



**Canada Science and Technology
Museum Corporation**

Special Examination Report—2009



Office of the Auditor General of Canada
Bureau du vérificateur général du Canada



14 April 2009

To the Board of Trustees of
the Canada Science and Technology Museum Corporation

We have completed the special examination of the Canada Science and Technology Museum Corporation in accordance with the plan presented to the Audit and Finance Committee of the Board of Trustees on 13 June 2008. As required by Section 139 of the *Financial Administration Act* (FAA), we are pleased to provide the attached final special examination report to the Board of Trustees.

We would like to bring to your attention that, on 12 March 2009, the *Budget Implementation Act, 2009* (Bill C-10) received Royal Assent, resulting in changes to the FAA. The Corporation is now required to have a special examination carried out at least once every ten years, as compared to the previous requirement of once every five years. In addition, the FAA now requires that the Board of Trustees submit the special examination report to the appropriate Minister and the President of the Treasury Board within 30 days after the day the Board receives it. The FAA also requires that the Board of Trustees make the special examination report available to the public within 60 days after the day on which it receives the report.

We will be pleased to respond to any comments or questions you may have concerning our report at your meeting on 24 April 2009.

I would like to take this opportunity to express my appreciation to the Board members, management and the Corporation's staff for the excellent co-operation and assistance offered to us during the examination.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mark G. Watters', with a long, sweeping flourish extending upwards and to the right.

Mark G. Watters, CA
Assistant Auditor General

Attach.

Table of Contents

Main Points	1
Special Examination Opinion	5
Overview of the Canada Science and Technology Museum Corporation	7
Background	7
Focus of the special examination	9
Observations and Recommendations	9
Human resources management	9
No human resources strategic plan is in place to support the Corporation's strategic objectives	9
The Corporation has not made notable progress in developing a succession plan, despite reporting this to the Board of Trustees	10
Performance management practices are weak	11
The Corporation's code of ethics document requires updating and its conflict of interest document requires follow-up	12
Implementation of a new classification standard was completed	12
Corporate governance	13
The Corporation has some appropriate governance practices in place	14
The Board does not always request the information it needs to carry out its oversight role	15
There is no evidence that the Board has requested options for the protection of the collection	17
Development and preservation of the collection	17
The Corporation has adequate systems and practices in place to develop its collection	18
The Corporation has adequate controls in place to manage its collection	18
The Corporation has taken steps to protect and preserve the collection but continues to experience storage challenges	19
Knowledge sharing	20
Appropriate systems and practices are in place for the development and management of knowledge-sharing activities	20
The Corporation does not have a marketing plan in place	21
Strategic and operational planning	22
The Corporation has defined strategic directions and specific and measurable objectives, but operational plans need to improve	23
The Corporation identifies and assesses risks annually	24

Performance measurement and reporting	24
The Corporation compiles and uses performance information, though performance is difficult to track over time	25
Environmental management	25
The Corporation is aware of key environmental risks and takes appropriate steps to mitigate them	26
The Corporation lacks a formal plan regarding environmental practices	26
Conclusion	27
About the Special Examination	28
Appendix	
List of recommendations	31



Canada Science and Technology Museum Corporation

Special Examination Report—2009

Main Points

What we examined

The Canada Science and Technology Museum Corporation manages three museums in Ottawa: the Canada Agriculture Museum, the Canada Aviation Museum, and the Canada Science and Technology Museum.

The Corporation is responsible for fostering scientific and technological literacy throughout Canada by establishing, maintaining, and developing a collection of scientific and technological objects, with special but not exclusive reference to Canada. The Corporation reports to Parliament through the Minister of Canadian Heritage and Official Languages.

The Corporation funds its activities primarily through parliamentary appropriations. It has about 250 employees. The three museums' collection ranges from World War I aircraft to telescopes and other scientific instruments and, in the case of the Canada Agriculture Museum, live animals.

We examined whether the Corporation's systems and practices provide it with reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively. Our examination covered the period from 1 January to 1 October 2008.

Why it's important

Museums such as the Canada Agriculture Museum, the Canada Aviation Museum, and the Canada Science and Technology Museum provide a unique experience. Through their collection, their knowledgeable staff, and their activities, exhibitions, public programs, and websites, these museums provide visitors with opportunities to explore. They can open minds to new interests and contribute to an understanding of Canada's heritage and contribution to the world in science and technology.

What we found

We found a significant deficiency in the Corporation's human resources management systems and practices that puts the Corporation at risk of not having the competencies it needs to carry out its mandate.

- There is no human resources strategic plan in place to support the Corporation's strategic objectives. We saw no evidence of planning activities or operational plans that support the Corporation's strategic objectives. Neither the Board nor its committees have human resources defined as part of their responsibilities.
- While 60 percent of management was eligible to retire in 2008, there is still no succession plan in place, despite a recommendation we first made in 1999 and the Corporation's own identification of this issue as a priority.
- Performance management practices are weak—we found no performance evaluation for a third of employee files reviewed, no competency models to determine what skill sets are required, no training plans for individual employees, and no performance ratings to support bonuses paid to senior management.

We found no significant deficiencies in other systems and practices. As noted below, we identified adequate practices as well as some that should be improved.

- The Corporation develops, manages, and controls its collection adequately. In the area of strategic planning, the Corporation has updated its strategic framework every year since 2005, which demonstrates the use of performance information. However, the annual changes have altered which performance information is tracked and retained, making it difficult to track performance over time.
- The Board of Trustees has not defined the information it requires to carry out effective oversight of the Corporation. For example, it has not requested information on the renewal of a lease agreement between the Corporation and the operator of an airport owned by the Corporation, an agreement that expired in March 2003. Furthermore, the Audit and Finance Committee of the Board was told that a succession plan for senior management had been developed. In fact, no such plan existed. Although the lack of a succession plan was identified as a key risk to the Corporation, the Board has not requested the succession plan for approval. Without requesting that it receive complete and up-to-date information, it is difficult for the Board to ensure that risks are properly mitigated. In addition, although it has long been aware of the storage problems that put the Museum's collection at risk, the Board has not asked management to develop alternative options for resolving the problems.

The Corporation has responded. The Canada Science and Technology Museum Corporation agrees with the recommendations. Its responses follow the recommendations throughout the report.

