

We're seeking feedback

Our Discussion Document, [Testing our thinking: Developing an enduring National Infrastructure Plan](#), sets out our thinking as we begin work to develop a National Infrastructure Plan. The Discussion Document sets out what we expect the Plan will cover and the problem it's trying to solve, as well as the approach we're proposing to take to develop it.

We're sharing this now to test our thinking and give you the chance to share your thoughts. Let us know if we've got it right or if there are issues you think we've missed.

We'll use your feedback as we develop the Plan. We'll be sharing our thinking by presenting at events around the country, hosting workshops and webinars, and sharing updates through our website, newsletter, and social media. We'll also seek feedback on a draft Plan before publishing the final Plan in December 2025.

Submission overview

You'll find 17 main questions that cover the topics found in the Discussion Document. You can answer as many questions as you like and can provide links to material within your responses. On the final page, you can provide any other comments or suggestions that you would like us to consider as we develop the National Infrastructure Plan. Submissions are welcome from both individuals and organisations.

Deadline for submissions: 5.00pm on 10 December 2024.


A few things to note:

- We expect organisations to provide a single submission reflecting the views of their organisation. Collaboration within your organisation and internal review of your submission (before final submission), is supported through our [Information Supply Platform](#). You'll need to be registered with an Infrastructure Hub account and be affiliated with your organisation to utilise these advanced features. Many organisations will already have a 'Principal respondent' who can manage submissions and assign users at your organisation with access to the draft responses.
- Submissions will be published on our website after the closing date. The names and details of organisations that submit will be published, but all personal and any commercial sensitive information will be removed.

Submission method

We prefer feedback to be submitted through our [online survey](#). Alternatively, you may use this Word template to generate and upload a PDF.

Instructions for PDF submission:

1. Complete your response using this Word template. You can edit the document at points marked with the  cursor. This includes adding tables, images and text as normal.
2. Save the file type as PDF by selecting 'Save as' in MS Word and choosing 'PDF' as the file type.
3. Complete the introduction section of the online form.
4. Select 'PDF attachment' as your submission method. You'll then be prompted to upload your PDF.

Important: PDF submissions that are not generated from this Word template cannot be processed.

If you have any questions, please feel free to email info@tewaihangangovt.nz and one of our team will follow up with you.

Context for the Plan

Section one: Why we need a National Infrastructure Plan

Q1. What are the most critical infrastructure challenges that the National Infrastructure Plan needs to address over the next 30 years?

New Zealand's infrastructure faces numerous challenges, including ageing assets - vulnerable to the effects of climate change and other pressures - that require renewal. Our current approach to asset management is characterised by a "worst first" strategy, which is unsustainable. We advocate for a shift toward a depoliticised, coordinated, and long-term approach to infrastructure planning and investment to maintain a stable pipeline for renewals and capital projects.

Uncertainty around the infrastructure pipeline is a major challenge for a sector that is also grappling with escalating costs, largely driven by increases in labour and material prices. This volatility makes it challenging for infrastructure service providers to structure their business for the long-term - and localise efforts on a project-by-project basis. It also makes it challenging to accurately estimate project costs, which can contribute to funding issues, legal challenges, and loss of public trust.

The evidence is compelling:

- In the infrastructure and construction sector, stakeholder pressure is the leading cause of project delays (Deloitte, 2018).
- Community opposition has contributed to the delay, cancellation or mothballing of more than \$30B of infrastructure projects in the last decade (ANU, 2021).

Source: IAP2 Advocacy Call to Actions and Recommendations.

Q2. How can te ao Māori perspectives and principles be used to strengthen the National Infrastructure Plan's approach to long-term infrastructure planning?

Downer advocates for te ao Māori perspectives and principles, including the principle of Partnership enshrined in Te Tiriti o Waitangi, to be incorporated into long-term infrastructure design, planning, and delivery. The opportunity exists to improve social, environmental, cultural and economic outcomes through effective and genuine engagement. Māori principles of engagement and the communication, negotiation, and relationship-building techniques can contribute to wider thinking on effective community engagement.

A more inclusive approach will build trust, which is necessary for a thriving sector and thriving Aotearoa. It will also:

- Allow organisations to coordinate and work together to plan, design, and deliver infrastructure in a more efficient way – a key outcome of the NIP.
- Support social and cultural license to operate, which is a necessary condition for projects to progress.

