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Audit and Ethics
Branch

Direction générale de la
vérification et de l'éthique

2001-640 Final Report
Investment Analysis Process in Real Property Services

2002-09-09

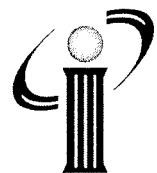


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Executive Summary

Authority for the Project

Project 2001-640, Audit of the Investment Analysis Process In Real Property Services (RPS) of Public Works and Government Services Canada (PWGSC), was authorized as part of the 2001/2002 Audit and Review Plan approved by the Departmental Audit and Review Committee.

Objectives

The objective of this audit was to assess the compliance of the investment analysis process within RPS of PWGSC with Treasury Board Secretariat (TBS) and RPS Investment Analysis Policies.

Scope

The audit was conducted in the National Capital Area (NCA) and the Atlantic Region during the period October 2001 to March 31, 2002. Real property investment decisions between April 1, 2000 and December 31, 2001 were covered by this audit.

This audit did not include a review of the management control framework (MCF) of the RPS investment analysis process. This was covered in the June 1999 Audit and Ethics Branch's Review of the Management Control Framework - Long-term Capital Planning in RPS.

Background

RPS manages a diverse portfolio of office space and other general purpose property which is both crown owned and leased. RPS acts as custodian for approximately \$6.8 billion worth of Government of Canada real property and manages an inventory of approximately 6,000,000 square metres of space in 100 departments and agencies. In addition, RPS also provides expert and value-added professional and technical real property services (including architectural and engineering, real estate, property and facilities management) to departments and agencies for the acquisition, development, construction, management, operation, maintenance, repair and disposal of real property.

The Real Property Program delivered by RPS operates as owner/investor on behalf of the federal government to manage office and federal facilities to reduce the overall cost of government by providing affordable and productive work places to federal clients and to optimize return on investments. Real property investment decisions made in RPS generally fall into two categories: accommodation decisions; and asset improvement decisions. All capital projects are supported

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by some form of investment analysis prior to approval. The Investment Analysis Report (IAR) is the primary vehicle used in RPS to analyze, justify and document real property investment decisions.

Real property investment decisions are governed by TBS through its Real Property Investment Policy (RPIP) and by the RPS Investment Analysis Policy (IAP). These policies exist to ensure sound real property investment decisions are made.

Conclusion

In general, our audit found that the investment analysis process was in compliance with the TBS and RPS investment analysis policies. This conclusion was based on our assessment of the investment analysis process on a representative sample of real property investment decisions in the NCA and Atlantic Region against criteria that were derived from TBS and RPS investment analysis policies and identified in the Preliminary Survey Report.

We identified areas where compliance can be strengthened as described below.

Key Findings

Compliance can be strengthened in two areas: discounted cash flow analysis; and, risk assessment and sensitivity analysis.

The audit revealed two investment decisions valued over \$1 million in the NCA where discounted cash flow analysis was not conducted. By not conducting discounted cash flow analysis, the requested project approval amount was overstated for these two investment decisions. The impact in these two cases was minimal because the duration of cash flows was short.

The audit also revealed that evidence of risk assessment in IARs were noted in less than half of NCA projects valued over \$1 million. Furthermore evidence of sensitivity analysis for these projects were found on an exception basis. For projects valued at over \$1 million, risk assessment and sensitivity analysis would enhance the usefulness of the information presented to decision making authorities and would focus their attention and expertise on the most relevant issues.

In addition, other opportunities to enhance the effectiveness of the investment analysis process were identified by the audit. These opportunities dealt with the need for consistency of use and content of IARs and the potential for increased use of the Real Estate Financial Tool kit (REFIT). These opportunities have been communicated to the respective organizational unit through our debriefing process for their consideration and proper action.

Recommendations

It is recommended that the Assistant Deputy Minister, Real Property Services:

1. *Ensure that the Branch re-emphasizes, to all RPS personnel who are responsible for investment analysis, the requirement to perform discounted cash flow analysis for all investment analysis where there are cash flows that extend beyond one year.*
2. *Ensure that guidelines currently under development for dealing with risk assessment and sensitivity analysis are completed and disseminated by the Owner Investor Directorate on a timely basis to all RPS personnel who are responsible for investment analysis.*

1 Introduction

1.1 Authority for the Project

Project 2001-640, Audit of the Investment Analysis Process In Real Property Services (RPS) of Public Works and Government Services Canada (PWGSC), was authorized as part of the 2001/2002 Audit and Review Plan approved by the Departmental Audit and Review Committee.

1.2 Background

RPS of PWGSC manages a diverse portfolio of office space and other general purpose property which is both crown owned and leased. RPS acts as custodian for approximately \$6.8 billion worth of Government of Canada real property holdings including various engineering works such as bridges and dams and administers some 2000 lease contracts with annual rents totalling over \$500 million. RPS manages an inventory of approximately 6,000,000 square metres of space providing productive work environments for some 160,000 federal public servants in 100 departments and agencies at an annual net appropriation of approximately \$1.3 billion. In addition, RPS also provides expert and value-added professional and technical real property services (including architectural and engineering, real estate, property and facilities management) to departments and agencies for the acquisition, development, construction, management, operation, maintenance, repair and disposal of real property.