Special Examination Opinion

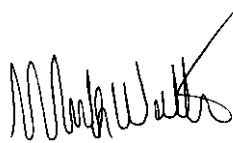
To the Board of Trustees of the Canada Science and Technology Museum Corporation

1. Under section 131 of the *Financial Administration Act* (FAA), the Canada Science and Technology Museum Corporation is required to maintain financial and management control and information systems and management practices that provide reasonable assurance that its assets are safeguarded and controlled; its financial, human, and physical resources are managed economically and efficiently; and its operations are carried out effectively.
2. Section 138 of the FAA also requires the Corporation to have a special examination of these systems and practices carried out at least once every five years.
3. Our responsibility is to express an opinion on whether there is reasonable assurance that during the period covered by the examination—from 1 January to 1 October 2008—there were no significant deficiencies in the Corporation’s systems and practices.
4. We based our examination plan on our survey of the Corporation’s systems and practices and a risk analysis. On 13 June 2008, we submitted the plan to the Audit and Finance Committee of the Board of Trustees. The plan identified the systems and practices that we considered essential to providing the Corporation with reasonable assurance that its assets are safeguarded and controlled, its resources managed economically and efficiently, and its operations carried out effectively. Those are the systems and practices that we selected for examination.
5. The plan included the criteria that we used to examine the Corporation’s systems and practices. These criteria were selected for this examination in consultation with the Corporation. The criteria were based on our experience with performance auditing and our knowledge of the subject matter. The criteria and the systems and practices we examined are listed in About the Special Examination at the end of this report.
6. We conducted our examination in accordance with our plan and with the standards for assurance engagements established by the Canadian Institute of Chartered Accountants. Accordingly, it included the tests and other procedures we considered necessary in the circumstances. In carrying out the special examination, we did not rely on internal audits.

7. We noted a significant deficiency in the Corporation's systems and practices for human resources management that puts the Corporation at risk of not having the competencies it needs to meet its mandate. There are no human resources strategic and operational plans in place to support the Corporation's strategic objectives. There is no succession plan in place, despite the fact that 60 percent of management was eligible to retire in 2008. Performance management practices are weak.

8. In our opinion, based on the criteria established for the examination, there is reasonable assurance that during the period covered by the examination there were no significant deficiencies in the Corporation's systems and practices, except for the significant deficiency in human resources management as described in the preceding paragraph.

9. The rest of this report provides an overview of the Corporation and more detailed information on our examination observations and recommendations.



Mark G. Watters
Assistant Auditor General for the Auditor General of Canada

Ottawa, Canada
1 October 2008

Overview of the Canada Science and Technology Museum Corporation

Background

10. The Canada Science and Technology Museum Corporation (CSTMC or the Corporation) was established by the *Museums Act* as a federal Crown corporation in July 1990. Under the terms of the Act, the Corporation's mandate is to foster scientific and technological literacy throughout Canada by establishing, maintaining, and developing a collection of scientific and technological objects, with special but not exclusive reference to Canada, and by demonstrating the projects and processes of science and technology and their economic, social, and cultural relationships with society.

11. The Corporation reports to Parliament through the Minister of Canadian Heritage and Official Languages. It is governed by a Board of Trustees whose 11 members come from various regions of the country and are appointed by the Governor in Council. The Board has five Committees: Executive Committee, Audit and Finance Committee, Nominating and Governance Committee, Major Facilities Committee, and Corporate Development Committee.

12. The Corporation manages three museums located at three sites in Ottawa:

- **The Canada Agriculture Museum.** Located at Ottawa's Central Experimental Farm, the Museum offers programs and exhibitions on Canada's agricultural heritage and on the benefits and relationship of agricultural science and technology to Canadians' everyday lives.
- **The Canada Aviation Museum.** Located at the Rockcliffe Airport (the airport is owned by the Corporation and leased to a flying club), the Museum has an extensive aviation collection, illustrating the development of the flying machine during both peace and war times, from the pioneer period to the present day. The collection gives particular, but not exclusive, attention to Canadian achievements.
- **The Canada Science and Technology Museum.** Located in a repurposed building in the east of Ottawa, the Museum presents exhibitions on the history of science and technology in Canada. The Museum also has a unique library and photographic archive, and the Canadian National Railway photographic collection.

13. The Corporation has approximately 250 employees. It undertakes activities in heritage preservation (collections management, conservation, and research) and knowledge sharing (research dissemination through activities such as educational and community programs, and exhibitions).

14. The Corporation has a collection that includes about 39,000 artifacts, trade literature, engineering drawings, rare books, and journals. The collection also includes livestock at the Canada Agriculture Museum. In the 2007–08 fiscal year, the Corporation reported welcoming 660,000 on-site visitors to the three museums and received 2.55 million website visits.

15. The Corporation funds its activities primarily through parliamentary appropriations. A base appropriation of \$25.8 million in the 2007–08 fiscal year was supplemented with a one-time payment of \$5.7 million for capital infrastructure, maintenance, and operation costs for the Canada Aviation Museum hangar, and for severance adjustments and retroactive wage settlements. Self-generated revenue from areas such as admissions, commercial operations, and contributions from philanthropy contributed \$4.7 million to operating and capital expenses in the 2007–08 fiscal year. The same year, the Corporation established the CSTMC Foundation, which operates as a separate entity to actively pursue donations in support of the Corporation’s mandate and goals.

16. In the 2004–05 fiscal year, the Corporation developed a five-year strategic framework consisting of four principal elements:

- **Vision statement:** The CSTMC will be a nationally recognized leader in engaging Canadians in the exploration of their rich scientific and technological culture, through its exceptional collections, innovative programs, collaborative approaches, and professionalism.
- **Pillars of success:** A nationally recognized leader, engaging Canadians, exceptional collections, innovative programs, collaborative approaches, and professionalism.
- **Multi-year objectives:** Outcomes that are measurable and have time frames.
- **Measures:** Results that are tracked on a short-term basis to indicate relative success.

The Corporation has identified obtaining a new facility for the Canada Science and Technology Museum as a priority and has included this as an objective in its strategic framework.

Focus of the special examination

17. We examined the Canada Science and Technology Museum Corporation's systems and practices in the areas of human resources management, corporate governance, development and preservation of the collection, knowledge sharing, strategic and operational planning, performance measurement and reporting, and environmental management. Our objective was to determine whether those systems and practices provide the Canada Science and Technology Museum Corporation with reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively.

18. Further details on the audit objectives, scope, criteria, and approach are provided in About the Special Examination at the end of the report.

