Delivering Next Generation Infrastructure

How Global Investment and Local Innovation Are Shaping Aotearoa's Digital Future – The Connexa Story

June 2025

Infrastructure New Zealand

CONNEXA

infrastructure.org.nz | connexa.co.nz

Key Report Findings

Connexa, the country's first and largest mobile tower infrastructure company (TowerCo), shares seven key insights into how next generation infrastructure can be successfully delivered in New Zealand.

1. Strategic international investment is vital to bridging New Zealand's infrastructure deficit. The gap between what we have and what we need is too large for public sector or domestic private investment to close alone. Finding the right international investment partners is critical to delivering and managing the infrastructure we need.

2. A committed project pipeline promotes long-term thinking and attracts investment. It enables better workforce planning, unlocks supply chain efficiency, and delivers sustained productivity gains.

3. Standardised, modular design accelerates delivery. Repeatable designs reduce cost, avoid delays caused by bespoke and site-specific solutions, and improve long-term efficiency and maintainability.

4. Cross-functional teams deliver at scale, and speed. Bringing together teams from different disciplines to deliver concurrently (rather than sequentially) – reduces risk, strengthens culture and promotes innovation.

5. Look beyond your sector for workplace planning. This can uncover specialist skills, new capabilities, and brings in valuable diversity of thought and experience.

6. Think like a start-up. The infrastructure sector needs new models, not traditional ones. Forge new approaches and ways of working to unlock smarter, faster delivery.

7. The future of infrastructure is digital and data-led. Technology must be at the heart of how we deliver and manage infrastructure – it is essential to lift productivity in structural ways to embed continuous improvement.

Overview

The state of infrastructure is frequently in the spotlight in Aotearoa New Zealand, with growing attention on the country's infrastructure deficit estimated to be at least $200 billion. Increased investment from a range of sources, and concerted effort, will be needed if the country is to provide the level of infrastructure required to support a growing population and economy.

While it is important to identify gaps, it is equally important to understand where things are working well. Connexa, a mobile tower infrastructure company, has emerged as a leader in delivering next generation infrastructure. This report draws on Connexa's experience to provide insights that New Zealand can apply as part of its broader infrastructure push.

Telecommunications and the TowerCo Sector

Telecommunications services are a critical part of any nation's infrastructure and within this sector, digital connectivity is increasingly essential.

Wireless digital connectivity depends on an extensive network of passive physical infrastructure–most notably, the towers that host mobile network operators' (MNOs) technology.

These mobile towers were historically owned by MNOs themselves. Over time, carriers–beginning in the United States–began selling off their tower assets to free up capital for investment in other parts of their networks. This shift gave rise to the independent TowerCo model, which has since been widely adopted in markets around the world. According to TowerXchange, there are now more than 350 TowerCos operating globally.

In New Zealand and Australia, the adoption of the TowerCo model has been recent and rapid. In January 2021, MNOs owned 89% of the mobile towers across the two countries. By 2024 that figure had fallen to just 23%. Today there are five major TowerCos operating in Australasia, reflecting a significant transformation in how digital infrastructure is developed and managed. Connexa is helping define what best practice looks like.

New Zealand Is a World Leader in Mobile Connectivity – But Staying There Requires Sustained Investment

New Zealand consistently ranks among the top OECD countries[1] for mobile connectivity, enabling broad participation in a rapidly evolving digital economy. Mobile services are now deeply integrated into daily life and core to how businesses operate and innovate.

The pace of growth is staggering. According to Ericsson, global mobile broadband subscriptions hit 7.7 billion in 2024[2] – up from just two billion a decade earlier. Commerce Commission data shows that in New Zealand, average monthly mobile data use grew from 0.21 GB in 2012/13 to 6.23 GB in 2022/23[3].

This is part of a broader global trend: digital infrastructure remains a sector with strong growth tailwinds, driven by mobile-first behaviors, flexible work patterns, and the increasing number of connected devices and applications.

Even with strong coverage today, the mobile infrastructure that supports this growth must keep pace. Significant investment is required to ensure New Zealand continues to benefit from world-leading digital connectivity. Mobile infrastructure is as critical to our future as roads, fibre, and energy networks.

[1] TCF Industry Report 2023

[2] Ericsson Mobility Report 2024

[3] Commerce Commission Telecommunications Monitoring Report 2023

About Connexa and New Zealand's Passive Tower Infrastructure

Globally backed, locally delivered, nationally beneficial

Connexa is effectively an amalgamation of two Telco infrastructure carve-outs. It was established in October 2022 when Spark divested its mobile tower infrastructure and then acquired 2degrees' mobile tower infrastructure less than 12 months later.

