



Final Report - Internet Version
Review of the
Management Control Framework
For Asset Integrity
Project 2000-640
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Executive Summary

Authority for the Project

This review was part of the 2000-2001 Audit and Review plan as approved by Public Works and Government Services Canada's (PWGSC) Audit and Review Committee.¹

Objectives

The objective of the project was to assess the effectiveness of the Management Control Framework (MCF) to ensure asset integrity for Crown-owned and lease purchase assets for which PWGSC is custodian.

Scope

The review considered the MCF for asset integrity for all real property assets for which PWGSC is custodian including those for which the day-to-day real property management has been contracted out as part of the Alternative Forms of Delivery (AFD) initiative. On-site interviews and other audit activities were conducted in the Real Property Services Branch (RPSB), including the National Capital Area, as well as in the Ontario and Pacific Regions. Telephone interviews were also conducted with staff in the Atlantic, Quebec and Western Regions.

Background

The RPSB is responsible for providing affordable, productive accommodation as well as related services to federal tenants, clients and others. While many of the locations that federal employees occupy are leased, there are a significant number of buildings in the portfolio that are owned by the federal government. The RPSB is responsible, as custodian, for approximately 400 Crown-owned (as well as lease purchase) office buildings and non-office federal facilities (common purpose buildings, national treasures, dams, bridges, wharves and highways) across the country. Day-to-day property management for approximately three-quarters of its office building portfolio was contracted out in 1998 with the balance managed directly by the RPSB and the PWGSC Regions.

The 2000-2001 *Main Estimates Part III (Report on Plans and Priorities) - Section III Plans, Results and Resources* recognizes the value of Federal real property assets and identifies "Maintenance of Asset Integrity" as a key result commitment. The *Section III Planned Results for RPS* describes intentions to focus efforts on cost effective management and stewardship of

¹ This project was conducted under the guidelines of the previous Treasury Board Review and Internal Audit Policy which was in effect up to March 31, 2001.

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real property assets ensuring safe, healthy, accessible and productive environments that support sustainable development and other federal initiatives while optimizing government investment in real property assets.

Key Findings

A comprehensive framework of policies, regulations, accountabilities, delegations and other instruments exists to effectively manage asset integrity for Crown-owned and lease purchase assets for which PWGSC is custodian.

Although no significant gaps were identified in the overall design of the management control framework, there are some weaknesses associated with the application of the framework and the information available to support planning for asset integrity. In addition there are external factors which could impact the RPSB capacity to manage assets in the future. In each case, however, RPSB management is developing/implementing strategies to address and/or mitigate potential risk to the organization.

Key issues related to asset integrity include:

- Asset planning documents are not current in accordance with RPSB requirements. In addition, interviews indicated that the quality of planning products has been variable. There is a major initiative underway to ensure that planning documents supporting asset integrity are brought up to date. Interviews also indicated that organizational changes implemented as part of the RPSB Business Management Model (BMM) have led to a better alignment of planning documents. Efforts are also underway to improve the quality control framework for planning;
- At the time of the review the RPSB did not have quantifiable assessments of asset integrity at the portfolio level to support a more strategic management approach to asset integrity. As a result, project planning and approval has not benefited from a portfolio perspective. The RPSB is currently piloting software with the intent to select management tools which will facilitate portfolio wide views as well as model financial trade-offs associated with deferred maintenance and repairs;
- The RPSB established quantifiable Key Performance Indicators (KPIs) linked to asset integrity to support the measurement of contractor performance for the Alternate Forms of Delivery (AFD) contract. Interviews indicated that the AFD KPIs have some deficiencies which, if not adjusted, could lead to long term asset integrity problems. Efforts are underway to review these KPIs with a view to provide better measures of asset performance. The measurement of asset performance for PWGSC managed assets (non AFD) does not yet use quantifiable KPIs similar to those applied to assets managed under the AFD contracts. Although asset condition is monitored through Building Condition Reports supported by annual inspections, the monitoring tends to focus on the "health and safety" systems and does

