

Draft National Infrastructure Plan - Āpōpō Feedback

Introduction

Āpōpō congratulates Te Waihanga on preparing the first draft National Infrastructure Plan (the draft plan). We welcome the opportunity to provide feedback on the draft plan for consideration in the plan's finalisation (the finalised plan).

About Āpōpō

Āpōpō is the lead association for infrastructure asset management professionals in New Zealand. With over 1,100 members and founded in 1948, Āpōpō represents those who take responsibility for managing the country's infrastructure assets that deliver community outcomes, including roads, rail, air and seaports, pipes and water treatment plants, and community health, education, justice and defence facilities.

Formerly known as ALGENZ, INGENIUM and, until 2023, IPWEA NZ, Āpōpō offers professional development courses, events and asset management practice guidance, as well as globally recognised accreditation, career pathways and industry recognition through annual awards and scholarships.

Infrastructure assets are the foundations of our communities – the physical things and systems most of us take for granted but which enable our quality of life, our well-being, our community purpose.

Our management of infrastructure assets is all about applying the competencies and experiences of our discipline to deliver valuable community outcomes. It is inclusive of a full lifecycle from beginning to end – from recognition of a community need, to fulfilling that need for generations to come. (The Āpōpō Guide, 2025)

Asset Management Theme

The focus of the draft plan on **asset management** is appropriate and is strongly supported by Āpōpō.

The draft plan correctly identifies the criticality of effective asset management practices for realising the value of infrastructure investments made by past current and future generations.

Theming the draft plan in this manner is both valuable and useful for supporting the asset management profession to lift its profile and the understanding of decision makers as to what can be achieved when asset management is prioritised.

Recommended adjustments

1. Consistent with the asset management theming of the draft plan, we recommend that the finalised plan is adjusted by reframing the draft plan's change recommendation of "Start with Maintenance" to "Start with Asset Management".

2. Taking this further, the finalised plan should recommend the current decision making and performance monitoring system is turned up-side-down by replacing the investment management led system with an asset management led system in relation to infrastructure.
3. The finalised plan should strengthen the call to lift public sector capability in asset management by specifying actions that support the development of skilled and knowledgeable asset managers who are equipped to enable the delivery of effective and valuable asset management practices. Recommended actions should include:
 - That professional accreditation of competency (knowledge and experience), as awarded by the asset management profession, be required for responsible public sector asset managers.
 - That asset information systems are invested in and populated to provide appropriate data sources for understanding the condition and performance of government's infrastructure asset portfolio.
 - That relevant asset management roles at multiple levels throughout asset owning organisations be consistently defined and sized across the public sector to support clear career pathways and interoperability.
4. Minor presentation adjustments are recommended for the finalised plan.

These four recommendations are detailed in the following commentary.

1. Re-frame “Start with Maintenance” to “Start with Asset Management”

The three recommendations under the “Start with Maintenance” area of the draft plan are all tightly aligned with sound asset management principles and do not require further adjustment.

- Asset management and investment planning: Central government agencies are legislatively required to prepare and publish long-term asset management and investment plans.
- Performance reporting: Central government agencies are legislatively required to report on performance against their asset management and investment plans.
- Asset management assurance: Central government agencies' asset management and investment plans are independently assessed

However, the headline of “Start with Maintenance” misleads by implying that maintenance is the effective starting point for infrastructure value realisation. Asset management informs maintenance, which is an integral component of the necessary life-cycle approach, rather than maintenance per se being the lead concept. Commencing with understanding needs, an asset management first approach articulates the value from meeting those needs, and goes on to define the operations, maintenance, renewal, retirement, and investment activities required to consistently realise value over time and deliver to a community's needs.

By way of example, it is wasteful to maintain water supply systems to an area abandoned to sea level rise inundation, and so starting with maintenance can result in answering the wrong question. An asset management plan is the starting point for determining what, why, where, when and how an element of infrastructure is maintained and ultimately is renewed or retired.

The headline focus on maintenance, to the exclusion of other critical phases of asset management best practice, such as renewing existing infrastructure, unfortunately also misleads.

The average required spend ratio for renewals and maintenance compared to building new infrastructure of 60:40 is now becoming widely understood, thanks to the good work of Te Waihanga. This ratio correctly emphasises renewals and maintenance, noting that different asset types and circumstances will require different ratios.

