

# **INFRASTRUCTURE** **EVIDENCE BASE** **2015 Refresh**

**Social Sector**

**March 2015**



**NATIONAL INFRASTRUCTURE UNIT**

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# EVIDENCE BASE

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## Introduction

Infrastructure is a crucial part of the New Zealand economy. It supports the day to day activities of New Zealanders, helps to improve living standards, and can be a driver for economic growth. As such, it is vital it is managed as well as possible. The National Infrastructure Plan 2011 sets out a long term vision for New Zealand's infrastructure and seeks to provide a common direction for how we plan, fund, build and use all economic and social infrastructure.



To support this, in 2014, the National Infrastructure Unit published the first New Zealand Infrastructure Evidence Base, working with owners and providers across all sectors to provide quantitative data where possible, and good quality qualitative analysis where the data is not yet available.

This document provides an update to the 2014 Evidence Base, providing the latest in time series data where appropriate, and reiterating and evolving key messages where required. It draws together work on performance indicators (the current state of the infrastructure), scenario and trend analysis (the future pressures or drivers of demand), the national resilience picture, and the second 10-year Capital Intentions Plan (what is known about indicative future spend). As before it has been compiled in collaboration with sector representatives and we believe is an accurate representation of the current state of New Zealand's infrastructure.

The timing of this iteration of the Evidence Base is aligned to provide a common understanding of the issues faced by New Zealand's infrastructure, to act as a strong platform for the next National Infrastructure Plan, due to be released later in 2015.

This document forms the substantive component of the Evidence Base for the social sector, defined by NIU as the assets needed to deliver social services to the public. These social services include social housing, health, education, justice (including police, courts, and corrections), and elements of defence infrastructure. It follows from the overview document, which can be found on the NIU's [website](#).

This chapter draws largely from the Treasury's *2014 Investment Statement*,<sup>1</sup> which was developed with NIU input in 2014 and provides a detailed account of government assets, including social assets. In order to avoid duplication, the following pages provide a high-level

<sup>1</sup> Under section 26NA of the Public Finance Act, Treasury is required to develop an Investment Statement before the end of 2017 and then at intervals not exceeding four years. The overall purpose of the 2014 Investment Statement is to provide Ministers, Members of Parliament, taxpayers, journalists, investors, lenders, government agency staff, and rating agencies an overview of the state of the Crown's assets and liabilities, and frameworks for considering performance and key risks in a single document. The first Investment Statement was produced in 2010 followed by a supplement in 2011. Both are available on the Treasury website.

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overview of the social infrastructure sector and the challenges it faces. Readers are encouraged to consult the Investment Statement to gain a more complete understanding of the Government's social assets and their effects on the Crown's balance sheet. Where data has been provided below, this is publically available information and has been provided with permission of the information owner. It is also worth noting that the forecasts and pressures are based on current policy settings and delivery approaches, and are not necessarily informed by alternative service delivery options that might be less asset-centric.

## Overview messages

The social sector has made substantial progress in recent years, especially in areas of asset management, capital planning, procurement, and the allocation of capital. This includes new Government Procurement Rules which came into effect in 2013, the completion of three public-private partnership (PPP) procurements with another two projects currently under procurement, and the current consultation on central government expectations of agency capital management and asset performance. At the local level, it includes changes to the Local Government Act requiring 30-year infrastructure plans and non-financial performance measures.

There is a growing awareness that capital asset management is important. However, there are still significant improvements that can be made, particularly at the central government level. Asset management has traditionally been underdeveloped, including planning and the collection and use of appropriate information on assets. Furthermore, future pressures are emerging through:

- demographic changes, including increased urbanisation, which is leading to an over- and under-utilisation of assets, and changes in the proportion of the population within different age groups will also affect the demand for different social sector services. Resources could be more effectively used if the asset base is rationalised and aligned with demand expectations;
- the age of social assets, meaning that there is a specific need for a step change in asset management over the next few years. The large number of older assets means decisions will need to be made on whether to replace or maintain them to meet future service needs. This provides an opportunity for new thinking on how infrastructure supports service delivery and exploring demand as well as supply-side options;
- the lack of coordination across the social sector as a whole when developing capital asset and spatial plans;
- the variation in availability, quality, comparability, and consistency of data on social asset performance across different sectors. There is a need to develop a similarly high standard of information on the state of assets and their performance within the social sector, and to integrate this understanding into making better capital decisions; and
- technological advances, which continue to play a significant role in determining the size and type of asset base required to deliver social services. The rapidity of technological progression will demand a more flexible approach to infrastructure investment, which will ensure that infrastructure remains adaptable to the ever-changing means of delivering social services.