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not measure broader asset performance using a quantifiable approach. Work is also underway within the RPSB in this area;

- Traditionally risk assessment has focused on the potential liability associated with health and safety when evaluating asset integrity projects. There is recent evidence that a broader based risk management is being undertaken as part of the decision making process;
- A structured framework exists for managing the environmental condition of real property assets including current environmental baselines; and,
- The RPSB faces significant challenges to ensure that it has sufficient qualified human resources to manage asset integrity. There is broad consensus that the retirements and departures during the 1990's, new responsibilities many staff were given as part of the RPSB BMM, along with growing business volumes from custodial departments has strained human resource capacities. Linked initiatives are currently underway within both the RPSB, and the Asset and Facilities Management Services Sector, to define competency requirements and to identify mechanisms for attracting, developing and retaining the human resources required in the future.

Impact/Conclusion:

The RPSB and the Regions are proactive with evidence of a strong team approach to the management of asset integrity. Both the overall design of the management control framework and the current related initiatives are considered to be effective with respect to ensuring asset integrity for Crown-owned and lease purchase assets for which PWGSC is custodian.

Since the RPSB is developing and/or implementing solutions in respect of the identified weaknesses associated with the application of the control framework, no recommendations are included with this report.

1 Introduction

1.1 Authority for the Project

This review was part of the 2000-2001 Audit and Review plan as approved by Public Works and Government Services Canada Audit and Review Committee.²

1.2 Objectives

The overall objective of the project was to assess the effectiveness of the Management Control Framework (MCF) to ensure asset integrity for Crown-owned and lease purchase assets for which PWGSC is custodian.

1.3 Scope

The review assessed the MCF³ for asset integrity for all real property assets for which PWGSC is custodian including those for which the day-to-day real property management has been contracted out as part of the Alternative Forms of Delivery (AFD) initiative. Considered and included in the scope were the following lines of enquiry:

- legislation, regulations, policies, accountabilities, delegations, and other instruments governing asset integrity;
- strategic and operational planning, monitoring and reporting mechanisms over asset integrity;
- risk management as related to asset integrity;
- methods used to manage the environmental condition of the real property assets including environmental baselines;
- the operating environment and relationships with clients/stakeholders;
- the overall design of the delivery processes employed to maintain asset integrity, including whether the roles and responsibilities of the resources delivering the products are well defined, the spans of control are appropriate, and those controls intended to ensure compliance with policies and procedures; and,
- performance measurement over the attainment of established objectives and goals aimed at ensuring the integrity of buildings and other real property assets.

² This project was conducted under the guidelines of the previous Treasury Board Review and Internal Audit Policy which was in effect up to March 31, 2001.

³ A management control framework consists of the policies, procedures and structures established by management to assure that the organization achieves its objectives. It comprises processes for direction setting, operational planning, policy setting, decision-making, organization and accountability, process design, resource deployment and management, information and technology management, performance monitoring, co-ordination and communication.

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Interviews and document reviews were conducted within the Asset and Facilities Management Services (AFMS) Sector, the Office Accommodation & Real Estate Services (OARES) Sector and the Client Service Unit (CSU) Directorates of the National Capital Area (NCA) of the Real Property Services Branch (RPSB). On-site review activities were conducted in the Ontario and Pacific Regions as well as telephone interviews with staff with real property responsibility in the Atlantic, Quebec and Western Regions. Approximately sixty individuals provided input to the audit team through either one-on-one interviews or focus groups.

1.4 Background

The RPSB is responsible for providing affordable and productive accommodation and related services to federal tenants, clients and others. While many of the locations that federal employees occupy are leased, there are a significant number of buildings in the portfolio that are owned by the federal government. The RPSB is responsible as custodian for approximately 400 Crown-owned (as well as lease purchase) office buildings and non-office federal facilities (common purpose buildings, national treasures, dams, bridges, wharves and highways) across the country. Day-to-day property management for approximately three-quarters of its office building portfolio was contracted out in 1998 with the balance managed directly by RPSB and the PWGSC Regions.

