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**Management Approaches to Resource Allocation**

**Table of Contents**

* [1. Executive Summary](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar01-eng.asp#Toc320285129)
* [2. Introduction](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar02-eng.asp#Toc320285130)
  + [2.1 Background](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar02-eng.asp#Toc320285131)
  + [2.2 Objectives](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar02-eng.asp#Toc320285132)
  + [2.3 Methodology](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar02-eng.asp#Toc320285133)
  + [2.4 Organizations Surveyed](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar02-eng.asp#Toc320285134)
  + [2.5 Data Assumptions and Limitations](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar02-eng.asp#Toc320285135)
* [3. Key Findings](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar03-eng.asp#Toc320285136)
* [4. Interview Summaries](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285137)
  + [4.1 Planning Process and Plan Content](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285138)
    - [4.1.1 Federal Government Policy Requirement](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285139)
    - [4.1.2 Summary of Respondents](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285140)
    - [4.1.3 Commonalities and Differences](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285141)
  + [4.2 Roles and Responsibilities](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285142)
    - [4.2.1 Federal Government Policy Requirement](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285143)
    - [4.2.2 Summary of Respondents](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285144)
    - [4.2.3 Commonalities and Differences](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285145)
  + [4.3 Information Systems & Performance Measurement](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285146)
    - [4.3.1 Federal Government Policy Requirement](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285147)
    - [4.3.2 Summary of Respondents](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285148)
    - [4.3.3 Commonalities and Differences](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285149)
  + [4.4 Risk Management Approach](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285150)
    - [4.4.1 Federal Government Policy Requirement](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285151)
    - [4.4.2 Commonalities and Differences](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar04-eng.asp#Toc320285152)
* [5. Impact on Corporate/Departmental Processes](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar05-eng.asp#Toc320285153)
  + [5.1 Process](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar05-eng.asp#Toc320285154)
  + [5.2 Structural](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar05-eng.asp#Toc320285155)
  + [5.3 Behavioral](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar05-eng.asp#Toc320285156)
* [6. International Experiences](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar06-eng.asp#Toc320285157)
  + [6.1 The United Kingdom](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar06-eng.asp#Toc320285158)
  + [6.2 Australia](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar06-eng.asp#Toc320285159)
* [7. Leading Practices](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar07-eng.asp#Toc320285160)
  + [7.1 Processes / Plan](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar07-eng.asp#Toc320285161)
  + [7.2 Roles & Responsibilities](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar07-eng.asp#Toc320285162)
  + [7.3 Information Systems & Performance Measurement](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar07-eng.asp#Toc320285163)
  + [7.4 Risk Management Approach](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar07-eng.asp#Toc320285164)
* [8. Conclusion](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar08-eng.asp#Toc320285165)
* [9. Works Cited](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar09-eng.asp#Toc320285166)
* [Appendix A. Organizations Surveyed](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar10-eng.asp#Toc320285167)
* [Appendix B. Interview Guide](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar11-eng.asp#Toc320285175)

**Management Approaches to Resource Allocation**

**1. Executive Summary**

In 2007, under the Policy Framework for the Management of Assets and Acquired Services, the Treasury Board approved new policies on Investment Planning and on the Management of Projects as part of an effort to streamline long-term investment planning for both assets and acquired services. These policies are meant to improve the visibility of departmental decision-making and to enable Ministers to see departmental context beyond individual project submissions.

Having studied implementation challenges, lessons learned, and federal government experience in adopting the new policies, the Secretariat then sought to compare and contrast management approaches to resource allocation over a cross-section of public and private sector organizations to assess if and how corporate or departmental practices were impacted by an integrated investment planning and resource allocation approach.

TBS contracted the services of Tiree Facility Solutions to document the range of corporate practices currently in place over a sampling of organizations to identify which of those organizations have integrated resource allocation decision-making at an enterprise level, and to see which practices have been impacted by the implementation of an integrated investment planning approach. Organizations were selected based on sector, asset mix, and business delivery function. Academic experts in the fields of publicly-owned real estate and health care economics were also approached for input.

The study revealed commonalities between the selected organizations that recurred consistently throughout the survey:

* Almost every organization interviewed has adopted a formal capital investment planning process that uses priority setting.
* Most organizations that have adopted planning processes have done so recently—typically in the past 5 years.
* Most new planning processes have been more horizontally integrated and are significantly more transparent throughout their organizations.
* Almost all organizations have faced change management issues in terms of adopting new processes internally.
* Almost all organizations have experienced process, structural or behavioral changes.

The overall response with respect to formal investment planning was a positive one. Respondents claimed that decision-makers’ visibility of investment decisions improved in breadth—given that integrated investment plans convey departmental or corporate context—and in depth, given that a multi-year investment plan provides a capacity for adapting to spending spikes and valleys.

The federal government’s approach appears to be in step with the other organizations interviewed in that they are neither leading nor lagging the implementation of a formal resource allocation process.

**2. Introduction**

**2.1 Background**

In 2005, under the guidance of Treasury Board Ministers, the Treasury Board Secretariat (TBS) committed to renewing policies that govern the Government of Canada’s programs and services. TBS introduced the Policy Suite Renewal Initiative (PSRI) as one of its key management initiatives to support accountability and excellence in the management of public service.

The objectives of the policy suite renewal initiative are to:

* clarify, through a renewed policy suite, the management responsibilities and accountabilities of ministers and deputy heads;
* establish a clear distinction between their duties and those of functional experts;
* create an integrated, streamlined and consolidated policy infrastructure; and
* establish an organizational structure to ensure that policies remain current, relevant and clear.

As part of this initiative, in 2007 the Treasury Board (TB) Ministers approved two new policies under the Policy Framework for the Management of Assets and Acquired Services: the *Policy on Investment Planning-Assets and Acquired Services*, which replaces the *Policy on Long-Term Capital Plans*; and the *Policy on the Management of Projects,* which replaces the *Project Management Policy, the Policy on the Management of Major Crown Projects* and the *Project Approval Policy*.

