

New Zealand Gateway Reviews

Lessons Learned Report 2015

Third Lessons Learned Report:
New Zealand Gateway Reviews 101-150

Further information

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Executive summary

This is the third New Zealand Gateway Unit report presenting lessons learned from the New Zealand Government's Gateway reviews. We analyse and publish recommendations every 50 reviews – frequent enough to identify issues that are still current, while covering enough reviews to identify trends. All our lessons learned reports are on our website: www.treasury/investmentmanagement/review/gateway/lessons

This report provides an analysis of 44 Gateway reports (numbered 101-150) conducted across 39 projects and programmes in 22 agencies between March 2013 and September 2014¹.

Key messages

The Gateway Unit analyses the recommendations arising from Gateway reviews and categorises them by 15 themes. The table below shows the top six themes, by frequency, across the three Lessons Learned reports published to date.

	Theme		
	2015 (Reviews 101-150)	2013 (Reviews 051-100)	2011 (Reviews 001-050)
1	Governance	Business case	Business case
2	Sourcing strategy and management	Risk and issue management	Programme and project management
3	Business case	Governance	Risk and issue management
4	Risk and issue management	Sourcing strategy and management	Stakeholder management
5	Programme/project management	Transition into service	Resourcing
6	Stakeholder management	Programme and project management	Governance

The 15 themes have remained fairly consistent over the 150 New Zealand Gateway reviews to date, but the rankings are changing over time. Analysis of the changes in theme ranking identifies some key issues:

- **Governance** is a significant and growing concern, in part because the increasing trend towards large complex multi-agency and all-of-government projects requires a lift in capability. There are some concerns that expectations are exceeding capability in this area.

¹ Six reviews were cancelled or deferred after a review number had been assigned.

- ▶ The rise in recommendations around **sourcing strategy and management** also reflects this increasing complexity.
- ▶ Concerns continue around the application of core **project and programme management** disciplines.
- ▶ Although the number of recommendations around **Business Cases** has dropped since the introduction of Better Business Cases (BBC), it is still a key theme and there is still significant uncertainty about use of the BBC process.

Gateway Lessons Learned analysis, with information derived from other central agency processes² contributes to the Treasury's understanding of the issues, underlying problems and trends in government projects and has helped to identify key areas of focus for the Corporate Centre, for example:

- ▶ Commissioning Capability work is addressing sourcing strategy concerns.
- ▶ The Treasury's Investment Management and Asset Performance group (IMAP) is working to further develop Better Business Cases to increase support to agencies.
- ▶ IMAP is working to introduce programme and project maturity assessments which will input into an Investor Confidence Rating. This will enable Corporate Centre monitoring and interventions to focus on agencies and projects which require more assistance.
- ▶ Gateway and Major Projects Monitoring have jointly commissioned a New Zealand version of a CBT masterclass for Senior Responsible Owners (SROs) of projects and programmes, which provides guidance around good governance and engagement with Corporate Centre processes.

Positive lessons learned tend to emerge as projects progress to second and later reviews. In the period covered by this report, five projects were reviewed at Gate 4, 'Readiness for Service'. Pleasingly, all five have since successfully transitioned into service.

² eg Major Projects Monitoring and Portfolio Performance data collection

Content of this report

This is the third New Zealand Gateway Unit report presenting lessons learned from the New Zealand Government's Gateway reviews.

- ▶ This report provides an analysis of 44 Gateway reports (numbered 101-150) conducted across 39 projects and programmes in 22 agencies between March 2013 and September 2014³.
- ▶ Analysis of these 44 reviews by various criteria is in [Appendix 1](#).

The Gateway Unit identifies lessons learned by analysing Gateway review reports from completed reviews, and through ongoing communication with agencies and Gateway reviewers. We identify trends in emerging issues through recommendations to improve deficient practices; or through recognition by a review team of good practice already being applied by an agency to a project.

We analyse and publish recommendations every 50 reviews – frequent enough to identify issues that are still current, while covering enough reviews to identify trends. All the reports are on our website: www.treasury/investmentmanagement/review/gateway/lessons

'Lessons learned' in this report are recommendations taken directly from Gateway review reports; they highlight opportunities for project and programme management improvements in New Zealand Government agencies. We have anonymised the recommendations where necessary and have sometimes reworded slightly for clarity and context, but otherwise the wording of these recommendations is taken directly from the Gateway review reports.

What is Gateway?

Gateway™ is a project/programme peer review methodology that provides advice and support to the Senior Responsible Owner (SRO) of a programme or project.

Gateway provides short (one week), focused reviews at critical points in a project's life-cycle by a team of reviewers not associated with the project or with any of the central government monitoring agencies. The team primarily engages with, and solely reports to, the SRO. A Gateway review is a learning and development conversation; it is not part of any assessment or performance review.

Gateway provides agencies with an opportunity to receive an independent perspective on their project immediately prior to a key decision point ('Gate'). The process is designed to help the SRO to cut through the everyday noise of the

3 Six reviews were cancelled or deferred after a review number had been assigned.

project and identify the key issues that need to be addressed to help the project to succeed. The confidentiality of the process provides a non-threatening environment where the SRO can engage with independent experts with relevant experience. The review provides the SRO assurance regarding the project's readiness to proceed to the next phase, along with action-oriented recommendations to enhance the prospects of success.

Gateway reviews are a peer review mechanism and distinct from other forms of project assurance. The review teams consist of a mix of public sector and private sector reviewers who contribute different skills and experience to the review. All interviews are non-attributable, thus promoting a high degree of frank disclosure. During the review week, the review team acts as a 'critical friend' to the project. The team adopts a role of coach and mentor to the Senior Responsible Owner (SRO), providing them with a daily briefing and discussion of emerging findings. At the end of the review week, the final deliverable is a concise report, confidential to the SRO, which contains findings and recommendations. After that time, the review team has no on-going contact or relationship with the project.

Gateway is also a form of system assurance as, even though the contents of the review report are confidential to the SRO, the knowledge that a robust process has taken place and that concerns will be escalated if there are problems, gives senior stakeholders confidence in both projects and Gateway itself. Evaluations from other jurisdictions point to significant value that can be attributed to well run Gateway processes.

The Gateway reviews

Project reviews - for a project, the Gateway reviews are:

- ▶ Review 0: Strategic Assessment
- ▶ Review 1: Business Justification and Options – Indicative Business Case
- ▶ Review 2: Delivery Strategy – Detailed Business Case
- ▶ Review 3: Investment Decision
- ▶ Review 4: Readiness for Service
- ▶ Review 5: Operational Review and Benefits Realisation

Programme reviews – for a programme a series of Gate 0 reviews is repeated at intervals throughout a programme's life. A programme will generally undergo four or more Gate 0 reviews:

- ▶ An early review

- ▶ Mid-stage reviews at appropriate points during the programme (eg at tranche boundaries, or when there are significant concerns, or on a change of SRO – approximately every 12-15 months is a recommended interval)
- ▶ A final review after the conclusion of the programme.

Good practice

Positive lessons learned tend to emerge as projects progress to second and later reviews. In the period covered by this report, five projects were reviewed at Gate 4, 'Readiness for Service'. Pleasingly, all five have since successfully transitioned into service.

The review reports identified several other agencies with projects on track to deliver successful outcomes through sound programme and project management principles. These agencies generally share the following good practice fundamentals, which match many of Gateway's key themes:

- ▶ Projects strongly aligned with government and organisation policies and goals; project success criteria that clearly link objectives to outcomes, and clear links with agency key strategic priorities.
- ▶ Clear senior management and Ministerial ownership and leadership, including an engaged senior executive as Senior Responsible Owner (SRO).
- ▶ Clear governance arrangements and active governance oversight that ensures on-going alignment with business objectives.
- ▶ Effective stakeholder engagement to help analyse, segment and appropriately engage the right people at the right time, with active management of critical stakeholder issues.
- ▶ Organisational commitment to good project/programme and risk management practice.
- ▶ A team with the necessary skills and expertise; the whole project organisation requires the appropriate skills, not just the project manager.
- ▶ Sound commercial knowledge of the supplier marketplace, linked to the requirements, and careful and appropriate management of the supplier over the contract term.
- ▶ Effective team integration between clients, the supplier team and the supply chain.
- ▶ Robust business cases with transparent underlying drivers, well-researched and rigorously analysed options, and clearly defined benefits with specific metrics and delivery timeframes.
- ▶ Effective financial control.

Changes in key themes over time

The Gateway reviews included in this report (reviews 101-150) made a total of 558 recommendations.

The lessons learned are categorised in this report under 15 key themes. These are largely aligned with the Key Process Areas (KPAs) used in major programme and project management best practice tools such as P3M3⁴. Because these KPAs are very broad, we have added some more detailed themes over time as we have identified specific areas of concern.

The table below shows the themes, ranked in order of frequency of findings and showing the changes in emphasis over the three Lessons Learned reports:

	Theme		
	Report 3, 2015 (Reviews 101-150)	Report 2, 2013 (Reviews 051-100)	Report 1, 2011 (Reviews 001-050)
1	Governance	Business case	Business case
2	Sourcing strategy/ management	Risk and issue management	Programme and project management
3	Business case	Governance	Risk and issue management
4	Risk and issue management	Sourcing strategy/ management	Stakeholder management
5	Programme/project management	Transition into service	Resourcing
6	Stakeholder management	Programme and project management	Governance
7	Resourcing	Resourcing	Programme/project planning
8	Benefits realisation	Stakeholder management	Management of change
9	Transition into service	Benefits realisation	Sourcing strategy/ management
10	Programme/project planning	Management of change	Dependency management
11	Management of change	Programme/project planning	Financial management
12	Capturing lessons learned	Financial management	Methodology
13	Methodology	Methodology	
14	Financial management	Dependency management	
15	Dependency management	Capturing lessons learned	

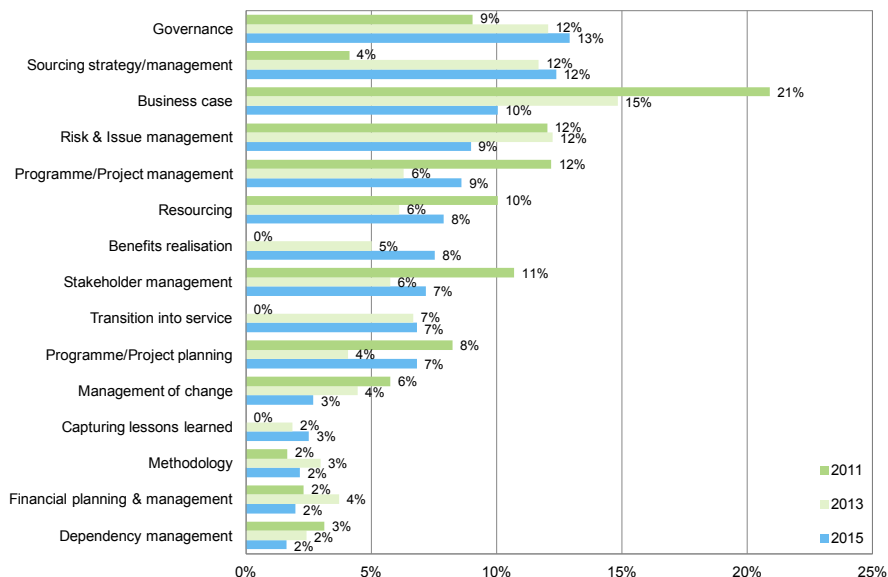
The diagram below shows the relative distribution of themes in the three reports.