Today Connexa is co-owned by two Canadian investment funds, Ontario Teachers' Pension Plan and La Caisse. It operates a portfolio of more than 2,500 tower sites from Cape Reinga to Bluff, around two-thirds of the country's mobile towers, making it a significant contributor to New Zealand's infrastructure ecosystem. Connexa's primary competitor - and counterpart in delivering mobile tower infrastructure in New Zealand - is Fortysouth, formed when One New Zealand sold its passive tower assets.

'Passive tower infrastructure' refers to the physical elements of mobile networks – concrete and steel towers, and everything associated with developing and managing this network of assets. Connexa's customers are MNOs such as Spark and 2degrees, as well as emergency response providers. These customers install and operate technology hosted on Connexa's towers. Connexa is responsible for the towers themselves, the supporting infrastructure, and management of the sites on which they are located. This includes establishing and maintaining long-term leases with hundreds of landlords across New Zealand to ensure secure and sustainable access to land for building sites.

Connexa began operations with just five employees. Today it has a team of 85 and continues to grow rapidly. The company draws on local and international talent, with more than 20 nationalities represented with backgrounds across a wide range of industries.

Milestones

October 2022

Ontario Teachers' Pension Plan acquires 1,267 towers from Spark, and Connexa is formed, becoming New Zealand's first specialist TowerCo.

December 2024

Connexa acquires ATC New Zealand's land portfolio of 112 sites.

June 2023

Connexa acquires 2degrees' mobile tower network of 1,124 sites and becomes New Zealand's largest TowerCo.

February 2025

Spark sells its remaining holding in Connexa to global investment group La Caisse.