Observations and Recommendations

Human resources management

19. The Canada Science and Technology Museum Corporation's success largely depends on the quality and performance of its approximately 250 employees. The Corporation requires highly skilled and uniquely qualified individuals so it is important that it retains this knowledge and expertise in order to meet its mandate.

20. We expected the Corporation to have systems and practices in place to manage human resources economically, efficiently, and effectively to achieve its objectives and goals.

21. We found a significant deficiency in the Canada Science and Technology Museum Corporation's systems and practices to manage human resources economically, efficiently, and effectively.

No human resources strategic plan is in place to support the Corporation's strategic objectives

22. The Corporation has defined strategic directions and measurable goals and objectives, including those related to "professionalism" (to promote a professional workforce). However, we found that the Corporation has not put in place supporting activities to attain the

stated goals and objectives for human resources (HR). For example, we saw no evidence of planning activities, including HR strategic initiatives or operational plans, to support the Corporation's strategic objectives. In addition, the Board of Trustees and its committees do not have HR defined as part of their responsibilities (see paragraph 42). The Corporation therefore risks missing opportunities for HR management, as a key corporate system, to contribute strategically to overall corporate objectives.

The Corporation has not made notable progress in developing a succession plan, despite reporting this to the Board of Trustees

23. Development of a succession plan has been an issue raised over a number of years. In our 1999 special examination report, we stated that little effort had been made to establish a succession plan to allow the Corporation to meet its long-term HR needs. Since 2005, the Corporation has identified the importance of succession planning and has indicated its intentions to develop a succession plan—both to the Board of Trustees and to the public. An internal audit completed in December 2007 concluded that the Corporation should act immediately to ensure that a succession plan is developed. In 2008, the Corporation still did not have a succession plan in place, although 9 (or 60 percent) of its 15 senior managers were eligible for retirement in that year.

24. Our examination revealed that only limited work has been done to develop a succession plan. In the fall of 2007, the Corporation established a Sustainable Workforce Committee, which developed an action plan to guide succession planning. However, the only step implemented from this action plan was identification of future vacancies resulting from eligible retirements. The Corporation has not completed a workforce analysis, undertaken an analysis of the workforce market, or developed a competency profile, which are all key elements in a succession plan.

25. Information provided to the Board of Trustees regarding a succession plan does not fairly represent actual progress. Since 2005, there have been references to activities to be completed in the development of a succession plan. In 2006, the Audit and Finance Committee of the Board of Trustees was told that a succession plan for senior management had been developed and presented to the Board. We found that no such plan exists.

26. In addition, the Corporation has not provided complete information regarding succession plan progress to the public.

Information found in corporate plans dating back to 2005 states that the Corporation will develop a succession plan. Subsequent annual reports have provided no explanation for the lack of progress.

27. The seriousness of this situation is two-fold. First, without a succession plan in place to guide its HR plans and activities, the Corporation risks not having the appropriate competencies when required to enable it to meet its mandate. Given that 60 percent of senior managers were eligible to retire in 2008, the potential risk is immediate. Second, providing a Board committee with information that is not a true representation of progress toward a succession plan may hinder the Board's ability to make informed decisions, thus jeopardizing its capacity to effectively carry out its responsibilities. Not providing complete information to the public provides an inaccurate portrait of the Corporation's activities.

Performance management practices are weak

28. The Corporation has directives to guide performance management. However, our examination found that the Corporation does not respect these directives. For example, under the directives, staff members are required to undergo a performance assessment once a year. One third of the staff files we reviewed for the 2006–07 fiscal year did not contain a performance evaluation. Those on file provided little information regarding employee performance and consisted primarily of self-evaluation. The majority of senior management performance assessments reviewed for the same period consisted of self-evaluation, with no employee or supervisor signature. The established evaluation form was not used, resulting in variances in the type and quality of information. We found no performance ratings to support bonuses paid to senior management. The Corporation's Chief Executive Officer decided bonus allocation in a parallel exercise, and there was no evidence that it was directly based on the performance evaluation itself.

29. We also found that the Corporation has no systems or practices to ensure that employees have the necessary skill set. For example, no analyses regarding the Corporation's HR needs and no competency models to show the type of skills required in different positions were available. We found no evidence of systems or practices to identify employee training needs. No training plans have been developed for individual employees, and no links between employee performance objectives and a longer-term career plan have been made.

30. A successful performance management system ensures employees understand the organization's culture and goals as well as what it expects of them personally. It also ensures that the efforts of everyone in an organization are synchronized with the broader organizational goals. The lack of reliable and consistent performance management practices puts at risk the Corporation's ability to meet its planned results. Without such practices, the Corporation cannot assess whether it has a competent and experienced workforce to carry out its activities, meet future challenges, and fulfill its mandate.

The Corporation's code of ethics document requires updating and its conflict of interest document requires follow-up

31. In 2004, we recommended that the Board of Trustees adopt a code of values and ethics. In 2005, the Corporation adopted a code of ethics and a directive on conflict of interest. However, during this special examination, we noted that the Corporation does not have established procedures for the disclosure of wrongdoings similar to those set out in the *Public Servants Disclosure Protection Act*. For example, it does not inform employees that they may disclose wrongdoing to the Public Sector Integrity Commissioner. There is also no mention of the protection of the identity of individuals involved in the disclosure process. We encourage the Corporation to establish such procedures.

32. We found that the Corporation provides copies of the code of ethics and the conflict of interest directive to new employees. However, there is no practice in place to subsequently and periodically follow up with employees to remind them of the documents' contents or to update employee conflict of interest declarations.

Implementation of a new classification standard was completed

33. In 2004, the time of our previous special examination report, the Corporation was in the process of developing a classification standard, which evaluates positions based on work content and establishes a hierarchy of positions and compensation that reflects their requirements. At that time, we recommended that the Corporation assess the state of its classification standard and take remedial actions as required. Adoption of the classification standard resulted in 51 employee grievances, with 41 appealed positions reviewed by an appeal review committee. Those grievances were resolved by the end of October 2008. The committee upheld the appeals for 32 positions and the review affected 4 other positions as a result of the upheld appeals.

34. Recommendation. The Canada Science and Technology Museum Corporation should

- develop and implement human resources strategic and operational plans that support the Corporation's strategic planning objectives;
- develop and implement a comprehensive succession plan, providing accurate information on progress to the Board of Trustees and to the public;
- develop and implement a performance management system that ensures timely and consistent practices; and
- implement practices to periodically follow up with employees to remind them of the contents of the code of ethics and the conflict of interest directive, and to update employee conflict of interest declarations.