The *Policy on Investment Planning* recognizes the relationship between departmental spending on investments [See footnote [1]](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar12-eng.asp#ftn1) in the form of assets [See footnote [2]](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar12-eng.asp#ftn2) and acquired services [See footnote [3]](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar12-eng.asp#ftn3) through projects and procurement activities, including real property transactions, and presents a holistic and strategic approach to departmental planning and priority setting activities over a five-year horizon. The Policy requires that deputy heads ensure that appropriate management practices and oversight mechanisms are in place for their planned investments and that TB approval of these plans is sought every three years at a minimum.

The *Policy on the Management of Projects* supports a risk-based approach to project approval and oversight. Project approval authority limits are based on the assessed capacity of the department to manage projects and the risk and the complexity of those projects. Projects determined to be above the organization’s capacity (due to their risk and complexity) require TB approval. In support of the *Policy on the Management of Projects*, two Standards—one for *Organizational Project Management Capacity* and one for *Project Complexity and Risk—*are administered through two assessment tools.

Prior to the introduction of these policies, the approach to capital expenditure planning was project-focused. At the time, only 18 of 95 departments with significant capital votes (budgets) were required to submit a five-year capital plan that covered assets. Departments were also required to seek TB approval for any projects that exceeded their authority. For most departments this threshold value was $1M. Ministers often had limited departmental context in which to understand projects other than what was provided in the individual project submission. Departmental decisions to invest in significant service contracts were not visible unless the services contract itself required TB approval.

Currently, 104 federal departments and agencies are subject to the new policies, which reflect a risk-based approach to determining project approval limits and TB oversight.

The expected results of these policies are:

* More consolidated approach to investment planning and the management of projects;
* Risk-based approach to the management and oversight of projects;
* Investments and resource allocation explicitly linked to program outcomes and government priorities;
* Ministers provided with a holistic picture of departmental investments at the enterprise level, as well as advance notice of planned projects;
* Ministers strategically positioned to allow for early oversight and direction to departments.

**2.2. Objectives**

Since the introduction of the new policies in 2007, TBS has completed a number of studies which focused on implementation challenges, lessons learned and the federal experience. The Secretariat is now looking to compare and contrast the management expectations established in the *Policy on Investment Planning* in the Government of Canada with other approaches to resource allocation over a cross-section of public and private sector organizations to asses if and how corporate or departmental practices were impacted by their approach.

**2.3. Methodology**

TBS contracted the services of Tiree Facility Solutions to conduct this study. The key purpose of the study was to research and document the range of corporate practices currently in place over a cross section of organizations, to identify which of those organizations integrate resource allocation decision-making at an enterprise level, and to see if and how organizational investment practices were impacted by the implementation of an integrated investment planning approach.

The selection of potential organizations to participate in the study and be interviewed was based on their sector, asset mixes and business delivery functions. The study also included academics whose research focuses on the management of publicly-owned real estate and on resource allocation in health-care decision making.

Participation was voluntary and key informants assured that the study would not seek specific or potentially strategic information.

The study was qualitative in nature and comprised of 13 structured telephone interviews with representatives of the selected organizations and two semi-structured interviews with the academic sources. Secondary sources of information obtained from Google, TBS web site and policy-related documents informed the study.

Collected responses were compiled side-by-side in one document and organized for easy comparison across different organizations and sectors. This was the basis for the analysis and interpretation of the content of this report.

Appendix B contains the interview guide and the glossary of relevant terms distributed to informants in advance of a scheduled telephone interview.

Section 3 of this report contains key findings identified in the course of this study. Section 4 summarizes the data collected during the survey of 13 organizations and two academics, comments on similarities and differences, and comments on how practices in other organizations relate to policy requirements for federal government departments. Section 5 directly addresses the impact of formal processes on investment planning practice, as well as challenges encountered in implementation. Section 6 details international experiences in risk-based investment and project approval processes. Section 7 identifies innovative practices found in the participating organizations. Section 8 offers concluding statements on the study’s findings. Finally, Section 9 is a bibliography containing works that were used in the process of this study and may be of further interest to TBS.

**2.4. Organizations Surveyed**

Seven sectors were identified for this study, however only respondents from four sectors participated in the study: Government; Municipal, Universities, Schools and Hospitals (“MUSH”); Financial Services; and Retail. No organization from the Utilities or High Tech sectors responded. From each sector: 6 participants were from Government, 4 from MUSH, 2 from Financial Services, 1 from Retail.

Capital budgets ranged in size from $37.5 million to $17.6 billion. Asset classes for almost all organizations included real estate, fleet, equipment and IT.

A brief description of the sectors and mandates can be found in Appendix A.

**2.5. Data Assumptions and Limitations**

The study assumed that a sampling of this small size (<15 organizations) would nevertheless yield qualitative findings reflective across a broad cross-section of Canadian government and industry. There was some selection bias as the organizations were not randomly chosen and participation was voluntary.

The study was limited in terms of:

* Time and resources allocated to undertake the study
* Selection and size of sample
  + Resource and time constraints imposed limitations on the selection and sample size.
  + Organizations not randomly chosen: organizations selected based on sector, asset mix, and business delivery function.
  + Degree of self-selection among respondents: participation was only on a voluntary basis.
* Language and terminology, although defined in the interview guide, led to some challenges:
  + The understanding of the terms “investment” and “capital asset investment”, as used in relevant TB policies, was not consistent among respondents.
  + Many respondents did not understand the meaning of “acquired services” and how it related to their expenditure planning and resource allocation process.
  + Varying interpretations of the concept of an integrated approach to the management of projects and investment planning.
* Government of Canada policy limitations on asking opinion-based questions restricted the type and variety of questions in the Interview Guide.
* Varying nature of assets held by organizations (real estate, IT, scientific equipment, healthcare) and variances in how organizations are allocating resources to different business lines make it difficult to aggregate and compare total spending.
* Varying nature of scope and value of asset base, capital and operating budgets of the organizations (capital budgets that ranged from $37.5 million to $17.6 billion)

**3. Key Findings**

The findings reveal that:

* Almost all organizations had some type of formal capital planning process instituted in the last five years—evidence of a broad and cross-sectoral trend towards more integrated investment planning;
* Almost all organizations used some sort of priority setting process. Factors influencing prioritization of investment allocations are associated with government priorities, risk, program/business requirements, asset conditions, demographics;
* Accountability for investment decisions (both the plan and the process) resided with the most senior person in the respondent organizations;
* Elected officials in public sector organizations were responsible for the approval of the plan;
* Board of Directors and/or Senior Vice Presidents were responsible for approving investment decisions in private sector (depending on the size and complexity of the investment decision);
* Those organizations who have implemented a formal planning process have experienced a more informed decision making process;
* Respondents indicated that formal planning has allowed them to plan for and smooth out spikes and valleys in spending, and has increased Deputy Head/Senior VP awareness/visibility on investment decisions and where their capital dollars are being spent;
* Organizations with formal planning processes have also created internal processes and committees and some have had to assign staff to manage the planning process;
* Almost all organizations have experienced process, structural or behavioral changes;
* Both the UK and Australia introduced the idea of risk-based oversight and governance for major projects between 2001 and 2006. Although not all of these governments exercise their oversight through limiting expenditure authority in the approval of projects by a central agency as that of the Canadian government, the concept of a tailored approach considering project risk and complexity and organizational capacity has been reflected either in the project approval process or in the project implementation;
* Prevalent use of spreadsheets and databases to prepare and monitor the capital planning process – no commercial off-the-shelf (COTS) or enterprise solution in use;
* There were a variety of metrics used to measure both corporate (program/business objectives) and operational performance (project or asset specific) but only the federal government appears to measure the performance of the investment planning process itself;
* With the exception of the federal government respondents, most organizations have committed to a software solution and a methodology (building condition assessment of facility condition index) that provides an understanding of the state of their physical assets including replacement costs, life cycle analysis, and funding needs;
* Almost all organizations integrate risk management at some level of their investment planning process;
* Project Risk and Complexity tools are not unique to the Canadian federal government – similar practices exist in the UK and Australia.

These findings are further discussed and expanded-upon under their respective sub-headers in Section 4, Interview Summaries.

Of the 13 organizations interviewed, 3 are subject to the federal government’s new investment planning policies. The remaining 10 organizations have almost all instituted a formal planning process for their capital assets.  The following summarizes the key differences and commonalities:

|  |  |  |
| --- | --- | --- |
| **Element** | **Federal Government** | **Others** |
| Plan approval interval | 3 years | 1 year |
| Plan horizon | 5 - 20 years | 3 – 10 years |
| Priority setting process used | Yes | Yes |
| Plan coverage | Assets and services | Capital assets |
| Plan approval | Elected officials | Elected officials for public sector and Board of Directors/Senior VP for private sector |
| Senior recommending committees | Executive team members | Executive team members |
| Allocation and re-allocation approach | Strategic, horizontal and transparent | Strategic, horizontal and transparent |
| Challenges in implementation | Process, structural and behavioral changes | Process, structural and behavioral changes |
| Risk integration | Plan and project level | Project level |
| Information systems for planning | Spreadsheets and databases | Spreadsheets and databases |
| Information systems for asset condition | Not reported | Custom software and methodology to collect, analyze and prioritize capital assets repair and maintenance |

## 4. Interview Summaries

The following section summarizes the information collected during the interviews and key findings. For each aspect of this study—planning process and plan content, roles and responsibilities, information systems and performance measurement, and risk management—the relevant aspects of the *TB* Policy on Investment Planning are described, then compared and contrasted to practices evident in the organizations interviewed.

### 4.1. Planning Process and Plan Content

For the purposes of this study, a formal planning process is understood as one that has a planning horizon of a certain distance, with a degree of institutional support or frameworks. Respondents were asked about their prioritization methods, the structure of their planning process, and about the adoption of current methods.

**Key Findings:**

* Almost all organizations had some type of formal capital planning process instituted in the last five years—evidence of a broad and cross-sectoral trend toward more integrated investment planning.
* Almost all organizations used some sort of priority setting process. Factors influencing prioritization of investment allocations are associated with:
  + Government priorities, risk, program/business requirements, asset conditions, demographics

#### 4.1.1. Federal Government Policy Requirement

Under the Policy on Investment Planning, deputy heads are responsible for ensuring the governance and support of investment planning (policy requirement 6.1.1).

A departmental investment plan is required to have a wide, departmental-, portfolio-, and government-wide perspective and reflect departmental strategic plans and broad strategic objectives of the government. It should be influenced by assessments of investment performance, consider alternative options and delivery models for meeting asset and service requirements spend within departmental reference levels, and take into account the life-cycle cost of assets and acquired services (policy requirement 6.1.2).

The departmental investment plan must be submitted at least every three years (covering a five-year period) to the Treasury Board Secretariat and the decision whether or not to submit to TB for approval is based on a variety of factors including significance, risk, departmental management performance, the magnitude of changes proposed by the plan, and the capacity to deliver said plan (policy requirement 6.1.4).

#### 4.1.2. Summary of Respondents

The following table summarizes the responses of organizations regarding questions on plan content and the planning process, with “plan approval interval” describing the time period between approvals of the plan. “Plan horizon” refers to the years covered in the forward projection of the plan. Further information on these organizations can be found in Appendix A.