Getting the settings right: Māori are playing a more active and leading development role in infrastructure delivery, which is particularly evident with post-settlement groups (i.e. the Māori economy is booming and will be worth \$100 billion by 2030). This development role needs to be considered in the NIP when addressing the gap between long-term infrastructure need and planned investment (e.g. opportunities for co-investment and co-ownership).

Source: Willie Jackson, Māori Development Minister, May 2023

Capability to plan and build: Māori are also involved in building infrastructure – at Downer 25% of our workforce is Māori. We recognise the need to increase Māori participation and leadership across the infrastructure sector and our award-winning Māori-led programmes are designed using te ao Māori principles.

The infrastructure gap creates significant opportunities for Māori participation – ongoing capacity building support, including funding, and progressive procurement policies are critical enablers.

Taking care of what we have: Te ao Māori perspectives intrinsically align with the NIP's intergenerational investment horizons, including the concept of taonga tuku iho (treasures handed down). A similar guiding principle from te ao Māori that must underpin long-term infrastructure planning is environmental stewardship (kaitiakitanga) and sustainability – one of the biggest issues facing the sector today. We need to unlock opportunities for Māori to incorporate mātauranga Māori into infrastructure design, planning, and delivery, such as environmental monitoring, water management, and climate resilience strategies. A case study is Auckland Transport's Downtown Programme, which was guided by Te Aranga Māori Design Principles.

Section two: Long-term expectations

Q3. What are the main sources of uncertainty in infrastructure planning, and how could they be addressed when considering new capital investments?

Politics and policy: Governments change, priorities shift. Address this with long-term strategic plans and flexible designs, and encourage bipartisanship.

Climate change: Extreme weather events are increasing. Address this with robust risk assessments and resilient designs.

Cost increases: Labor and materials become more expensive. Address this with flexible contracts and risk-sharing.

Technology changes: New technology can make infrastructure obsolete or require significant upgrades before the end of their intended lifespan. Address this by considering future trends and adapting designs.

Section three: Existing investment intentions

Q4. How can the National Infrastructure Pipeline be used to better support infrastructure planning and delivery across New Zealand?

Make it easy to use: Everyone should be able to access and understand the NIP.

Standardise information: Use the same data and reporting format for all projects.

Connect with local plans: Make sure the NIP works with local government plans.

Include risk information: Show the risks of each project in the NIP.

Keep it up to date: Regularly update the NIP with the latest information.

Section four: Changing the approach

Q5. Are we focusing on the right problems, and are there others we should consider?

Yes, but we need to consider these too:

- **Old infrastructure:** Maintain and upgrade existing infrastructure.
- **Digital infrastructure:** We need strong and reliable digital networks.

- **Social infrastructure:** Invest in schools, hospitals, and community spaces.
- **Skills shortages:** Train more people and make it easier for skilled workers to come to NZ.
- **New technology:** Use new technology to build and maintain infrastructure better.

Capability to plan and build

Theme one: Capability to plan and build

Investment management: Stability, consistency and future focus

- Q6. What changes would enable better infrastructure investment decisions by central and local government?

Realistic cost estimates: Use reliable cost estimation methods (like P95) and consider market conditions to avoid budget blowouts.

Predictable funding: Give local councils clear and consistent funding so they can plan long-term projects.

Stop with the rushed funding: Avoid one-off funding that forces councils to rush projects without proper planning.

Get everyone on the same page: Improve communication and coordination between government departments responsible for planning, funding, and delivering projects.

Work with contractors: Share project plans and designs with contractors early on to get their input and avoid potential problems.

Bipartisan Agreement: Continue to progress establishment Bipartisan support for key investment projects to derisk investment and reduce market fluctuations.

- Q7. How should we think about balancing competing investment needs when there is not enough money to build everything?

Bring in private money: Use public-private partnerships (PPPs) to get extra funding and expertise. It is critical that risk allocation is well balanced or managed to attract a competitive market and enable New Zealand companies to compete.

Make users pay: Charge tolls or fees for infrastructure that people use directly, like roads or public transport.

Evaluate projects properly: Use clear criteria to choose projects that offer the best value for money.