***The Corporation's response.** The Corporation agrees with the recommendation, fully appreciating the need to align its workforce with the achievement of its strategic objectives. To ensure all risks are addressed, the Corporation will, during its annual corporate strategic planning exercise, identify immediate and future needs with respect to human resources and establish tactics to address these needs. The results of this exercise will contribute to the Human Resources plan and be integrated into the business plan. The Corporation will continue its work on the development and maintenance of a comprehensive succession plan. With the recent implementation of the revised performance management process, it is anticipated that annual adjustments and improvements will be made to the succession plan to ensure it meets all requirements. The Corporation agrees that a performance management system is critical to the operations of the Corporation. At the time of the audit, the Corporation had reviewed and revised its existing performance management system. The revised system, initiated in October 2008, takes into account the alignment of performance objectives to the Corporation's strategic priorities, assesses leadership competencies, and identifies development requirements and career objectives of staff. The system will include monitoring of the implementation of the performance management system and also ensure the mid-year review of all management positions. Recognizing the importance of strong conflict of interest and disclosure policies for management, employees, and the members of the Board of Trustees, the Corporation will ensure that a system for regular awareness and follow-up is implemented.*

Corporate governance

35. Corporate governance involves the structures, systems, and practices that oversee the direction and management of an

organization so that it can fulfill its mandate and achieve its objectives. A key component of corporate governance is the Board.

36. We expected the Canada Science and Technology Museum Corporation to have a well-performing corporate governance framework and practices to meet best practices expectations in Board stewardship, shareholder relations, and communications with the public.

37. We noted that although the Board of Trustees has an appropriate governance framework and some appropriate governance practices, it needs to adopt practices to exercise its oversight role effectively.

The Corporation has some appropriate governance practices in place

38. The Corporation's Board of Trustees is composed of 11 members. As of 31 July 2008, all Board positions were occupied. The Board has five committees: Executive Committee, Audit and Finance Committee, Nominating and Governance Committee, Major Facilities Committee, and Corporate Development Committee.

39. The Board Nominating and Governance Committee developed a profile of skills, expertise, and regional representation required for the Board as a whole. The committee uses this profile to identify the lacking elements when making recommendations to the Minister in order to fill vacancies. Board succession is actively addressed to ensure continuity and appropriate skills on the Board.

40. The Corporation's management provides new Board members with orientation material such as the Corporation's legislative framework, minutes of previous Board meetings, and, as recommended in 2004, a Code of Ethics that includes conflict of interest guidelines. Board members also have the opportunity to learn about the Corporation and their role through discussions with the Corporation's Chief Executive Officer. Should Board members choose, management will also arrange sessions between Board members and senior managers. In addition, Board members attend an annual governance training session.

41. Board independence is ensured in various ways, including having members with sufficient expertise to carry out their duties, and allowing only Board members to vote and make decisions. Trustees also hold part of their meetings without management in attendance. In addition, as recommended in our previous special examination report, the Board has instituted an annual self-assessment process. New Board members also complete a conflict of interest declaration.

42. The responsibilities of the members of the Board are primarily defined in the *Financial Administration Act* and the *Museums Act*. The Board's five standing committees have terms of references that are regularly reviewed and approved by the Board. However, we found that neither the Board nor any of its committees have human resources specifically defined as part of their responsibilities. We encourage the Corporation to include human resources as part of the Board's or one of its committee's responsibilities.

The Board does not always request the information it needs to carry out its oversight role

43. The Board relies on information presented to it in order to carry out its oversight responsibilities. This information should present and explain options, facilitate comparisons, and be timely and accurate. The Board needs to be proactive and identify the information that it requires should it find any to be lacking. We found that the Board has not made it a practice to request all the information it needs to carry out effective oversight.

44. We observed that the Board does not require written documentation from its sub-committees prior to Board meetings to help it make informed decisions. Information provided to the Board is often conveyed orally only, even when the Board needs to make significant and complex decisions. For example, when asked to approve the level of funding and associated options for the proposed new Canada Science and Technology Museum facilities, which would guide discussions with government officials, Board members did not receive written information that would have presented and explained options, facilitated comparisons, and allowed the Board to consider the options before the meeting.

45. One key source of information for the Board to evaluate the risks the Corporation faces is the corporate risk assessment. The Board needs to ensure that the Corporation has identified principal risks and has implemented appropriate systems and practices to monitor and manage these risks. Since 2005, CSTMC's management has completed annual corporate risk assessments. In 2004, we recommended that the Board define the risk management information it needed. In 2008, the Audit and Finance Committee requested and received an information session on the corporate risk assessment development process. However, we found that not all Board members clearly understood this process. Given that the Board's understanding of the risk assessment process is lacking, we were unable to determine how the Board ensures that significant risks are properly mitigated.

46. The CSTMC is in a unique position as a federal Crown corporation—it has responsibility for museums and for an airport that has a third-party operator (currently a flying club). With responsibility for an airport come potential risks to the Corporation, such as those related to safety and security and to emergency response. We would expect the Board, in its oversight role, to request information on the airport to satisfy itself that the Corporation has the necessary systems and practices in place to manage these risks. The lease agreement with the flying club expired in March 2003. In 2008, a new agreement was not yet in place; the lapsed agreement had simply been renewed annually. We found that the Board has not requested updates on where the Corporation is in reaching an agreement with the airport's operator, and has not questioned why there have been delays in the development of the new agreement or how the Corporation is managing given that annual renewal of the lease agreement may not sufficiently protect it (for example, the lapsed agreement has no formal emergency response plan defined for the airport).

47. In 2004, we recommended that the Board ensure that the Corporation develop an appropriate succession plan. As stated in the Human resources management section, there is still no succession plan in place despite its identification as a key risk to the Corporation. We found that the Board has not made it a practice to take steps to ensure that a succession plan was developed and has not requested detailed progress reports with milestones for completion of key steps. As indicated in paragraph 25, when the Audit and Finance Committee was told that a succession plan had been presented to the Board, the Audit and Finance Committee did not challenge management and request a copy of the plan for approval.

48. In 2004, we recommended that the Corporation prepare a strategic plan for information technology. The Corporation has prepared a draft plan but it has not yet been approved. The draft Information Technology (IT) Strategy outlines how IT initiatives support the Corporation's strategic framework, and presents IT strategic priorities and related major IT initiatives. The Board has not made it a practice to follow up with management to question the length of time it has taken to develop a plan nor has it asked management to set timelines to see the plan approved.

