



Reflections from our audits: *Investment and asset management*



Cover artwork acknowledgement:
Painting 502, 1963, Waikanae,
by Walter Honour. Purchased 1968. © Te Papa.
CC BY-NC-ND licence. Te Papa (1968-0025-1)

Reflections from
our audits:
*Investment and
asset management*

Presented to the House of
Representatives under section 20 of
the Public Audit Act 2001.

July 2017

ISBN 978-0-478-44271-7

Contents

Introduction	3
Part 1 – Public assets are critical to delivering public services	6
Part 2 – Engage effectively with the people receiving the services	8
Part 3 – Be alert to challenges and opportunities	10
Natural hazards and extreme weather	10
Ageing, more urbanised population	11
Infrastructure replacement coming in waves	12
Limited resources and constrained budgets	12
Advances in technology	13
Part 4 – Make sound investment decisions	14
Have a sound and compelling case for investment	14
Plan over the right time frame	16
Consider overall public value	17
Work with others throughout the public sector	18
Know the expected benefits from investments in assets	19
Part 5 – Manage assets effectively	20
Collect reliable information	20
Invest in quality systems	22
Involve the right people	23
Manage assets over their entire life	25
Monitor asset performance	26
Determine whether benefits have been realised	27
Part 6 – Questions decision-makers should ask themselves	29

Introduction

Investment and asset management are critical to New Zealand's future. Public entities are stewards of physical assets worth about \$260 billion and financial assets worth about \$145 billion. These assets provide essential services to New Zealanders. Public money must be wisely invested in these assets, if they are to continue to deliver services in the long term.

There are a range of challenges and opportunities that affect public sector assets. Challenges include natural hazards such as earthquakes, climate change, rising demand for some services, an ageing population, urbanisation, and infrastructure replacement coming in waves. Opportunities are presented from advances in technology that could change the way services are provided to New Zealanders.

We have previously reported our concerns about aspects of how physical assets (such as hospital and school buildings and water-related infrastructure) are managed. We have also become increasingly interested in financial assets (such as bank deposits, shares, and other marketable securities) because financial assets are an increasing part of the total assets managed by the public sector.

For these reasons, we used our work programme for 2015/16 to look at whether New Zealand is getting the best from its public assets. We looked at a range of topics to assess how well the public sector plans for, funds, manages, and maintains infrastructure and other assets to optimise long-term service delivery for New Zealanders.

Our work on investment and asset management has reinforced what is needed to make good decisions about investing in assets, and what needs to be done to manage assets well.

To make good investment decisions there needs to be effective engagement by public entities with the people receiving the services about the service levels they expect and the affordability of those expectations. We found that public entities could engage more effectively with people about these matters.

Public entities tend to have well-reasoned business cases for investing in assets, but the cases do not always take into account the whole life of the proposed asset. Also, public entities are not always thinking about whether their decisions to invest in assets are best for the public sector as a whole, including the expected benefits and how they will be measured.

*Engage more effectively
with people*

*Take into account the
whole life of assets*

Work co-operatively with other entities

Public entities should work co-operatively with other entities, where it is sensible to do so, to address the challenges and opportunities that can affect investment and asset management. This includes central and local government working more effectively together for the benefit of New Zealanders.

For many years our work has recognised that public entities are not managing their physical assets as well as they should be. There are indications that some physical assets risk being “run down”, particularly in the health and local government sectors. In my view, the challenge of funding the maintenance and renewal of assets needs to be tackled if long-term service delivery is to be assured.

Often, better information is needed about the condition and performance of assets. The information needs to be analysed and used to monitor asset performance, and, in the case of physical assets, to make good choices and judgements about maintaining, renewing, and replacing assets to optimise the delivery of public services.

Without good reporting and information about assets, governors cannot make deliberate and informed decisions about how to invest in, and manage, the assets they govern.

Get better information about the condition of assets

Many public entities need to focus on improving their asset management and related systems, or use of their systems. Effective asset management requires an approach that is integrated with the operations of the public entity, where everyone involved has a shared understanding of what the assets are expected to deliver. Having the right information, systems, and people provides a foundation for managing assets well.

Public entities generally need to do better at measuring the performance of their assets and reporting information about assets to governors, so informed decisions can be made by those ultimately accountable for the delivery of services.

Our work on financial assets shows that public entities with significant investments in financial assets have reasonably good structures and systems for managing and governing those assets. However, at a whole-of-government level, thought needs to be given to financial asset risks and the challenges and opportunities that those risks present. In my view, there should be an overarching

investment strategy for the Crown's financial assets. There is such a strategy for physical assets.

I encourage decision-makers to think about the matters raised in this report, including the questions we have posed about investing in and managing assets. It is clear to me that, although aspects of asset management are done well by some public entities, there are significant issues to be addressed and challenges to meet if public assets are to continue to deliver the services that New Zealanders expect over the long term.

A handwritten signature in black ink, consisting of a stylized 'G' followed by a horizontal line with a small flourish at the end.