- ▶ This is by percentage of findings, as the number of recommendations has varied across the three reports.

⁴ Portfolio, Programme and Project Management Maturity Model, developed by the UK Office of Government Commerce.

- Some recommendations are categorised in more than one theme, where the recommendation relates strongly to more than one. For example, a recommendation concerning governance arrangements that should be in place during transition from project to business-as-usual will be categorised under both *Governance* and *Transition into service*.

Gateway review recommendations by theme
2015, 2013 and 2011 Lessons Learned reports



The 15 themes have remained fairly consistent over the 150 Gateway reviews carried out in New Zealand to date; however, the rankings are changing over time.

A proportion of this change simply relates to the maturity of the Gateway process in New Zealand; for example, in the first Lessons Learned report, published in 2011, there were no recommendations relating to Transition into service, Benefits realisation, or Capturing Lessons Learned because no projects under Gateway had reached that stage of their lifecycle.

Allowing for this, there remain some themes where the changes have been meaningful:

- Governance continues to be a significant and growing concern, in part because the increasing trend towards large complex multi-agency and all-of-government projects requires a lift in capability. There are some concerns that expectations are exceeding capability in this area.

- ▶ The rise in recommendations around sourcing strategy and management also reflects this increasing complexity.
- ▶ Concerns continue around the application of core project and programme management disciplines and processes, with a startling proportion of recommendations showing a lack of maturity in these areas:
 - stakeholder management
 - risk management
 - governance
 - resources management
 - project and programme planning
 - finance management
 - benefits management.
- ▶ Although the number of recommendations around Business Cases has dropped since the introduction of Better Business Cases, it is still a key theme and there is still significant uncertainty about use of the BBC process.

Gateway effectiveness and continuous improvement

Assessing the effectiveness of Gateway is a separate exercise from the lessons identified in this document and the publications before it. Effectiveness reviews have been conducted in the UK and Australia and influence the use of Gateway in New Zealand.

Gateway Lessons Learned analysis, with information derived from other central agency processes⁵ contributes to Treasury's understanding of the issues, underlying problems and trends in government projects and has helped to identify key areas of focus for the Corporate Centre. For example:

- ▶ Commissioning Capability work is addressing sourcing strategy concerns.
- ▶ Treasury's Investment Management and Asset Performance group (IMAP) is working to further develop Better Business Cases to increase support to agencies.
- ▶ IMAP is working to introduce programme and project maturity assessments which will be an input into an Investor Confidence Rating, which will enable Corporate Centre monitoring and interventions to focus on agencies and projects which require more assistance.

⁵ eg Major Projects Monitoring and Portfolio Performance data collection.

Separately, the Treasury, and prior to it the State Services Commission, have continued to invest in Gateway to build capability and respond to the changing nature of investments in the public sector. Examples of initiatives in each of these categories include:

- ▶ Building capability: The Lessons Learned publications are used in the training programmes for reviewers to ensure up-to-date information on the findings from reviews are shared with new reviewers and made available to those people who have already completed the training. A specific focus is also given to building the capability of lead reviewers in New Zealand and to have an experienced person from the public sector on each review.
- ▶ Changing nature of investments: Over time, projects have become larger and more complex. If a review team identifies that a project that is in significant difficulty it is important to communicate the risk promptly and in a co-ordinated manner. Gateway has introduced a Delivery Confidence process to ensure review recommendations are communicated to the chief executive of the relevant organisation and corporate centre agencies are advised of the recommendations from the review so that they can provide assistance.

The Treasury will continue to assess ways to adapt and enhance the Gateway framework in response to feedback and the changing environment in which it operates.

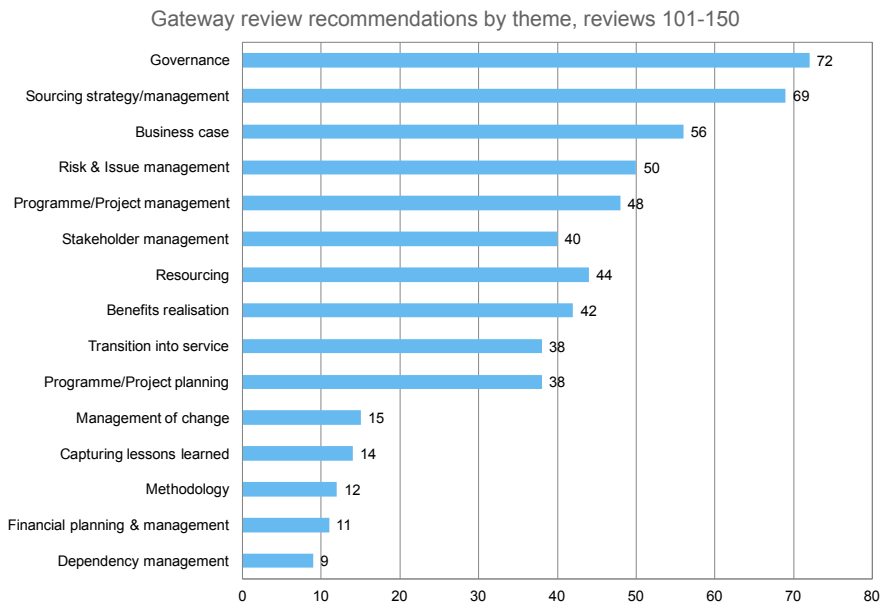
Analysis of the recommendations, reviews 101-150

The following pages provide some analysis of the recommendations from this tranche of reviews and draws out some key lessons to be learned, for consideration by other projects.

In each case:

- ▶ The 'Key findings' shaded box highlights Treasury's analysis of the most frequent recommendations within this theme, based on all 150 reviews to date. In many cases these findings relate to practices that are fundamental to the theme but which are consistently and frequently not addressed in the projects under review, and have wider application to agency projects and programmes.
- ▶ We then show some of the more specific and targeted recommendations, which are more detailed and less basic; these are likely to be of more interest to projects that already have the fundamentals in place.
- ▶ We have anonymised these recommendations where necessary and in some cases have slightly reworded to add clarity and context, but they are otherwise taken directly from the Gateway review reports.

The graph below shows the distribution of the 558 recommendations by theme, for the reviews included in this report.



Theme 1 Governance

Governance recommendations relate to the oversight, structure and decision-making of a project or programme.

This theme also includes recommendations relating to the sub-theme 'Alignment with government priorities', as this alignment, particularly for cross-agency projects and programmes, is a key and growing part of governance roles.

Thirteen percent of all recommendations (72 recommendations) focussed on Governance issues. This shows an increasing trend – in our first report (2011) Governance issues made up 9% of all recommendations, and in our 2013 report 12%.

This increase reflects the increasing complexity of governance arrangements as more projects are undertaken to deliver shared services or multi-agency initiatives.

Key findings

There must be clear and consistent linkages between an agency's strategic planning documents: Strategic Plan – Business Architecture – Enterprise IT Architecture and then to the architecture of individual projects. If this linkage is not clear, there is a risk that projects will develop solutions that solve their own problem but do not support generic, enterprise-wide requirements. There is an underlying problem however; many agencies do not have robust strategic plans; this makes end-to-end linkages difficult and causes issues in consistency of enterprise architectures and technologies.

As in our previous reports, a key recommendation is that the Senior Responsible Owner (SRO) role needs to be held at an appropriately senior level in the organisation, with the authority to bring stakeholders together and the ability to overcome resistance to the programme. For programmes/projects sufficiently important and high-risk to be subject to Gateway, this should generally be a Tier 2 manager, who reports direct to the Chief Executive.

Governance structures should be defined at the outset, with clear terms of reference and with membership and delegations tailored to ensure robust oversight and empowered decision-making members from the entire project life-cycle including Acquisition/Procurement, Transition planning, and ongoing operations.

This is particularly critical for multi-agency projects and programmes. Governance accountabilities, particularly around financial arrangements, must be designed and agreed early and focus on the overall outcomes for all participants and the sector, not the individual agencies, including analysis of impacts and costs. Failure to agree these structures early can lead to significant delays and suboptimal outcomes, particularly for any smaller agencies involved.

New Zealand Government recommended CBT masterclass for Senior Responsible Owners (SROs) of projects and programmes; an international certification tailored for New Zealand by the Gateway Unit and Treasury: email newzealand@ilxgroup.com

Gateway review recommendations under this theme include:

- ▶ Where a project is part of a programme, ensure that a project's governance structure is integrated with the broader programme governance structure. This will help to ensure that both groups understand the differences in drivers and risk appetite between the long-term organisational change and short-term operational projects, and will help ensure consistency of decision-making across the programme.
- ▶ In a complex organisation where accountabilities for delivery of aspects of a programme or project are split, ensure that a single governance and project management structure is in place to deliver the end-to-end project in a coordinated disciplined manner with clear accountabilities and reporting lines.
- ▶ Recognise that governance and accountability frameworks need to change as the programme/project progresses. Phase boundaries are a good time to revisit and update governance and advisory arrangements. For example, a cross-agency process design team needed in the Business Case stage may need to be replaced by a forum with different membership to drive the business changes needed to deliver benefits.
- ▶ Ensure that the Governance requirements are not reduced after Financial Close but remain rigorous and robust throughout the project. The governance body should continue to scrutinise activities including risk management, financial status and management capacity.
- ▶ Where a project has opted for a 'vanilla' solution with minimal customisation, ensure that governance confirms and mandates the approach for future releases and business-as-usual support. Without a formal reconfirmation, it is easy for ongoing development to slip into customisation which can lead to downstream complexity.
- ▶ For Shared Services and cross-agency projects:
 - The Senior Responsible Owner (SRO) and cross-agency governance representatives must develop and agree the working model/structure that shows visible CE support from each agency, and brings together and makes available the visionary capability, planning capability, and programme delivery capability across the agencies.

