his own version of a water jet propelled boat
- Hamilton Jet
- Waterjet propulsion systems

**NOW**

**SIR PETER JACKSON, SIR RICHARD TAYLOR & JAMIE SELKIRK**
- Form Weta Digital - visual effects for blockbuster movies like The Hobbit & Avatar

---

*EFTPOS* refers to *Electronic Funds Transfer at Point Of Sale*.
New Zealand: Open for business
A well-established ecosystem supports New Zealand's technology industry growth.

Regional Development Agencies
14 regional Economic Development Agencies provide local support to technology companies.

Mature & Emerging Financial Markets
• A long-established stock market, the NZX.
• The NXT public market for small and emerging businesses allows raising of capital with lower compliance costs.
• Five active equity crowdfunding platforms to fund early stage companies.

World-leading Tertiary Institutions
• New Zealand universities are ranked in the world’s top 50 in 21 subjects and top 100 across 68 subjects.*
• Numerous entrepreneurial development programmes support student ventures.

Government Policy
Initiatives within the Government’s Digital Economy Programme include:
• Establishment of ICT graduate schools.
• Funding to increase the number of engineering graduates.
• A Global Impact Visa system encouraging entrepreneurs and investors to create and support innovation-based ventures from New Zealand.
• Supporting the establishment of a nation-wide Techweek event.

*Source: Universities New Zealand, March 2016

Simple, Predictable and Fair Tax Environment
• No general capital gains tax.
• US-based Tax Foundation (2016) ranks New Zealand’s overall tax system as second in the developed world for its competitiveness.

Strong Angel Investor Network
• A well-developed network exists of early-stage investment vehicles for seed capital.

Collaborative Working Spaces
• A growing number of collaborative workspaces and innovation hubs in all regions.

World-leading Internet Speeds
• Government has committed to spend over $2B to provide Ultra-Fast Broadband to 80% of New Zealanders by 2022.
• 4 existing international fibre cables with another under construction.

Government Support Agencies
• Callaghan Innovation provides companies with R&D support in the form of grants and expert and technical advice.
• 250 New Zealand Trade & Enterprise (NZTE) overseas advisors help New Zealand companies expand their offshore operations.
• NZ Venture Investment Fund (NZVIF) supports the early stage investment market with $300m in funds under management.
Supportive regulatory framework

The New Zealand government is firmly committed to facilitating business growth and fostering a safe financial market.

Our Business Record

1. Most transparent country in the world¹
2. Ease of starting a business²
3. Protecting minority investors²
4. Ease of doing business²
5. Getting credit²
6. Forbes Best Countries for Business³
7. Heritage Foundation Index of Economic Freedom⁴


Sir Paul Callaghan, GNZM FRS FRSNZ

“New Zealand has the fundamentals in place... We are ranked among the highest countries in the world for property rights, market freedom, free trade, lack of corruption and legal and political rights. And our taxation rate – personal and business – is one of the lowest in the OECD.”

Vic Crone, CEO, Callaghan Innovation

“Every dollar invested in the tech sector creates $3 worth of growth in the New Zealand economy. Doubling or tripling the contribution of dairy or tourism by simply continuing to expand these sectors is not practical, given their respective demands on land, water and infrastructure. By contrast, all the tech sector needs to expand is more brains, more ideas and more capital to bring them to market.”

CALLAGHAN INNOVATION is a government agency that helps businesses succeed through technology and R&D. It provides access to experts, technology and product development, innovation skills, business collaborations and R&D grants.
Centrally positioned and globally connected
New Zealand has Free Trade Agreements – in place or proposed – with most major global economies, a global network of government support offices, and Ultra-Fast Broadband fibre connections which extend throughout the country and internationally.

16
Current Free Trade Agreements, largely in the Asia-Pacific region (and a further 5 under negotiation or awaiting ratification).

60.7 milliseconds
Time taken to send data between New Zealand and the United States.

41
International New Zealand Trade & Enterprise (NZTE) offices – with over 250 offshore advisors helping New Zealand businesses expand overseas, attract investment and grow exports.