Active Infrastructure

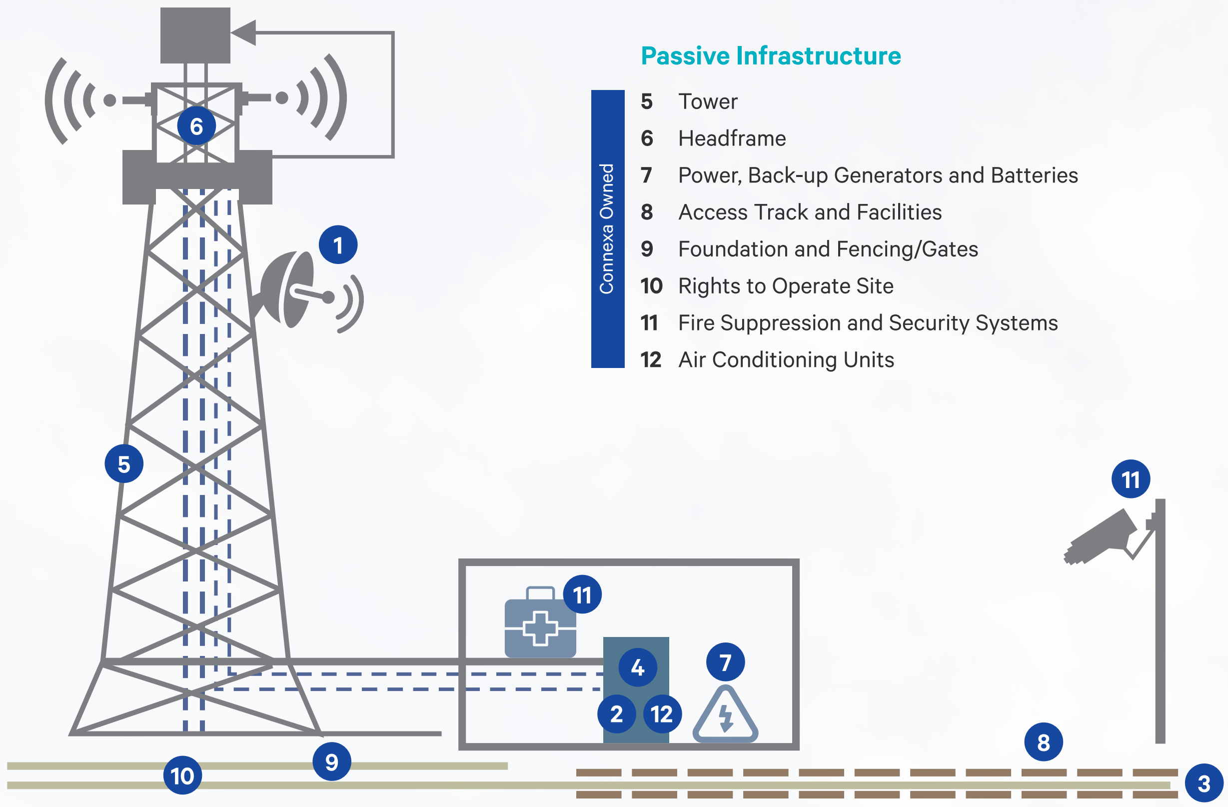
MNO Owned | MNO Owned

1 Active Radio-Transmission Equipment
2 Backhaul Router
3 Backhaul Fibre
4 Cabinets

Passive Infrastructure

Connexa Owned

5 Tower
6 Headframe
7 Power, Back-up Generators and Batteries
8 Access Track and Facilities
9 Foundation and Fencing/Gates
10 Rights to Operate Site
11 Fire Suppression and Security Systems
12 Air Conditioning Units



Foreign Direct Investment Partners Play a Key Role

A key factor in Connexa's ability to grow quickly and invest for the long term has been the strength of its shareholder relationships. They bring a combination of global experience, infrastructure expertise, and a strong capital base – enabling long-term investment to achieve value growth through support for critical public services.

Ontario Teachers' Pension Plan and La Caisse both have established track records for delivering sustainable returns for the people they serve. As at December 31, 2024, their combined assets total approximately $900 NZD billion, more than twelve times the size of the NZ Super Fund.

Most importantly, both shareholders have well developed global infrastructure strategies and decades of experience. Established in 1990, Ontario Teachers' Pension Plan invests in high-quality core infrastructure assets that provide vital services to society with a focus on long-term, sustainable investments. Its portfolio includes airports, container terminals, power generation, electricity and gas transmission and distribution systems, water and wastewater systems, desalination facilities and renewable power generation assets.

Established in 1965, La Caisse is the world's largest institutional investor in infrastructure, according to Infrastructure Investor's GI 50 ranking. It has infrastructure investments in 19 countries, including in Vertical Bridge, the largest private owner and operator of communications infrastructure in the United States. With more than 25 years' experience of direct investment in infrastructure, its portfolio includes ports, airports, highways, wind farms, public transit systems, and energy transportation and distribution networks. Connexa is La Caisse's inaugural investment in New Zealand.

Having investor partners who understand the value of long-term infrastructure investment, with direct knowledge and expertise across a range of sectors is helping Connexa utilise its own capital more effectively and strengthen the efficiency and productivity of its infrastructure delivery and asset management systems.

Ontario Teachers' Pension Plan is a global investor with investments in more than 50 countries, including: public and private equities, fixed income, credit, commodities, natural resources, infrastructure, real estate and venture growth. Returns from investments deliver retirement income for 340,000 working members and pensioners. As at December 31 2024, its net assets total $266.3 CAD billion.

La Caisse is a global investment group that manages funds for public pension and insurance plans. The company works alongside its partners to build enterprises that drive performance and progress. Its portfolio includes the major financial markets, private equity, infrastructure, real estate and private debt. As at December 31 2024, its net assets total $473.3 CAD billion.

Strategic Investment Partners Are Looking for Opportunity

As the New Zealand Infrastructure Investment Summit 2025 recently demonstrated, the country's stable political and economic conditions are attractive to global investors. New Zealand's commitment to addressing its infrastructure deficit represents a significant opportunity for foreign direct investment.

"Foreign investors are actively looking to New Zealand as a stable, sound economy for strategic investments. This presents us with a real chance to attract long-term capital, accelerate the delivery of critical nation-building infrastructure and lift productivity.

Connexa's experience demonstrates the value of global investment partnerships – not only in providing capital, but also in bringing the expertise required to develop and manage long-term infrastructure at scale."

Nick Leggett - Infrastructure New Zealand CEO

Connexa's Forward -Build Programme

Connexa is undertaking New Zealand's largest forward-build programme, with more than 800 new mobile tower sites planned over the next eight years. This commitment was part of its acquisition of Spark and 2degrees' tower networks, ensuring the infrastructure capability required to meet customers' growing connectivity needs.

A forward pipeline of this scale positioned Connexa to attract experienced international investors seeking long-term partnerships. It enables more efficient infrastructure planning and delivery, while unlocking supply chain optimisation and the use of modular, standardised deployment methods. Crucially, it also supports long-term workforce planning, talent development, and sustained investment in innovation.