- The governance structure should be as simple and as flat as feasible. Highly hierarchical structures hinder momentum and timely decision-making.
 - The structure needs to be supported by clear agreements and documentation of roles and responsibilities, and protocols for behaviours, communication paths and decision-making delegations and authorities; these should be monitored to ensure they are observed by all parties.
 - The accountability framework needs to be clear, streamlined, agreed and operationalised, particularly in regard to decision-making and approvals. Major stakeholder groups' needs can be met by appropriate management forums and do not necessarily need a presence on the governing body.
 - For a programme with multiple (eg agency or regional) project implementations, the governance board must agree the priority and sequencing and the overall timeframe for the individual projects, to ensure credible implementation. Simultaneous or near-simultaneous deployments put pressure on key resources and raise planning, slippage and reputational risks.
- ▶ A major project is a long-term exercise. Ensure that the Senior Leadership Team (SLT) understands the fundamental importance of the project to the 4-year and 10-year plans, the resource commitment that it entails, and the impact it will have on the organisation's ability to run other initiatives including business-as-usual.
 - ▶ Decision making paths and issue escalation and resolution paths must be agreed and clearly documented.
 - ▶ The Programme/Project Board or Steering Group should include an experienced independent person (ie not aligned with the organisation or with the suppliers).

Theme 2 Sourcing Strategy and Management

This theme covers the end-to-end procurement process including:

- ▶ Procurement strategy and planning
- ▶ Approaches to the market (Expression of Interest and RFx processes)
- ▶ Contract negotiation
- ▶ Contract management
- ▶ Any supporting probity processes.

This theme also includes arrangements made with internal suppliers.

Twelve percent of all recommendations (69 recommendations) focussed on Sourcing Strategy, much the same as in our previous report.

Key findings

Many agencies demonstrate a lack of commercial experience and expertise, from developing robust Request for Information documents through negotiation and establishment of a framework for management of the contract management. This is not something that agencies do frequently, and it is important to engage appropriate skilled resource to assist where needed. Failure to adequately resource and manage engagement with suppliers can result in poorly structured engagements that lead to suboptimal delivery.

It is clear there is still considerable uncertainty around the MBIE-led Government Rules of Sourcing, launched in April 2013. Agencies must familiarise themselves with these rules and ensure that they meet the requirements, including:

- ▶ The Cabinet-mandated procurement sequence, aligned with the Better Business Cases framework: *Market Soundings – Indicative Business Case – Request for Information (RFI) – Detailed Business case – Request for Proposal (RFP)*.
- ▶ Minimum timeframes that must be allowed for RFx responses.

Advice and guidance is available from the MBIE Procurement Team; links are provided in [Appendix 3](#).

Contract management arrangements are frequently set up too late in the project. These should be put in place as soon as the business case is approved, and consideration given to resourcing and upskilling for supplier management. A contract manager should be appointed before supplier contract negotiations are finalised, to ensure that they understand the commercial ramifications and ongoing contract management requirements. Failure to do this can lead to poor engagement with key suppliers and subsequent risks to project outcomes.

Gateway review recommendations under this theme include:

- ▶ The SRO should establish clarity around the responsibilities, roles and resources required for a strong intelligent client function to perform effective supplier management.
- ▶ Where multiple supplier contracts are required, understand how they relate and do not rush. Ensure that dependencies are well understood. Enter into contracts with supporting parties at the same time as the main contract, unless the risk of not doing so is acceptable.

- ▶ Where a programme must work closely with a commercial provider to deliver outcomes, engage an external facilitator with commercial and public sector experience; consider facilitated workshops to agree on how the agency and provider are going to work together towards an agreed common purpose.
- ▶ When moving to a Commercial-off-the-Shelf (COTS) solution, it is important to adopt a formal process for managing the preferences and trade-offs between business process and COTS systems change, so that implications are clearly understood.
- ▶ For a project using an innovative or new procurement approach (eg PPP) consider making contact with similar projects in New Zealand or Australia to draw on their experience, in particular in terms of flexible application of the procurement model. There is now good experience in government in projects using Public/Private Partnership models (Department of Corrections, Ministry of Education, New Zealand Transport Agency) that new projects are able to draw on.
- ▶ For a project using an innovative or new procurement approach (eg PPP) consider expanding the overall timeframe to financial close, particularly the Request for Proposal preparation period and the time for bidders to develop their responses. This is particularly important if the expectation is that organisations within consortia will work together to develop innovative solutions – allowing too little time to work together will lead to suboptimal proposals.
- ▶ Well before entering into negotiations with a supplier – preferably as part of preparation for RFP – sufficiently detailed requirements must be agreed and documented for:
 - functional and non-functional requirements
 - completion of service level, maintenance and support agreements
 - defining business change management requirements
 - identification of related portfolio project dependencies
 - a sound basis for the detailed technical solution design
 - pragmatic analysis and internal agreement on potential trade-offs with the supplier, around requirements and delivery complexity.
- ▶ In the RFP, consider mechanisms for purchasing Intellectual Property (IP) from unsuccessful bidders and methods for applying this IP to the successful bid; this may provide an opportunity to improve value for money. Also consider purchasing IP from all bidders, in the event the process is abandoned; this recompenses the bidders for partial costs of bid preparation, and maximises the use of IP from all bidders.

- ▶ Be very aware that using an external advisor early in the project may raise significant probity concerns if they are also potential solution suppliers. This may be addressed:
 - through the inclusion in the IBC of an independent certification of appropriate separation being applied, or
 - in the Probity Plan, or
 - by excluding the advisor from being a solution implementation partner (preferred).
- ▶ Develop a Risk Allocation Matrix to clearly define the key project risks and where they are to be contractually allocated: agency, supplier, shared (defining how this will be managed). This is both for 'getting to contract' purposes and also as an enduring framework for contract management.
- ▶ Ensure that the risk/reward strategies in the procurement plan, and particularly the risk sharing arrangements, are not weighted in favour of the suppliers. For example, suppliers will often seek to have the client carry out the solution implementation / integration role – be very aware of the risk this involves and whether the organisation has the necessary skills and capacity.
- ▶ Document a Decision-making Framework to support contract development. Consider:
 - What level of risk needs to be removed before the agency signs?
 - If this is not achieved by a specified date, what is to happen? (eg enter into a separate contract for Elaboration and Proof of Concept while the main contract continues to be negotiated)
 - What level of technical certainty must be reached before contract signing? (eg Proof of Concept, Statements of Work.)
 - For each decision in the register include formal decision criteria (eg acceptance criteria for any Proof of Concept), contingency options, decision-maker, required decision date, escalation path.

Theme 3 Business Case

Recommendations under the Business Case theme relate to all aspects of the Better Business Cases framework (BBC) introduced in 2010 and mandatory for any initiatives requiring Cabinet approval:

- ▶ Strategic Assessment
- ▶ Indicative Business Case
- ▶ Detailed Business Case
- ▶ Implementation Business Case.

The BBC framework is a structured way that stakeholders can work and think together to provide a business case, with fit for purpose analysis, which gives confidence to decision makers that investing in a proposed programme or project is justified. Although the number of recommendations around Business Cases has dropped since the introduction of Better Business Cases, there is still significant uncertainty about use of the process, in particular:

- ▶ How the process is applied to programmes
- ▶ The breadth and depth of detail that needs to be included in the documents
- ▶ How the process can be usefully scaled to ensure the documentation is a good match for the scale of the initiative.

Ten percent of all recommendations (56 recommendations) focussed on business case issues – this is down from 15% in our 2013 report and 21% in our first report in 2011. This reduction reflects increasing awareness and use of the Better Business Cases framework across government.

Key findings

The business case should be a dynamic document that reflects the strategic context; it should be regularly reviewed and if necessary updated as the project or programme progresses.

The Programme Business Case should include a lively and engaging description of how its component projects will work together to support the programme's vision and objectives.

To assist the articulation in the Business Case of a compelling vision and strategic story for the project, and to show how the benefits and system efficiency gains will be delivered, senior staff and subject matter experts must be heavily involved in the business case development. They will drive the thinking, express the full understanding of the project and its implications, and ensure agency ownership of the business case. Full outsourcing to external consultants presents significant problems, as the required level of understanding and clarity is unlikely to be articulated by business case consultants.

Gateway review recommendations under this theme include:

All Business Cases (Programme Business Case (PBC), Indicative Business Case (IBC), Detailed Business Case (DBC))

- ▶ The Executive Summary of the Business Case, and the accompanying Cabinet Paper, must tell a sharply focussed and compelling story to support the proposal, to set the strategic context and cover off likely questions about the

initiative's fit to government priorities and to the organisation's direction and objectives. It should present a compelling investment justification for the project or programme.

- ▶ In the Business Case, project planning and contractual framework, consider a staged approach to project delivery. This can help to manage and mitigate project risks while presenting greater flexibility for funding and early harvest of benefits. Consider:
 - Natural boundaries/delineation of project workstreams and components.
 - The need for segregation of high risk components, exit ramps, pilots, and other risk mitigation factors to reduce the overall risk profile.
 - Staging as a tool to segregate cashflow and funding requirements between project components and government decision-making.
 - Staging the priorities of testing/commissioning, rollout and training requirements.
 - Separating the delivery of benefits to reflect realisation priorities.
 - Staging as a mechanism to retain the opportunity for uptake of potential new/existing technology opportunities and supporting products.
- ▶ Once a Business Case (PBC, IBC or DBC) is approved it forms an important baseline for many strategic parameters, including:
 - Key benefits
 - Outputs
 - Interdependency of project elements
 - Prioritisation of Programme elements
 - Governance
 - Procurement framework
- ▶ The signed-off Business Case (PBC, IBC or DBC) is a living document. Once it is signed, it should be placed under formal change control. Where changes to the project/programme are proposed, they must be analysed for impact on the business case, particularly outputs and benefits. If the BC document itself is not updated, there must be a clear documentation of the impact of changes on the overall justification for the project. If changes are significant, there must be formal signoff at the appropriate governance level.
- ▶ In considering options, always consider minimisation of complexity through implementation of a 'vanilla' solution. Where current requirements are complex, consider the deployment of a 'clean' core system with interfaces to peripheral systems to deal with complexity. This means that down-stream complexity

reduction can be done in the peripheral systems, not the core, or could be delivered through configuration (not customisation) of the core and removal of peripheral systems. In either case, this approach helps deliver a strategically compliant, sustainable and cost-effective solution for the longer term.