Note that federal organizations A, B and C must comply with all TB policies. While Organization D is a federal government agency, it is exempt.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Organization** | **Formal Plan** | **Plan Approval Interval** | **Planning Horizon** | **Priority Setting Process used** | **Priorities** | **Date of  Plan Implementation** | **Plan Coverage: (Capital / Operating / Both)** |
| A | Yes | 3 years | 20 years | Yes | Equipment, infrastructure, readiness, personnel. | 2009 | Both |
| B | Yes | 3 years | 5 years | Yes | Set by program area. | 2008/2009 | Both |
| C | Yes | 3 years | 5 years | Yes | Government priorities, asset priorities, finance, timing. | 2009/2010 | Both |
| D | Yes | 1 year | 10 years | Yes | Government priorities, sector priorities, asset priorities – still developing process. | 2009 | Capital |
| E | Yes | 1 year | 10 years | Yes | Government priorities. | 2011 | Capital |
| F | Yes | 3 years | 10 years | Yes | Emergency, building codes, facility condition, equipment life cycle. | 2010 | Capital |
| G | Yes | 3 years | 10 years | Yes | Business requirements | 2002 | Capital |
| H | Yes | 1 year | 5 years | Yes | Government priorities, legislative requirements, asset conditions, student requirements. | 2006/2007 | Both |
| I | No | 1 year | 5 years | Ad-hoc | Not integral to planning process | 2005/2006 | Capital |
| J | Yes | 1 year | 5 years | Yes | Government priorities, legislative requirements, asset conditions, student requirements. | 2010 | Both |
| K | Yes | 1 year | 5 years | Yes | Business requirements and corporate image. | 2011 | Capital |
| L | No | 1 year | 1-3 years | Yes | Compliance and business impact. | 2007 | Capital |
| M | Yes | 1 year | 3-5 years | Yes | Compliance and business needs. | 2007 | Capital |

#### 4.1.3. Commonalities and Differences

##### 4.1.3.1. Plan Length

The federal organizations interviewed that must comply with the federal government’s policy requirements (A, B and C) are required to submit a plan every 3 years that covers 5 years of expenditures.

Practices relating to the length of planning cycles revealed slightly different approaches to timing, with plans being renewed by all respondents’ organizations on an annual or three-year basis. Planning horizons were set predominantly at five to ten years. One of the financial institutions interviewed, Organization L, was the notable exception in that it planned investments with a horizon of one to three years.

Though a period of 3-7 years is usual (Kaganova, 2011), Organization D’s representative mentioned that there were initial reservations about long-term forecasting. Organization E reported a similar experience in the difficulty predicting projects further ahead than five years. Addressing these concerns during the change management process may be an important step in achieving buy-in from staff and stakeholders.

##### 4.1.3.2. Priority Setting Process

Almost all organizations used some sort of priority setting process. For public sector organizations, the government agenda often drove program priorities while in the private sector specific business requirements drove investment decisions. In the public sector and in private organizations priorities were also set by legislative compliance (i.e. adherence to code requirements) and asset condition. And while private sector and public sector business drivers, performance measures and priorities are different—as are their “fundamentally different management, reporting, and decision-making systems” (McKellar, 2006, p.63) – there appears to be a common approach to ensuring that those making the investment decisions are provided with accurate data, relevant priorities, corporate context and risk to that sound financial decisions can be made that are aligned with corporate strategic objectives.

Though good judgment and common sense remain essential counterparts to priority-setting criteria, as Kaganova (2011) puts it, “carefully prepared criteria will sharpen distinctions among projects, narrow the range of disagreement, provide a basis for discussion, and, hopefully, make the entire process more transparent” (p.33).

Almost every organization that had capital assets also used the outcome of a facility condition assessment to determine the highest needs. Many organizations have committed to a software solution and a methodology that provides an understanding of the state of their physical assets including replacement costs, life cycle analysis, and current and future funding needs. This information is then used to inform either a business case or a determination of priority matched against a fixed funding target.

Priority setting and resource allocation approaches are being used in health care in Canada and other jurisdictions (UK, New Zealand and Australia). Incorporating the economic principles of opportunity costs and marginal analysis, the Program Budget and Marginal Analysis (PBMA) is a tool to aid decision makers in setting priorities in the provision of health services. The aim of PBMA is to help decision makers plan services in the face of limited budgets, by combining information on the costs and health related benefits of services. It represents a practical application of economic principles in setting priorities by using cost effectiveness principles applied through the use of marginal analysis. (Peacock, 1998)

Mitton (2004) notes that “PBMA provides an explicit mechanism for operationalizing the economic principles of opportunity cost and the margin. This approach helps to ensure a transparent priority setting process, allows for stakeholder consultation of allocation recommendations, enables public input to be incorporated and is driven jointly by local opinion and available evidence. Coupling PBMA with an ethical framework to examine the fairness of the process is important in and of itself and also will likely foster buy-in if the process is viewed to be credible.”

Mitton identifies (2011, p.9) the key success factors to a successful PBMA process:

* Buy-in of decision makers to the acceptance of scarcity and the need to assess options for change;
* Strong leadership;
* High level of trust between managers and clinicians (Subject Matter Experts)

##### 4.1.3.3. Scope

Federal organizations A, B and C must comply with the federal government’s policy requirements and thus are required to include their planned expenditures in acquired services however this reporting requirement was not evident in other organizations. It would appear that the federal government is unique in requiring investment plans to include both capital and operating expenditures.

Almost all organizations responded to questions about their capital planning processes, but not all respondents were able to comment on how their operating budgets were planned or allocated. This was in part due to the individuals interviewed and their role—typically in positions of oversight of capital expenditures—and due to the interpretation of the questions asked in the Interview Guide.

For those who did comment on operating budgets, most responded that the operating budget was reviewed annually and it covered acquired services.

One organization indicated that it was dealing with a structural operating deficit and that it was hoping to build a 3-year operational plan. Currently its operating budget is determined on an annual basis.

Organization H was a notable exception as it uses a revenue-driven activity cost model for its entire budget. Every revenue dollar is allocated among the 17 faculties. Since 90% of the revenue comes from tuition and provincial operating grants, the allocation to each faculty is simply based on the revenue they generate through tuition minus a corporate services charge for IT, finance, facilities services, etc.

##### 4.1.3.4. Affordability and Allocation/Re-Allocation

Organizations A, B and C are required to comply with the federal government’s policy requirements and thus submit an investment plan that is within their appropriated budgets (reference levels). This is in common with many of the other organizations who planned within a defined spending envelope or allocation.

Organizations reported that resource re-allocation decisions were better informed with a formal planning process, in the sense that if a new requirement is identified; processes are in place to allow for emerging priorities. Organization A reported that because the process looks not just at next year’s needs for a particular requirement, but at the whole life cycle cost, it results in a plan that is much better-integrated as it is linked to the HR, IT, and procurement needs.