The total planned spending on capital projects is expected to be \$381 million for the fiscal year ended March 31, 2002. Planned spending on major capital projects (greater than \$ 1 million) is expected to be \$ 331 million and on minor capital projects (less than \$1 million) is expected to be \$50 million. All capital projects are supported by some form of investment analysis prior to approval.

The Real Property Program delivered by RPS operates as owner/investor on behalf of the federal government to manage office and federal facilities to reduce the overall cost of government by providing affordable and productive work places to federal clients and to optimize return on investments. Real property investment decisions made by RPS generally fall into two categories: asset based involving asset improvement decisions (e.g.. capital and repair projects); and space based involving accommodation decisions (e.g.. lease and space optimization projects). These decisions are made within a strategic context which includes consideration of four levels of real property strategy including: National Investment Strategy (NIS); Regional Investment Strategy (RIS); Community Based Investment Strategy (CBIS); and, the Asset Management Plan (AMP) for a specific asset. These strategies ensure that investment decision-making is consistent, linked, responsive to client needs and government priorities, and supported at the national, regional, community, and individual asset levels.

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Real property investment decisions are governed by Treasury Board Secretariat (TBS) through its Real Property Investment Policy (RPIP) and by the RPS Investment Analysis Policy (IAP). These policies exist to ensure sound real property investment decisions are made.

The Investment Analysis Report (IAR) is the primary vehicle used in RPS to analyze, justify and document real property investment decisions.

1.3 Objectives

The objective of this audit was to assess the compliance of the investment analysis process within RPS of PWGSC with TBS and RPS Investment Analysis Policies.

1.4 Scope

The audit was conducted in the National Capital Area (NCA) and the Atlantic Region during the period October 2001 to March 31, 2002. Real property investment decisions between April 1, 2000 and December 31, 2001 were covered by this audit.

The audit did not include a review of the management control framework (MCF) of the RPS investment analysis process. This was covered in the June 1999 Audit and Ethics Branch's Review of the Management Control Framework - Long-term Capital Planning in RPS.

1.5 Methodology

The audit was carried out in accordance with generally accepted auditing standards and included interviews and the review of relevant documentation, including IARs, supporting real property investment decisions. The investment analysis process was assessed against criteria that were derived from TBS and RPS investment analysis policies and identified in the Preliminary Survey Report.

The sample was selected to obtain representation of the organizational units within RPS who are responsible for conducting investment analysis and preparing IARs. To achieve this, the sample was stratified as follows:

- ***Asset vs. space based investment decisions.*** In general, Asset and Facilities Managers are responsible for investment analysis supporting asset based investment decisions, whereas Client Accommodation Service Advisors (CASAs) are responsible for investment analysis supporting space based investment decisions.
- ***Investment decisions where the amount approved was at least \$1 million vs. investment decisions where the amount approved was less than \$1 million.*** Investment decisions where the amount approved is at least \$1 million are subject to higher level review and challenge including the Investment Management Board (IMB), the Regional Investment

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Management Board (RIMB) or the Executive Director, National Client Service Units in the NCA.

In total, 118 investment decisions were examined. This comprised 70 projects in the NCA and 48 from the Atlantic Region broken down as follows.

| Region and Project Value | Asset Based Projects | Space Based Projects |
|------------------------------------|-----------------------------|-----------------------------|
| NCA Projects > \$1M | 9 | 16 |
| NCA Projects < \$1M | 30 | 15 |
| Atlantic Projects > \$1M | 1 | 9 |
| Atlantic Projects < \$1M | 19 | 19 |
| Total | 59 | 59 |

The sample of investment decisions with a project value of at least \$1 million was drawn from minutes of decisions made by the IMB and the Atlantic RIMB.

Investment decisions with a project value of less than \$1 million were selected in the NCA from five out of 19 or 26.3% of Client Service Units (CSUs). Within the five CSUs, asset based projects were selected from 30.3% of Asset and Facilities Managers and space based projects were selected from 54.5% of CASAs.

Investment decisions were selected in the Atlantic Region from three out of four Geographic Services Units (GSUs). Within the three GSUs, asset based projects were selected from 80% of Asset and Facilities Managers and space based projects were selected from 60% of CASAs.