Programme Business Case (PBC)

- ▶ Within a programme, the Business Cases for individual projects should demonstrate alignment with defined stages or tranches of the programme.
- ▶ In programme planning and in the business case, the tranches in a programme should not be assigned arbitrary duration (eg a 7-year programme with tranches of 2, 3, 2 years). Tranches should be designed to align with benefit realisation points, provide programme 'off ramp' opportunities where stakeholders may choose to make varying investment decisions according to cumulated benefit and any emergent shift in strategy, and consider capacity constraints (resourcing and capacity to absorb change).

Indicative Business Case (IBC)

- ▶ The Indicative Business Case (IBC) should consider a broad range of options rather than focussing too narrowly on preferred options.
- ▶ The Strategic Case of the Indicative Business Case (IBC) should avoid focus on the technology problem; it should identify the impact of the current problem on the business, particularly any front-line impacts. It should include visionary operational requirements and any aspirations around workforce planning and deployment.
- ▶ Business cases for multi-agency business transformation should include analysis of the implications and benefits of each option for:
 - citizens (how does this affect me?)
 - each affected agency (what's in it for me)
 - government transformation (how does it support policy and strategy?)
 - financial investment (what will it cost and can we afford it?)

Detailed Business Case (DBC)

- ▶ Within a programme, the Detailed Business Cases for individual projects should demonstrate alignment with defined stages or tranches of the programme.
- ▶ Ensure that the Cabinet submission sets out a concise, compelling and credible story so that costs, benefits and tradeoffs between the options are clearly laid out. For example, as well as the Highest Benefit/Highest Cost option other options showing Lower Benefit/Lower Cost and Lower Benefit/Lower Risk should be clearly stated so that Ministers can realistically evaluate alternatives.

- ▶ In the Detailed Business Case (DBC) the risk allocation between the Crown and the Supplier during the Design and Development phases should be clearly documented; both to be sure that it is understood by decision-makers, and so that the commercial contract strategy can be commensurate with decision-makers appetite for Crown risk exposure.
- ▶ Always consider minimisation of complexity through implementation of a 'vanilla' solution. Where current requirements are complex, consider the deployment of a 'clean' core system with interfaces to peripheral systems to deal with complexity. This means that down-stream complexity reduction can be done in the peripheral systems, not the core, or could be delivered through configuration (not customisation) of the core and removal of peripheral systems. In either case, this approach helps deliver a strategically compliant, sustainable and cost-effective solution for the longer term.

Theme 4 Risk and Issue Management

Nine percent of all recommendations (50 recommendations) focussed on the management of risks and issues – a reduction from the 12% of both our previous reports.

Key findings

As noted in our previous reports, many projects still fail to follow basic good practices for risk and issue management, ie identification, assessment of likelihood, impact and residual impact after treatment, assigning ownership, and active iterative management throughout the project.

Risk and issue management should be incorporated into a project from its initiation, using the appropriate elements of the AS/NZS ISO 31000:2009 standard.

The risk register needs to be kept current by regular and comprehensive assessment of the status of risks, including the identification of new risks, and review of current high risks should be a standard agenda item for regular Governance meetings.

Gateway review recommendations under this theme include:

- ▶ In the Detailed Business Case (DBC) the risk allocation between the Crown and the Supplier during the Design and Development phases should be clearly documented; both to be sure that it is understood by decision-makers, and so that the commercial contract strategy can be commensurate with decision-makers appetite for Crown risk exposure.

- ▶ Risk management documentation should include separate Risk and Issue Registers and a Risk Management Plan describing how risks will be allocated, managed and escalated. The Risk Register should include both agency and supplier-side risks, should differentiate between Strategic (Programme), Delivery (Project) and Deliverable (Product) risks, and should look forward to cover the full project life-cycle, not simply the current stage.
- ▶ Undertake a full security assessment early in the project to ensure that all aspects of information security and privacy are considered and built into the project architecture and design. Policy, procedures and operating processes for Identity and Access Management must be aligned and integrated with the information access requirements for the application, particularly when there are internal and external users with differing information access and security needs.
- ▶ As a project approaches Readiness for Service, documentation of new and residual risks associated with business-as-usual and Benefits Realisation may not be as well developed as that for project risks. The Operational Owner should ensure they develop a clear risk management plan specific to business-as-usual.

Theme 5 Programme and Project Management

This theme covers all aspects of project, programme and portfolio management including Master Plan and time/scope/quality management, but excludes Methodology and Project and Programme Planning, which occur frequently enough to warrant a separate category.

Nine percent of all recommendations (48 recommendations) focussed on Programme and Project Management, a rise from six percent in our previous report. In our first report in 2011 12% of all recommendations related to this theme; this was primarily because our definition at that time included several themes which have since risen in importance and frequency to the extent that they are now themes in their own right (Transition into Service, Capturing Lessons Learned, Benefits Realisation).

Key findings

Portfolio management is increasingly being implemented in NZ Government Organisations to provide a categorising, prioritising and resource-balancing mechanism for programmes, projects and business-as-usual activities. A portfolio approach is strongly recommended so that an agency understands how much project work can be managed in addition to operational work, and can prioritise and resource-balance accordingly.

When using an external provider, ensure that their programme and project methodologies are compatible with those used in the agency; many consultancies in particular do not use the New Zealand government de facto standard methodologies ie Managing Successful Programmes (MSP) and Prince2. The supplier should confirm in writing that their methodology meets the structural and documentation requirements of an industry-recognised standard.⁶

As noted in recommendations in theme 2, **Sourcing Strategy and Management**, to manage their own risk suppliers will often seek to have the client carry out and manage the solution implementation / integration role. This is a common source of failure and can weaken the agency's contractual position. Agencies who try to do systems integration internally frequently find that they both underestimate the work and skills required and overestimate their ability to manage both project work and business-as-usual. Agencies should be very aware of the risk this involves and whether their organisation has the necessary skills and capacity.

Gateway review recommendations under this theme include:

- ▶ A major programme requires a dedicated programme manager; a senior manager expected to do this in addition to their operational responsibilities will inevitably be diverted to operational management rather than programme leadership, to the detriment of both roles.
- ▶ During the analysis and design phases, address the potential conflicts between user requirements / 'fitness for purpose' and the technical requirements. There are likely to need to be tradeoffs; make sure they are explicitly identified and agreed, and that the decision made is the one that better supports the delivery of business benefits. In particular, ensure that technical requirements do not lead to compromised business outcomes.
- ▶ If the scope of a project changes significantly, update the Benefit Management Strategy and Benefit Management Plan. Consider whether the change in scope impacts benefits delivery and the viability of the project; this may require approval decisions to be revisited. Keep decision-makers fully informed of the process undertaken, advice received and changes made, so that they can make appropriate decisions on the future of the project.
- ▶ A programme or project should engage ongoing independent ICT technical quality assurance in respect of the supplier's product development, to ensure good development, review and quality management practices are being followed; appropriate traceability of requirements is in place; and appropriate configuration management is in place.

6 eg MSP, Prince2, PMBoK.

- ▶ In a complex organisation where accountabilities for delivery of aspects of a programme or project are split, ensure that a single governance and project management structure is in place to deliver the end-to-end project in a coordinated disciplined manner with clear accountabilities and reporting lines.
- ▶ Where there is no external provider and the delivery process is managed internally, ensure that processes are in place to govern and manage internal project delivery with as much rigour as would be applied to an external supplier.
- ▶ Ensure that requirements for assurance, including Central Agency Monitoring, Independent Quality Assurance (IQA) and Technical Quality Assurance (TQA) activities and Gateway reviews are agreed with Corporate Centre early in the project, and are then scheduled, costed and monitored.
 - When determining the requirements for Independent Quality Assurance, ensure that it is scaled appropriately for the size and complexity of the project/programme.
 - Consider also the expertise and quality of internal resources such as Internal Audit.

Theme 6 Stakeholder Management

Stakeholder Management is focussed around the relationships with all parties with an interest in the outcome of the project or programme, whether internal to the agency, internal to government or external.

Seven percent of all recommendations (40 recommendations) focussed on Stakeholder Management, up from six percent in our previous report. In terms of frequency of recommendations, this theme moves from eighth to sixth place.

To some extent this reflects the increasing complexity of programmes and projects, with a rising number of multi-agency and cross-sector projects, and innovative solutions such as Public/Private Partnerships (PPP), where managing the relationships with multiple stakeholders with different expectations can be very complex.

Key findings

Gateway reviews often find, particularly in larger programmes, that there is no common understanding among stakeholders of the programme's scope, objectives and outcomes. The SRO should work to develop a uniformity of understanding and vision among senior leaders regarding the success criteria for the project and clarity of top-down communication with 'one voice' as early as possible, certainly before the submission of the IBC, to ensure consistency of messages.

Where a project is part of a broader programme, it is critical to ensure that there is a coherent integrated approach to stakeholder consultation across all projects, particularly for services that will be offered through a common channel (eg e-services)

Communications and consultation, including the establishment of a Working Group or Reference Group with relevant local authorities, should be established as early as possible to facilitate stakeholder engagement and ensure consistency of messaging.

Gateway review recommendations under this theme include:

- ▶ The more complex the project/programme, the more critical it is that communications with stakeholders are clear, frequent and complete. This will build common understanding of key aspects, including design, plans, constraints, finances, project structures and reporting lines, terms of reference for key groups, responsibility for managing business change and deriving benefits, and how these activities must be coordinated in concert with the development schedule.
- ▶ For a programme involving multiple agencies, agree a Contracting Plan with the selected supplier and the agency CEs that reflects good practice contracting processes and commercial outcomes. This should set out the objectives, deliverables, resources, milestones, dependencies, and risks through to final signatures.
- ▶ For a shared services project, engage early and fully with stakeholders to develop and agree a methodology for apportionment of benefits and costs, including agreement on timing of contributions and management of variations.
- ▶ For projects that are following a non-standard process or are accelerated, it is particularly important to engage early and fully with the corporate centre, to raise confidence with decision-makers. Corporate Centre support – both Central Agencies and relevant Functional Leads – is critical and must be based on confidence and full understanding of the current position and future plans.
- ▶ Formally engage Subject Matter Experts (eg clinicians for Health sector projects) at all levels including on the Steering Committee. Reference Groups of Subject Matter Experts (eg for Health projects, a Clinical Reference Group) are critical to gain endorsement and support for a project's objectives, and to provide business leadership of organisational change management.
- ▶ For a multi-agency programme, consider establishing a service-oriented client management function in order to address client agency concerns.