Another federal organization (C) noted that if something new came up, there were processes in place to allow for emerging priorities. Part of their process allows for items to be added to the plan mid-year. This is valuable as the nature of capital procurement is that projects will slip from one year to another.

Educational institutions that were contacted in the study reported that funding from the government (and—in the case of the university—from large donors) would be aligned with government or other external priorities and its expenditure would have to be allocated accordingly. Organization J described an approach for generating its own capital funding through real estate investment which it could allocate unilaterally. This practice is described in greater detail in Section 7.1.

Organization H, among others, commented that integrated investment planning is more transparent in that participants can all understand where revenue comes from and where costs are. The process becomes more data-driven as a result of the explicit availability of this level of information about other programs, branches or lines of business.

Craig Mitton notes that international experiences have highlighted the central role of an advisory panel in setting priorities. Its role is to make better recommendations for reallocating resources to better meet organizational objectives. Without this, organizations can’t reallocate resources. “Proactive resource management requires the continual assessment of existing services vis-à-vis new investment options and where the relative value of the latter outweighs the former resources should be shifted accordingly” (Mitton, 2011, p.10).

### 4.2. Roles and Responsibilities

Organizations were asked about responsibility for investment planning decisions and about the governance processes in place to support formal investment planning.

**Key Findings:**

* Accountability for investment decisions (both the plan and the process) resided with the most senior person in the respondent organizations.
* Elected officials in public sector organizations were responsible for the approval of the plan.
* Board of Directors and/or Senior Vice Presidents were responsible for approving investment decisions in private sector (depending on the size and complexity of the investment decision).

#### 4.2.1. Federal Government Policy Requirement

It is a requirement of the Treasury Board Policy on Investment Planning that deputy heads ensure that an investment planning process is in place. As well, there is a requirement that key federal stakeholders—including, but not limited to: central agencies, relevant socio-economic departments and common service providers—are informed of the department's planned investments (policy requirements 6.1.1 and 6.1.8).

#### 4.2.2. Summary of Respondents

The following table outlines the various roles and responsibilities for investment planning in the organizations interviewed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Organization** | **Approval Body** | **Senior Level Accountability** | **Senior Level Recommending Committees** | **Department Accountable for the Plan** |
| A | Treasury Board | Deputy Head | Finance Committee (includes CFO) | Programs Directorate |
| B | Treasury Board | Commissioner | Senior Executive Committee, Senior Policy Investment Committee | Chief Finance and Administration Office |
| C | Treasury Board | Deputy Head | Investment Planning Secretariat presents ADM requests to DM | Corporate Services |
| D | Board of Management or Agency Management Committee | Commissioner | Subcommittee of Resource and Investment Management Committee | Corporate Services |
| E | Treasury Board (Cabinet subcommittee) | Deputy Head | Deputy Minister’s Committee on Capital | Treasury Board Secretariat |
| F | Treasury Board (Cabinet Committee) | Deputy Head | EVP and CFO | Real Estate Management |
| G | Commission | Police Chief | Chiefs Committee composed of Police Chief and deputy chiefs. | Office of Strategy Management |
| H | Board of Governors | Provost | Faculty committees chaired by their Deans | Provost’s Office |
| I | President’s Executive Committee | President | College Space and Infrastructure Committee | Finance and Administration |
| J | Board of Trustees | Director of Education | Deputy Directors | Strategic Building and Renewal |
| K | Board of Directors/Treasury Department/Business Lines | Business Line Senior Executive | Enterprise Decision Support Teams | Business Line |
| L | Board of Directors, Senior VP, Real Estate | Senior VP, Real Estate | Real Estate Investment Committee | N/A |
| M | Senior VP, Corporate Strategy and Real Estate | Senior VP, Corporate Strategy and Real Estate | N/A | Finance |

\*The *TB* Policy on Investment Planning section 6.1.4 states that “If requested by TBS, the plan is to be submitted to Treasury Board Ministers for approval”.

#### 4.2.3. Commonalities and Differences

##### 4.2.3.1. Plan Approvals

In general the most senior person in the organizations interviewed was accountable for investment decisions, whether it was approving the process or the plan itself. In the case of public sector organizations, the approval of the plan was generally done by elected officials. In private sector, this responsibility often resided with the business line senior Vice President.

The federal government approach distinguishes between the approval of the plan and the approval of the planning process. While the deputy is accountable for the investment plan, the intent is for TB—as the management board for the Government of Canada—to approve the management practices that led to the plan, not the plan itself.

Almost all organizations reported the creation of senior level and working level committees whose role was more strategic in terms of aligning investment decisions to business strategy/program delivery. This in turn strengthened governance in terms of oversight of all investments.

The role of the business case was discussed among the respondents. Many noted that because of the formal planning process, project proponents are now required to provide more robust business cases and to be more disciplined in their requests.

##### 4.2.3.2. Plan Champion

For many organizations, the plan’s champion resided in the Corporate Services/Finance/Administration branches. For organizations whose asset base was primarily real estate based, the capital plan was produced by the real estate branch.

The role of the CFO varied among the respondents. Although the CFO played a key role in participating in the senior recommending committee, the CFO did not universally “sign off” on the plan. The CFO’s office played a challenge role, providing funding constraints and funding priorities.

##### 4.2.3.3. Stakeholder Engagement

Organizations followed similar processes in which formal technical input (often in working groups established for the purpose of the plan) was gathered according to the organization’s program areas and priorities. These were then consolidated into an overall plan that was vetted by a senior level committee that had broad representation across the organization. The senior level committee then recommended the plan to the organization’s head.

Peacock notes that stakeholders may include “those directly involved in the programmes being considered and those indirectly involved (collaboratoring providers, policy makers, finance and information staff, and community representatives)” (Peacock, 2006, p. 483).

The federal government requires that departments actively involve relevant stakeholders in other departments to improve investment planning across the broader government enterprise.