49. The Audit and Finance Committee's terms of reference require it to assess the adequacy of the Corporation's internal controls and management of significant risks. The Committee relies on external and internal audits to meet this requirement. However, we found that internal audit does not prepare and present a risk-based annual audit

plan, nor has the Audit and Finance Committee made it a practice to request that one be developed. As a result, the Corporation may not identify areas of potential high risk for review, which may affect its ability to attain its planned objectives.

50. Minutes of the Board and the Audit and Finance Committee meetings often lack detail, thus limiting information available on the extent of discussions and decisions. Without sufficient documentation, it is difficult for the Board members and others to understand the context within which previous decisions were made.

There is no evidence that the Board has requested options for the protection of the collection

51. The Board is aware of the continuing difficulties with some existing storage facilities and the negative impacts affecting the collection. However, despite receiving such information over a period of time (including in our 2004 report), the Board has not made it a practice to ask management to develop alternative options to maintain the collection and has focused only on a new facility (including storage facilities) for the Canada Science and Technology Museum.

52. Recommendation. The Board of Trustees of the Canada Science and Technology Museum Corporation should

- clearly define its information needs and ensure this information is provided in a timely manner to enable it to play its oversight role effectively; and
- request options for the protection of the collection.

The Board of Trustees' response. The Board of Trustees agrees with the recommendation, as it acknowledges the need for accurate, timely information to effectively carry out its responsibilities. The trustees will identify their information needs and will continue to monitor the Corporation's effort to provide pertinent and timely information to the Board members. In light of the continued growth of the collection and degree of movement toward the realization of a new facility, the Board of Trustees will ensure that the Corporation continues to review options as they become apparent and present all findings to the Board.

Development and preservation of the collection

53. The primary purpose of the Canada Science and Technology Museum Corporation's collection—comprising scientific and technological artifacts and materials—is to help people understand the transformation in Canadian life that has resulted from science and technology. The Corporation acquires 80 percent of its collection

through donations. The collection includes trade literature, photographs, and three-dimensional artifacts. It focuses on seven major subject areas: aviation, communications, manufacturing, natural resources, physical sciences and medicine, renewable resources including agriculture, and transportation.

54. We expected the Corporation to have a well-defined collection development strategy in place, as well as a policy for acquisition and deaccession, to ensure that the collection of scientific and technological objects has special but not exclusive reference to Canada. We also expected the Corporation to have systems and practices in place to ensure the effective management, safeguarding, documentation, and conservation of its collection.

55. We found that the Corporation manages its collection adequately and has made some improvements since the 2004 special examination. However, the Corporation continues to face challenges meeting its own environmental standards in certain facilities.

The Corporation has adequate systems and practices in place to develop its collection

56. The Corporation has in place and follows a Collection Development Strategy, updated in 2006. This strategy provides a framework within which it conducts historical research, resulting in historical assessments that identify and analyze important concepts, objects, and issues key to the historic development of scientific and technological endeavour. After completing a historical assessment, the Corporation prepares a collection assessment comprising three sections: the ideal collection; a profile of the existing collection; and collection needs, which it identifies by comparing the ideal collection with the existing collection profile. This process identifies artifacts to be acquired and artifacts to be deaccessioned (removed from the collection).

57. In the 2007–08 fiscal year, the Corporation acquired 485 new artifacts and deaccessioned around 40. An acquisition committee recommends acquisitions and deaccessions. However, Corporation documentation does not indicate who approves these recommendations. We encourage the Corporation to clearly state who is responsible for approving acquisitions and deaccessions.

The Corporation has adequate controls in place to manage its collection

58. In 2005, the Corporation installed a new database to manage its collection. This database now holds approximately 40,000 records of

three dimensional artifacts, 95 percent of which include a picture of the artifact. In 2005, the Corporation also revised its documentation standards. It now considers artifacts fully documented if their record includes information in five fields: manufacturer, materials, relevance to Canada, relevance to technology, and at least one artifact image. In 2008, the Corporation undertook a collection rationalization test project to estimate the number of artifacts that are duplicates, are in poor condition, or do not have complete records. This included bringing some pre-2005 records up to current standards. To date, the Corporation reports that 49 percent of the three-dimensional artifacts are fully documented. Its goal was that, by the 2009–10 fiscal year, 75 percent of the collection will be documented to standard. However, the Corporation no longer expects to meet this goal due to resource reallocation.

59. Practices are in place to control the collection. For example, only specific staff members are able to make changes to the database. Collection Services staff perform random checks, and procedures are in place to search for misplaced artifacts.

The Corporation has taken steps to protect and preserve the collection but continues to experience storage challenges

60. The Corporation stores its collection in three leased warehouses, in an aircraft hangar, and in the museum buildings. The Corporation has appropriate standards in place for the storage of its collection and, in 2007, it drafted a directive for the conservation and use of artifacts.

61. Various initiatives have been put in place to protect the collection. For example, environmental data is collected, the roof was repaired at one warehouse in 2007, and new shelving in the hangar was anchored in 2006 as a precaution against possible earthquake damage. The Corporation reports that space savings also resulted from deaccession and reorganization of shelves as part of the rationalization test project. It also completed several environment and housing studies. In 2004, we recommended that the Corporation look at more systematic ways to assess the risk that items in the collection could deteriorate because of facility conditions. In 2005, the Corporation completed a limited study to identify possible indications of deterioration in artifacts due to the storage environment. As a long-term solution to the impacts of environmental conditions at current storage facilities and at the Canada Science and Technology Museum facility, the Corporation is working on a proposal for new facilities that includes new storage, which would be purpose-built for museum needs.

62. However, the Corporation continues to experience challenges with storing its collection. As in 2004, temperature and humidity conditions do not meet the Corporation's environmental standards and contribute to the deterioration of artifacts.

63. The Corporation has security measures in place to protect the collection, including using staff and closed-circuit television (CCTV) to monitor artifacts in exhibitions and in a storage area, and restricting access to storage space to authorized staff. However, there are limited numbers of CCTVs, and the number of staff authorized to access storage areas is excessive.

64. Plans that define responsibilities related to the collection are in place for emergency situations. This includes a notification system that provides names and numbers of staff to contact in case of emergencies. However, this document is out of date and needs to be updated to reflect current Corporation staff. We encourage the Corporation to update this document and improve the security measures it has in place to protect the collection.