- ▶ Where a decision has been taken to implement a software system as 'vanilla', the Project Director should be very explicit in defining the term, ensuring that all communications convey the same meaning and that key stakeholders have a common understanding and commitment.
- ▶ For a large complex programme/project, there should be dedicated professional communication and stakeholder management staff embedded within the structure, and all communications and engagement would be informed by programme-specific Communications, Stakeholder Engagement and Consultation Plans that include:
 - identification and analysis of all stakeholders
 - proposed engagement processes
 - Communication strategy and methods
 - engagement objectives and key messages
 - stakeholder management and responsibilities
 - strategic view of the Programme
 - benefits and risks of effective engagement
 - programme SWOT analysis
 - communication engagement, timeframes and milestones
 - a KPI and reporting regime
 - recognition of the complexity of the stakeholder involvement including the public and private sector
 - documentation change process.

Theme 7 Resource Management

Eight percent of all recommendations (44 recommendations) focussed on Programme and Project Resourcing, a rise from six percent in our previous report. In terms of frequency of recommendations, this theme moves from seventh to fifth place.

This rise also reflects the increasing complexity of programmes and projects, with a growing need for specialist expertise to support core project staff.

This theme also includes recommendations relating to a sub-theme 'consultation with experts' which speaks to the need to consult with both internal and external specialists where an agency does not have the detailed skills in-house.

Key findings

Fill key governance and programme/project roles early to minimise delays. This seems obvious, but it is surprising how often key roles are left vacant until the project is well-advanced. This can cause significant delays in the development of key documents, delays in decision-making and late establishment of other critical processes such as stakeholder engagement and risk management; these in turn may mean the project or programme is not structured to succeed.

Good human resource planning will assist in the retention and recruitment of necessary staff to ensure the skills are available to ensure the success of the programme or project. Poor resource planning can lead to staff becoming frustrated and stressed; it can also be a block to the recruitment of suitable new staff.

Project resources who are contracted in frequently don't have a strong understanding of the business. This can lead to frustration for internal stakeholders especially when they are expected to provide subject-matter-experts (SMEs) to the project and these roles are so specialised it is difficult to effectively recruit backfill.

Succession planning should recognise critical dependencies on key staff members and consider ways to reduce or manage these dependencies. A project-specific succession plan is useful to ensure that staff are recruited and trained to replace staff who are moving on. This is particularly important for key positions such as the SRO and project manager.

Gateway review recommendations under this theme include:

- ▶ Ensure that the programme manager has specialist support if required: for example in the areas of scheduling/planning, sourcing strategy and management, risk management, stakeholder management.
- ▶ For a complex procurement project/programme, experienced contract management resource should be engaged early, to ensure that a good understanding of business and contractual requirements from a commercial perspective can be included in the RFx documents and an appropriate contract management plan and function can be established well before supplier selection and negotiation start.

- ▶ For a major project key internal staff will be needed for business-as-usual, training of new staff and as subject matter experts on the project. Where an organisation does not have the necessary internal resources for business-as-usual as well as the project, it is essential to plan early, to identify resource requirements. In particular, it is critical to identify key staff and backfill requirements so they can be involved in the project in a long-term capacity.
- ▶ The SRO should stabilise and secure resources for the project by clarifying roles and responsibilities for the project balanced against business-as-usual activity, and ensure that adequate capacity and capability is available for both functions. This may require backfill and/or engagement of additional resources, and should include consideration of succession planning and management of the workload of key project, operational and shared resources.
- ▶ There is always a tension between resourcing of business-as-usual (BAU) outcomes and project outcomes. Organisations need to actively plan for the release of critical subject matter experts (SMEs) from BAU to key projects, including consideration of backfill resources to facilitate their release.
- ▶ Reference Groups of Subject Matter Experts (eg For Health projects, a Clinical Reference Group) are critical to gain endorsement and support for a project's objectives, and to provide business leadership of organisational change management.
- ▶ Well before the end of a project phase, consider the need for continuity of resourcing and ensure that processes are initiated to retain staff and acquire new staff, so that momentum is not lost.
- ▶ Where primary responsibility rests with a supplier, the agency must ensure it has resources for any work required to support the supplier (eg APIs, data management, testing, legacy application changes) without becoming a delaying factor, particularly where this may weaken the agency's contractual position.

Theme 8 Benefits Realisation and Management

Eight percent of all recommendations (42 recommendations) focussed on Benefits Management. This is up from 5% (27 recommendations) in our previous report and none in our first.

To some extent this rise simply shows that more projects are progressing to the later stages of the project lifecycle since the introduction of Gateway; the focus on benefits moves from planning to delivery. It also reflects heightened interest from Central Agencies in projects and programmes delivering the benefits they have promised.

Key findings

Projects are initiated to deliver benefits and outcomes; despite this, it is clear that benefits management is not well-developed on the majority of New Zealand government projects.

Early in the project, work should start on the Benefits Realisation Plan, which should include:

- ▶ clear lines of accountability for outcomes once the project is operational
- ▶ the separation and dependencies between tranches
- ▶ the linkages and dependencies between Statements of Work (SoWs), including off-ramps
- ▶ recognition of the requirement for early tracking of benefits from early releases.

In addition, a Benefits Map linking the project/programme deliverables to subsequent business benefits is needed so that it is easy to see the impact of changes on benefits when scope changes.

Gateway review recommendations under this theme include:

- ▶ Responsibility for defining the benefits realisation approach, as well as tracking and reporting the benefits, should be vested in those responsible for realising the benefits. As projects typically deliver assets that are enablers of business benefits, and are not themselves accountable for benefits realisation, this means early involvement with the business-as-usual function that will own benefits delivery, to ensure they accept and sign up to the delivery of the benefits.
- ▶ Where there are expectations that value from a project is needed across the entire agency, identify people at a sufficiently senior level and charge them with planning and securing the benefits from the project products and translating them into the wider organisation.

Theme 9 Transition into Service

Transition into Service (or Introduction into Service) is loosely defined as all those activities and processes that must be designed and established before a project can be signed off and considered part of the organisation's business-as-usual. It includes all the planning and establishment activities required for a project to be transitioned into business-as-usual, including:

- ▶ development and agreement of go/no go decision criteria for acceptance into business-as-usual, and identification of the decision authority

- ▶ determination and establishment of operational governance and management structures
- ▶ determination and establishment of appropriate staffing to handle peak go-live issues
- ▶ development of Service Level Agreements and/or Operating Level Agreements
- ▶ data migration.

For a significant project this warrants the appointment of a dedicated Transition Manager or Commissioning Manager, to ensure leadership and effective readiness planning, prioritisation, management and operation in support of the roll-out.

Seven percent of all recommendations (38 recommendations) focussed on Transition into Service, much the same as in our previous report; this theme did not appear in our first report in 2011. This reflects a number of projects progressing to the later stages of development and planning for transition into the business-as-usual environment.

Key findings

The most common issue is the tendency for a project to focus on delivery of its asset, with insufficient attention paid to ensuring that the process for handover to business-as-usual is rigorously planned and managed. However well a project is managed, it is almost certain that something will go wrong when it 'goes live' and it is critical to consider what might happen and to ensure that processes and structures are in place to manage any issues.

The lack of a detailed integrated plan for the transition period of a new system can result in a lack of clarity and common understanding of the key activities, and their timing, dependencies, and resourcing during this period. The project should prepare a detailed, integrated plan in conjunction with key stakeholders prior to 'Go Live', and communicate this to the stakeholders.

The Transition Plan must include implementation of organisational process changes as well as the assets created by the project.

Gateway review recommendations under this theme include:

- ▶ For a major project key internal staff will be needed for business-as-usual, training of new staff and as subject matter experts on the project. Where an organisation does not have the necessary internal resources for business-as-usual as well as the project, it is essential to plan early, to identify resource requirements. In particular, it is critical to identify key staff and backfill requirements so they can be involved in the project in a long-term capacity.

- ▶ To ensure smooth transition to the new way of working it is recommended to employ additional resources to cover the initial expected 'spike' of go live issues, for intensive business and technical support. Invest executive attention and allocate appropriate resources in developing end-to-end business processes to enable temporary resources to be released as soon as possible. Expert staff from the business units mainly affected should be trained to become part of the go-live support team. Ensure the appropriate mix, level and continuity of resourcing is in place to cover the warranty and stabilisation periods, to enable completion of residual work and to establish IT capability.
- ▶ When introducing a new way of working using technology, it is inevitable that mistakes will be made, and there must be some latitude given, particularly in the early stages. Support staff by emphasising a safe-haven approach to draw out the risks and protect staff from inadvertently incurring disciplinary action.
- ▶ If the business-as-usual infrastructure and operating model is not fully defined and implemented before the systems goes live, then the sustainability of the new way of working is at risk. The project team will be diverted from critical transition activities by the need to support business-as-usual.

Case study – Transition into service (Agency A)

The Gateway review team found that the structures in place to manage the transition into service were especially well planned and managed.

The project had recognised the need for support from specialist skills outside the agency, and had engaged an independent Commissioning Agent to start the change management early and manage the process.

The review team noted the thoroughness of the planning and management of the commissioning process.

A 'command centre' to oversee the migration and troubleshooting issues around transition into service had also been established and staffed with experienced staff to ensure that service to clients continued smoothly during the transition and issues were promptly addressed.

Theme 10 Programme and Project Planning

‘Planning’ here is used in the broad sense, to encompass the detailed proposals for various types of activities that will lead to a successfully executed programme or project.

Seven percent of all recommendations (38 recommendations) focussed on programme/project planning, a rise from 4% in the previous report. This is in part due to the increasing number of programmes involving multiple projects, and multi-agency and cross-sector projects – these factors make planning and integration much more complex.

Key findings

The ‘Project Plan’ is more than a Gantt chart or a pictorial view of the project’s overall timeline; it should be a document explaining all phases of the project through to completion and post-implementation review. The plan should include identification of deliverables, tasks, timeframes, resource requirements and interdependencies; it should identify critical path activities, cost or benefit variations and relevant risk mitigation strategies. It should also cover all change management activities and activities required for Introduction into Service (Transition planning), and make provision for assurance activities.