### 4.3. Information Systems & Performance Measurement

Respondents were asked what information systems and technology they have in place to track asset and departmental performance in support of planning and resource allocation processes.

**Key Findings:**

* Prevalent use of spreadsheets and databases to prepare and monitor the capital planning process: no COTS or enterprise solution in use.
* There were a variety of metrics used to measure both corporate (program/business objectives) and operational performance (project or asset specific) but only the federal government appears to measure the performance of the investment planning process itself.
* With the exception of the federal government respondents (which did not report on specific software), most other organizations have committed to a software solution and a methodology (e.g. building condition assessment or facility condition index) that provides an understanding of the state of their physical assets including replacement costs, life cycle analysis, and funding needs.

#### 4.3.1. Federal Government Policy Requirement

The Policy on Investment Planning requires that information systems are in place to support planning, budgeting and accounting for resource allocation, and enable performance measurement and reporting related to the management of departmental investments (policy requirement 6.1.3). Within the context of the policy there is a requirement for departments to evaluate, monitor and document the investment planning process and its results.

#### 4.3.2. Summary of Respondents

The following table illustrates the variety of information systems and tools that the organizations reported that they were using to support planning, asset and project management. Note that it is not a complete inventory and does not include all their information systems.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Organization** | **Capital / Investment Plan** | **Facilities  condition** | **Asset Management** | **Project Management** | **Others / Comment** |
| A | N/A | N/A | N/A | N/A | Single ERP (Enterprise Resource Planning) system for materiel, equipment, engineering but not infrastructure |
| B | SAP-TEAM | N/A | N/A | SAP | Current development and customization project to have all reporting go through SAP. |
| C | Excel | Oracle  - Asset Life Cycle Management System | Oracle  - Asset Life Cycle Management System | N/A | N/A |
| D | Excel | N/A | N/A | SAP module – Project Systems | N/A |
| E | Excel | VFA | N/A | N/A | N/A |
| F | N/A | VFA | N/A | PMIS (Project Management Information System) | SAP, JD Edwards, Tririga |
| G | In-house application | N/A | N/A | SAP module – Project Systems | N/A |
| H | Excel | N/A | N/A | N/A | Cognos data cubes |
| I | In-house application | VFA | PeopleSoft | N/A | PeopleSoft |
| J | Database | RECAPP (Real Estate Capital Asset Priority Planning) | N/A | PMIS (Project Management Information System) | SAP |
| K | N/A | RECAPP (Real Estate Capital Asset Priority Planning) | N/A | N/A | N/A |
| L | N/A | N/A | N/A | N/A | OneView (outsourced provider) Sharepoint |
| M | Excel / Databases | N/A | Spreadsheets | Tririga | N/A |

#### 4.3.3. Commonalities and Differences

##### 4.3.3.1. Information Systems

Respondents from federal organizations each reported that an information system was in place, but that the specifics of each system differed. Organization A is in the process of developing an integrated ERP for all expenditures; Organizations B and D each use SAP-based systems for project management. Organization C uses an Oracle-based tracking system for asset conditions and management.

Common to almost all the respondent organizations was the use of spreadsheets and databases to prepare and monitor the capital planning process. Only Organization A was investing in an ERP customization project to meets its reporting requirements.

Organization K commented on the historic nature of its information systems indicating that the systems have been a patchwork of disparate, home-grown systems with poor reporting capabilities and data quality issues. It has just undertaken an initiative to improve the architecture and design of their systems and has invested in a capital planning/building condition assessment tool.

##### 4.3.3.2. Key Performance Indicators

The responses to the Interview Guide question regarding the type of key performance indicators demonstrated that there were a variety of metrics used to measure both corporate (program/business objectives) and operational performance (project or asset specific).

All three federal government respondents described the use of a performance measurement framework focused on projects and assets.

Examples of corporate key performance indicators (KPIs) were crime rate, hospital waiting times, faculty success, publication of research, research funding, sales/store, costs/store.

Example of operational KPIs were project-based (scope, schedule, budget, accuracy, close out, compliance); asset-based (age, maintenance, downtime); space-based (gross sq. ft./student) and environmental (energy use per sq. ft./GHG emissions, energy use/store).

##### 4.3.3.3. Performance Measurement

Federal government organizations are required to measure the performance of the investment planning process.  For example, the Guide to Investment Planning – Assets and Acquired Services, section 3.2.3 sets the expectation for the departmental investment plans to:

* Describe the performance management approach used for the investment planning process and for the asset and contract management regimes (based on other TB policies)
* Describe key performance indicators
* Describe the investment control, monitoring and evaluation processes
* Demonstrate how continuous improvement is used to leverage lessons learned into the future investment planning cycles.

This expectation appears to be unique to the federal government.

In terms of tracking asset condition, with the exception of the federal government respondents, most of the organizations have committed to a software solution and a methodology (building condition assessment of facility condition index) that provides an understanding of the state of their physical assets including replacement costs, life cycle analysis, and funding needs. While federal government departments and agencies are required to track real property asset performance against functionality, utilization, physical performance and compliance as per the Policy on Management of Real Property [See footnote [4]](http://www.tbs-sct.gc.ca/invest/doc/mara-agmar/mara-agmar12-eng.asp#ftn4), they did not report on the use of specific software solutions.

The financial and retail organizations reported that they track operational metrics such as energy usage, space utilization and costs metrics (costs per sq. ft., costs per FTE) in addition to building condition assessment data.

### 4.4. Risk Management Approach

This section deals with the inclusion of risk in the planning and resource allocation process and the communication of key asset risks to individuals responsible for decision-making.

**Key Findings:**

* Almost all organizations integrate risk management at some level of their investment planning process;
* Project Risk and Complexity tools are not unique to the federal government – similar practices exist in the UK and Australia.

#### 4.4.1. Federal Government Policy Requirement

The Policy on Investment Planning – Assets and Acquired Servicers requires that departmental investment plans comply with the Standard for Organizational Project Management Capacity and the Standard for Project Complexity and Risk. These standards describe the process used to assess the department’s project management capacity as well assessing the level or risk and complexity of projects. This information is captured in the departmental investment plan.