With visibility and scale, Connexa can take a smarter, more integrated approach and build faster and better than traditional, one-off deployment models allow. The innovations already realised are significant, and the potential for further improvement is only just beginning.

Co-location and Environmental Stewardship

Because historically mobile networks were built to achieve competitive coverage, mobile towers were built to accommodate only one provider's equipment. Connexa is changing that approach, and prioritising co-location: where multiple providers share the same passive infrastructure. Co-location is a key strategy for the company and is changing the digital infrastructure landscape in New Zealand.

Co-location means fewer towers, without compromising coverage. Fewer towers means reduced visual clutter in communities, and a lower environmental impact (by saving on emissions-heavy materials like concrete and steel).

It is an example of Connexa's commitment to becoming an ESG (environmental, social and governance) leader in its sector. Its practices align to the GHG protocol and in May 2025 the company was awarded a Toitū Carbon Reduce certification. Its ESG strategy includes measuring and reducing emissions, maintaining diversity in its workforce, helping to address digital inequity, and ensuring strong, ethical governance across its business.

The Connexa Approach

Traditionally mobile towers were designed and built one by one, following a linear process as networks expanded. Designs were often bespoke and tailored to meet the immediate needs of a single MNO – fit for initial purpose, but not necessarily fit for future purpose. Connexa is re-engineering this model, replacing sequential workflows with an integrated, end-to-end system focused on efficiency, speed, and scalability.

The results are compelling. Connexa has reduced its end-to-end cycle times by 35% from its inherited baseline.

The key innovations in Connexa's approach are its cross-functional, multi-disciplinary tower delivery teams (TDTs), standardised and modular design and digital-first philosophy.

Connexa's TDTs allow multiple stages of work – from design to build – to run in parallel, rather than one after the other. This new streamlined delivery model reduces touch times and cycle times, and increases productivity. It's also scalable, so to build more towers, Connexa can simply add more TDTs.

Standardised tower design overcomes the challenge of waiting to finalise design or sign a lease before ordering a tower - because towers need no longer be bespoke or site specific. This modular approach not only speeds up delivery but also allows towers to be built in geographic clusters for greater efficiency. While planning regulations still mean local and regional variances, modular design gives Connexa the flexibility to adapt to these differences, improving supply chain coordination and lead times.

Connexa has also invested in technology to support its agile approach. Its digital workflow tool serves as a single source of real-time information for every tower and project, enabling seamless collaboration with customers and suppliers. The platform enhances transparency and accountability, with visual dashboards and improved reporting that support faster decision-making and information-sharing.

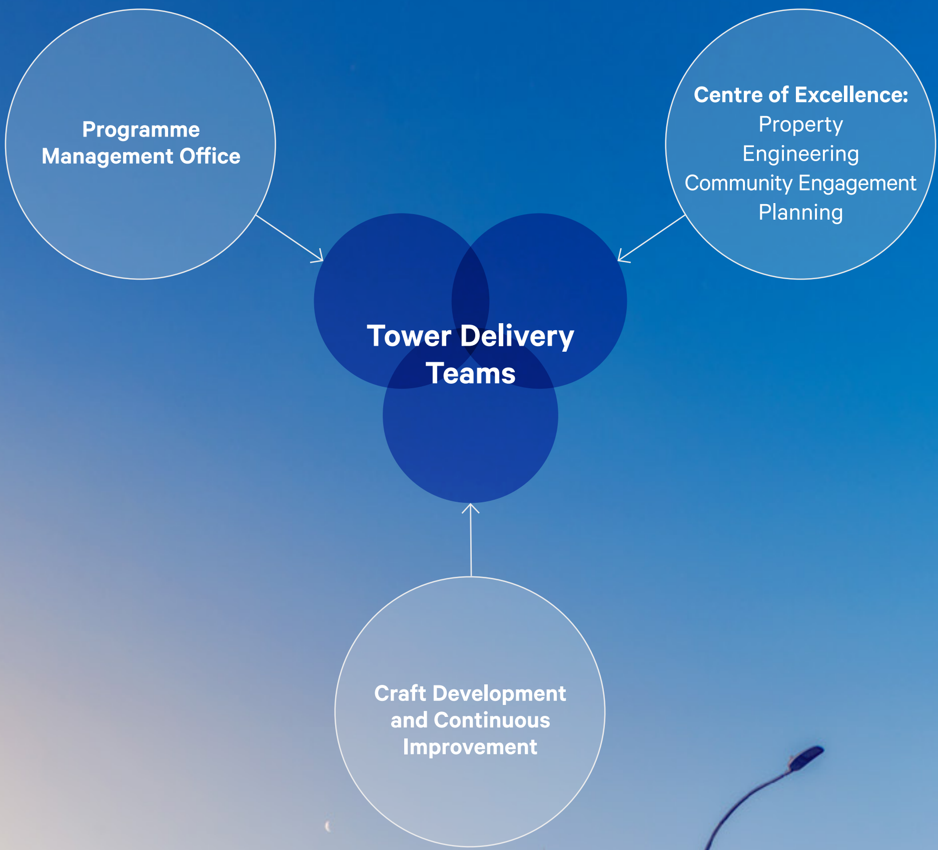
Similarly, Connexa's proprietary geospatial tool captures data and visualisation layers for each site and its surroundings - such as underground services locations, flood plain hazards and boundary lines. Where teams previously had to visit a physical site multiple times to get this information, the tool allows them to do much of their analysis and planning virtually.