## Context

As at 30 June 2014 the total value of the Crown's property, plant, and equipment assets in the health, education, justice, social housing, and defence<sup>2</sup> sectors was \$40.9 billion. This includes 2,532 schools, 17 prisons, and 38 public hospitals.

Much of the information contained in this chapter is derived from the Treasury's 2014 Investment Statement, which contains the most comprehensive account of the performance of social assets and the effects they have on the Crown's balance sheet; this is available at



<sup>2</sup> We do not include specialised military equipment (SME).

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<http://www.treasury.govt.nz/government/investmentstatements/2014>.

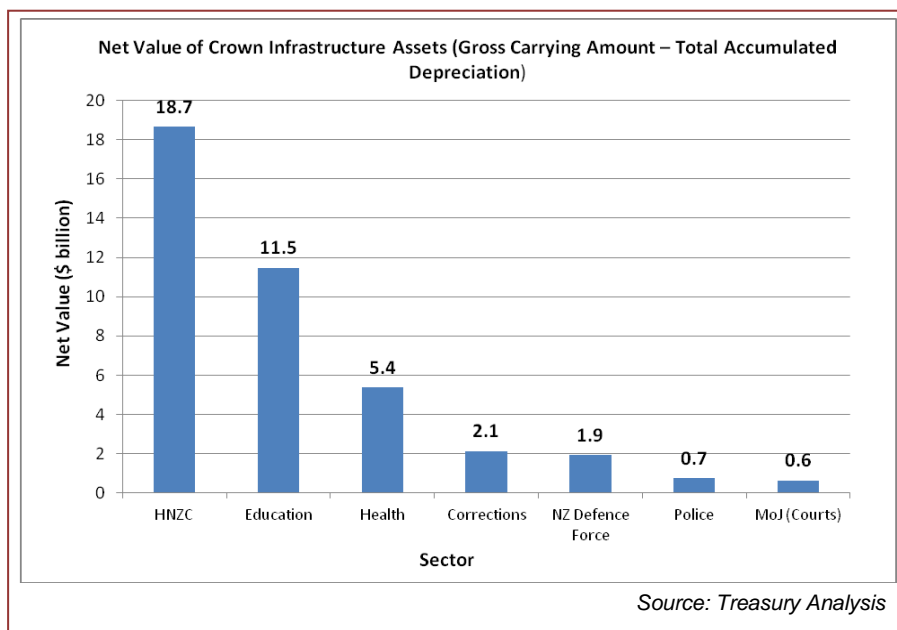
## What do we have?

The graph opposite provides a breakdown of the Crown's infrastructure assets by sector.<sup>3</sup> As can be seen, the vast majority of infrastructure (by value) lies in social housing, schools, and hospitals.<sup>4</sup>

## Is it where it needs to be?

The 'total number of surplus assets' and other asset utilisation measures provide an indication of whether social assets are where they need to be.

Changing demographics have had a significant impact on the development and use of Crown assets in the past. Historically New Zealand's population was split across an array of smaller towns and cities, resulting in the need for a large number of smaller assets to provide services. Over time, increased urbanisation has led to the Crown having assets that are surplus to needs and others that require additional capacity; as at 2014, about half of all schools (1,258) had surplus classrooms and approximately 421 schools required additional capacity. Capital-intensive agencies are developing novel ways of tackling surplus and pressured assets, such as the Ministry of Education's transportable schools initiative, which will become more important over time.



## What quality is it?

The quality of social assets depends on their capability to perform a level of service; this can be assessed in terms of functionality (whether an asset is fit-for-purpose) and condition (the physical state of an asset). The understanding of the functionality of New Zealand's social assets, and how well they fit their intended purpose, is relatively weak and with a number of assets that are aging, there is a risk that they may be out-of-date to meet current and future service requirements. For example, many of New Zealand's schools were built in the 1950s to the 1970s giving an average age for the portfolio of 42 years. Equally, the condition of our hospitals varies significantly across regions.

The Treasury's 2014 Investment Statement recognises the need for further work to develop metrics for the measurement and monitoring of the performance of Crown assets to meet government objectives.