However, maintenance is insufficient by itself to preserve infrastructure performance – materials failure, functional obsolescence, demographic changes, or natural hazard occurrences typically initiate planned or unplanned renewal activity in order to restore, sustain, or enhance the level of service available from an infrastructure asset. The importance of renewals to performance needs to not be overshadowed by a call for maintenance first. An asset management first approach ensures a balanced approach to activity is pursued.

2. Turn our existing system ‘up-side-down’

Asset management needs to be the lead system rather than being a secondary consequence of the investment management system. The finalised plan should recommend that the whole system is ‘turned up-side-down’.

The investment management system currently drives infrastructure decision making and is poorly equipped to manage whole-of-life decision making with its focus on supporting or rationalising immediate spending decisions. Business cases can tend to justify or rationalise spending or functionality decisions already taken ‘in principle’.

This means that investment strategies underpin how much, where, and when spending on infrastructure occurs. A need to invest or spend capital funds to stimulate economic activity from that spend (“200 jobs created for hospital rebuild” type headlines) results in a focus on upfront costs/benefits only, rather than whole-of-life costs, even while whole-of-life benefits are nonchalantly assumed (“build it and they will come” justifications). This mismatch results in sub-optimal decision making for long term value realisation, e.g. the job creation hospital may be too large (and therefore costly to finance and maintain) for the future demographic driven health needs of the area.

With the investment management system having current priority, once construction of a new or renewed infrastructure asset is complete, the task of realising value from the asset for its full designed life span only then commences.

In its early life, all is new with construction defects well managed into a steady minimal intervention state. This state can provide a false sense of security until the frequency and/or severity of failures creates a service continuity shock, sometimes decades in the making. At that point, the asset management plan is often created or dusted off from the top shelf to guide what happens next. This then typically costs more and has greater impacts than expected due to shortened rectification timeframes. Asset management as an afterthought is up-side-down from the system we need.

Asset management has a mature set of tools and practices tested globally, customised locally, and ready to be taking the lead for robust infrastructure asset decision making. Asset management planning (strategic and tactical) should be the starting point, not an afterthought or necessary evil.

A comprehensive asset management plan articulates the forward investment spend (maintenance, renewal, new build) alongside how, when, where, and why that spend is to be incurred. As asset performance or expectations change, business cases can explore genuine options for addressing the changes. Funding and financing decision making can then be taken in good time knowing the asset management strategy for the particular element of infrastructure.

An asset management led system would also support reliable and accurate no surprises policies. Disclosure of asset performance and condition with robust utilisation and functionality needs analysis, enables better decision making about the levels of service achievable for a given budget and any residual community expectation gap. Gone would be the situation of public surprise that otherwise hidden assets, such as water pipes or, say, coastal navigational aid systems, are broken and require replacement at unexpected and/or unaffordable cost.

3. Enhance asset management capability

To enable such an intensified focus on asset management, capability across all infrastructure asset owning and monitoring agencies will need to be significantly enhanced. Asset management professionals will need to be in leadership **and** delivery positions that implement an asset management first strategy for the country.

Three initiatives to significantly enhance the capability of Government agencies in order to meet this need should feature in the finalised National Infrastructure Plan:

- increase capability (capacity and verifiable competency) in asset management;
- invest in asset information systems; and
- define Asset Management roles across government.

Enhance professional capability

Increasing capacity and improving competency (together, capability) in asset management involves investing in the delivery and uptake of formal and informal learning programmes and qualifications that add to the professionalisation of asset management in the government sector. Inexperienced asset managers need to be supported to not only learn on the job but to gain deep knowledge and expertise in best practices so as to carry out their functions effectively and maximise whole-of-life value from the infrastructure assets they manage.

Professional accreditation (which verifies knowledge and experience against reputable, globally recognised standards) of asset managers should be featured in the finalised plan as the base line required by asset owners for their employees who are responsible for meeting their organisation's asset management accountabilities. This is similar to requiring a Chartered Accountant to be leading a finance and accounting focused role.

Āpōpō is well placed to support and deliver funded initiatives to enhance the capability of infrastructure asset management professionals for New Zealand, through best practice knowledge resources, online and in-person learning, networking, global connections, peer recognition and career pathways.