Greg Schollum
Deputy Controller and Auditor-General

21 July 2017

1

Public assets are critical to delivering public services

- 1.1 New Zealanders contribute billions of dollars of taxes, rates, levies, and fees annually to both central and local government. In return they expect, and have the right to expect, that these funds are well managed and used wisely.
- 1.2 Over many years, some of the funds from taxes, rates, levies, and fees have been invested in public assets. The value of physical assets in the public sector was about \$260 billion at 30 June 2016, which is relatively evenly split between central and local government. The value of financial assets at the same date was about \$145 billion, and most financial assets are held by central government entities.
- 1.3 Often when we think of public assets, we picture physical assets that are owned and managed by public entities. That is, those assets that are used to deliver services essential to our everyday lives. We rely on roads and rail assets to travel, electricity networks to power our homes and businesses, wastewater and storm water networks to protect our environment and health, hospitals to treat those who are unwell, and school buildings where our children learn.
- 1.4 The public sector also has an increasing amount of financial assets, such as cash, deposits, shares, and derivatives. Financial assets are used to help fund various public services that New Zealanders expect to receive. For example:
 - The New Zealand Superannuation Fund has built up financial assets designed to contribute to the country's future superannuation costs.
 - The Accident Compensation Corporation uses financial assets to help pay the costs of providing accident cover to all New Zealanders and visitors to New Zealand.
 - The Earthquake Commission's financial assets were used to help pay for claims associated with the Canterbury earthquakes.
- 1.5 The effective running of the New Zealand economy, including the health, prosperity, and quality of life of its people, depends on many of our public assets. Public entities are stewards of those assets and need to manage the assets well to deliver the public services that New Zealanders expect.
- 1.6 Poor management of assets has real costs to New Zealanders. Poor investment decisions use resources that could have been available to fund other priorities, and can result in unnecessary additional expenditure.¹ Further, managing financial assets well, including being clear about the risks of the financial strategy, is important to our resilience. It helps us to deal with shocks that arise, such as earthquakes, floods, droughts, and financial crises.

- 1.7 To deliver high-quality public services in a cost-effective way, public entities need to:
- be open and engage with people about the service levels they expect from public assets;
 - be alert to challenges and opportunities when investing in and managing public assets;
 - make sound investment decisions that take into account both the long term and the whole public sector; and
 - have the right information, systems, and people, and use information about assets to effectively manage the assets.

- 1.8 Investment and asset management was a particular area of focus for our work in 2015/16. It builds on a range of work on investment and asset management that we have carried out over many years. And, given the importance of assets to delivering services to New Zealanders, it is a topic that we will continue to focus on.

- 1.9 We see public entities that are investing in and managing assets well and those that need to make improvements. In this report, we share examples of both good and not so good practice, to help all public entities to improve how they invest in and manage the assets they are responsible for.

*We rely on roads and rail assets
to travel, electricity networks
to power our homes and
businesses, wastewater and
storm water networks to protect
our environment and health,
hospitals to treat those who are
unwell, and school buildings
where our children learn.*

2

Engage effectively with the people receiving the services

- 2.1 Whether investing in or managing assets, there needs to be clarity about the services people expect to receive from the assets, and effective engagement with those people about the services. Seeking the views of people is essential to understanding their needs, so that their needs and expectations can be matched with what the assets deliver. Engaging with people needs to be done on an ongoing basis.
- 2.2 People's expectations for open, accessible, and reliable information is increasing. Being able to engage with stakeholders and to explain why you did something is the essence of public accountability, and is the basis for trust and good administration. Engaging with people about services and the assets used to provide those services means having reliable information.
- 2.3 More often than not, public entities could reduce or allay concerns about what they are doing if they kept people better informed and were as open as possible. We often find that the situations that lead people to ask us to inquire into aspects of a public entity's work are where the entity has not been open about matters significant to the community.
- 2.4 Improving transparency, by reporting and communicating about the performance of assets to stakeholders, is about the relevance, rather than the amount, of information. Our review of public sector financial assets showed that much of the information that public entities communicated to people was highly technical. It was a challenge to make the information accessible, understandable, and useable.² However, it needed to be to get effective engagement.
- 2.5 The New Zealand Superannuation Fund did well at clearly writing and communicating to stakeholders about its investment beliefs, policies, and approaches. Public entities could learn from what the New Zealand Superannuation Fund did to make technical information more accessible, understandable, and useable.³
- 2.6 In 2014, a new requirement was introduced to the Local Government Act 2002. Local authorities are now required to prepare a consultation document for their communities to set out and seek views on the significant issues in their long-term plans. The intent of the consultation document is to facilitate good engagement with communities by concisely and clearly presenting significant issues, plans, and projects. This change in the Act included presenting the proposed content of the local authority's infrastructure strategy.

² Office of the Auditor-General (2016), *A review of public sector financial assets and how they are managed and governed*, page 33.

³ Office of the Auditor-General (2016), *A review of public sector financial assets and how they are managed and governed*, page 4.

- 2.7 The quality of the consultation documents for the 2015-25 long-term plans varied, and many local authorities missed the opportunity to effectively engage their community about the long-term challenges to their infrastructure assets.⁴ In our report, we noted that there needed to be clearer and more concise information about current levels of service and proposed levels of service⁵ to enable communities to effectively engage with their local authority about the levels of service they wanted and were prepared to pay for.
- 2.8 Being plain about the realities is essential to create the right debate with stakeholders. Minimising issues and deferring decisions or difficult conversations serves no-one well in the long run. It can result in a decline in service, spikes in cost, or assets failing.

Have you openly engaged with the right people about the right issues in making your significant investment decisions?

How will you continue to engage with people about those decisions and the services the assets provide?

4 Office of the Auditor-General (2015), *Consulting the community about local authorities' 10-year plans*, page 3.

5 Office of the Auditor-General (2015), *Consulting the community about local authorities' 10-year plans*, page 17.

3

Be alert to challenges and opportunities

- 3.1 The environment in which public entities operate is diverse and constantly changing. As a country, New Zealand has experienced significant economic shocks in the last 10 years, including the global financial crisis, the Canterbury earthquakes, and several severe weather events.
- 3.2 We have previously highlighted the need for decision-makers to understand the risks in managing physical assets and ensure that these risks are actively managed.⁶ Risks are not just presented when experiencing significant shocks. The public sector needs to think carefully about the risks presented by changing demographics, as our population ages and becomes more urbanised, and the risks presented by historical investment choices.
- 3.3 Risks present both challenges and opportunities that public entities need to consider in making their investment decisions. New Zealand does not have the economies of scale of many other countries. Therefore, careful thought is needed about where and how to invest to optimise services for New Zealanders, and to build resilience.
- 3.4 New Zealand has invested significantly in financial assets to help respond to the challenges. However, the challenges come into sharper focus with our physical assets – especially given the age of much of New Zealand’s infrastructure.
- 3.5 There are opportunities presented that should be considered, including the increasing advances in technology.