The 2000-2001 *Main Estimates Part III (Report on Plans and Priorities) - Section III Plans, Results and Resources* recognizes the value of Federal real property assets and identifies "Maintenance of Asset Integrity" as a key result commitment. The *Section III Planned Results for RPS* describes intentions to focus efforts on cost effective management and stewardship of real property assets ensuring safe, healthy, accessible and productive environments that support sustainable development and other federal initiatives while optimizing government investment in real property assets.

2 Issues Examined

The Review of the MCF⁴ for Asset Integrity considered both management control operating activities and the environmental factors which influence how the controlling activities are being applied using the following model:

Environmental

- External Factors and Influences;
- Organization and Accountabilities;
- Internal Rules, Factors, and Influences; and,
- Culture and Climate.

Operational

- Planning;
- Execution/Monitoring; and,
- Evaluation.

⁴ The MCF framework model utilized in this review has been adapted from Anthony, Robert, John Deardon and Vijay Govindarajan, 1965, Management Control Systems, Boston, Irwin Press.

3 Findings, Conclusions and Recommendations

3.1 External Factors and Influences

Increased business volumes from custodial departments is having an impact on the RPSB capacity to maintain asset integrity.

The RPSB is seeing increasing business volumes coming from custodial departments. In the February 2000 budget, the government announced \$200 million in new funding to be used to improve the federal government's infrastructure to address safety concerns and maintain services to Canadians. As part of the Treasury Board application for access to these funds, custodial departments are being asked to demonstrate that they have a real property planning framework similar to that in place within PWGSC. Many departments are finding that they do not have the resources internally to do this and thus are turning to RPSB to provide this service to them. Management within the CSU Directorates are finding it very difficult as a result, to predict their future business volumes and thus the number of resources required to provide the services that their clients will require on an ongoing basis from PWGSC.

There is broad consensus across all groups interviewed that the existing internal resources are stretched to address current workloads. There is more work to do than there are people available to do it in the time available to get the work done. There is considerable apprehension about the potential impact of the new work that may come from custodial departments and from initiatives related to asset revitalization.

There are concerns about the Department's ability to attract both the replacement resources required as well as the new resources to deal with the growth in business volumes.

As the RPSB has similar demographics to the rest of the government, a significant number of staff will be eligible to retire over the next few years. While not everyone will retire as soon as they can, many will do so. These retirements will compound the impact of the down sizing that the RPSB underwent during the 1990's due to the Early Retirement and Early Departure Initiatives along with the out sourcing of day-to-day property management activities to AFD contractors through which the RPSB lost much of its "corporate memory" over much of its asset base.

The departures and accompanying promotions to fill positions has already caused significant turnover especially in the Asset Manager (AM) and Property and Facilities Manager (PFM) positions. Because the number of available positions exceeds the supply of internal candidates, the RPSB is actively recruiting externally at the AS2 to AS5 levels, however, it is competing with the market place for qualified resources especially in the larger metropolitan areas.

The RPSB recognizes that it faces significant challenges to ensure that it continues to have sufficient qualified human resources to manage asset integrity. Initiatives are currently underway

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within the RPSB to define competency requirements and to identify mechanisms for attracting, developing and retaining the human resources required in the future.

3.2 Organization/Accountabilities

The organization and accountability structure in place to maintain asset integrity across the country is consistent with the 1996 RPSB Business Management Model (BMM).

The groups with primary responsibility for ensuring asset integrity within the RPSB and the Regions are the OARES, the AFMS as well as the CSU Directorates. The Architectural and Engineering Services (AES) supports the maintenance of asset integrity by carrying out specific projects and inspections as requested by AFMS or the Owner/Investor.