## What capacity is it at?

Capacity reflects the productive potential of an asset and can be assessed against current and expected demand needs. Indicators include surplus assets and utilisation (similarly to "Is it where it needs to be?" above) as well as availability and remaining economic life. Changing demographics have been a significant contributing factor to changes in asset capacity to meet current and future service requirements, leading to a number of surplus assets or growing regions requiring greater asset capacity as noted above.

<sup>3</sup> This includes land, non-residential buildings, residential buildings, plant & equipment, electricity generation assets, electricity network assets, state highway assets, and SCH assets.

<sup>4</sup> 'Health' assets are an aggregation of District Health Boards and the Ministry of Health and therefore do not offer a perspective on regional spend.



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Equally, technological advances are having an effect upon the type of demands placed upon social assets. In health, the average length of stay for both medical and surgical treatment decreased between 2002 and 2012 by 0.3 days and 0.6 days respectively, and there was a five per cent increase in the proportion of all surgical procedures carried out as day case procedures. These all have implications for the types of built assets needed to deliver relevant health services. Similar discussions are taking place across the social sector; the *Policing Excellence* review is a further example of how technological advances are influencing how services are delivered, and the assets needed to do so, in the Justice sector.

## Resilience

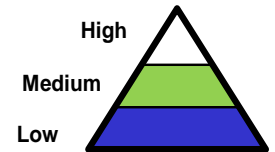
Required levels of resilience will vary depending on perspective. This assessment is made at a national level and is yet to be developed with robust supporting evidence. It does however assist in prioritising efforts.

NIU defines the resilience of infrastructure to include not just the physical or hard assets but also other aspects such as how infrastructure organisations function, capacity and capability to fund, and community awareness. To provide an assessment of resilience, the social sector has been disaggregated and qualitative methods applied to compare resilience expectations with assessed level of resilience to identify desired improvements in resilience. These tabulations have been publicly available and presented in various forums through 2012 and 2013 and continue to evolve as new information becomes available.

At this stage the resilience assessment for the social sector is least developed but it is noted that it is probably the sector most vulnerable to interdependency issues, being very dependent on all other sectors and being a primary interface with communities.

In the table resilience expectations from a national perspective are identified as low, medium or high. When making these judgements a wide range of aspects require consideration. Particularly for social assets, highly specialised facilities tend to warrant high levels of resilience whereas if the functions can be relatively easily undertaken elsewhere then a low resilience expectation is appropriate. To demonstrate; under “Courts” the functions undertaken can be undertaken in alternate facilities (low “Resilience Expectation”) but “Regional hospitals” provide specialised facilities and associated services (high “Resilience Expectation”). Under this assessment police, health laboratories and regional hospitals deserve specific attention but a more robust assessment may indicate alternate priorities.

Key: Levels of Resilience



Social	Resilience Expectations	Assessed Resilience	Desired Movement
<b>Education</b>			
Pre-school	Low	Medium	-
Primary School	Medium	Medium	-
Secondary school	Medium	Medium	-
University/Post Secondary	Medium	Medium	-
<b>Justice</b>			
Police	Low	Medium	↑
Corrections	Medium	Medium	-
Courts	Low	Medium	-
<b>Health</b>			
Laboratories	Low	Medium	↑
Medical Centres	Medium	Medium	-
Local/specialised hospitals	Medium	Medium	-
Regional hospitals	High	Medium	↑
<b>Housing</b>			
Individual houses	Low	Medium	-
Housing blocks	Medium	Medium	-
Suburbs	Medium	Medium	-
<b>Defence</b>			
Airforce assets	High	High	-
Navy assets	High	High	-
Army assets	High	High	-

## How productive it is?

‘Asset capability’ offers an understanding of an asset’s ability to provide an intended level of service and, as discussed above, can be viewed in terms of ‘functionality’ and ‘condition’. Understanding of the functionality of the Crown’s assets remains weak, and the quality of condition assessments across entities remains varied.

In terms of asset capacity, surplus (under-utilised) assets represent poor value-for-money and the opportunities presented through technological innovations mean that the composition and type of assets used to provide a particular service may be sub-optimal. This is becoming increasingly more recognised throughout the social sector. *Policing Excellence* is a major change programme enabling

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Police to deliver better outcomes, and recognises the opportunities of modern, mobile technology to frontline officers and the possible benefits this may have on the current configuration of Police assets.