Natural hazards and extreme weather

- 3.6 Although the long-term effects of climate change are uncertain, it is becoming increasingly apparent that parts of New Zealand are, and will continue to be, affected by changes in weather patterns and rising sea levels. New Zealand is also seismically active, and physical assets need to be designed with these risks in mind.
- 3.7 We have seen a number of recent examples of natural hazards and extreme weather events that have overwhelmed flood defences, storm water systems, and water supply systems. Although it is not possible to avoid the effects of natural hazards or extreme weather, they should be anticipated, prepared for, and mitigated where possible. We have found that public entities plan mainly for likely events. They also need to deliberately and sensibly plan, as appropriate, for more unlikely events that would have significant consequences.⁷

⁶ Office of the Auditor-General (2013), *Managing public assets*.

⁷ Office of the Auditor-General (2014), *Reflections from our audits: Our future needs – is the public sector ready?*, page 20.

- 3.8 For example, one of Waimakariri District Council’s long-term plan strategies for managing its infrastructure is to provide potential extra financial “headroom”, so that it can raise debt to help pay for infrastructure repairs in the wake of another natural disaster. Wellington City Council made a point in its 2015-25 long-term plan to emphasise issues and options for addressing the Capital’s earthquake-prone buildings.⁸

Ageing, more urbanised population

- 3.9 The different regions of New Zealand have divergent futures. For some regions, such as Auckland, Waikato, and the Bay of Plenty, the future will be dominated by a sharp growth in population. Other areas face a steady decline in population.
- 3.10 Accommodating increases in population brings significant challenges for those public entities trying to meet the needs of their growing communities. For example, they will need to provide for increased transport needs and a greater demand for health and education services. Such challenges should not be underestimated: Auckland currently has 800 new vehicles registered every week.
- 3.11 The regions facing a decline in population that are unable to stop the decline need to consider the possibility of abandoning assets or decreasing the level of service that is currently provided. Rangitikei District Council, for example, has a declining and ageing population. The Council presented information about the implications of those changes in an effective way to engage its community.
- 3.12 Rangitikei District Council was up-front about what it could afford, and the need to seriously consider abandoning some assets. It started a conversation with its community about a financially sustainable solution for dealing with wastewater in Mangaweka that did not involve replacing the existing plant, due to the cost of doing so.⁹
- 3.13 Most regions are likely to experience an ageing population. As a community ages, its need for community services will change. The community’s infrastructure needs will also change – there might be a higher demand for footpaths that can accommodate mobility scooters, and green spaces that have a passive recreational use, and greater demand for particular health services. With more people moving to fixed incomes in their retirement, affordability will become an increasing challenge to meet and respond to the changing demands of communities.

8 Office of the Auditor-General (2015), *Matters arising from the 2015-25 local authority long-term plans*, page 47.

9 Rangitikei District Council (2015), *2015-25 Long-Term Plan*, page 71.

Infrastructure replacement coming in waves

- 3.14 Groups of assets that have been built around the same time will need replacing, upgrading, or require major repairs around the same time. For example, more than one third of school buildings are between 40 and 60 years old. These buildings are not only ageing and tired, but were not designed for modern teaching practices. Also, many school buildings built between 1997 and 2006 have weathertightness problems.
- 3.15 Similarly, there was extensive investment in road infrastructure throughout New Zealand during the 1920s and early 1930s, (and a reasonable level of investment since the mid-1950s). Many roads were built before developments in safety and sustainability, and before heavy trucks and trailers and buses came along. The roads may need upgrading to deliver the services that New Zealanders need from their transport networks today.
- 3.16 In local government, a lot of the water-related infrastructure (water supply, wastewater, and storm water) was built around the same time. It is likely that much of that infrastructure will need to be repaired or replaced between 2040 and 2060.¹⁰
- 3.17 These are examples of the replacement “waves” that are coming. With good planning, these replacement waves will be able to be discussed with the community, and their financial implications considered and planned for.

Limited resources and constrained budgets

- 3.18 Central government is focused on reducing net debt to 20% of the country’s gross domestic product by 2020 and to 10-15% by 2025.¹¹ Local authorities are conscious of, and in many cases are responding to, community calls to manage debt and reduce rate rises.
- 3.19 Restraints such as these can have the consequence of limiting the amount spent on maintaining and renewing assets, given the competing demands for the funding that is available to public entities. Greater transparency of asset condition and maintenance can help to show where insufficient spending on assets threatens long-term asset management.
- 3.20 New Zealand is a small country with limited resources, including a limited number of people with specialised skills to manage some types of assets. These resources need to be used wisely if public sector assets are going to continue to deliver essential services over the long term.

10 Office of the Auditor-General (2014), *Water and roads: Funding and management challenges*.

11 New Zealand Government, *2017 Budget, Budget at a glance: Delivering for New Zealanders*, page 1.

Advances in technology

- 3.21 Technology is changing the way that services are delivered, how people communicate and interact with public entities, and how those entities interact with them.
- 3.22 Infrastructure assets have long lives. Although the future demand for services needs to be considered when planning new physical assets, so too does any change in how services are likely to be delivered, particularly through increased use of technology.
- 3.23 In the health sector, district health boards are responding to changes in how healthcare is to be delivered, with increasing use of new and emerging technologies. These types of changes have implications for the assets that will be needed to deliver improved health services.
- 3.24 Tertiary education institutions are facing pressures from new technology, such as delivering education outside of lecture theatres. This, combined with ageing assets and demographic changes resulting in declining numbers of domestic students, means tertiary education institutions need to reconsider the assets that will be used to deliver education in future, and plan the changes accordingly.
- 3.25 No public entity is immune from the influence of technology. Although it brings challenges, there are also many opportunities that can be embraced.