A high level programme plan / roadmap, an informative implementation plan and associated resourcing plan will assist in recovering from programme delays and can be used for monitoring and reporting purposes.

Gateway review recommendations under this theme include:

- ▶ Where there is more than one rollout/implementation, consider the timing carefully. Parallel/overlapping implementations strain resources and heighten risks. Try to have sufficient lag so that resources can move from one to the next, problems can be resolved before they recur, lessons learned can be identified and used to make improvements to later implementations.
- ▶ During the analysis and design phases, address the potential conflicts between user requirements / ‘fitness for purpose’ and the technical requirements. There are likely to need to be tradeoffs; make sure the appropriate people are involved in this decision-making; that the tradeoffs are explicitly identified and agreed, and that the decision made is the one that better supports the delivery of business benefits. In particular, ensure that technical requirements do not lead to compromised business outcomes.

- ▶ For a procurement project that is part of a broader capability programme, it is essential that the project plan includes all elements of the capability development including transition into service, equipment integration plans, relationship management planning, contingency planning and interdependencies between the procurement and the capability development.
- ▶ Where a project is to be delivered in two or more stages, the functionality for the first stage should deliver foundation functionality, sufficiently complete and standalone that it is a useful delivery if future stages are unable to be completed.
- ▶ The Programme Business Case should provide unambiguous detail of what it is going to deliver by whom, resources required, when it will happen and at what cost. This document should as much as possible be explicit and remove complexity for simplicity and clarity. It should clearly define the decision-making pathway and define the path to move forward to delivery with a minimum of procedural encumbrances.
- ▶ Where a project has phased delivery of its products, careful tracing of requirements is needed to ensure complete implementation of all requirements.
- ▶ Where a project is part of a broader programme, ensure that work on the project does not overtake programme-level decisions; for example, ensure technical solution design at the project level does not proceed in advance of a programme technology roadmap.

Theme 11 Management of Change

These recommendations relate to the work required in the business to make itself ready for the initiative, in terms of changes to business processes including:

- ▶ business continuity planning
- ▶ changes to work processes and resourcing
- ▶ changes to organisational structures and staffing to support changed work processes
- ▶ changes to supporting documents
- ▶ training of staff
- ▶ communications to customers and clients.

Management of business change is closely related to Transition into Service, which focuses more on technical readiness and associated staffing requirements for introduction of a system or service into business-as-usual.

Three percent of all recommendations (15 recommendations) focussed on business change management issues, a slight drop from four percent in our previous report.

Key findings

As in our previous report and also observed in theme 9: Transition into Service, the most common theme is the tendency of a project to focus on delivery of its asset, with insufficient attention paid to ensuring that the necessary business changes are planned and controlled. This is particularly true of ICT-enabled business change projects, where there is a marked tendency to focus on the IT aspects and pay insufficient attention to the organisational changes required to support the new system.

This is particularly relevant in agencies that have levels of customer facing operations where business performance is largely linked to achieving KPIs (volumes, timeliness etc) – the issue being that customer facing staff can only absorb so much change at any one time.

Gateway review recommendations under this theme include:

- ▶ For an ICT-enabled business change project, ensure that the business change remains the focus and is not overshadowed by the ICT component.
- ▶ Major organisation change/transformation projects have an inherent high level of political risk. The SRO should provide regular face-to-face briefings to the Minister on progress and readiness and progress to go-live.
- ▶ Ensure that the Change Management Strategy and Plan addresses all the dimensions of change, including technology adoption, changes to manual business processes, integrated training, and required changes to organisational structures to support the business changes.
- ▶ Where an organisational change programme may have impacts on related or unrelated projects (eg restructuring, rebaselining of the programme, refresh of the strategic plan) consider the impact of these changes on the projects and ensure that the risks associated with these changes are reflected and addressed in the project planning.
- ▶ For a programme involving multiple organisations, develop and implement change management plans that are tailored for each organisation; do not assume that a single plan can suit all of the participants.
- ▶ Recognise that key line managers, as the principal operational leads for the organisation, should be key project owners and culture change agents; ensure they have the training and support they need. There can be real value in their:
 - articulating their own area-focussed change management plan
 - undertaking full training alongside the change champions
 - being early users of the technology

- discussing amongst themselves what success looks like for them and how their work will be transformed
- actively leading conversations with other key groups to amplify the demonstration effect of their personal commitment to the organisational changes
- networking amongst themselves to enhance success.

Theme 12 Capturing Lessons Learned

Three percent of all recommendations (14 recommendations) focussed on projects learning from their errors and successes and ensuring these learning are actioned and made available to others, whether in the same project or in later projects or tranches.

In our last report this was the least-used theme, in fifteenth place. In our first report in 2011 this theme was subsumed in the **Programme and Project Management** theme. Its rise in the theme hierarchy reflects as much as anything the government's and monitoring agencies' increasing focus on ensuring that projects and programmes learn from their own and others' mistakes.

As a follow-up to the Novopay review, projects and programmes are now required to assess their uptake of the recommendations, to help ensure they avoid the same errors: <http://www.minedu.govt.nz/theMinistry/NovopayProject/MinisterialInquiry.aspx>

Key findings

Like Benefits Realisation planning and Risk Management, capturing of lessons learned is often done once in a cursory fashion and never followed up. This suggests a lack of understanding of the importance of learning from our own and others' mistakes.

It is important that lessons are sought and documented early and often, and not simply filed but actively actioned and made available to later phases of this programme and to other projects.

Gateway review recommendations under this theme include:

- Projects to implement Human Resources Management Information Systems (HRMIS) must explicitly consider the findings of the Ministerial Inquiry into the Novopay Project and ensure they are addressed, in the future state business requirements and/or the risk register.

- ▶ For a programme/project with a staged implementation, ensure processes are in place to gather feedback/lessons learned from early stages and to analyse these so they can be used to improve performance of later stages.
- ▶ As part of project Initiation, the SRO should identify similar projects in government and leverage any lessons learned and successes from these initiatives. Treasury's IMAP group can help to identify these projects.
- ▶ Before go-live, the project should analyse and document available information to review out-turn costs and scrutinise maintenance/ support costs (eg Facilities Management (FM) costs). This will:
 - Inform future agency projects of this type
 - Benchmark against existing agency cost metrics relating to improved procurement and asset management strategies
 - Update the Bid model
 - Analyse the cost of the completed designs
 - Update information relating to the whole-of-life costs.
- ▶ Particularly for a project that is the first of its kind in an organisation (eg first Public/Private Partnership (PPP) project), ensure that lessons learned are captured and documented in a way that can enable improvement to the organisation's procurement and asset management practices.

Theme 13 Methodology

This theme covers the use of structured proven approaches to programme and project management such as:

- ▶ MSP
- ▶ Prince2 and PMBOK processes and practices
- ▶ Investment Logic Mapping (ILM)
- ▶ Quantitative Risk Analysis (QRA).

The theme also covers recommendations relating to the increasing use of agile and iterative approaches and methods.

Programme and project methodologies, including agile development methods, provide a coherent set of proven structures, roles and practices, with supporting materials and practices. They can help ensure well considered and sound decision-making under pressure, and ensure a common, clear understanding of roles and accountabilities.

An Enterprise Programme and Project Management Office (EPMO), independent of any individual project, can facilitate use of a methodology and ensure that standards are maintained.

Two percent of all recommendations (12 recommendations) focussed on methodology issues, much the same as in our two previous reports.

Key findings

The use of an appropriate methodology that is flexible and scalable can contribute greatly to the success of a project. For ICT-enabled business change projects structured ICT design and development methodology must be in place and used, with key project management artefacts developed in line with the methodology structure.

Investment Logic Mapping (ILM) is best practice; it is a mandatory requirement of Government's business case guidelines for large high-risk projects and programmes, and a recommended practice for all projects. The ILM provides the skeleton for the investment argument in a Business Case and should be presented consistently throughout. If this is not so, rework the ILM and ensure that the Business Case and the ILM align.

Gateway review recommendations under this theme include:

- ▶ Where a programme portfolio is complex and has significant impacts on business-as-usual (BAU) consider establishing a portfolio management function to ensure alignment between projects and BAU to organisational strategy and outcomes.
- ▶ Very few ICT projects are purely about the technology delivery. Where there is a need to integrate the ICT delivery with business and process change, a project should be delivered within a framework of Programme Management, to integrate ICT delivery, change management and project planning in a structure that is focussed on the delivery of business benefits.
- ▶ Although QRA (Quantitative Risk Analysis) is mandatory only as part of the Detailed Business Case for large scale high-cost projects and programmes, it is an inexpensive mechanism to improve certainty around risk and cost estimates for any complex project. QRA is particularly useful:
 - As part of the Indicative Business Case, where it can give early visibility of risks that may have an impact on planning. QRA at this stage of a project is good practice.
 - For the costs associated with transition/implementation. The resulting cost drivers identified through the sensitivity analysis will be key inputs to the risk register, and potentially the contracts.
 - Risks identified by a QRA must be added to the Risk Register and managed appropriately.

Theme 14 Financial Planning and Management

Two percent of all recommendations (11 recommendations) focussed on financial management issues, down from four percent in the previous report.

The State Services Commission's Performance Improvement Framework (PIF) reviews of government agencies show that financial management is generally performed relatively well. This is reflected in the small number of Gateway review recommendations under this theme.

Key findings

Increasingly, projects and programmes in the public sector span multiple agencies; this introduces new complexity into financial arrangements, which if not addressed early and carefully can cause significant difficulties and delays as a result of funding gaps. The historic silo structure of government agencies mean that they are often reluctant to make a financial commitment that does not appear to have immediate benefit to themselves. Where there are significant size discrepancies among the agencies involved, this can have significant impact on the planning and delivery of benefits.

The majority of the recommendations made in Gateway reviews reflect the complexity of financial structures for these projects.

Gateway review recommendations under this theme include:

- ▶ The Detailed Business Case should include a detailed financial model with a fully justified preferred option and implementation plan. Where multiple organisations are sharing the costs, they need to be able to relate their individual contribution to the detailed financial model and understand how this relates to the implementation.
- ▶ For a project/programme involving multiple agencies, seek to access funding to ensure all agencies can fully participate in the programme. This enables timelines and benefits to be optimised across all involved agencies.
- ▶ For a project involving multiple agencies, engage early and fully with stakeholders to develop and agree a methodology for apportionment of benefits and costs, including agreement on timing of contributions and management of variations.
- ▶ Where a project is sponsored by multiple agencies, the Funding Agreement should be in the form of a 'Partnership Agreement' covering principles that set the scene for the relationship between the parties. Full funding details will be schedules to the Master Services Agreement.