By embedding digital tools and new ways of working from day one, Connexa has created a delivery model tailored to its ambitious goals - and built a team with the skills and more importantly, the mindset to achieve them.

Connexa's digital tools and data-driven processes are designed with the customer in mind. They reduce network design times, speed up deployment, and improve access to infrastructure, making it faster and easier for customers to connect where and when it matters.

Each Tower is an Infrastructure Project

Building a new tower is each time an important infrastructural project. By developing a systemised approach to delivery through its TDTs, Connexa can carefully and diligently scale up by rolling out many of these 'mini infrastructure projects' at the same time. Connexa's TDTs have the skills, tools and capacity to deal with site-specific and community-specific issues without re-inventing processes or designs for each tower. This allows Connexa to move beyond the bespoke development model used previously and build out its network more quickly and at higher quality. Nuances of each project can be handled within a model that understands the many standardised, repeatable elements common to each new site and each tower. Individual attention can be given to genuine site-specific exceptions or challenges rather than designing and engaging from scratch every time. In this way, rolling out hundreds or even thousands of sites is simply a scaling up the delivery of a single piece of infrastructure.



Workforce and Culture

A key element of Connexa's success is a diversified workforce. With specialised TowerCos still being a relatively new sector in New Zealand, there is limited local experience. To meet demand - and to deliver at the ambitious pace Connexa has set - the company has built a diverse, specialised workforce that also brings fresh perspectives and new ways of working.

This diversity is not incidental, it's by design. Connexa made a conscious decision to embed inclusion from inception, and as a result has built a team that reflects a wide range of backgrounds, perspectives, and capabilities.

More than half of Connexa's team have no prior experience in the telecommunications or infrastructure sectors. By blending deep technical expertise with people skilled in delivery, problem-solving and innovation, Connexa is building a team designed for agility.

Fostering a start-up culture, Connexa is discovering that magic happens by combining experience in getting stuff done, and doing it differently. Conventional project management only goes so far. This mindset is core to Connexa's mission: to continuously improve how new assets are developed and how existing infrastructure is managed – at scale and at speed.

“The benefit of being a new company is that you effectively start with a blank canvas – we get to define our values, our culture, and how we work, and then hire people who align with that.

Infrastructure can have a bit of a reputation of being stagnant, but we’ve made a conscious decision to embrace innovation. We look for team members who have agility - and a desire to build a better tomorrow.

We often say we’re “building the plane while flying it”. Our team is empowered to try new things even if it’s hard. We say yes – and then figure it out as we go.”