Knowledge sharing

65. Sharing knowledge is a key activity for the Canada Science and Technology Museum Corporation in fulfilling its mandate. The Corporation shares knowledge through exhibitions in its museums (the Corporation reports that two percent of its collection is on view at the Canada Science and Technology Museum), travelling exhibitions and loans (with one percent of its collection on loan to other exhibition centres each year), community and educational programs, and the three museum websites.

66. We expected the Corporation to develop and maintain clear knowledge-sharing strategies and practices to ensure that the activities it carries out contribute to achieving its national mandate.

67. We noted that the Corporation has adequate systems and practices in place to share knowledge and information with Canadians. However, we noted a lack of a marketing plan.

Appropriate systems and practices are in place for the development and management of knowledge-sharing activities

68. We found that the Corporation has systems and practices in place to develop and manage exhibitions, as well as community and educational programming. The Corporation's three museums have permanent and temporary exhibitions, which they develop using a corporate exhibition development process. In 2006, the Corporation

introduced a process to develop new products at the three museums. This process guides the development of multiple types of offerings, for example, an exhibition with related public programming and Web content. Its intent is to support the strategic framework pillar of success “innovative programs” by offering products with multiple types of offerings to increase reach and accessibility.

69. Each museum has its own website, where there is access to collection, exhibition, and programming information. A federally run website that includes information on Canadian museum collections currently provides online access to some collection data. Acknowledging that it needs to do more regarding sharing knowledge at a national level, the Corporation plans to put additional information about its collection on its museums’ websites. In addition, it has held public tours of storage areas during the summer. The Corporation also addresses requests for information from the general public, academics, other museums, and institution professionals. It created a new outreach officer position in 2008 to raise the profile of the Corporation’s programs and collections outside of the National Capital Region.

70. The Corporation currently offers around 90 activities related to educational programming and more than 35 community programming activities. These programs are available in both official languages. It has not undertaken a complete review to determine whether this programming remains appropriate. We encourage the Corporation to review its programming, since constantly managing and updating a large number of programs incurs administration costs.

71. Although the Corporation’s three museums are on separate sites across the city and each addresses different aspects of science and technology, they share some common practices. The pillar of success champion for “engaging Canadians” (the senior manager responsible for leading corporate activities to deliver a range of products at the museums) provides a formal link across the three institutions at a senior management level. However, we noted that there are limited initiatives for cooperation among the three museums at the working level. We encourage the Corporation to look for opportunities to enable the three museums to share experiences, knowledge, resources, and lessons learned wherever possible.

The Corporation does not have a marketing plan in place

72. The Corporation’s mandate is to foster scientific and technological literacy throughout Canada. We observed that there is

no corporate-wide marketing plan in place that provides overall strategies for the Corporation to define how it intends to reach Canadians across the country, including who its target audiences are nationally and how it plans to communicate with them.

73. Without a corporate-wide marketing plan, reporting on the Corporation's national role is limited to individual corporate activities. For example, the annual report provides information on the Science and Engineering Hall of Fame initiative (which honours individuals whose outstanding scientific or technological achievements have had long-term implications for Canadians), and some information is provided on Web activity, travelling exhibitions, and artifact loans. However, the dissemination of this information is not supported by a corporate marketing plan that indicates how this information aligns with strategic objectives and who its target audience is. A corporate-wide marketing plan would provide overall strategies for the Corporation to help align its activities to its strategic objectives.

74. Recommendation. The Canada Science and Technology Museum Corporation should develop a corporate-wide marketing plan to provide overall strategies for the Corporation that defines how it intends to reach Canadians across the country, identifying target audiences, and defining communication strategies to reach these audiences.

The Corporation's response. The Corporation agrees with the recommendation and has undertaken extensive market segmentation studies specifically designed to develop a profile of distinct target audiences for its three operating museums. The segmentation results served to refine the Corporation's insights into those markets it could best serve given the resources available. The market segmentation process has guided the Corporation's museums in their approach to the local marketplace. Next steps include the development of a comprehensive approach to marketing the Corporation and its three museums nationally.

Strategic and operational planning

75. Strategic and operational planning assists a corporation in achieving its mandate, while focusing on the future. It allows an organization to formulate achievable objectives over the long term, based on a realistic assessment of the resources available.

76. We expected the Canada Science and Technology Museum Corporation to have clearly defined strategic directions and specific and measurable goals and objectives to achieve its mandate. Its strategic direction and goals would consider the internal and external

environment, its corporate risks, and the need to control and protect its assets and manage its resources economically and efficiently.

77. We found that the Corporation has clearly defined strategic directions and specific and measurable goals and objectives to achieve its mandate. However, we noted several areas for improvement.

The Corporation has defined strategic directions and specific and measurable objectives, but operational plans need to improve

78. In 2004, we recommended that the Corporation clearly state its objectives, show how they link to ongoing objectives, and develop performance measurement as an outcome. In 2005, the Corporation developed its first strategic framework, which links six high-level pillars of success (paragraph 16) and their related organizational objectives with practical lower-level performance measurement.

79. The strategic planning process begins with the use of performance information gathered throughout the year that provides management with the context for the planning process. Although the Corporation does not have an official strengths, weaknesses, threats, and opportunities analysis, it draws information on the first three (and to a lesser degree on opportunities) from various sources, including environmental scans and the integrated risk assessment. It assesses progress against the strategic framework to determine whether the framework requires updating to reflect new realities or emerging priorities. The Board of Trustees can then provide input to the new draft strategic framework using information that management provides (including a summary of key risks drawn from the corporate risk assessment). As recommended in our 2004 report, the Corporation has put numerous practices in place to ensure that the strategic framework is communicated to staff.

80. We noted that the Corporation has updated the strategic framework every year since 2005 to reflect changing organizational priorities and objectives. Adjustments to the framework demonstrate that the Corporation is using performance information to make modifications. However, the rationale for making a particular change is not always properly documented. Annual changes and refinement of the framework and its multi-year objectives can lead to confusion, making it difficult to track the Corporation's performance over time (see Performance measurement and reporting, paragraph 88). In addition, an examination of the pillars of success and their purpose statements found that some pillars are output-based (that is, they are direct products of the Corporation, such as "exceptional collections"),

while others are outcome-based (their consequences are attributable to activities and outputs, such as the Corporation is seen as “a nationally recognized leader”). We encourage the Corporation to ensure that its major strategic objectives are outcomes, not outputs, of its operations.