- ▶ Where there are multiple agencies and multiple projects within a programme, particularly where there is private sector involvement, it is critical to document and formally agree funding arrangements, including:
 - cost-sharing agreements
 - capex/opex tradeoffs
 - long-term asset ownership
 - timing of contributions from participating parties
 - cost escalation arrangements and authorising governance
 - monitoring and reporting arrangements.
- ▶ For a project involving multiple agencies, in developing the funding model do not overlook the wider costs of running the project itself: not just core project management resources but contract management, change management, implementation planning, risk management, the cost of stakeholder road-shows and business case development. Agree the sources of this funding and timing; if taking a staged approach be aware of the requirement for continuity of project work across stage boundaries.
- ▶ A contingency plan should be developed to identify actions to be taken if the best bid exceeds the Affordability Threshold (AT) or significantly exceeds the cost estimated in the Detailed Business Case. This should include consideration of probity of process during any scope/cost negotiations with one or more bidders.
- ▶ For a Public/Private Partnership (PPP) project, ensure that the final analysis and reporting of cost status is clear and transparent. It should address issues including the final Public Sector Comparator and the changes that have been made since the Business Case, the Affordability Threshold and its status, the level of risk retained by the client agency, and the overall project/programme budget status.

Theme 15 Dependency Management

Dependency management primarily applies to outputs that are required by a project to succeed, but which will be delivered by parties not under the control of the project; for example, where a project's scope is to procure, test and implement an ICT system, but this is dependent on the timely delivery of ICT infrastructure upgrades by the ICT Operations group.

Two percent of all recommendations (nine recommendations) focussed on dependency management issues, much the same as identified in our previous reports.

Key findings

The single most valuable thing that programmes and projects can do to help themselves in this area is to develop a detailed critical path diagram which clearly identifies external and internal dependencies and the potential impact of any delays in their delivery.

This diagram can help governance groups to understand the vulnerabilities so that they can use their wider span of control and influence to keep external activities to schedule.

Gateway review recommendations under this theme include:

- ▶ For a multi-agency implementation, ensure that the implementation plan for individual agencies reflects the pressures and priorities of their work programmes and competing initiatives.
- ▶ For a programme with multiple (eg regional) project implementations, the governance board must agree the priority and sequencing and the overall timeframe for the individual projects, to ensure credible implementation. Simultaneous or near-simultaneous deployments put pressure on key resources and raise planning, slippage and reputational risks.
- ▶ For an implementation covering multiple sites, carry out a stocktake of all external dependencies for each site, including network capability and performance, off-site storage, Infrastructure-as-a-Service, disaster recovery and back-ups. Identify any deficiencies and agree an Action Plan to address these.
- ▶ The Risk Register and Dependency Register must identify those critical risks and dependencies that must be reported at the governance level. These should be regularly monitored and reported on to governance.

Appendix 1: Reviews 101-150 – analysis by type

Reviews by Gate

This report provides an analysis of 44 Gateway reports (numbered 101-150) conducted across 39 projects and programmes in 22 agencies between March 2013 and September 2014. Six reviews were cancelled or deferred after a review number had been assigned.

Of the projects and programmes, 17 were reviewed for the first time and 27 undertook their second or subsequent reviews.

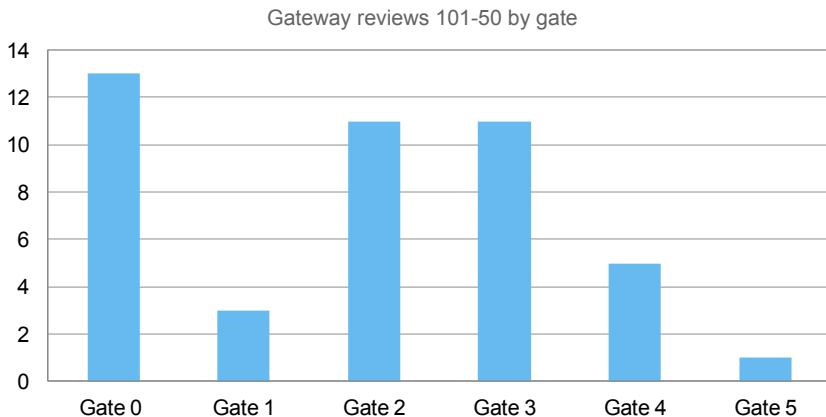
Of the project reviews conducted during the period:

- ▶ The majority (27) were at the project initiation stages (Gates 1 and 2).
- ▶ A significant proportion (11) progressed to Gate 3 (Investment Decision) during the period.
- ▶ Five progressed to Gate 4 (Readiness for Service).
- ▶ One was reviewed at Gate 5 (Operational Review and Benefits Realisation).
- ▶ 13 were combined reviews – a specific Gate review of a project in the context of its programme (Gates 0/1, 0/2).

Ten programmes were also reviewed, some more than once.

The graph below shows the distribution of reviews covered by this report.

- ▶ Note that combined reviews are counted as the later review (ie a Gate 0/1 review is shown as a Gate 1).
- ▶ All Gate 0 reviews are Programme reviews.

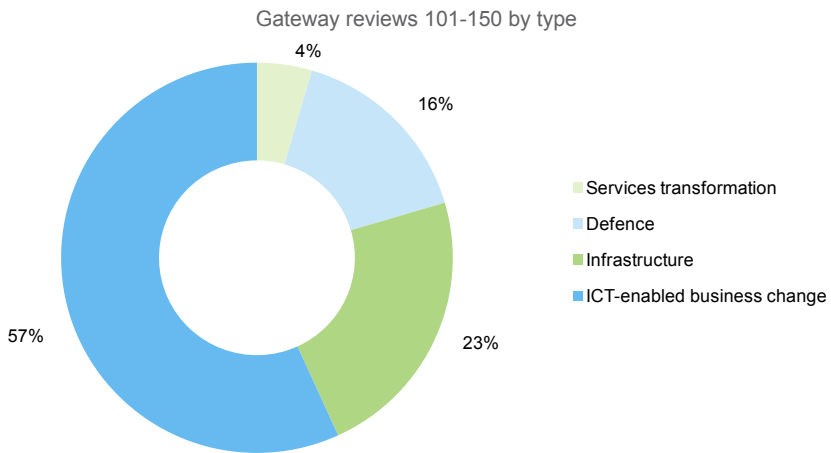


Reviews by project type

Of the 44 reviews covered by this report:

- ▶ 10 were infrastructure projects/programmes, including Hospital builds, major roading projects and disaster recovery projects
- ▶ seven were Defence acquisition and capability projects
- ▶ 25 were ICT-enabled business change
- ▶ two were service transformation projects with minimal ICT components.

The graph below shows the reviews by project type.








Reviews by Delivery Confidence assessment

In January 2014 the NZ Gateway Unit introduced the Delivery Confidence (DC) model, bringing New Zealand into line with international Gateway practice. 27 of the reviews in this report were run using this new model.

Delivery Confidence introduces an overall assessment by the Gateway Review Team of its confidence that the project or programme will succeed, if it progresses on its current trajectory. The Delivery Confidence rating reflects:

- ▶ specific issues that threaten delivery to time, cost or quality and jeopardise the delivery of benefits
- ▶ the Review Team's professional judgement of the likelihood of the project or programme succeeding even though there may be no definitively clear evidence either way
- ▶ the resilience of the project or programme to overcome identified shortcomings/ threats.

The team's assessment of Delivery Confidence is based on the following definitions:

Rating	Criteria description
 G	Successful delivery of the project/programme to time, cost and quality appears highly likely and there are no major outstanding issues that at this stage appear to threaten delivery significantly.
 AG	Successful delivery appears probable however constant attention will be needed to ensure risks do not materialise into major issues threatening delivery.
 A	Successful delivery appears feasible but significant issues exist requiring management attention. These appear resolvable at this stage and if addressed without delay, should not impact delivery or benefits realisation.
 AR	Successful delivery of the programme is in doubt with major risks or issues apparent in a number of key areas. Prompt action is needed to address these, and whether resolution is feasible.
 R	Successful delivery of the project/programme appears to be unachievable. There are major issues on project/programme definition, schedule, budget, quality or benefits delivery, which at this stage do not appear to be manageable or resolvable. The Project/ Programme may need to be rebaselined and/or its overall viability re-assessed.

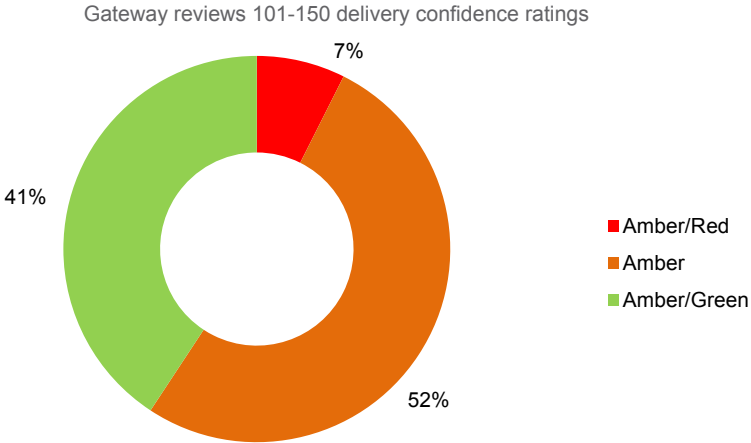
The Delivery Confidence model's key difference from the previous standard Gateway review is confidentiality around the recommendations raised in the report.

A Gateway Review report goes to the SRO only and is distributed further at the SRO's discretion, usually in the format of an action plan rather than the report itself.

Delivery Confidence takes the view that if a project is in trouble, interested Corporate Centre parties should be informed so that early action can be taken.

- ▶ Any review that results in a rating of Amber/Red or Amber is subject to Enhanced Notification and Monitoring Escalation; the agency must prepare an Action Plan to bring the project/programme back on track and relevant Central Agencies are advised.
- ▶ Escalation processes ensure that the relevant Monitoring Agency is involved as much as necessary in the development of the Action Plan and works with the agency to address the issues raised.

The graph below shows the Delivery Confidence assessment of the 27 reviews conducted using this model in the period covered by this report.