The OARES, as the Owner/Investor, has ultimate responsibility for the custodial assets and for providing the project funding required to maintain and/or enhance asset integrity. The Owner/Investor relies on the AFMS and the CSU Directorates to identify the work required through the budgeting and planning process. The Owner/Investor approves key planning documents for individual assets and must approve specific projects over a certain dollar threshold.

The CSU Directorates share responsibility for approval of the Asset Management Plans (AMP) and the annual Building Management Plans (BMP) with the AFMS. The CSU Directorates must consider both client satisfaction and asset integrity requirements when approving (within authority limits) and/or recommending property related projects to the Owner/Investor.

The AFMS at the National COE level is responsible for developing policies, procedures, functional guidance and best practices to support asset integrity. Within the respective AFMS operational organizations across the country, there are Managers, Property and Facilities and Property Managers who are responsible for the day to day operating activities related to asset integrity for the assets which are directly managed by the Crown. In addition, in order to recognize the requirement to manage performance within the AFD contract, the AFMS organizations include Asset Managers (AM) and Property and Facilities Managers (PFM) who are responsible for the assets that are property managed by the AFD contractors.

As part of the implementation of the RPSB BMM, responsibility for producing the AMPs was shifted to the Managers Property and Facilities as well as to the AMs and PFMs from the Owner/Investor function to ensure better alignment of planning documents. Although there is broad consensus that this aim has been furthered through this responsibility reassignment, questions were raised as to whether the above mentioned officers prepare AMPs often enough to become proficient in them or to know what to demand or expect from a third party preparing them. In order to address this concern, in several regions, a specialist Regional - AFMS COE resource assists with the preparation of the AMPs, obtaining input as required from the Manager, Property and Facilities for Crown managed property or the AM (and/or the PFM) in the case of the AFD managed assets.

3.3 Internal Rules, Factors and Influences

Compliance with building codes, government policy and health and safety requirements is the first priority with the Asset and Facilities Management Service (AFMS).

Interviews indicated that compliance with building codes, government policy and health and safety requirements continues to be of primary importance in planning for and monitoring asset integrity. Life-safety systems in a building, are reviewed by AFMS staff in an integrated fashion on a routine basis. The Annual Building Inspection (ABI) and periodic BCR are designed to assist in identifying non-compliance with these requirements.

There has been extensive effort over the past several years to update policies, procedures and electronic tools applicable to asset integrity.

A revised policy along with updated guidelines for the AMP was promulgated during the summer of 2000. Standard Operating Procedures (in draft) have recently been developed for those assets managed by the AFD contractor. A PFM manual has also been developed which is seen by many as an excellent resource, especially for those new to the position.

A BMP module of the Project and Business Management System (PBMS) was developed and put into production in the fall of 2000. Interviews indicated that, at the operational level, there is some dissatisfaction with the first release of this module. However, there is a BMP Module Group with regional representation which provides this type of feedback to the PBMS National Roll-out Team as part of its issue management process in place for the PBMS.

The RPSB is also currently reviewing electronic tools designed to provide better information to track asset integrity across the entire portfolio and help identify where capital investment is required.

3.4 Culture and Climate

Over the past decade, there has been an emphasis on carrying out those repairs and refurbishments that were absolutely essential to keeping the building systems operational rather than following a life-cycle approach.

Interviews indicated that, due to fiscal restraint during this time frame, there was a tendency to implement short term solutions as they carried with them a lower expenditure of funds within a given fiscal year.

The National - COE AFMS is fostering a broader perspective to managing assets through training and the development of management tools. Interviews indicated there is a move towards the increased use of a risk based perspective to support recommendations for projects which is helping others understand the need for the requirement.

Issues associated with the transfer of property management responsibilities for approximately three-quarters of PWGSC's portfolio to Alternate Forms of Delivery (AFD) contractors are being worked out.

