



Title: **Testing our thinking - Developing an enduring National Infrastructure Plan**

Organisation: **ACE New Zealand**

Reference: **NIPC24-0003005** | Submitted: **08/12/2024 04:25 pm** | Submitted by:

## Summary of information submitted

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### Page 1 - Introduction

[NIPC24-0003005](#)

### We're seeking feedback

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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

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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 (6. Next steps) you can provide any other comments or suggestions that you would like us to consider as we develop the National Infrastructure Plan. Submissions are welcomed from both individuals and organisations.

A few things to note:

- You can save progress using the button at the top right of this form.
- A red asterisk (\*) denotes a mandatory field that must be completed before the form can be submitted.
- 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.

## Further assistance

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Each submission that is started is provided a unique reference identifier. These identifiers are shown in the top right of each application page. Use this identifier when seeking further assistance or communicating with us about this submission by using one of the following methods.

- Use [info@tewaihanga.govt.nz](mailto:info@tewaihanga.govt.nz) to contact us with any questions relating to our Discussion Document and consultation.
- Use [inform@tewaihanga.govt.nz](mailto:inform@tewaihanga.govt.nz) for help managing roles and permissions of user accounts affiliated with your organisation in the Information Supply Platform (ISP).

## Submission method

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Our preferred method is to receive responses through this form. However, we anticipate some submitters will wish to upload a pdf document, especially where their submission is complex or long. If this submission method is necessary, please use [this word template](#) and save as a pdf. We ask that you retain the structure and headings provided in the template as this will support our processing of responses.

### Select a submission method

To continue, select the method you will be using.

[Online form](#)

The Discussion Document includes five sections. Below we're seeking feedback on why we need a National Infrastructure Plan. We also want to test our thinking on our long-term needs and make sure we have a clear view of what investment is already planned.

## Section one: Why we need a National Infrastructure Plan

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A National Infrastructure Plan can provide information that can help improve certainty, while retaining enough flexibility to cancel or amend projects as circumstances or priorities change.

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

*We agree that we need greater certainty about where we invest, and we need to be smart about how we plan, deliver, as well as how we use infrastructure. This is crucial for businesses that will be engaged to design, construct and maintain the infrastructure to ensure they have the capability and capacity to do so, when they are needed.*

*To be able to fully understand our infrastructure needs, and what we need them to achieve over their lifetime, we need a clear vision for New Zealand's future. It's about what we need, but it is also about where we want to go. Our infrastructure needs to provide a cohesive suite of outcomes/services that align with an integrated New Zealand vision. We consider there needs to be a national conversation about our vision for New Zealand.*

*Beyond this, some of the most critical challenges that the NIP needs to address include:*

- *Financing and funding;*
- *The future of local government;*
- *Resilience and climate adaptation;*
- *How we go about developing a 30-year pipeline; and*
- *Workforce development and capability.*

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

*Te Ao Māori perspectives, and Mātauranga Māori in particular can act as a benchmark of sorts, to align guiding principles in our planning. There is value in adopting a balance of ancestral and contemporary knowledge if we are to leverage the best current practice and build on lessons of the past. There is also value in considering how a Te Ao Māori approach to future planning coalesces with or supports other planning approaches. In particular, the planning approach for Te Ao Māori is multi-generational, often looking 500 years into the future, and the influence of such a viewpoint should be woven into any 30-year vision.*

*The use of nature-based infrastructure solutions is one area where Te Ao Māori can guide our approach, particularly when considering nature-based hazards.*

*Resilience is another area where a Te Ao Māori approach will remain particularly valuable. To be resilient, our communities need not just built infrastructure, but an understanding of*

*its purpose and dispersion, a knowledge of backup options, our relationships and more.*

## Section two: Our long-term needs

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The National Infrastructure Plan will reflect on what New Zealanders value and expect from infrastructure. To do this, the Plan needs to consider New Zealanders' long-term aspirations and how these could be impacted over the next 30 years.

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

*The main sources of uncertainty include:*

- *Political cycles and changes in political direction*
- *A lack of shared vision that can direct our investments*
- *Land use/resilience – managed retreat, planning restrictions for risk prone land.*

*We consider decision making around capital investments will be enhanced through partnerships and building strong relationships with communities, local government, and iwi.*

*In relation to the point that if infrastructure investment can generate growth, it could lead to increased revenue that can fund more infrastructure. While we agree this is an important point to consider, we need to ensure that if we are generating economic growth to fund more infrastructure, that fund is used for infrastructure.*

## Section three: What investment is already planned

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We already gather and share data on current or planned infrastructure projects through the National Infrastructure Pipeline. This data, alongside other information gathered by the Treasury or published by infrastructure providers, helps to paint a picture of investment intentions.