81. We found inconsistencies in the development and content of operational plans. The Corporation has linked existing operational plans to strategic framework objectives and measures. However, specific objectives for particular projects were missing or did not always set explicit targets for the project or provide a means of measuring progress. In addition, objectives stated in the plans did not always match the wording of objectives as stated in the strategic framework. For example, “manage a sustainable workforce” was changed to “maintain a sustainable workforce.” The level of project task detail was also inconsistent across operational plans.

The Corporation identifies and assesses risks annually

82. Since 2005, the Corporation has identified and assessed risks each year. These corporate risk assessments provide management and the Board with information for the strategic framework review and identify items that are then translated into top priorities in the corporate plan.

83. Recommendation. The Canada Science and Technology Museum Corporation should

- ensure consistency of operational plans across the Corporation, including consistency between operational plans and strategic framework objectives and in terms of their level of detail; and
- set clear measurable targets in its operational plans.

The Corporation’s response. The Corporation agrees with the recommendation and will reinstate its training program on operational planning with increased emphasis on the identification of measurable targets. Operational plans will be monitored and reviewed to ensure consistency between the operational plans and the strategic framework and to ensure that measurable targets are set.

Performance measurement and reporting

84. Measuring and demonstrating the impact of activities is not a challenge unique to the Canada Science and Technology Museum Corporation. Nonetheless, it is important to assess the extent to which the Corporation’s activities contribute to fulfilling its mandate and achieving its objectives.

85. We expected the Corporation to have a performance management framework in place, including the identification of performance indicators to measure the achievement of its mandate and statutory objectives. We also expected reports to provide complete, reasonable, timely, and balanced information for decision making and accountability reporting.

86. We noted that the Corporation has a performance management framework in place and that its reports provide reasonable, timely, and balanced information for decision making and accountability reporting. However, we noted several areas for improvement.

The Corporation compiles and uses performance information, though performance is difficult to track over time

87. The Corporation uses performance information in reporting both internally and to the public. Performance expectations are clear and concrete in the strategic framework and are translated into targets with a direction, amount, and time frame for change in the corporate plan. Information is provided on both strong and weak performance. The Corporation reports planned versus actual performance. However, we noted that it does not clearly document its target-setting process and results, specifically during discussions that take place at Board and management retreats. Although planned versus actual performance and targets are reported, we found that justification for the gaps between planned and actual results was not always available.

88. As previously mentioned, annual changes and refinement of the strategic framework can lead to confusion when looking at performance over time. For example, the objective “increase on-site and off-site visits by 20 percent,” as stated in the 2005–10 strategic framework, underwent changes until 2007, when it was removed as an objective from the 2008–13 framework with no explanation. While adjustments to measures may be due to the Corporation’s changing priorities, they make it difficult to track performance over time. There is also a risk that these changes may be interpreted as a response to the Corporation’s inability to meet certain stated objectives. We encourage the Corporation to document changes made to the strategic framework to help clarify the need for the changes.

Environmental management

89. The Canada Science and Technology Museum Corporation has unique environmental issues given the nature of its operations. From the presence of radon in artifacts, to responsibility for an airport, to the handling of manure at the Canada Museum of Agriculture, the

Corporation must ensure that it has systems and practices to appropriately manage a wide scope of environmental issues.

90. We expected the Corporation to have considered and assessed the environmental impacts and related risks and opportunities associated with its operations, activities, and strategies. We also expected it to manage these risks as appropriate, consistent with government expectations and applicable laws, regulations, and other requirements.

91. We noted that the Corporation has practices to address environmental risks. However, it has not formalized and documented all these practices.

The Corporation is aware of key environmental risks and takes appropriate steps to mitigate them

92. We found that the Corporation has identified the key environmental risks associated with its operations and has taken remedial actions to address them. For example, it has identified and completed remediation for most contaminated sites. For the site where it has not completed remediation, the Corporation is monitoring the contamination. The Health and Safety Committee conducts facilities inspections. Material safety data sheets regarding hazardous materials are provided to employees. Hazardous waste guidelines are also in place, although dated. The Corporation put radioactive instruments in the collection in appropriate storage facilities. In addition, it developed an asbestos management plan for one of its museums.

The Corporation lacks a formal plan regarding environmental practices

93. We found that although the Corporation is aware of its environmental risks and has taken action to address them, there are areas for improvement in its environmental practices.

94. We noted that at Health and Safety Committee meetings, members discuss and deal with some environmental issues. However, we found that there is no environmental policy in place or a plan that formally defines environmental risks and related actions, and roles and responsibilities regarding environmental practices within the Corporation. Integrated risk assessments at the corporate level do not incorporate elements related to the environment. No one has formal overall responsibility for environmental management within the Corporation; each museum's facilities manager unofficially assumes responsibility for most environmental management, and the chief facilities manager assumes an oversight role. The Corporation does not

maintain a centralized listing of environmental laws, regulations, and other requirements designed to facilitate environmental management and compliance. Finally, we saw few documented procedures and no evidence of reporting on environmental issues to the Board or its committees.

95. Recommendation. The Canada Science and Technology Museum Corporation should formalize existing environmental procedures and practices, and establish clear accountabilities.

The Corporation's response. The Corporation agrees with the recommendation and will undertake a review of its procedures, develop proper documentation, and officially assign responsibility for environmental management and oversight.

Conclusion

96. We found a significant deficiency related to the systems and practices to manage human resources that could prevent the Canada Science and Technology Museum Corporation from achieving its mandate. Other than this exception, we concluded that during the period under examination, the systems and practices we examined were designed and operated in a way that provided reasonable assurance to the Corporation that its assets were safeguarded and controlled, its resources were managed economically and efficiently, and its operations were carried out effectively.

About the Special Examination

All of the audit work in this report was conducted in accordance with the standards for assurance engagements set by The Canadian Institute of Chartered Accountants. While the Office adopts these standards as the minimum requirement for our audits, we also draw upon the standards and practices of other disciplines.

Objective

Under section 138 of the *Financial Administration Act* (FAA), federal Crown corporations are subject to a special examination once every five years. Special examinations of Crown corporations are a form of performance audit where the scope is set by the FAA to include the entire corporation. In special examinations, the Auditor General provides an opinion on the management of the corporation as a whole. The opinion for this special examination is found on page 5 of this report.

Special examinations answer the following question: Do the corporation's systems and practices provide reasonable assurance that assets are safeguarded, resources are managed economically and efficiently, and operations are carried out effectively?