Rob Berrill - Connexa CEO

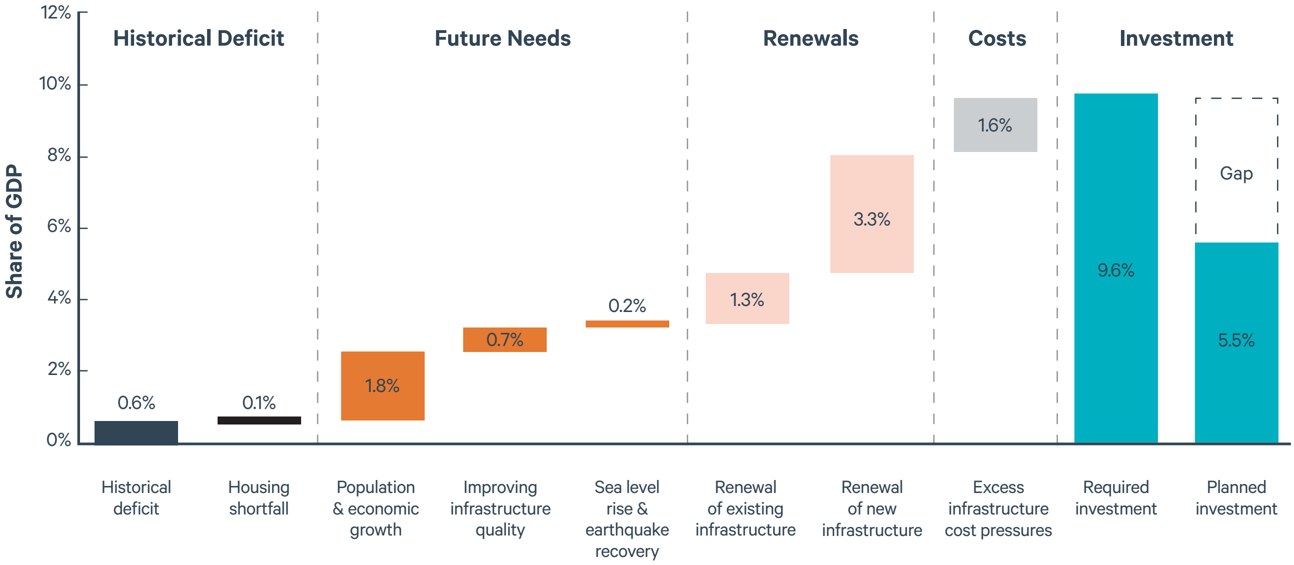
Infrastructure as a Long-Term Investment

New Zealand's infrastructure development has relied upon a mix of public and private sector investment. Telecommunications is a sector that has largely been in the realm of private investment for many decades, following the privatisation of public assets in the 1990s. However, new infrastructure in New Zealand has historically most often been led by public sector investment.

A report prepared for the Infrastructure Commission shows that to address its infrastructure gap, New Zealand would need to significantly increase the 5.5% of GDP it currently spends on infrastructure.

Figure 1: Investment would have to nearly double to invest our way out of our infrastructure deficit

New Zealand infrastructure challenge, 2021 - 2051



Fiscal constraints on public investment, set against the scale of New Zealand's infrastructure deficit, means new funding and financing approaches are needed. Looking around the world, private investment as a platform for new infrastructure is well-established. Foreign direct investment has long been part of the bedrock of infrastructure networks internationally. Telecommunications is also a highly regulated market characterised by direct user charges and a defined revenue model.

As Connexa's experience demonstrates, patient, long-term capital investment can underpin the careful, responsible development and management of new infrastructure. The value of international investment lies not only in providing the next generation infrastructure that New Zealand needs, but also in its ability to turbocharge significant new infrastructure rollouts, drive productivity and efficiency, and contribute to the development of a skilled and diverse infrastructure workforce.

Finding the right partners is critical, but there are a significant number of investors expert in the infrastructure space around the world. When aligned with local needs and long-term goals, these partnerships can help deliver world-class infrastructure outcomes for New Zealand.

More than just sourcing capital, international investment partnerships can bring knowledge, innovation and discipline to these infrastructure programmes to produce world-best outcomes.

To ensure New Zealand can benefit from international investment partnerships in infrastructure, the regulatory environment must continue to be improved to support the efficient development of new infrastructure. This includes bipartisan support for RMA reform and the streamlining of planning and consenting procedures.

Conclusion

New Zealand's largest TowerCo, Connexa, is adopting a start-up approach to deliver vital new infrastructure at pace and quality. The company is designing and continuously improving new end-to-end delivery methods, utilising new technology, new thinking and new approaches.

Critically, Connexa is supported by international investment from shareholders who understand the long-term development of infrastructure for the public good, and who bring expertise and knowledge, innovation and discipline, as well as capital, to the table. These are the kinds of investment partners New Zealand will need to identify and attract in greater numbers in order to address the country's infrastructure deficit and lift investment to the levels required to support a developed-nation economy and society into the future.

In a relatively short time, Connexa has shown how next generation infrastructure can be delivered at scale in New Zealand in ways that are lower cost, more efficient, high quality, resilient and with reduced environmental impact. It has done this by utilising its key investment partnerships and applying external capital, experience and expertise to the challenge.

Infrastructure New Zealand

PO Box 7244, Victoria Street West,
Auckland 1142, New Zealand

infrastructure.org.nz

Connexa

PO Box 91362 Victoria Street West,
Auckland 1010, New Zealand

connexa.co.nz