The level of risk and complexity of the departmental portfolio of planned projects are a factor in TBS’ evaluation of departmental investment plans.

#### 4.4.2. Commonalities and Differences

##### 4.4.2.1. Project Risk Management

At the project level, risk analysis and mitigation is an integral element of the project management process for almost every organization interviewed. Risk is communicated specifically for each project or in the business case that is seeking funding for a project.

 For federal government departments, all projects must be assessed to determine the level of complexity and risk before project funds are expended, to determine project approval authority. The Project Complexity and Risk Assessment (PCRA) tool was developed that includes 64 assessment criteria organized into 7 categories: project characteristics, strategic management, procurement, human resources, business, project management integration, and project requirements.

One provincial organization indicated that it was developing a “risk screen” – a tool that will identify what projects are high risk and need to go to Ministers for review. If the project has a low risk, then the project can be signed off by the Project Board or the ministry’s deputy head.

Educational services organizations, in addition to managing risk on their capital projects, need to analyze the risk associated with their funding levels. For example, international students generate significant revenue– but their demand can fluctuate depending on market conditions.

Internationally, approvals linked to project risk profiles have been in practice in both the UK and Australia.

In the UK, all acquisition and procurement projects are subject to the Gateway Review Process. A Risk Profile Assessment, not unlike the Project Complexity and Risk Assessment (PCRA), is conducted for each project to determine its level of risk being high, medium or low before a Gateway Review Process is tailored to provide oversight reflecting the corresponding risk level during the project implementation life cycle. For projects classified as low risk, departments may decide that a Review is not needed. This decision must be made on the basis of a full understanding of the implications and departments must be accountable for their action.

In Australia, once a project meets certain financial thresholds, the risk level is determined using the Gateway Assessment Tool and oversight process of the project implementation is tailored to reflect the assessed risk level. The risk threshold for entry to the Gateway Review Process is High Risk and projects assessed as High Risk must move sequentially through the full Gateway Review phases throughout the project’s full life cycle.

##### 4.4.2.2. Plan Risk Management

Risk-based approaches to investment plan priority-setting were more prevalent in government departments and agencies and in the municipal and educational organizations.

Federal government organizations (A, B, C and D) described risk—both project-based and departmental—as integral parts of the investment planning process. This is the result of the policy requirement to evaluate risk using the PCRA prior to plan approval.

Organization C made particular note that investment plans also communicated the consequences of not proceeding with an investment; because of this, approval of the plan also means explicit approval of that which is not being funded.

Organization D noted that risk was integrated into all their processes for investment planning, oversight and methodology and that their Chief Risk Officer was a member of the Resource and Investment Management Committee.

 Outside of the federal government risk management practices are more commonly carried out at the project level or the corporate level (corporate risk profile).

**5. Impact on Corporate/Departmental Processes**

The following section highlights how some of the corporate/departmental processes were impacted as a result of implementing a formal departmental planning process.

**Key Findings:**

* Almost every organization experienced process, structural and behavioral changes as a result of implementing a formal planning process;
* Those organizations who have implemented a formal planning process have experienced a more informed decision making process;
* Most new investment planning processes have been more horizontally integrated and significantly more transparent throughout their organizations;
* Respondents indicated that formal planning has allowed them to plan for and smooth out spikes and valleys and has increased Deputy Head/Senior VP awareness/visibility on investment decisions and where their capital dollars are being spent;
* There appears to be a common approach to ensuring that those making the investment decisions are provided with accurate data, relevant priorities, corporate context and risk so that sound financial decisions can be made that are aligned with corporate strategic objectives.
* Organizations with formal planning processes have also created internal processes and committees and some have had to assign staff to manage the planning process.

**5.1. Process**

Under fixed program budgets, often specific areas had significant spending requirements that exceeded their budget allocation. Managing at a departmental level allows departments to manage those spending spikes more effectively. Reallocation becomes strategic and not opportunistic. Many organizations responded that their Deputy Heads/Presidents received a full picture of their capital expenditures that are described in terms of priority and risk. Organization D’s representative described the process as “eye-opening”.

Many organizations reported that there was increased transparency in the formal planning process. Once the process was understood, branches could see what funding was provided to other branches. Prior to this, planning and decision-making was stove-piped, often lacking context from other initiatives within the department. Adopting a formal planning process has resulted in decisions being made by the program managers/decision makers at a strategic level, rather than by the implementers.

One organization experienced challenges in moving from a branch process to a department process.

Organization B’s representative claimed that the new investment planning process had resulted in strengthened governance in terms of oversight and engagement; Organization G reported stronger and more robust business cases; Organization H related that the formal planning process was “a very positive change” and improved decision-making “hugely—night and day.”

**5.2. Structural**

Some organizations have had to create new internal processes and committees and have had to assign staff to manage the planning process. As noted in section 4.2.3.1, a number of senior level and working level committees were created. Some respondents created new sections responsible for the planning and oversight mandate. For organizations whose budgets are in the billions, having a one-size-fits-all approach is not practical. As well, for organizations who rely on partners to deliver services, it is difficult to manage the investment decisions made by these partners.

Prior to the formal investment planning process in place at most of the organizations interviewed, the real property/asset management organizations tended to have the lead in the capital plan. The input was individual capital projects and the output was a capital plan which was submitted to the Finance/Corporate Services branches. Following the transition to a formal planning process, many organizations have moved the lead to the Finance/Corporate Services branches and have set up technical working groups across their organizations to provide input into the corporate plan.

**5.3. Behavioral**

Previously branches had roughly the same budget every year, but once the investment plan was developed, those departments did not have an annual capital budget but were funded in accordance with the approved items on the multi-year capital plan. Budget managers felt a “loss” because they no longer had control over their budget. However as people became accustomed with and involved in the process, they recognized that they are getting the funding their programs/projects require.

Organizations (D, E) reported some resistance to changes to the planning process and plan horizon, including doubts that estimates beyond five years would have any validity. These issues also appear to have subsided with familiarity.