FREE TRADE AGREEMENTS (FTAs)
- Countries with current FTAs
- Countries where FTAs are proposed, under negotiation or awaiting ratification

FIBRE CABLES
EXISTING
- Southern Cross Cable
- TASMAN 2 Cable
- Aqualink Cable
- TASMAN Global Access (TGA) Cable
UNDER CONSTRUCTION
- HAWAIKI Cable

KEY:
- NZTE Office Locations
- Kiwi Connection, a new technology centre located in Ho Chi Minh City, is making it easier for New Zealand technology companies to invest and conduct business in Vietnam.
- Kiwi Landing Pad, located in San Francisco, helps high growth NZ technology companies establish and grow their business in the US.
Key support organisations
Some of New Zealand's many technology sector supporters:

<table>
<thead>
<tr>
<th>Tertiary / Research and Development Institutions</th>
<th>Government and Industry Networks</th>
<th>NZ Angel and Seed Investors / Venture Capital</th>
<th>Collaborative Spaces, Tech Transfer Offices and Incubators</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZ Wide</td>
<td></td>
<td>Angel &amp; Seed Investors:</td>
<td>sharedspace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>powerHouse</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>curekids VENTURES</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pacific Channel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auckland &amp; Northland</td>
<td></td>
<td>Venture Capital:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamilton &amp; Waikato</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central North Is.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wellington &amp; Lower North Is.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christchurch/ Other South Is.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 32 lists contact details for the key NZ-wide organisations.
“What I like about the ideas I've seen coming out of New Zealand is that they are fundamentally based on science and technology innovations. The innovation comes first and, oh by the way... you can use it to build a good business. I think that is the right priority... and that's exciting!”

Vinod Khosla, Founder of Khosla Ventures, Co-founder of Sun Microsystems, former general partner at Kleiner Perkins Caufield & Byers. Investor in Rocket Lab, BioDiscovery, Lanzatech
Contact Information

More information about New Zealand's top 200 and startup technology firms can be found in the annual TIN100 Report (www.tin100.com).

CENTRAL GOVERNMENT
NZ Ministry of Business, Innovation and Employment: www.mbie.govt.nz
New Zealand Immigration: www.newzealandimmigration.govt.nz
New Zealand Trade and Enterprise (NZTE): www.nzte.govt.nz
Callaghan Innovation: www.callaghaninovation.com
NZ Venture Investment Fund (NZVF): www.nzvf.co.nz
KiwiLandingPad: www.kiwilandingpad.com

INDUSTRY ORGANISATIONS / NETWORKS
Technology Investment Network (TIN): www.tin100.com
New Zealand Technology Industry Association (NZTech): www.nztech.org.nz
NZ Institute of IT Professionals: www.itp.nz
The New Zealand Game Developers Association: www.nzgda.com
FinTechNZ (NZ Financial Innovation and Technology Association): www.fintechnz.org.nz
The MacDiarmid Institute: www.macdiarmid.ac.nz

REGIONAL ECONOMIC DEVELOPMENT AGENCIES
EDANZ: www.edanz.org.nz
NZ ANGEL & SEED INVESTORS / VENTURE CAPITAL
New Zealand Private Equity and Venture Capital Association (NZVCA): www.nzvca.co.nz
Angel Association New Zealand: www.angelassociation.co.nz
Cure Kids Ventures: www.curekidsventures.co.nz
Global From Day One: www.globalfromdayone.com
GRC: www.grcpartners.com
KIW1: www.crunchbase.com/organization/kwi1
Milford Asset Management: www.milfordassetmanagement.com
Movac: www.movac.co.nz
Pacific Channel: www.pacificchannel.com
Pioneer Capital: www.pioneercapital.co.nz
Powerhouse: www.powerhouse-ventures.co.nz
Punakaiki Fund: www.punakaiki.co.nz
Sparkbox: www.sparkbox.vc
Tuhua Fund: www.crunchbase.com/organization/tuhua-fund

Auckland & Northland
Arc Angels: www.arcangels.co.nz
Astrolab: www.astrolab.co.nz
First Cut Ventures: www.firstcut.vc
Flying Kiwi Angels: www.fka.nz
Foundry Innovations: www.foundryhq.com
Ice Angels: www.iceangels.co.nz
Waterman Capital: www.waterman.co.nz

Hamilton and Central North Island
Enterprise Angels: www.enterprisegods.co.nz
Launch Taranaki: www.launchtaranaki.co.nz
Manawatu Angel Investment Group (MIG): www.thembc.co.nz/Investment/mig-angels
WNT Ventures: www.wntventures.co.nz