Build in stages: Break down large projects into smaller phases to manage costs and adapt to changing needs.

Workforce and project leadership: Building capability is essential

- Q8. How can we improve leadership in public infrastructure projects to make sure they're well planned and delivered? What's stopping us from doing this?

Share knowledge: Encourage government agencies to share lessons learned from past projects, both good and bad, with industry.

Hire experienced people: Bring in people with commercial experience to lead infrastructure projects.

Q9. How can we build a more capable and diverse infrastructure workforce that draws on all of New Zealand's talent?

Collaboration between industry and educational institutions is essential to align curricula with workforce needs. Paid internships, cooperative programmes, and mentorships provide students with practical experience and networking opportunities. We also believe the Māori economy is a huge opportunity for New Zealand and supplier diversity can foster innovation, growth, and resilience for the sector and economy.

Project costs: Escalation means less infrastructure services

Q10. What approaches could be used to get better value from our infrastructure dollar? What's stopping us from doing this?

Work together on risk: Collaborate with contractors to manage risks and costs, using tools like Statistics NZ indices or open-book cost tracking.

Be smart about materials: Consider using different materials or redesigning components to reduce costs.

Buy early: Procure materials early to avoid price increases.

Clients can supply materials: If clients provide some materials directly, it can help stabilise costs.

Taking care of what we've got

Theme 2: Taking care of what we've got

Asset management: Managing what we already have is the biggest task

- Q11. What strategies would encourage a better long-term view of asset management and how could asset management planning be improved? What's stopping us from doing this?

Minimum Asset Management maturity standards: Central government should require all public asset owners to meet minimum asset management maturity requirements aligned with the ISO 55001 Asset Management standard.

This would enable cross-asset class performance reviews conducted by independent bodies using international best practice. Such reviews would facilitate the sharing of best practices and help identify opportunities for improvement. For example, in the energy sector, Transpower's ISO 55001 accreditation has contributed to significant advancements in asset management planning.

Cross-asset economic justification model: An all-of-government economic justification model should be developed to assess the interrelationships between asset portfolios.

This would provide visibility across different sectors, such as how social housing impacts health and education outcomes, enabling a "best for investment" strategy across all of New Zealand. Currently, funding is siloed by sector, leading to inefficiencies and missed opportunities for collaborative investment.

Defining levels of service and outcomes: A clear definition of what constitutes "good" outcomes and corresponding levels of service (LoS) is essential. For instance, in the health sector, infrastructure needs may differ depending on whether the focus is on operational needs or broader health outcomes. This clarity would allow infrastructure strategies to align more effectively with long-term sector goals.

Long-term planning for intergenerational equity: Infrastructure planning should adopt a longer-term horizon, extending to 2050, 2075, and 2100, to ensure decisions account for whole-of-life costs and intergenerational equity. A shift from reactive "worst first" strategies to proactive, monetised, long-term planning is necessary. Such an approach avoids short-term cost-cutting that leads to compounding issues and potential fiscal insolvency.

Clear governance for Asset Management: Each Government portfolio should designate an owner responsible for asset management at a governance level, supported by an individual within the leadership team. Governance and leadership roles in asset management should have mandated competency and capability requirements to ensure informed and effective decision-making.

Transparent discussions on funding needs: There needs to be robust, open discussions about the funding required to maintain and renew infrastructure effectively. Asset owners must acknowledge the responsibility to maintain what they own, rather than attempting to fit essential maintenance and renewal work into predefined, inadequate budgets. This shift is critical for achieving sustainable and effective asset management outcomes.

Resilience: Preparing for greater disruption

- Q12. How can we improve the way we understand and manage risks to infrastructure? What's stopping us from doing this?

To improve how we understand and manage the risks that natural hazards pose for infrastructure in New Zealand, we need a comprehensive, forward-looking, and collaborative approach that considers

a wide range of economic, social, and environmental costs. This requires improved data collection, integrated risk mapping, long-term resilience planning, and improved stakeholder collaboration.

Through our participation in various disaster recovery alliances, such as SCIRT, NCTIR, and TREC, we have gained a deep understanding of the importance of coordinated governance, as well as the priorities and challenging decisions it entails. A bottom-up approach will enable national resilience strategies to be responsive to local needs.