**6. International Experiences**

The Treasury Board Secretariat has conducted a preliminary review of two Commonwealth countries (The United Kingdom and Australia) on their approaches to project approval and oversight.

**Key Findings:**

* Although not all of these governments exercise their oversight through limiting expenditure authority in the approval of projects by a central agency as that of the Canadian government, the concept of a tailored approach considering project risk and complexity and organizational capacity has been reflected either in the project approval process or in the project implementation.

**6.1. The United Kingdom**

In the UK, performance target and budget allocation decisions are made for departments by the cabinet committee that conducts the UK government’s spending reviews. Once the decisions are made, departments have the authority to launch and execute the spending initiatives that they determine as necessary to achieve their business objectives. It is unclear whether there is a project financial threshold for departmental projects.

In January 2011, the UK government created a Major Projects Authority (MPA) body with the mandate to improve the delivery success rate of major projects. The creation of the MPA formalizes the role of Her Majesty’s Treasury (HMT) in collaboration with the Cabinet Office to oversee the ongoing approvals and assurance reviews of projects. This process is supported by the introduction of a compulsory Integrated Assurance framework which covers the life cycle of each Major Project. Gateway Review is one of the assurance tools to assess a project’s performance.

The Gateway Review Process was developed in 2001 to examine projects at key decision points throughout their life cycles. The governmental oversight is carried out through a Gateway Review Process by the UK’s Office of Government Commerce, which is an independent office of HMT to support the procurement and acquisition process through policy and process guidance.

All acquisition and procurement projects are subject to the Gateway Review Process. A Risk Profile Assessment, not unlike the Project Complexity and Risk Assessment (PCRA), is conducted for each project to determine its level of risk being high, medium or low before a Gateway Review Process is tailored to provide oversight reflecting the corresponding risk level during the project implementation life cycle. For projects classified as low risk, departments may decide that a Review is not needed. This decision must be made on the basis of a full understanding of the implications and departments must be accountable for their action.

When significant risk is identified during the Gateway Review Process, a letter from the Chief Executive of the Office of Government Commerce to the Permanent Secretary of the department responsible to alert the most senior levels to take immediate remedial action. Only issues that cannot be resolved are escalated to Ministers by MPA.

**6.2. Australia**

Australia has a project approval process that follows the Lead Agency Framework adopted by the Cabinet in August 2009 to improve the project approval process. According to this Framework, five departments were identified as lead agencies to provide tailored assistance to preparing project submissions based on the complexity and the significance of the project proposals, which are assessed as Level 1, 2 or 3. It is not clear whether approvals are subject to financial thresholds set out by a central body; however, it appears that a detailed Project Definition Document covering all aspects of a project identifies the required level and complexity of the approval processes, including the needed approvals and the level of details of submissions.

The Australian Government has introduced the Gateway Review Process in 2006 to strengthen the oversight and governance of major projects. The Process is managed by the Department of Finance and Deregulation, which plays an important role in assisting government across a wide range of policy areas to ensure its outcomes are met, particularly regarding expenditure and financial management, deregulation reform and the operations of government.

Once a project meets certain financial thresholds, the risk level is determined using the Gateway Assessment Tool and oversight process of the project implementation is tailored to reflect the assessed risk level. The risk threshold for entry to the Gateway Review Process is High Risk and projects assessed as High Risk must move sequentially through the full Gateway Review phases throughout the project’s full life cycle.

## 7. Leading Practices

The following are highlights of some of the leading practices observed during the interviews.

### 7.1. Processes / Plan

Organization J described an approach to funding that involved proactive efforts to develop revenue by creating an arms-length organization to maximize real estate transaction revenue. Because this revenue is not allocated according to political or legislative requirements, it can be used to address demographic and program-related needs identified in Organization J’s priority-setting process.

Organization H uses a revenue-driven activity cost model for its entire budget. Every revenue dollar is allocated among the 17 faculties. Since 90% of the revenue comes from tuition and provincial operating grants, the allocation to each faculty is simply based on the revenue they generate through tuition minus a corporate services charge for IT, finance, facilities services, etc. This has resulted in reduced bureaucracy and a standard methodology that has translated into increased transparency and an improved decision making process.

In terms of priority setting, the PBMA framework used in the healthcare sector could be applied to other sectors. The “core of the PBMA approach is an advisory panel charged with making recommendations for resource re-allocation. The process can be supported by a range of ‘hard’ and soft evidence and requires that decision making criteria are defined and weighted in an explicit manner” (Mitton, 2004).

### 7.2. Roles & Responsibilities

Organization D described the inclusion of their Chief Risk Officer on their Resource Investment Management Committee thus elevating the consideration or risk in the investment plan. Organization C noted the importance of their Senior Policy Investment Committee that is active in reviewing process.

### 7.3. Information Systems & Performance Measurement

Organization D was the only one to describe a Benefit Realization assessment. As part of their project gating process, every investment project must document and eventually measure the benefits it will bring to their internal organization. Whether or not it is a Return on Investment (ROI), increased efficiency or addressing a risk– these benefits must be identified in their problem definition stage. As the project matures the project champions have to develop a benefit measurement plan that demonstrates any benefits achieved. Sometimes there is a delay in assessing those benefits. They noted that it is not uncommon for a project to finish in 2012 and return in 2014 with a Benefit Realization Report.

### 7.4. Risk Management Approach

The federal government’s Project Complexity and Risk Assessment (PCRA) tool assesses the complexity and risk of individual projects. It includes 64 assessment criteria organized into 7 categories (project characteristics, strategic management, procurement, human resources, business, project management integration and project requirements). There is on-line access to the tool through “Callipers” and it is supported by a guide and an excel workbook.

## 8. Conclusion

There appears to be a common approach to ensuring that those making the investment decisions are provided with accurate data, relevant priorities, corporate context and risk so that sound financial decisions can be made that are aligned with corporate strategic objectives.

Based on feedback from respondents, formal investment planning processes have become more horizontally integrated and significantly more transparent.

The federal government’s approach appears to be in step with the other organizations interviewed in that they are neither leading nor lagging the implementation of a formal resource allocation process.