## How well are we managing it?

The social sector has made substantial progress in recent years in areas of asset management, capital planning, procurement, and the allocation of capital. The Government's Better Business Case (BBC) process continues to push improvements, and an external review conducted in July 2013 found widespread user endorsement of, and support for, BBC method and guidance. There has been some positive movement in procurement with new Government Procurement Rules having come into effect in 2013, and the completion of three public-private partnership (PPP) procurements with another two projects currently under procurement. The Social Housing Reform Programme (SHRP) is being progressed, which will alter the way in which social housing is managed and delivered in New Zealand by facilitating the development of community housing providers to provide better social housing outcomes.

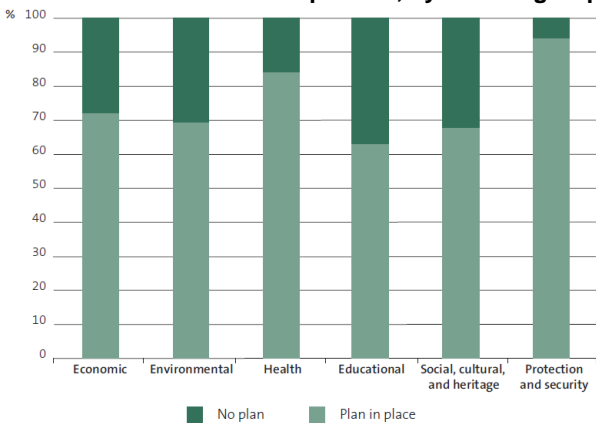
At the central government level, there is a growing awareness that capital asset management is important, and capital-intensive agencies are expected to demonstrate a level of asset management practice and performance that is appropriate to the scale of assets under their management and the criticality of those assets to the delivery of key public services. Indeed, Treasury is currently consulting on changes to Cabinet Office Circular CO(10)2 that sets the expectations around how agencies make investment decisions and manage their assets; the proposed expectations include that agencies use relevant indicators of asset performance in their decision-making such as those relating to utilisation, condition, and fitness-for-purpose, and that they report on these annually.

At the local government level, the Local Government Amendment Act 2014 requires councils to prepare an infrastructure strategy for at least a 30-year period. Earlier amendments to the Act require non-financial performance measures to be used by councils when reporting to their communities. The first council long-term plans incorporating these 30-year strategies and non-financial performance measures are due this year.

However, there are still significant improvements that can be made. Asset management has traditionally been underdeveloped. An independent report on asset management maturity was commissioned from GHD Ltd in 2011/12, which provided useful baseline data across 13 of the capital intensive agencies that together manage over \$66 billion worth of physical assets and software. The report showed that all but one agency had a gap between current and target levels of asset management maturity. The chart on the following page highlights the 17 attributes of asset management that span the asset life cycle, demonstrating the wide variety in maturity around them. Some of the largest gaps are in planning and asset information systems, which are key to enabling a more mature practice.

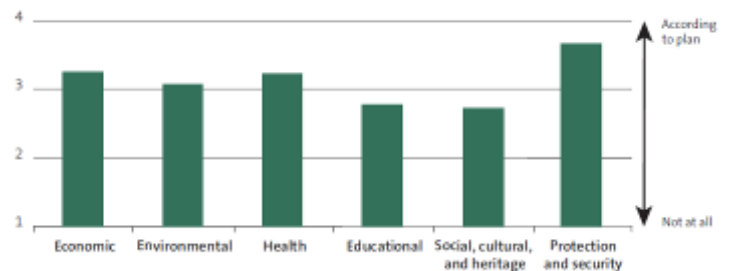
Equally, in June 2013 the Office of the Auditor-General published the *Managing Public Assets* report and showed that although most public entities understand the importance of planning for assets (with plans in place for about 75 percent of assets), most assets across all service groups varied in the extent to which they were being managed, including some where the plans were not being followed at all. It was also found that asset condition information is not being regularly reported to decision-makers.