The AFD contract management was seen by many interviewees as being labour intensive, in addition, there were concerns about the adequacy of the resources in place at the working level to monitor the contractors' performance.

Many of the AMs and PFMs are new in their current responsibilities and are still growing into the job. While they were often formerly property managers dealing with operational matters, they now are expected to be contract administrators. In some Regions, the PFMs have a very large geographic territory to cover which reduces the frequency of on-site visits. This increases reliance on information provided by the local AFD property manager.

Most of those interviewed recognized that the relationship between PWGSC and the AFD contractors is an evolving one within the current results based contract. Training courses for PFMs are being provided. Regular telephone conference calls are held with the National and Regional AFMS managers to discuss issues associated with the administration of the current contract as well as to consider requirements for the future.

3.5 Planning

A formal planning framework exists for maintaining asset integrity. Key elements of the planning framework include the Asset Management Plan (AMP), Building Management Plan (BMP) and the Building Condition Report (BCR).

The BMP is prepared each fall based on the AMP and the ABI. The BMP outlines the general condition of the asset, health and safety issues associated with the structure, and the planned repair strategy. Operating and maintenance (O&M) as well as capital costs for the previous year, current year and the next four years are provided along with a summary of all planned projects over the four year planning horizon. The BMP must be approved by both the AM and the CSU Director responsible for the asset. Linkage between the BMP and the AMP has been enhanced as a result of management asking, on a more consistent basis, how particular projects are linked to the AMP.

The AMPs and BCRs are typically prepared on a five year cycle. The BCR is prepared just prior to the AMP being developed. It is based on a multidisciplinary examination of the building and provides key information for assessing the condition of an asset. More detailed examinations are carried out if considered necessary to supplement the information obtained through the BCR process. The AMP for an asset is based on the BCR, the Community Based Investment Strategy and the long term plans for the asset. All of the parties with responsibility for the integrity of the asset (O/I, AFMS and CSU Directorates) must approve the AMP before it goes to the Regional Investment Management Board for approval.

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Generally across the country, the AMPs have not been updated as frequently as required by the policy framework and many, as a result, are more than five years old. Interviews with National - AFMS COE staff indicated that the quality has also been variable. There is currently a major initiative underway to ensure that planning documents supporting asset integrity are brought up to date within the AMP planning cycle. Efforts are also underway to improve the quality control framework for planning. Some Regions have emphasized a team approach involving the O/I, AM, PFM and Client Accommodation Service Advisor (CASA) to develop the AMP. Through this process there is a shared understanding of the long term plans for the asset.

As part of the planning process, risk assessment has historically focused on the potential liability associated with health and safety when evaluating asset integrity projects. There is recent evidence that a broader based risk management approach is being undertaken as part of the decision making process.

3.6 Execution/Monitoring

Periodic Building Condition Reports (BCR), along with annual inspections, are the primary mechanisms utilized to monitor the asset integrity of all assets in the PWGSC portfolio.

The periodic BCRs that are prepared in advance of the development of the AMP are the RPSB's key mechanism for assessing the integrity of the asset. When the BCR is prepared, a multidisciplinary team inspects the building to determine the extent to which it is in compliance to the building code at the time of construction and the extent to which it conforms with current building codes. The BCR also contains a section on the environmental condition of the building. Additional in-depth inspections that may include destructive testing may also be utilized to assess the integrity of the individual building components.

There are annual inspection reports which, although not sufficiently detailed to provide an assessment of the integrity of the asset, identify urgent problems with the asset.

The information from the periodic and detailed inspections is stored in a paper based format, limiting RPSB's ability to pinpoint portfolio wide problems or its ability to support decisions to mount horizontal projects across the portfolio (i.e. elevators, roofs). Two pilots are currently underway to assess the feasibility of utilizing electronic tools to assist in this area.