Three of 44 reviews were assessed as Amber/Red or Red and subject to escalation processes to assist them to get back on track.

Appendix 2: Purpose and development of Gateway in New Zealand

The underlying purpose of Gateway reviews is to help New Zealand government projects succeed by improving the performance of major projects in government agencies. Gateway reviews address this purpose in several ways:

- ▶ SRO mentoring through the Gateway review process
- ▶ Developing public sector reviewers
- ▶ Lessons learned analysis
- ▶ Capability building initiatives.

The Treasury recognises that project practices evolve over time, and that to remain relevant our application of Gateway and alternative investment reviews also need to adapt. Evaluation of feedback, lessons learned, and the review of processes are useful inputs to evolving Gateway in New Zealand over time and maintaining the integrity of the Gateway brand. A review of Gateway in New Zealand is on the work programme for the Office of the Auditor General in 2015/16, and as part of the Treasury-led changes to the government investment management system, alternative investment reviews and improvements to the Gateway arrangements are planned to be introduced before June 2016.

SRO mentoring

The Gateway Review Team primarily engages with, and solely reports to, the SRO. A Gateway review is a learning and development conversation, not part of any assessment or performance review. All interviews are non-attributable, promoting a high degree of frank disclosure and a non-threatening environment to discuss issues and barriers to project success.

During the review week, the review team acts as a 'critical friend' to the project. The team adopts a role of coach and mentor to the Senior Responsible Owner (SRO), providing them with a daily briefing and discussion of emerging findings. SRO feedback shows a strong appreciation of this approach and its success in identifying ways to increase a project or programme's chances of success.

Developing public sector reviewers

A key driver for the introduction of Gateway, from its inception in the UK in 2001, has been to improve project management understanding at senior levels in government. As part of this, there is a requirement for at least one senior public sector reviewer on every review.

Participation in Gateway reviews provides senior public servants with real-life exposure to major projects in other government agencies; the opportunity to work with private sector experts, from Australia and New Zealand, to identify issues and barriers to success and how they can be addressed. Senior government managers who undertake Gateway reviews consistently comment on the high value they gain, both personally and in terms of learnings they take back to their own agency.

Based on observation and on feedback from Review Team Leaders (RTLs) the New Zealand Gateway Unit actively works to develop promising New Zealand team members to Senior Reviewers and ultimately to Review Team Leaders; this improves project governance expertise in New Zealand and also reduces our dependence on Australian reviewers.

Although private sector reviewers may have no contact with a project after the Gateway review is complete, we encourage public sector reviewers to maintain and develop relationships and to continue to share their experiences and expertise – although this will preclude their involvement in further Gateway reviews for the same project/agency.

Since Gateway's initiation in New Zealand in 2008:

- ▶ 56 New Zealand senior public servants have participated in one or more Gateway reviews
- ▶ Senior public servants from 35 New Zealand public sector agencies have participated
- ▶ New Zealand reviewers (25 public sector and 10 private) have participated in 99 Gateway reviews in Australia
- ▶ 18 New Zealand reviewers have participated in 5 or more reviews to become Senior Reviewers
- ▶ Five New Zealand reviewers have progressed to Review Team Leaders

Of New Zealand's five Review Team Leaders, three are retired senior public servants (Chief Executive and Deputy Chief Executive level). They still have strong networks internal to government and experience gained in Gateway reviews assists them in other assignments.

Capability development

The Australasian Gateway Units run a Gateway forum approximately annually to share experiences and ensure Gateway is run consistently across the jurisdictions in line with international best practice.

In conjunction with the Gateway forum a Review Team Leader forum is held, to which RTLs and developing RTLs are invited. The Gateway Units use these one-day fora to:

- ▶ provide an update to current Gateway practices and any systemic changes (eg the introduction of Delivery Confidence)
- ▶ discuss any issues or areas of concern that RTLs have identified
- ▶ publicise and distribute the findings of key resources, eg Lessons Learned reports
- ▶ provide an opportunity to RTLs to network and share experiences.

The New Zealand Gateway Unit hosted the most recent Gateway Forum, in November 2014.

Lessons learned analysis

With close to 150 completed in New Zealand to date, Gateway reviews constitute a longitudinal study of project management maturity on major projects and programmes in NZ government.

The New Zealand Gateway Unit identifies lessons learned by reviewing Gateway review reports from completed reviews, and through ongoing communication with agencies and Gateway reviewers. We identify trends in emerging issues through recommendations to improve deficient practices; or through recognition by a review team of good practice already being applied by an agency to a project.

The anonymised recommendations highlight opportunities for project and programme management improvements in New Zealand Government agencies. They are widely distributed and contribute to Treasury's understanding of the issues, underlying problems and trends in government projects and have helped to identify areas of focus for the Corporate Centre. For example:

- ▶ Early Gateway reviews identified significant issues around project and programme business cases; this was a key contributor to the decision to introduce Better Business Cases, which has led to significant improvements in business cases developed for government projects.
- ▶ Gateway and Major Projects Monitoring jointly commissioned a New Zealand version of a CBT masterclass for Senior Responsible Owners (SROs) of projects and programmes. This is available through ILX Group: email newzealand@ilxgroup.com

New Zealand Gateway Review recommendations are also submitted to the joint Australasian Gateway Lessons Learned database, which the NZ Gateway Unit can query and provide reports from on request from agencies and projects.

Appendix 3: Good Practice Guidance

New Zealand Government

The Treasury, www.treasury.govt.nz:

- ▶ *Better Business Case Guidance*: <http://www.treasury.govt.nz/statesector/investmentmanagement/plan/bbc/guidance>
- ▶ *Gateway Review Process*: www.treasury.govt.nz/statesector/investmentmanagement/review/gateway
- ▶ *Guidelines for Monitoring Major Business Projects and Programmes*, July 2011. <http://www.treasury.govt.nz/statesector/investmentmanagement/do>

New Zealand Government recommended CBT masterclass for Senior Responsible Owners (SROs) of projects and programmes; an international certification tailored for New Zealand by the Gateway Unit and Treasury: contact newzealand@ilxgroup.com

Department of Internal Affairs, Office of the Government Chief Information Officer:

- ▶ <https://www.ict.govt.nz/>

Ministry of Business, Innovation & Employment (MBIE):

- ▶ *Procurement Toolkit*, www.business.govt.nz/procurement/for-agencies/guides-and-tools

Australian Government

Australian Audit Office: www.anao.gov.au/Publications

- ▶ *Better Practice Guide: Developing and Managing Contracts*, February 2012.
- ▶ *Better Practice Guide: Implementation of Programme and Policy Initiatives*, October 2006
- ▶ *Better Practice Guide: Public Sector Governance*, July 2003
- ▶ *Better Practice Guide: Business Continuity Management – Building resilience in public sector entities*, June 2009

Department of Finance:

- ▶ *Commonwealth Procurement Rules*, July 2012 www.finance.gov.au/procurement/procurement-policy-and-guidance/commonwealth-procurement-rules/index.html
- ▶ *ICT Policy, Guides and procurement* 2012. <http://agict.gov.au/policy-guides-procurement/>

UK Government

All UK government methodologies and best practices are now available from the official Axelos site: <https://www.axelos.com>, including:

- ▶ *ITIL – Information Technology Infrastructure Library*: <https://www.axelos.com/best-practice-solutions/itil>
- ▶ *MoP – Management of Portfolios*: <https://www.axelos.com/best-practice-solutions/mop>
- ▶ *MoR – Management of Risk: Guidance for Practitioners*: <https://www.axelos.com/best-practice-solutions/mor>
- ▶ *MSP – Managing Successful Programmes*: <https://www.axelos.com/best-practice-solutions/msp>
- ▶ *P3M3 – Portfolio, Programme, and Project Management Maturity Model*: <https://www.axelos.com/best-practice-solutions/p3m3>
- ▶ *P3O - Portfolio, Programme and Project Offices*: <https://www.axelos.com/best-practice-solutions/p3o>
- ▶ *Prince2 – Managing and Directing Successful Projects with PRINCE2*: <https://www.axelos.com/best-practice-solutions/prince2>

Standards New Zealand

Standards New Zealand: www.standards.co.nz/

- ▶ *AS/NZS ISO 31000:2009: Risk Management – Principles and guidelines (supersedes AS/NZS 4360:2004: Risk Management, 2004)* www.standards.co.nz/news/standards-information/risk-management/
- ▶ *AS/NZS ISO/IEC 38500:2010: Corporate Governance of Information and Communication Technology* <http://shop.standards.co.nz/catalog/38500%3A2010%28AS%7CNZS+ISO%7CIEC%29/view>
- ▶ *HB 221:2004: Business Continuity Management* <http://shop.standards.co.nz/catalog/221%3A2004%28SAA%7CSNZ+HB%29/view>
- ▶ *AS/NZS 5050:2010: Business continuity - Managing disruption-related risk* <http://shop.standards.co.nz/catalog/5050%3A2010%28AS%7CNZ%29/view>
- ▶ *HB 167:2006: Security Risk Management* <http://shop.standards.co.nz/catalog/167%3A2006%28HB%29/view>
- ▶ *HB 231:2004 Information security risk management guidelines*: <http://shop.standards.co.nz/catalog/231%3A2004%28HB%29/view>

- ▶ AS/NZS ISO/IEC 27005:2012: *Information technology - Security techniques - Information security risk management* <http://shop.standards.co.nz/catalog/27005%3A2012%28AS%7CNZS+ISO%7CIEC%29/view>

Project Management Institute

- ▶ *Project Management Body of Knowledge Fifth Edition (PMBOK® Guide)*
<http://marketplace.pmi.org/Pages/ProductDetail.aspx?GMProduct=00101388701>
- ▶ *Construction Extension to the PMBOK® Guide Third Edition*
<http://marketplace.pmi.org/Pages/ProductDetail.aspx?GMProduct=00101025801>
- ▶ *Government Extension to the PMBOK® Guide Third Edition*
<http://marketplace.pmi.org/Pages/ProductDetail.aspx?GMProduct=00100082501>
- ▶ *Software extension to the PMBOK® Guide Fifth Edition*
<http://marketplace.pmi.org/Pages/ProductDetail.aspx?GMProduct=00101457501>
- ▶ *The Standard for Program Management Third Edition*
<http://marketplace.pmi.org/Pages/ProductDetail.aspx?GMProduct=00101388801>

Change Management Institute

- ▶ *Change Management Body of Knowledge First Edition*
<https://www.change-management-institute.com/buycmbok>