**Maintenance and renewal profiles, by service group**



Source: The Office of the Auditor-General

**How well maintenance & renewal plans are followed, by service group**



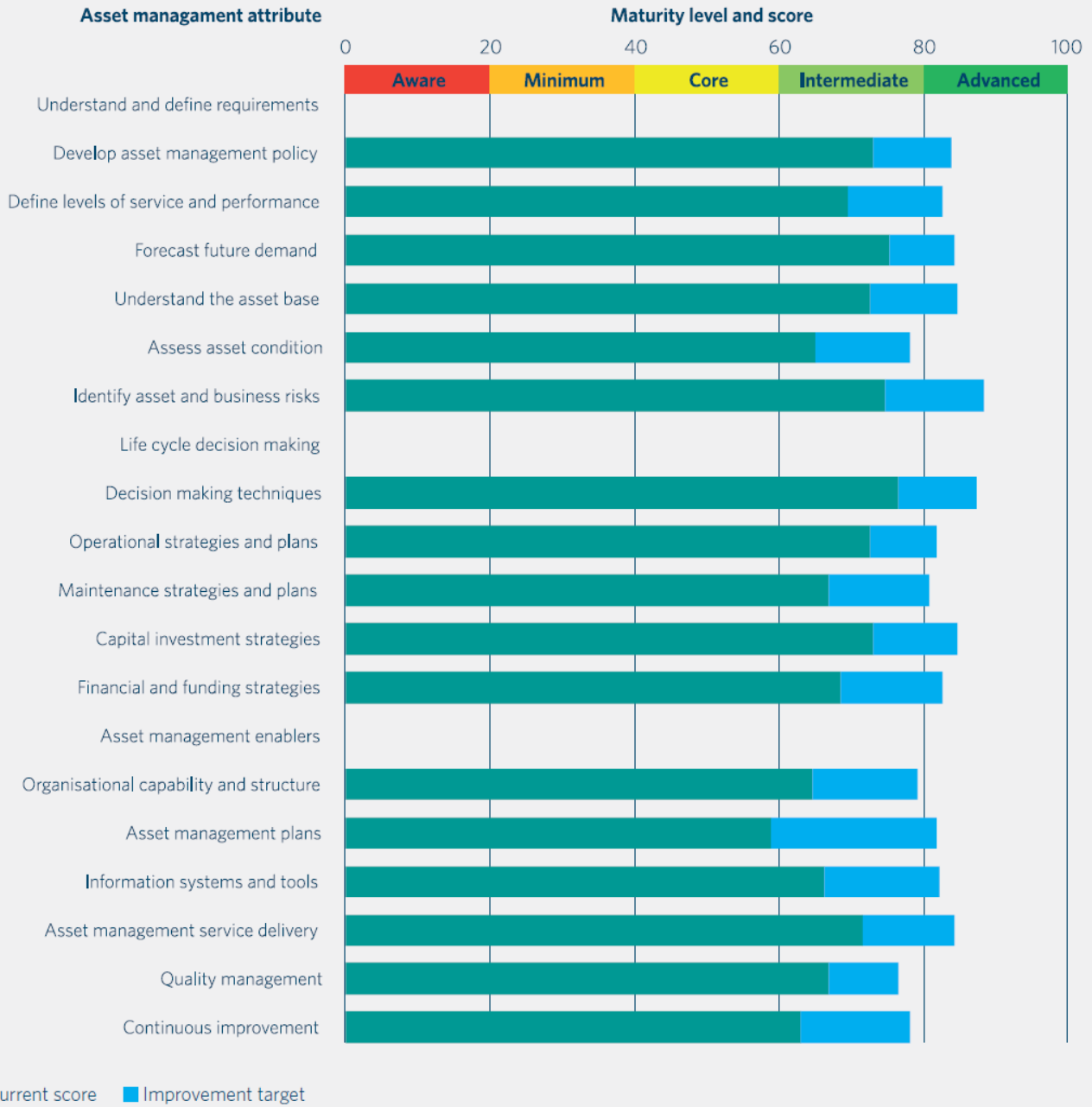
Note: These averages were calculated based on the responses on a scale of 1-4, with 1 specified as "not at all" and 4 specified as "according to plan". Grades 2 and 3 were not specified.

Source: The Office of the Auditor-General

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## Asset management maturity scores 2011 by attribute

(averages for current and appropriate level of maturity)



Source: COMU



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## Sources

GHD Ltd. (2012). Final Reports – Asset Management Capability Assessment. Report prepared for the Treasury.

Ministry of Education (2011). National School Roll Projections: 2011 Update.

Ministry of Justice (2012). Justice Sector Forecasts 2012-2022.

Office of the Auditor General. (2013). Managing public assets. Retrieved from <http://www.oag.govt.nz/2013/managing-public-assets>.

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