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

*Having a National Infrastructure Pipeline will provide long-term pipeline certainty which is central to enabling businesses in the sector effectively plan their business and build capability, including developing and retaining skilled labour in New Zealand, and investing in technology. It will also support better inter-agency coordination to provide a more coordinated pipeline of work.*

*It takes the consulting sector time and money to gear up for a project, from assisting with business case development, to pulling together a bid, to recruiting the right people, and*

*mobilising and building the capacity and capability of the team. Effective and efficient delivery requires a visible forward pipeline. Having a National Infrastructure Pipeline that goes beyond political cycles will be important for the sector to have the confidence to invest in their people and technology we need to deliver on these projects.*

*To further support better long-term planning the pipeline could be categorised according to priorities to provide more certainty and efficiency in high priority infrastructure such as hygiene / sanitation / essential infrastructure.*

## Section four: Changing the approach

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We have used our research and publicly available information on infrastructure investment challenges to identify key areas for change. The next question and the following three pages seek further detail on the three themes in section four of our paper. Within each of the three themes, we explore some topics in more detail, outlining the evidence, discussing the current 'state of play', and asking questions about where more work is needed.

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

*We consider the three themes identified are the right problems to focus on.*

*One other area to consider is how we have a public dialogue about acceptable levels of service, and how we consider certain trade-offs across our system. For example, certain things can be built to a lower design standard, and while they may not theoretically last as long, that could still be acceptable.*

*Another consideration is the development of a nationwide risk/resilience standard for infrastructure. It is significantly more efficient to ensure systems are resilient early, rather than needing to retrofit or rebuild following an event occurs. Defining what resilience looks like and acceptable levels of risk has the potential to fundamentally alter the way we plan and deliver infrastructure.*

## Changing the approach — Capability to plan and build

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Section four looks at changes that we can make to our infrastructure system to get us better results. We've broken these changes down into three themes: capability to plan and build, taking care of what we have, and getting the settings right.

For the first theme, we look at three key areas:

- Investment management: Stability, consistency, and future focus
- Workforce and project leadership: Building capability is essential
- Project costs: Escalation means less infrastructure services.

## Investment management: Stability, consistency, and future focus

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We're interested in your views on how we can address the challenges with government infrastructure planning and decision-making.

### 6. What changes would enable better infrastructure investment decisions by central and local government?

*We fully agree with the need to follow best practice principles and we need to do this consistently through good up-front planning, business cases and cost management. Time and cost efficiencies are better achieved when government and the private sector work together. This includes through bringing specialist expertise in early during the planning phases to advise on how to best achieve project objectives in a way that maximises time and cost efficiencies. This needs to happen before a fully scoped project is put to tender because then the opportunity to influence better outcomes is more limited.*

*We agree with the point that ensuring greater transparency of large public sector projects will help the public hold the government and delivery agencies to account, which can help get better results. In addition to this, greater transparency also allows the private sector to plan and operate their business more effectively.*

*Government could also consider some legislated bottom lines or minimum standards with regards to asset maintenance, renewals and investment in the most critical civic infrastructure.*

*In addition, an agreed resilience/risk standard framework would enable better infrastructure investment decisions at both central and local government level. Resilience may require additional up front investment but will help mitigate costly impacts during significant events.*

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

*We agree that there needs to be a public dialogue about necessary and acceptable trade-offs.*

## Workforce and project leadership: Building capability is essential

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We're interested in your views on how we can build capability in the infrastructure workforce.

## 8. 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?

*There is an opportunity for the public and private sectors to work better together which to ensure projects are well planned and delivered.*

*When public and private sector don't work together to get these upfront planning procurement processes right, we waste time and money in unproductive contract negotiations, risk choosing the wrong delivery mechanisms for projects, experience scope creep and cost blow-outs, and undermine the sectors' ability to deliver innovative and cost-effective solutions for New Zealanders. The Government plays an important role in setting the tone here, including through outlining clear expectations and accountabilities for this.*

*An issue to address within the public sector is leadership capability. To improve our current inefficiencies we need to address this.*

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

*To be able to deliver our infrastructure needs efficiently, and when we need it, we need a workforce with the right capabilities and skills which are available in the areas where we need to deliver. Ensuring we have the right capability will also be a key driver for efficiency.*

*Women and minority groups are woefully underrepresented in the infrastructure sector. For example, our current engineering workforce is made up with just 17% women, and only 6% Māori and Pacific peoples. Without enough engineers, we will not be able to address the infrastructure deficit or deliver and maintain the new infrastructure we need to support our economy and meet our climate change responsibilities. To build and retain our talent we need to provide equitable access to training and upskilling opportunities, and offer more formal career development pathways across the key skills we will require in future. There is also an opportunity to use procurement to encourage and incentivise firms to grow talent and engage in DEI initiatives.*

*Having a clear pipeline is important to retain skilled labour in New Zealand. Many other countries are investing in infrastructure as we are now, with larger, more attractive projects. There is enormous sunk cost for New Zealanders when we lose workers that we have attracted and/or trained and the cost of getting them back, also getting them back is getting increasingly hard given the global shortage of infrastructure workers making the market for talent globally competitive.*

## Project costs: Escalation means less infrastructure services

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We're interested in your views on further opportunities to improve our ability to deliver good infrastructure at an affordable cost.