Do you clearly understand, and have you considered, the challenges and opportunities you face?

Do you regularly review challenges and opportunities to inform your investment and asset management decisions?

4

Make sound investment decisions

- 4.1 Public entities have important decisions to make about how they will use funds to invest in assets, to deliver high-quality public services now and in the future.
- 4.2 These decisions are equally important whether investing in financial or physical assets. Investing in physical assets can include renewing existing assets (such as re-surfacing a road), investing in a new asset to provide additional capacity (such as building additional classrooms at a school), or providing new services (such as a new community centre).
- 4.3 Our work has considered what public entities do at the “thinking and planning” stages to make sound investment decisions. We looked at whether public entities were clear about what they wanted to achieve from investments in assets, and whether the cases made for investment were based on reliable data and the right analysis that takes account of the broader economy. We also looked at whether public entities considered overall public value and worked with other public entities to provide services for the long term.
- 4.4 During our work, we identified that few public entities have mature practices for defining the benefits they are seeking from their investments. And few measure those benefits.

Have a sound and compelling case for investment

- 4.5 Any significant investment, whether in financial or physical assets, should be backed by a sound business case. A business case should demonstrate and provide confidence that the investment is aligned to the entity’s strategic intentions, how the investment will be achieved, and how value for money will be demonstrated and measured. From time to time, we review business cases as part of our work.
- 4.6 For entities in central government, we expect the requirements of the Treasury’s Better Business Case approach to be followed. In our report *Investing in tertiary education assets*, we noted that tertiary education institutions generally did well in following Better Business Case guidance. To have done better, they would need to consider the whole tertiary sector and public value. This would require a “joined-up” public sector mind-set, which can be hard to achieve when institutional drivers are entity-based.
- 4.7 Other public entities, such as local authorities, are not required to apply the Better Business Case approach. Nevertheless, we would expect the same disciplines to be applied.

Do you have a compelling case for investment?

Consider your strategic intentions

- 4.8 It is important that any business case reflects the strategic intentions an entity or sector is seeking to achieve. In our report *Managing the school property portfolio*, we looked at the Ministry of Education's investment in school property assets. The Ministry published a school property strategy (for 2011-2021) that was clear about the Ministry's wish to improve learning environments to support educational achievement. The Ministry still has some work to do to align investment and management of school property with the strategy. For example, the Ministry has not yet identified how to measure whether its investment in assets improves learning environments or supports educational goals. We acknowledge the complexity of determining such measures.

Guard against optimism bias

- 4.9 When preparing business cases to invest in assets, entities need to be aware of, and guard against, optimism bias. Business cases need to use the best assumptions, based on objective underlying data and information. In that way, sound decisions can be made about whether the investment should be made.
- 4.10 We found that many business cases for assets in the tertiary education sector were optimistic when forecasting domestic enrolments. Throughout the sector, total forecasts well exceeded the total number of expected domestic students. Although the forecasts for a particular entity could be justified, collectively they could not. Sub-optimal investment decisions could have been made by some entities in the tertiary education sector.
- 4.11 In the recovery from the Canterbury earthquakes, many of the original milestones for rebuilding projects in the central business district (the "anchor projects") were optimistic, and some were unrealistic. Not surprisingly, most of the milestones were missed. This had a damaging effect on the public's and investors' trust and confidence in the re-development of the central business district of Christchurch.

Have you been realistic and used reasonable assumptions?

Plan over the right time frame

- 4.12 Long-term planning is important for prudent investment and asset management to ensure that essential public services will continue to be delivered.
- 4.13 Our work in the health sector since 2009 shows a sector focused on delivering short-term results, but generally not planning for the long term. The sector has a challenging operating environment, increasing demand for services, and financial constraints. Given the challenges, the health sector and each district health board needs to take a longer-term view on capital investment and asset management.¹²
- 4.14 In our report *Managing the assets that distribute electricity*, we looked at the way that three electricity distribution businesses were managing their distribution networks. We found that the three companies' focus was largely on the short to medium term. With a longer-term focus, we consider that the three companies could make better-informed decisions about how to manage their networks.
- 4.15 It can be difficult to plan for the future, especially in an environment of increasing complexity and uncertainty. In our view, the best plans cover the entire life of the asset, from identifying the need for the asset, creating the asset, operating the asset, and eventually replacing and disposing of the asset. This gives a complete picture and supports better decisions.
- 4.16 In 2015, Cabinet issued a circular¹³ setting out expectations for managing investments in assets for all government departments and most Crown entities. The circular requires investment-intensive agencies to have a current long-term investment plan that describes an agency's or sector's "investment journey", in line with its long-term vision and goals. It shows where investment will be made, and how it will occur to support the strategy.
- 4.17 The long-term investment plan covers at least 10 years, and needs to be updated at least every three years. The regular updating of plans is important because as circumstances change, plans for investing in and managing assets may need to change to realise the best value from the assets. The move to longer-term planning is a step in the right direction for entities in central government.
- 4.18 When we looked at Crown-owned companies, we noted that companies such as New Zealand Post and KiwiRail, which have particularly uncertain environments, focused on the future and analysed what it might hold. These companies thought about their purpose and how best to achieve their goals, despite the uncertainties they face.

12 Office of the Auditor-General (2016), *District health boards' response to asset management requirements since 2009*, page 5.