Enhanced data collection and risk mapping: We are starting to see a shift to impact forecasting not just weather forecasting, enabled through the merger of NIWA and MetService and their investment in technology (quantum computing). Our path forward lies with high resolution climate projections, digital twins, and risk analysis tools, such as slope monitoring via satellite technology.

To date funding appears to be the major limitation for asset owners, e.g. the cost of forecasting. PPPs can help bridge gaps in financing resilience initiatives – which aligns with the Government's policy direction. Beyond finance, PPPs can enable access to offshore expertise.

Decarbonisation: A different kind of challenge

Q13. How can we lower carbon emissions from providing and using infrastructure? What's stopping us from doing this?

More alignment and collaboration: Our experience is that local authorities have struggled to align procurement practices with climate emergency declarations. As outlined in the NIP, the challenge is the pace at which change is occurring. The absence of standardised guidelines for carbon calculations and low carbon literacy hampers sustainable procurement choices. A fully collaborative system with provision for carbon calculation and EPD storage for use by the whole industry would be a positive step in New Zealand's journey towards net-zero emissions.

Risk and cost sharing: In New Zealand, early contractor involvement (and other collaborative models) has helped maximise potential embodied carbon reduction through an ability to influence material selection and supply chains and explore alternative solutions.

Local solutions: Sustainable procurement is a key pathway to a net-zero emissions economy. In the infrastructure sector, where materials are often bulky and transportation can contribute significantly to carbon emissions, sourcing materials locally should be a major consideration of procurement. Emphasising local procurement can reduce transportation-related emissions and foster local economic growth and resilience.

Carbon reduction by design. Ensure that procurements encompassing design, or design support, request and evaluate the requirement to incorporate 'Sustainability in Design' from the early stages of project inception. Decisions made early in the project lifecycle will often have the best long-term impacts on sustainability and carbon outcomes.

Getting the settings right

Theme 3: Getting the settings right

Institutions: Setting the rules of the game

Q14. Are any changes needed to our infrastructure institutions and systems and, if so, what would make the biggest difference?

Yes! Here's what would make the biggest difference:

- **Better coordination:** Government agencies need to work together more effectively. This means clearer communication, less duplication, and consistent processes.
 - **Stable funding for transport:** The transport sector is especially vulnerable to funding changes. We need more reliable funding so that projects aren't constantly starting and stopping.
 - **A stronger National Infrastructure Pipeline:** A truly national pipeline would help align strategies, allocate funding, and ensure projects deliver value.
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Network pricing: How we price infrastructure services impacts what we think we need

Q15. How can best practice network pricing be used to provide better infrastructure outcomes?

Network pricing (charging people for using infrastructure like roads or water) can help us make better decisions about what to build and where. To make it work, we need:

- **The right technology:** We need systems to track how people use infrastructure and to help them make informed choices.
 - **Good communication:** We need to explain network pricing clearly to the public and get their buy-in.
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Regulation: Charting a more enabling path

Q16. What regulatory settings need to change to enable better infrastructure outcomes?

In addition to ongoing efforts to evaluate and reform key Parliamentary Acts, it is equally important to **conduct a centralised review of local government standards, processes, and timeframes**. Significant variations in planning requirements across local councils contribute to increased costs and uncertainty within infrastructure pipelines. Standardising and streamlining these processes would reduce inefficiencies, as well as provide greater predictability for infrastructure delivery.

Simplify local rules: Different councils have different planning rules, which adds cost and uncertainty. We need to standardise these rules.

Review the big picture: We need to look at the laws and regulations that govern infrastructure and ensure they are still fit for purpose.

What happens next

Section five: What happens next?

Q17. Do you have any additional comments or suggestions that you would like us to consider as we develop the National Infrastructure Plan?

Thank you for the opportunity to provide feedback on your current thinking. We'd welcome ongoing dialogue with Te Waihanga as you continue to shape an enduring National Infrastructure Plan.

Thank you for providing feedback on our Discussion Document. We'll use your comments as we continue to develop the Plan. This will not be the only opportunity for you to provide feedback, but it is an important way to test our emerging thinking on the development of an enduring National Infrastructure Plan.

Please email info@tewaihanga.govt.nz if you have any questions or need more information.