2 Issues Examined

The investment analysis process that supported real property investment decisions was assessed against audit criteria derived from TBS and RPS policies covering the following key components of the investment analysis process:

- Definition of project requirements and performance specifications of the requirement including linkage to strategic or long term plans and strategic documents such as NIS, RIS, CBIS, AMP's, and Building Management Plans (BMPs);
- Identification of viable options, where they exist, including the status quo;
- Financial analysis of options, including:
 - ◆ full life cycle costing, which includes cash inflows and outflows over the entire investment horizon;
 - ◆ discounted cash flow analysis, which calculates the total cash flow over the entire investment horizon in current year dollars;
 - ◆ risk assessment, which identifies areas of uncertainty, measures their likelihood of occurrence and impact, and identifies mitigation strategies;
 - ◆ sensitivity analysis, which measures the effect of changes in key assumptions and input values which are susceptible to change (e.g.. discount rates, lease rates, changes in legislation).
- Identification and analysis of non-financial factors such as:
 - ◆ time constraints;
 - ◆ health and safety issues;
 - ◆ environmental concerns;
 - ◆ building codes and standards;
 - ◆ tenant/user effects; and
 - ◆ public policy considerations such as economic development, accessibility, and political impacts.
- Evaluation of options; and
- Identification of a clear recommendation including implementation considerations such as:
 - ◆ project scheduling;
 - ◆ funding requirements and cash flow;
 - ◆ special issues or impact; and
 - ◆ time urgencies.

3 Conclusions, Findings and Recommendations

3.1 Conclusion

In general, our audit found that the investment analysis process was in compliance with the TBS and RPS investment analysis policies. This conclusion was based on our assessment of the investment analysis process on a representative sample of real property investment decisions in the NCA and Atlantic Region against criteria that were derived from TBS and RPS investment analysis policies and identified in the Preliminary Survey Report. Our audit revealed areas where compliance can be strengthened. This is presented in Section 3.2 below.

In addition, other opportunities to enhance the effectiveness of the investment analysis process were identified by the audit. These opportunities dealt with the need for consistency of use and content of IARs and the potential for increased use of the Real Estate Financial Tool kit (REFIT). These opportunities have been communicated to the respective organizational unit through our debriefing process for their consideration and proper action.

3.2 Findings

Our audit revealed that compliance can be strengthened in two areas: discounted cash flow analysis; and, risk assessments and sensitivity analysis.

Discounted Cash Flow Analysis

RPS investment analysis policy states that discounted cash flow will be used to evaluate each capital project. TBS investment analysis policy states that analysis should take into account the value of money over time which is a fundamental underlying principle of discounted cash flow. Discounted cash flow is used to measure the financial viability of capital projects by adjusting future cash flows to their present values thus allowing differences in the timing of cash flows to be reflected in the analysis.

Our examination revealed two out of 25 investment decisions over \$1 million in the NCA that were not supported by discounted cash flow analysis. These projects dealt with the modernization of office space and renewal of building components, with cash flows being incurred for a period of four years. By not conducting discounted cash flow analysis, the requested project approval amount was overstated for these two cases. The impact in these two investment decisions was small because the duration of cash flows was short.

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Risk Assessments and Sensitivity Analysis

In general, risk assessment and sensitivity analysis should be conducted for investment decisions that are large in value and/or are complex in nature, particularly where there are variables such as discount rates, lease values, escalation rates and capital outlay values that are susceptible to change. Risk assessment and sensitivity analysis provide essential information for decision making purposes and assist in the identification of risk reduction measures. The Real Property Investment Guide and RPS training material prescribe these generally accepted methods for assisting in conducting investment analysis.

Risk assessment is used to measure the effect of uncertainty by identifying areas of risk, measuring the likelihood of their occurrence, assessing the impact of the occurrences and identifying possible courses of action to mitigate the risks. Sensitivity analysis is a common method of measuring and analysing risk that addresses the question of “what if?”. It helps to establish the impact of changes in various input variables on the results.

For Atlantic Region projects in general, our examination revealed that there was documentation of risk assessment and sensitivity analysis in IARs for projects:

- valued over \$1 million; and,
- valued at less than \$1 million on an exception basis.

For NCA projects in general, our examination revealed that:

- there was documentation of risk assessment in IARs for less than half of projects valued over \$1 million;
- there was documentation of risk assessment in IARs for projects valued at less than \$1 million on an exception basis; and
- there was documentation of sensitivity analysis in IARs on an exception basis.

For projects valued at over \$1 million, risk assessment and sensitivity analysis would enhance the usefulness of the information presented to decision making authorities and would focus their attention and expertise on most relevant issues.

The Owner Investor Directorate is currently developing guidelines dealing with risk management and sensitivity analysis to provide direction and assistance to RPS personnel in these areas. This initiative will assist in raising the level of expertise and compliance in these area among RPS personnel.

3.3 Recommendations

It is recommended that the Assistant Deputy Minister, Real Property Services:

1. *Ensure that the Branch re-emphasizes, to all RPS personnel who are responsible for investment analysis, the requirement to perform discounted cash flow analysis for all investment analysis where there are cash flows that extend beyond one year.*
2. *Ensure that guidelines currently under development for dealing with risk assessment and sensitivity analysis are completed and disseminated by the Owner Investor Directorate on a timely basis to all RPS personnel who are responsible for investment analysis.*