13 Cabinet Office Circular CO (15) 5 *Investment Management and Asset Performance in the State Services*.

- 4.19 In 2015, all local authorities had a new requirement to prepare an infrastructure strategy, and include it in their long-term plan. Infrastructure strategies are important because they set out a local authority's vision for asset development and management for at least 30 years.¹⁴
- 4.20 Local authorities made a good start in preparing their infrastructure strategies. However, there is room for improvement. We were pleased with the approach taken by the nine local authorities that prepared infrastructure strategies beyond 30 years, and some covered the entire life of their assets. These local authorities took the opportunity to engage in a conversation with their community about the key infrastructure issues and risks facing the district and region.

Have you planned for the entire life of the asset?

Consider overall public value

- 4.21 Some of our reports on investment and asset management showed that individual public entities planned their capital investments well, including sound cases for investment and appropriate risk and investment management strategies. However, these plans often did not consider how the case stacked up when taking account of other public entities in the same sector, or the broader public sector.
- 4.22 If the main focus of investment decisions is overall public value, as a country the more marginal investments should not be made. The result should be that scarce financial resources are directed to those investments that will provide the greatest value to New Zealanders.
- 4.23 The National Infrastructure Unit within the Treasury has published the *National Infrastructure Plan 2015: The Thirty Year New Zealand Infrastructure Plan*. This plan provides a national view that looks at the infrastructure networks throughout different sectors and the interdependencies between them.
- 4.24 The vision set out in the plan is that “by 2045 New Zealand’s infrastructure is resilient and coordinated and contributes to a strong economy and high living standards”. It further notes that this means:
- National decision-making is integrated with regional and local planning and considers the interdependencies between sectors.
 - Separate national, regional, and local entities work together to create an efficient and effective infrastructure network.¹⁵

14 Office of the Auditor-General (2015), *Matters arising from the 2015-25 local authority long-term plans*, pages 35-48.

15 National Infrastructure Unit (2015), *National Infrastructure Plan 2015: The Thirty Year New Zealand Infrastructure Plan*, Wellington, page 11.

- 4.25 To achieve this vision, further thought is needed on how to co-ordinate the management of New Zealand's infrastructure.
- 4.26 For some public entities, it makes sense to co-ordinate decisions at a national or sector level. For others, it makes sense to focus regionally. In our report *District health boards' response to asset management requirements since 2009*, we noted that we expected knowledge, linkages, and understanding of assets to be held at the appropriate levels for effective regional and national planning.
- 4.27 There are some examples of shared services and similar arrangements in district health boards. However, too often they operate in isolation, rather than jointly focusing on long-term health services for all New Zealanders.
- 4.28 In our report *Review of public sector financial assets and how they are managed*, we noted:

The financial assets and associated liabilities of central government should be considered together, with a clear understanding of the risks being taken, how they are being managed, and the opportunities and challenges they create. Wider matters such as how public assets and liabilities interact with, and influence, each other, the Government, the investment industry, and the economy also need careful thought at a whole-of-government level.¹⁶

Have you looked at how to join up with others and maximise value?

Work with others throughout the public sector

- 4.29 In making decisions about where to invest money, there are difficult decisions that need to be made about the continued viability of some services, given population trends and the costs of replacing ageing infrastructure. Sometimes, the decisions made by one public entity will affect other public entities. Public entities will need to move beyond simply working together, and explore different solutions to achieve a common objective.
- 4.30 The way central and local government work together to consider the challenges and make decisions is likely to become more rather than less important. Local authorities will need to engage effectively not only with their communities but also with central government about the options, costs, and associated trade-offs.
- 4.31 Central government is likely to increasingly rely on local government to deliver services to meet community needs. However, given affordability constraints, local government is likely to become more dependent on central government funding.

¹⁶ Office of the Auditor-General (2016), *A review of public sector financial assets and how they are managed and governed*, page 4.

- 4.32 Tairāwhiti Roads is an example of central and local government working together. It is a joint venture between the New Zealand Transport Agency and Gisborne District Council and takes a collaborative approach to deliver maintenance, operations, and renewal programmes over the combined state highway and local roading network in Gisborne. It aims to deliver smarter asset management, better decision-making, and cost savings through regional efficiencies.
- 4.33 If the vision set out in the 30-year infrastructure plan for New Zealand is to be achieved, central and local government will need to:
- find enduring ways of working together;
 - build alignment of their objectives and strategic priorities; and
 - make decisions about co-funding of investments or services.

Know the expected benefits from investments in assets

- 4.34 It is important to document the benefits expected from investments in assets and to have ways of tracking and measuring the benefits as they are realised. This helps with understanding what is desired, and ultimately what is being achieved. Tracking and measuring benefits will provide insights into issues that need addressing or lessons for future investments.
- 4.35 Our work has highlighted three recurring themes that have the potential to undermine any measurement of benefits realised:
- a focus on asset delivery as the end point of a project or programme;
 - overly ambitious and optimistic estimates of benefits and time-scales, coupled with a lack of external challenge; and
 - complexity and longevity of projects.
- 4.36 To help ensure that benefits are realised, benefits need to be explicit in business cases, but also their tracking and measurement need to be embedded into the usual business processes once the asset is in use.

Have you clearly defined the benefits you are seeking and how you will measure those benefits?

5

Manage assets effectively

- 5.1 As the stewards of public assets, it is important that public entities have the right information, systems, and people to manage assets responsibly and to the best of their ability. Having the right information, systems, and people provides a good foundation for effectively managing assets to meet the needs of current and future generations.
- 5.2 When carrying out our work, we meet many people who are passionate about being good asset managers. They recognise the importance of effective asset management and the tools and resources they need to do their work.
- 5.3 However, public entities need to be realistic about the gaps in their information and systems. They need to understand the gaps and work hard to fill them to enable good asset management.
- 5.4 Good information about assets is needed for public entities to monitor the performance of assets and manage them. If done well, public entities will make decisions that optimise services to people and they will realise the most value from their investment in the assets.