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

*We agree that taking the time better plan and define and manage project scope is important to get better value from our infrastructure dollar.*

*Having a consistent pipeline also plays an important role in ensuring we get better value from our infrastructure dollar. Having certainty in the pipeline means that we aren't gearing up teams and resources only to lose them and then reinvest when the projects are started again. We need more synchronised programmes of work to retain specialist teams.*

*In addition, we also need to see better pre-tender planning so that we understand the feasibility of proposed projects and so that what is being asked for in a tender is clear from the beginning, coordinated and the process can be stream-lined.*

*We agree that we can lift productivity growth through consistent regulatory frameworks, use of standardised design, and promoting competition among firms. We also agree with the importance of setting up good processes and planning for making decisions about project scope and design. It is important to highlight the critical role that standardisation of procurement processes, including the use of standardised contracts, can also play here in getting better value for money.*

*Committing to new technologies and digital practices will also be a key driver for efficiency and boosting productivity. A White Paper recently published by Consult Australia provides a road-map for integrating digital practices across the infrastructure sector.*

### Page 4 - Taking care of what we've got

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## Changing the approach — Taking care of what we've got

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The second theme in section four looks at how we can get better at taking care of what we have. It looks at three areas:

- Asset management: Managing what we already have is the biggest task
- Resilience: Preparing for greater disruption
- Decarbonisation: A different kind of challenge.

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

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Asset management means looking after our infrastructure. We are interested in your views on how we can improve planning for this.



## 11. 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?

*Data, AI and technology have the potential to significantly overhaul our approach to long-term asset management and we encourage the National Infrastructure Plan to give consideration to these innovations and uses. National data standards, or moves toward mandated digital delivery or production of public-infrastructure digital twins could be considered.*

*Local councils know they have to get the most out of what they've got but there may be some incentives central government could explore to catalyse improvements across the local government sector.*

## Resilience: Preparing for greater disruption

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We are interested in your views on how we can better understand the risks that natural hazards pose for our infrastructure.

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

*In general, we'd consider the following as important to improving risk-based implementation:*

- *Risk and resilience standards*
- *Better use of data*
- *Greater level of flexibility built into our infrastructure system as a whole*
- *Nationwide conversation about acceptable levels of service*
- *Transparency around the trade-offs we need to make as a country*

## Decarbonisation: A different kind of challenge

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We're interested in your views on how we can improve understanding of the decarbonisation challenge facing infrastructure.

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

*Dealing more effectively with congestion and providing quality, reliable and affordable public transport are both crucial for helping us lower carbon emissions.*

*Over the 30-year horizon the National Infrastructure Plan seeks to cover, there are significant unknowns with regards to climate change. At some point there will likely be an economic trigger that will drive significant behavioural change. At present, it seems easy*

*for asset owners to consider what can be done to minimise their current dollar rather than look hard at longer-term outcomes.*

*It appears both convenience and cost are the biggest hurdles we face with regards to using infrastructure to help lower emissions.*

*There are also many emissions reductions to be had across the waste, recycling and circular economy sectors but New Zealand lacks the appropriate infrastructure.*

*Ensuring regulatory settings enable new renewable generation to be development is also vital.*

## Page 5 - Getting the settings right

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### Changing the approach — Getting the settings right

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The third theme in section four looks at how we can get our settings right to get better results from our infrastructure system. It looks at three areas:

- Institutions: Setting the rules of the game
- Network pricing: How we price infrastructure services impacts what we think we need
- Regulation: Charting a more enabling path.

#### Institutions: Setting the rules of the game

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We're interested in your views on what changes to our infrastructure institutions would make the biggest difference in giving us the infrastructure we need at an affordable cost.

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

*A permanent and centralised resilience and recovery entity could be established so that we are continually looking at boosting our resilience and are better prepared for significant weather events or natural disasters. At present, there is heavy reliance on emergency management agencies but not a lot of funding to make proactive changes to infrastructure. In the longer term, that would be more efficient than ongoing response and recovery.*

*Structures that facilitate better information-sharing and collaboration between public institutions and systems and the private sector are important.*

## Network pricing: How we price infrastructure services impacts what we think we need

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We're interested in your views on further opportunities to improve network infrastructure pricing.

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

*No response provided*

## Regulation: Charting a more enabling path

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We're interested in your views on further opportunities to improve regulation affecting infrastructure delivery.

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

*No response provided*

## Page 6 - What happens next?

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## Additional information to support our development of the Plan

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Section five in the Discussion Document is on the next steps. In this section, we're asking you for any additional comments, suggestions, or supporting documentation that we should consider in our development of the National Infrastructure Plan.

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

Click 'Add another' to add multiple suggestions or comments.

*Item 1*

*No response provided*

### 18. Attach any documents that support your submission

Click 'Add another' to add multiple attachments in PDF format.

## Thank you for your response

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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.

If you have prepared a submission on behalf of an organisation, you'll need to be an authorised *respondent* to make the final submission. If you entered a new organisation during sign-up, or your organisation does not already have a *Principal respondent* assigned, you will have been asked to nominate yourself or someone else for this role as you started this submission. Our team will have worked to verify these accounts allowing *Principal respondents* to manage access and assignment of requests for information to people within your organisation.

If you require any assistance please reach out to our team at [inform@tewaihangagovt.nz](mailto:inform@tewaihangagovt.nz).

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