A detailed framework has been developed to measure the ongoing performance of the Alternate Forms of Delivery (AFD) contractor in several areas including the quality and completeness of maintenance done to maintain the building structures, systems, equipment and grounds.

Eight of the 32 Key Performance Indicators (KPI) that were developed to assess the performance of the AFD contractor in providing property management and project delivery services were related to asset integrity. Specific building elements were benchmarked prior to the contractor assuming responsibility for managing the facility. An assessment of each asset's integrity is

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based on the ABI, which is done each November and verified by PWGSC. It assesses major building system components on a scale of 1 to 5 (1 is equivalent to new while a 5 indicates that the component must be recapitalized, it is past its useful life). Interviews indicated that the AFD KPIs have some deficiencies which if not adjusted could lead to long term asset integrity problems. Efforts are underway to review these KPIs with a view to provide better indicators of changes in asset performance.

This framework is currently not yet being applied to assets managed directly by the RPSB. The asset condition is monitored through BCRs supported by annual inspections that tend to focus on the "health and safety" systems. Work has started in this area to introduce broader asset integrity performance measures using a quantifiable approach. The tools being examined have the potential to facilitate portfolio wide views as well as to model financial trade-offs associated with deferred maintenance and repairs in order to take a more strategic management approach to asset integrity.

Environmental baselines were established for all buildings being managed by an AFD contractor. Every time a project is undertaken within the facility, there is a checklist that is utilized to ensure that the project has not had a negative impact on the environmental baselines of the building. As well, on an annual basis the degree of compliance with regulations regarding environmental practices is assessed as part of the KPI Legislated Requirements. For non AFD assets, compliance with environmental regulations is evaluated as part of the periodic BCR.

The Asset Report Card (ARC) provides periodic financial performance information to senior management on assets.

The RPSB has developed an ARC based on the Balanced Score Card model⁵. This document, which has replaced the Asset Performance Monitoring Report, compares primarily the financial performance of assets within a Region or between Regions. While the ARC does not comment directly on the integrity of the assets in the portfolio, analysis of the document may identify anomalies due to declining asset integrity.

3.7 Evaluation

Several national working groups have been established in recent years to develop tools and processes supporting asset integrity.

Working groups involving staff from the National - AFMS COE and representatives from all Regions were established to consider various processes and/or tools that would facilitate the planning process or would provide the Branch with better information on the integrity of its assets. These initiatives included: defining the information requirements for asset performance monitoring; the development of a building condition index; and, the creation of a common electronic tool for developing BMPs and storing the associated data. Generally, these initiatives

⁵ Robert S. Kaplan and David P. Norton, *The Balanced Scorecard—Measures That Drive Performance*, Harvard Business Review, January-February 1992, pp. 71-79.

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have been seen as useful mechanisms for questioning the status quo and for creating an environment that encourages ongoing process improvement.

The AFMS at the national level, has been working on the development of a quality assurance framework for AMPs.

4 Conclusions

A comprehensive framework of policies, regulations, accountabilities, delegations and other instruments exists to effectively manage asset integrity for Crown-owned and lease purchase assets for which PWGSC is custodian.

Although no significant gaps were identified in the overall design of the management control framework, there are some weaknesses associated with the application of the framework and the information available to support planning for asset integrity. In addition there are external factors which could impact the RPS capacity to manage assets in the future. In each case, however, RPSB management is aware of the concern and is developing/implementing strategies to address and/or mitigate potential risk to the organization.

The RPSB and the Regions are proactive with evidence of a strong team approach to the management of asset integrity. Both the overall design of the management control framework and the current related initiatives are considered to be effective with respect to ensuring asset integrity for Crown-owned and lease purchase assets for which PWGSC is custodian.

Since the RPSB is developing and/or implementing solutions in respect of the identified weaknesses associated with the application of the control framework, no recommendations are included with this report.

5 Action Plan

Recommendation

No recommendations are included with this report.

Action Plan

No action plan is required.