Collect reliable information

- 5.5 Having robust information about physical assets and their condition helps public entities make effective and sustainable decisions about how their assets are managed. Public entities might not have detailed information about all of their assets, but they should have a good understanding of critical assets. Critical assets are those assets that, if they failed, would have a significant adverse effect on essential services.
- 5.6 If a public entity does not have a good understanding of its critical assets, particularly the condition of the assets, they could be at risk of making poor long-term decisions. Long-term planning that is based on inaccurate condition information or poorly informed assumptions could result in costly or unsustainable decisions.
- 5.7 Our 2013 discussion paper, *Managing public assets*, included a case study of Greater Wellington Regional Council's management of its rail assets. Based on the Council's experience, we noted that:
 - work on assets cannot be effectively prioritised if assets are not understood;
 - information is crucial to the planning process;
 - the time it takes to complete condition assessments should not be underestimated; and
 - the assessment methodology must be understood and data must be useable.

- 5.8 These factors can be almost universally applied to the management and reporting of all physical and financial assets.¹⁷
- 5.9 The collection, analysis, and use of robust information about critical assets needs to be an area of focus for many public entities. This includes collecting the underlying knowledge and information about assets that staff involved in the management of those assets acquire.
- 5.10 Since 2009, we have reported that many district health boards have weak asset management information and practices. There has been a general lack of knowledge about the condition of assets and a lack of financial planning for asset renewal and replacement. When we followed up in 2016, we noted some improvements to asset information and practices. However, there was still some way to go for many district health boards to have “joined-up” and reliable information so they could budget properly and make good decisions about their assets.¹⁸
- 5.11 Our 2014 report, *Water and roads: Funding and managing challenges*, noted that many local authorities did not have a complete understanding of the performance or condition of their assets.¹⁹ Some local authorities had low confidence in the reliability of their asset data.²⁰ Further, when we looked at local authorities’ infrastructure strategies for their 2015-25 long-term plans, we noted that more than half of them discussed the need to collect better information about assets. Underground networks posed the greatest challenge in terms of asset condition information.

Do you have the right information about assets to make good decisions?

17 Office of the Auditor-General (2016), *Managing public assets*, pages 20-21.

18 Office of the Auditor-General (2016), *District health boards’ response to asset management requirements since 2009*, pages 3-5, 12.

19 Office of the Auditor-General (2014), *Water and roads: Funding and managing challenges*, pages 4-5.

20 Office of the Auditor-General (2015), *Matters arising from the 2015-25 local authority long-term plans*, pages 39-40.

Invest in quality systems

- 5.12 Having robust information is not an end in itself. The information needs to be collected in a way that makes it useable. Therefore, it is important to invest in good quality systems that make it easy to use the information to manage assets effectively.
- 5.13 At times, we find that systems are not in place or are not used in the best way.²¹ There is a risk that, in these circumstances, opportunities are missed or poor decisions are made.
- 5.14 In 2016, we followed-up on earlier reports that considered the effectiveness and efficiency of arrangements to repair pipes and roads in Christchurch. As the repair work was done, the Stronger Christchurch Infrastructure Rebuild Team (SCIRT) alliance collected a wealth of information about pipes and roads owned by Christchurch City Council and New Zealand Transport Agency that they could benefit from. SCIRT recorded this information in asset information systems that it set up.
- 5.15 We noted that Christchurch City Council could use this information to improve its understanding of the condition of its assets, which would improve its management of them. However, progress had been slow in planning for the transfer of the information from SCIRT's system to the Council's system. We noted that the Council needed to sustain momentum for the transfer of information to realise the benefits of SCIRT's work for ratepayers.²²
- 5.16 In our report *Managing the school property portfolio*, we noted that information about school properties was spread throughout different systems in the Ministry of Education. Although there is enough information in these systems to make informed decisions, we did not see the information being used to produce a whole-of-portfolio view to support effective evidence-based investment decisions.

Do you have systems where the data about assets can be readily analysed and used to manage those assets?

21 Office of the Auditor-General (2014), *Reflections from our audits: Our future needs – is the public sector ready?*, page 24.

22 Office of the Auditor-General (2016), *Effectiveness and efficiency of arrangements to repair pipes and roads in Christchurch – follow-up audit*, pages 31-37.

Involve the right people

Good governance

- 5.17 Public entities need good governance of assets. We expect those charged with governance to ensure that there is effective planning for and management of assets, and to monitor the effectiveness of asset management.
- 5.18 In our report *Review of public sector financial assets and how they are managed*, we looked at governance in 14 public entities with significant financial assets. All 14 had reasonably good structures and systems in place for managing and governing those assets.²³
- 5.19 When we consider the governance of physical assets, there are mixed results. For example, we found limited reporting on the condition and performance of assets to governors and senior managers of district health boards. This led us to question how well positioned governors are to make decisions about the future delivery of services.²⁴
- 5.20 In the absence of good reporting and information about assets, governors cannot make deliberate and informed decisions about how to invest in and manage the assets they govern. In our most recent report on the results of local authority audits, we noted our expectation that elected members of local authorities understand their critical assets in order to make good decisions about the maintenance and renewal programmes of those assets, as well as investments in new assets.

Clear roles and responsibilities

- 5.21 Good governance requires a distinction between the role of governors and managers. In our report *Reflections from our audits: Governance and accountability*, we noted that improvements are needed to clarify roles and responsibilities for governors and managers at an organisational level and project level.²⁵
- 5.22 In our audit of the Auckland Manukau Eastern Transport Initiative programme, we found that a change in the arrangements for the Programme Control Group led to the same person acting as the chairperson, programme sponsor, manager for the delivery of the programme, and the line manager of the programme director. Too much responsibility in the hands of one person reduced the effectiveness of the advice from the Programme Control Group.²⁶ This was not in the best interests of such a significant project.