Wellington & Lower North Island
Angel HQ: www.angelhq.co.nz
Christchurch/Other South Island
Canterbury Angels: www.canterbury.angels.nz
Ice Angels: www.iceangels.co.nz
Otago Angels: www.otagoangels.co.nz

COLLABORATIVE SPACES, TECH TRANSFER OFFICES AND INCUBATORS
Shared Space: www.sharespace.co.nz

Auckland & Northland
AUT Business Innovation Centre: www.aut.ac.nz/research/about-the-research-and-innovation-office
AR/VR Garage: www.arvrgarage.co.nz
Astrolab: www.astrolab.co.nz
Biz Dojo: www.auckland.biz.dojo.com
Grid Auckland: www.gridakl.com
eCentre Massey: www.ecentre.org.nz
Flux Accelerator: www.fluxaccelerator.co.nz
Icehouse: www.theicehouse.co.nz
Industry Connect: www.industryconnect.co.nz
The Distiller: www.thedistiller.org
UniServices: www.uniservices.co.nz
Velocity: www.velocity.auckland.ac.nz

Hamilton
Soda Inc: www.sodainc.co.nz
Waikato Link: www.waikatolink.co.nz

Central North Island
Basestation: www.basestation.nz
Building Clever Companies: www.thebcc.co.nz
Icehouse: www.theicehouse.co.nz
WNT Ventures: www.wntventures.co.nz

Wellington & Lower North Island
Biz Dojo: www.wellington.biz.dojo.com
Creative HQ: www.creativehq.co.nz
Empiral Space: www.empiralspace.co.nz
Lightning Lab: www.lightninglab.com
Mahuki: www.mahuki.org
Project R: www.twitter.com/projectr
R9 Accelerator: www.r9accelerator.co.nz

TERTIARY/RESEARCH AND DEVELOPMENT INSTITUTIONS
Open Polytechnic: www.openpolytechnic.ac.nz
KiwiNet: www.kiwinet.org.nz
Plant & Food Research: www.plantandfoodfood.co.nz
Tech Futures Lab: www.techatfutureslab.com
North Tec: www.northtec.ac.nz
The University of Auckland: www.auckland.ac.nz
 Auckland University of Technology: www.aut.ac.nz
 Auckland ICT Graduate School: www.ictgraduateschool.ac.nz
Unitec Institute of Technology: www.unitec.ac.nz
Whitireia: www.whitireia.ac.nz
Manukau Institute of Technology: www.manukau.ac.nz
Massey University: www.massey.ac.nz
AgResearch: www.agresearch.cow
University of Waikato: www.waikato.ac.nz
Wintec Institute of Technology: www.wintec.ac.nz
Eastern Institute of Technology: www.eit.ac.nz
Toi Ohomai Institute of Technology: www.toiwhonai.ac.nz
Victoria University of Wellington: www.victoria.ac.nz
Wellington Institute of Technology: www.wettel.ac.nz
Wellington ICT Graduate School: www.wellingtonict.ac.nz
Lincoln University: www.lincoln.ac.nz
University of Canterbury: www.canterbury.ac.nz
University of Otago: www.otago.ac.nz
Southern Institute of Technology: www.sit.ac.nz
Otago Polytechnic: www.op.ac.nz
Nelson Marlborough Institute of Technology: www.nmit.ac.nz
Ara Institute of Canterbury: www.arac.nz
Scion: www.scionresearch.com
Signal ICT Grad School: www.signal.ac.nz
About us

The Technology Investment Network (TIN) is a private company with a simple mission: to help facilitate the growth of the technology sector in New Zealand. It delivers on this objective through the following key endeavours.

Research and Analysis

TIN is the leading independent source of information on the technology sector; the organisation has been collecting and analysing company data for over a decade. The annual TIN100 Report (released in October each year) is a comprehensive listing of the year’s top 200 high technology companies (ranked by revenue), along with information about innovative technology startup firms. It also includes detailed analysis of sector performance for the year.

In addition, the company undertakes research and analysis on request for industry participants, professional services firms, investors and Government clients.

Networking and Information-Sharing

TIN organises a number of industry events each year, based around business-critical topics that are of high interest to sector participants.

The organisation also produces free bi-weekly electronic updates on New Zealand technology sector news. For more information about TIN or to purchase our latest report, visit our website: www.tin100.com