Invest in asset information systems

To be effective in managing infrastructure assets and realising long term value from them for the benefit of the communities they serve, requires accurate, meaningful and accessible information about the assets.

Necessary information includes, type, function, age, location, condition, performance, level of service, materials, remaining life, maintenance history, planned maintenance, cost, value, criticality, risks, inter-dependencies, etc, to list just some relevant attributes required to properly understand any particular infrastructure asset. Much of the government asset portfolio does not have such attributes available in a systematised manner. As a result, analysis across attributes or assets is difficult or impossible, with quality decision making, for example maintenance and renewal programming, being compromised or even avoided through lack of reliable information on which to base decisions.

Rectifying this requires investment in systems, people and processes – to organise necessary information that informs a high-quality and effective asset management process. Technology solutions are critical to arrange the masses of information available and required. Information capture and cataloguing processes need to be implemented to populate the systems with consistent quality data. Knowledgeable people responsible for creating, maintaining, and interpreting the quality information they contain complete the information picture.

Investment in information will enable better asset management practices, leading to consistent and valuable outcomes such as increased value being realised for communities from their assets.

Define consistent government asset management roles

There is currently no consistency across government in how asset management roles are defined, titled, or remunerated. Job descriptions vary widely, and many roles doing asset management work don't clearly reflect that in their titles, making it hard to benchmark, recruit effectively, or offer clear career pathways.

A requirement to lift government maturity in this area should be included in the finalised plan.

A standardised framework for asset management roles in central government could include:

- Consistent role titles and job description templates across levels (e.g. Junior Asset Manager to Chief Assets Officer/Executive)
- Clear competencies and work requirements aligned to each level
- Indicative salary bands, benchmarked to market and public sector scales
- Links to training and career pathways (e.g. Āpōpō competency framework, internships, graduate programmes etc.)

Āpōpō is again well placed to contribute to the development of such a framework with our accreditation framework (aligned to ISO55000, the GFMAM Asset Management Landscape, and the WPiAM Global Certification Scheme) lending itself as base material for role descriptions, competency definitions and articulating career development pathways which build on Āpōpō knowledge resources, learning opportunities, and global connections with best practice.

4. Presentation adjustments

Some minor document structure/presentation related adjustments to the draft plan are recommended so as to improve readability.

1. Table of contents – recommendations should be easy to find, they should also be listed in the Executive Summary. Recommendations are listed on p 12 but these don't follow the order in which they are found in the document.
2. The Table of Contents on page 27 appears to be unnecessary.
3. P41, Section 3.2.3: is this one of the 17 recommendations?
4. P102, Figure 31. The title is “Most” but the sample size is only 8? Perhaps reword.
5. Figure 31. Suggest adjusting the colours used: a) green should not be applied for a negative value b) confirm colours used are those recommended for colour-blindness.
6. P138 s7.3.8 Key Issues and opportunities – we suggest that “Integration/Consolidation of Urban and Network planning” should be a key item listed here. There is a disjunct between planning rules that allow urban development and expansion in areas prone to flooding or in areas difficult to service with water and wastewater services.

Conclusion

The draft National Infrastructure Plan is an excellent foundation for nation building at a time when a wide range of sectors are rightfully calling for better long-term value from our investments in infrastructure. There is cause for optimism that the plan, once finalised, will guide a step change



improvement in the thinking, planning, and execution of infrastructure investment and value realisation – all for the benefit of New Zealand's communities who collectively make the investments.

To ensure long term value realisation is maximised, the finalised plan should be framed to lead with Asset Management. Putting the discipline of Asset Management at the forefront and resourcing asset owning agencies with sufficient competent and professional practitioners who rely on appropriately sophisticated asset information systems populated with comprehensive reliable data, provides the greatest likelihood of securing the step change improvement that is both desired and necessary for the future wellbeing and prosperity of all New Zealanders.

We commend Te Waihanga New Zealand Infrastructure Commission for the draft plan and look forward to a finalised plan that starts with asset management, turns the existing system up-side-down to put asset management at the top, and strongly calls for asset management capability enhancement.

Please feel free to contact Āpōpō to discuss this submission further and for support in furthering our recommendations for the finalised plan.

Āpōpō – Infrastructure Asset Management Professionals Inc