23 Office of the Auditor-General (2016), *A review of public sector financial assets and how they are managed and governed*.

24 Office of the Auditor-General (2016), *District health boards' response to asset management requirements since 2009*, pages 4, 23, and 54.

25 Office of the Auditor-General (2016), *Reflections from our audits: Governance and accountability*, page 3.

26 Office of the Auditor-General (2015), *Reviewing aspects of the Auckland Manukau Eastern Transport Initiative*, pages 40-41.

Capable staff

- 5.23 Good asset management relies on entities having the right people to carry it out. Recruiting and retaining competent people is important, as is the engagement of external advisors where sensible to do so.
- 5.24 We looked at how well Crown Fibre Holdings Limited (Crown Fibre) was managing its work to build an ultra-fast broadband network throughout the country. Crown Fibre employed capable people who could negotiate and manage relationships in a tough commercial setting. This was a critical component of Crown Fibre's operations.²⁷
- 5.25 Public entities may not always have the expertise internally to manage their assets. If so, they will need to seek external expertise. We looked at how three electricity distribution businesses were managing their resources. They had resourcing strategies that included using contractors where there were skill gaps. They also recognised that there will be a need in the future for more specialist skills, such as data technicians and business analysts, to continue to manage their distribution networks effectively.²⁸
- 5.26 We expect the demand for specialised skills in many aspects of asset management to continue to increase. Because New Zealand is a relatively small country, finding specialised staff will be a challenge, and it is a risk that needs to be managed.

Independent advice

- 5.27 If public entities have new or complex financial or physical assets and do not have the experience or expertise internally to govern or manage them, independent external advice should be sought. This could include seeking a second opinion or referring business cases to an audit and risk committee.
- 5.28 Some of our previous inquiries work shows that peer review, independent expertise, additional due diligence, or specialist tendering or contracting support would have helped avoid or reduce the risk of investment or project breakdowns.
- 5.29 In our report *Review of public sector financial assets and how they are managed*, we made the point that investment portfolios of financial assets can be complex. That complexity may require governors to be supported by independent expertise, or to think innovatively and combine financial assets with others to obtain greater efficiencies and expertise, and better structures.²⁹

27 Office of the Auditor-General (2016), *Crown Fibre Holdings Limited: Managing the first phase of rolling out ultra-fast broadband*, page 3.

28 Office of the Auditor-General (2017), *Managing the assets that distribute electricity*, pages 18-19.

29 Office of the Auditor-General (2016), *A review of public sector financial assets and how they are managed and governed*, page 4.

- 5.30 In our report on Crown Fibre, we noted that in its approach for selecting commercial partners Crown Fibre got independent advice and assurance on procurement from several credible sources. This advice and assurance was positive. Crown Fibre's actions were consistent with its policies and with legal and probity principles for procurement.³⁰

Have you involved the right people in the decisions about assets?

Manage assets over their entire life

- 5.31 The public sector has a lot of physical assets that provide core services to New Zealanders. It is important to maintain these assets so that essential community services will continue to be delivered now and for future generations. Public entities need to have a mind-set of service delivery in perpetuity. If assets are allowed to run down, future generations will either not receive the same level of services or have to pay disproportionately more for them.
- 5.32 In our 2013 discussion paper *Managing public assets*, we took stock of how physical assets that deliver services to the public are managed. Public entities did not know whether there was any deferred maintenance or renewals for nearly 40% of assets. Understanding deferrals is important for assessing risk to services. Public entities in the education and health sectors had the most deferrals.
- 5.33 During our recent audits of local authorities, we reported a trend that local authorities continue to report a low level of capital expenditure on renewals³¹ compared to the amount they set aside for depreciation.³² Local authorities have also been carrying out substantially less capital work than they had budgeted for.
- 5.34 Where renewals expenditure is equal to depreciation over time, it usually indicates that reinvestment in the asset is enough to meet what is "used up". We have been considering this trend in local authorities for some time.
- 5.35 In our work on local authorities' 2012-22 long-term plans, the ratio of forecast renewals expenditure to depreciation showed a downward trend in asset reinvestment. If actual spending trends continue to match those forecast, we estimated that, by 2022, the gap between asset renewals expenditure and depreciation in local government could be between \$6 billion and \$7 billion.

30 Office of the Auditor-General (2016), *Crown Fibre Holdings Limited: Managing the first phase of rolling out ultra-fast broadband*, page 15.

31 Renewals expenditure is the money an asset-intensive organisation needs to reinvest to maintain its service capacity and capability. It means re-investing in the assets when components reach the end of their useful life and need to be replaced.

32 Depreciation is an estimate of the consumption of the entity's assets during the reporting period. Over the life of an asset, depreciation represents the amount of the service potential in the asset used by the entity. Normally, assets are fully depreciated before they are replaced.

- 5.36 In local authorities 2015-25 long-term plans, we found an increase in the level of renewal and replacement spending to depreciation in 2015. However, from 2019 onwards the level is forecast to return to the level forecast in previous long-term plans.
- 5.37 Each local authority's circumstances are unique. Infrastructure assets typically have at least 50 years of useful life, so we cannot draw firm conclusions about asset sustainability trends based on 10-year forecast information. However, this trend, together with weaknesses in asset knowledge, indicates that local authorities might be underinvesting in their assets.
- 5.38 We have encouraged all local authorities to better understand the condition and performance of their assets, and to consider whether they are underinvesting.³³
- 5.39 The work we have carried out in the health and tertiary education sectors shows that they too grapple with these issues.

Monitor asset performance

- 5.40 Appropriate monitoring of the performance of assets is needed to ensure that services are being provided as intended. Information about the performance of assets needs to be available for managers and decision-makers to scrutinise and inform asset development and management.
- 5.41 Performance monitoring needs to be appropriate to the nature of the asset, with measurable and relevant performance measures. Scrutiny of the performance will occur at different levels and the right information needs to be provided to the right level – short-term or long-term, locally focused or country-wide.
- 5.42 The New Zealand Transport Agency manages the state highway network. The network is one of the country's most important assets. In 2014, the network was almost 11,000 kilometres long, had a value of around \$28 billion, and \$500 million was spent on its upkeep and development annually.
- 5.43 An important part of the Transport Agency's work is monitoring the performance of contractors doing work on the network. This includes using contract management boards to review contract progress and a value assurance committee to review key result areas nationally. In our review of the Transport Agency's work, we stressed the importance of monitoring and benchmarking contractor performance consistently throughout the country and reporting on the results to contractors.³⁴

Are you receiving the information needed to monitor how effectively assets are managed?

33 Office of the Auditor-General (2017), *Local government: Results of the 2015/16 audits*, page 3.

34 Office of the Auditor-General (2014), *New Zealand Transport Agency: Maintaining and renewing the state highway network – follow-up report*, pages 3-8, 26-30.

Determine whether benefits have been realised

- 5.44 The benefits obtained from investments in assets can be realised over an extended period. It is common for the benefits from major capital infrastructure projects to be realised over 30 years or more. Tracking and measuring benefits needs to be carried out, and regularly reported on, over the long term.
- 5.45 When carrying out some of our asset management work, we have looked for whether productivity increased by doing either more for the same cost or the same for less cost. We also looked for whether New Zealanders experienced an improvement in services through increased reliability or accessibility.
- 5.46 Overall, our work showed that the state of benefits measurement and realisation in public entities is immature.
- 5.47 In 2016, we reviewed the use of the Gateway process in capital-intensive agencies in central government.³⁵ The Gateway process reviews significant capital projects at various stages of the project, based on risk factors identified by research into common causes of project failure.
- 5.48 We found that reviews were not carried out when the project was complete and benefits should start to be realised from the asset. Once the project was complete, the project team disbanded without first establishing processes to embed benefits realisation.
- 5.49 In our 2016 report *District health boards' response to asset management requirements since 2009*, we considered the 2016 health strategy. Two independent reviews carried out as part of the update of the strategy noted that:
- There is a lack of visibility of results that makes it hard to prioritise funding or take into account long term, cross-sectoral benefits from investment.*³⁶
- 5.50 Some public sector projects can take many years to become a reality. In such projects, it is important to revisit the business case for the project or programme to check that the benefit assumptions are still valid, wanted, and achievable. Priorities can change over long periods, and organisational memories can fade as staff and governors change.

35 Office of the Auditor-General (2016), *Using Gateway reviews to support public sector projects*.

36 Office of the Auditor-General (2016), *District health boards' response to asset management requirements since 2009*, page 44.

- 5.51 The Inland Revenue Department has a business transformation programme that will take about seven years. We carried out some work during the initial period of the programme, and found it to be well governed. But we also commented:

There is a challenge with a long-term programme of this nature to determine when the main benefits of the programme will be delivered. This is because the uncertainties and length of the programme mean that prescription of those benefits and when they will be delivered is necessarily difficult early in the programme and will become clearer as the programme progresses. In our view, management of the realisation of the benefits needs to be in place from the beginning of a programme.

- 5.52 We recommended a continued focus on risks, including the risk of the programme not being able to provide enough certainty or clarity about when benefits will be realised. Inland Revenue intends to continually assess and manage risks to benefit realisation.

6

Questions decision-makers should ask themselves

- 6.1 Throughout this report, we have posed a number of questions that we think decision-makers in public entities need to be able to answer about investing in and managing assets. These questions are important if public assets are to continue to deliver essential public services over the long term.
- 6.2 Those questions are:
- Have you openly engaged with the right people about the right issues in making your significant investment decisions?
 - How will you continue to engage with people about those decisions and the services the assets provide?
 - Do you clearly understand, and have you considered, the challenges and opportunities you face?
 - Do you regularly review challenges and opportunities to inform your investment and asset management decisions?
 - Do you have a compelling case for investment?
 - Have you been realistic and used reasonable assumptions?
 - Have you planned for the entire life of the asset?
 - Have you looked at how to join up with others and maximise value?
 - Have you clearly defined the benefits you are seeking and how you will measure those benefits?
 - Do you have the right information about assets to make good decisions?
 - Do you have systems where the data about assets can be readily analysed and used to manage those assets?
 - Have you involved the right people in the decisions about assets?
 - Are you receiving the information needed to monitor how effectively assets are managed?

About our publications

All available on our website

The Auditor-General's reports are available in HTML and PDF format on our website – www.oag.govt.nz. We also group reports (for example, by sector, by topic, and by year) to make it easier for you to find content of interest to you.

Our staff are also blogging about our work – see blog.oag.govt.nz.

Notification of new reports

We offer facilities on our website for people to be notified when new reports and public statements are added to the website. The home page has links to our RSS feed, Twitter account, Facebook page, and email subscribers service.

Sustainable publishing

The Office of the Auditor-General has a policy of sustainable publishing practices. This report is printed on environmentally responsible paper stocks manufactured under the environmental management system standard AS/NZS ISO 14001:2004 using Elemental Chlorine Free (ECF) pulp sourced from sustainable well-managed forests. Processes for manufacture include use of vegetable-based inks and water-based sealants, with disposal and/or recycling of waste materials according to best business practices.

Office of the Auditor-General
PO Box 3928, Wellington 6140

Telephone: (04) 917 1500
Facsimile: (04) 917 1549

Email: reports@oag.govt.nz
Website: www.oag.govt.nz