Key systems and practices examined and criteria

At the start of this special examination, we presented the Corporation's Audit and Finance Committee with an audit plan that identified the systems and practices, and related criteria, that we considered essential to providing the Corporation with reasonable assurance that its assets are safeguarded and controlled, its resources are managed economically and efficiently, and its operations are carried out effectively. These are the systems and practices and criteria that we used for examination.

Key system	Criteria
Human resources management <ul style="list-style-type: none"> • HR strategic management • Succession planning and management • Performance management process • Learning • Well-being, health and safety management 	We expected the Corporation to have systems and practices in place to manage human resources economically, efficiently, and effectively in achieving its objectives and goals.
Corporate governance <ul style="list-style-type: none"> • Roles and responsibilities of the Board and its committees • Information provided to the Board for decision making, including environmental matters • Board training and orientation • Conflict of interest • Code of ethics and values 	We expected the Corporation to have a well-performing corporate governance framework and practices to meet the expectations of best practices in Board stewardship, shareholder relations, and communication with the public.

Key system	Criteria
Development and preservation of the collection <ul style="list-style-type: none"> • Collection development strategy • Facilities and maintenance plans • Acquisition and deaccession policy • Cataloguing system • Practices for storage and protection of the collection • Management of risks and threats to the facilities, including environmental aspects 	<p>We expected the Corporation to have a well-defined collection development strategy in place as well as an acquisition and deaccession policy to ensure that the collection of scientific and technological objects has special but not exclusive reference to Canada.</p> <p>We expected the Corporation to have systems and practices in place to ensure the effective management, safeguarding, documentation, and conservation of its collection of artifacts.</p>
Knowledge sharing <ul style="list-style-type: none"> • Program, exhibit, and research strategies and plans • Communication and diffusion strategies • Sharing of knowledge practices • Partnership strategies 	<p>We expected the Corporation to develop and maintain clear knowledge-sharing strategies and practices, to ensure that the activities carried out contribute to achieving its national mandate.</p>
Strategic and operational planning <ul style="list-style-type: none"> • Strategic planning process • Process to develop and align the strategic, corporate, and operational plans • Risk management practices, including management practices for environmental risks 	<p>We expected the Corporation to have clearly defined strategic directions and specific and measurable goals and objectives to achieve its mandate. Its strategic direction and goals would take into consideration the internal and external environment and its corporate risks, and the need to control and protect its assets and manage its resources economically and efficiently.</p>
Performance measurement and reporting <ul style="list-style-type: none"> • Processes for reporting financial and non-financial information in the Corporation's Annual Report 	<p>We expected the Corporation to have a performance management framework in place, including the identification of performance indicators to measure the achievement of its mandate and statutory objectives. We also expected it to have reports that provide complete, reasonable, timely, and balanced information for decision making and accountability reporting.</p>
Environmental management <ul style="list-style-type: none"> • Environmental risk assessment • Roles and responsibilities • Reporting process 	<p>We expected the Corporation to have considered and assessed the environmental impacts and related risks and opportunities associated with its operations, activities, and strategies. We expected it to manage these risks as appropriate, consistent with government expectations and applicable laws, regulations, and other requirements.</p>

Audit work completed

Audit work for this special examination was substantially completed on 1 October 2008.

Audit team

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Appendix List of recommendations

The following is a list of recommendations found in the Special Examination Report. The number in front of the recommendation indicates the paragraph where it appears in the report. The numbers in parentheses indicate the paragraphs where the topic is discussed.

Recommendation	Response
Human resources management	
<p>34. The Canada Science and Technology Museum Corporation should</p> <ul style="list-style-type: none"> • develop and implement human resources strategic and operational plans that support the Corporation’s strategic planning objectives; • develop and implement a comprehensive succession plan, providing accurate information on progress to the Board of Trustees and to the public; • develop and implement a performance management system that ensures timely and consistent practices; and • implement practices to periodically follow up with employees to remind them of the contents of the code of ethics and the conflict of interest directive, and to update employee conflict of interest declarations. (19–33) 	<p>The Corporation’s response. The Corporation agrees with the recommendation, fully appreciating the need to align its workforce with the achievement of its strategic objectives. To ensure all risks are addressed, the Corporation will, during its annual corporate strategic planning exercise, identify immediate and future needs with respect to human resources and establish tactics to address these needs. The results of this exercise will contribute to the Human Resources plan and be integrated into the business plan.</p> <p>The Corporation will continue its work on the development and maintenance of a comprehensive succession plan. With the recent implementation of the revised performance management process, it is anticipated that annual adjustments and improvements will be made to the succession plan to ensure it meets all requirements. The Corporation agrees that a performance management system is critical to the operations of the Corporation. At the time of the audit, the Corporation had reviewed and revised its existing performance management system. The revised system, initiated in October 2008, takes into account the alignment of performance objectives to the Corporation’s strategic priorities, assesses leadership competencies, and identifies development requirements and career objectives of staff. The system will include monitoring of the implementation of the performance management system and also ensure the mid-year review of all management positions.</p> <p>Recognizing the importance of strong conflict of interest and disclosure policies for management, employees, and the members of the Board of Trustees, the Corporation will ensure that a system for regular awareness and follow-up is implemented.</p>

Recommendation	Response
Corporate governance	
<p>52. The Board of Trustees of the Canada Science and Technology Museum Corporation should</p> <ul style="list-style-type: none"> • clearly define its information needs and ensure this information is provided in a timely manner to enable it to play its oversight role effectively; and • request options for the protection of the collection. (35–51) 	<p>The Board of Trustees’ response. The Board of Trustees agrees with the recommendation, as it acknowledges the need for accurate, timely information to effectively carry out its responsibilities. The trustees will identify their information needs and will continue to monitor the Corporation’s effort to provide pertinent and timely information to the Board members. In light of the continued growth of the collection and degree of movement toward the realization of a new facility, the Board of Trustees will ensure that the Corporation continues to review options as they become apparent and present all findings to the Board.</p>
Knowledge sharing	
<p>74. The Canada Science and Technology Museum Corporation should develop a corporate-wide marketing plan to provide overall strategies for the Corporation that defines how it intends to reach Canadians across the country, identifying target audiences, and defining communication strategies to reach these audiences. (65–73)</p>	<p>The Corporation’s response. The Corporation agrees with the recommendation and has undertaken extensive market segmentation studies specifically designed to develop a profile of distinct target audiences for its three operating museums. The segmentation results served to refine the Corporation’s insights into those markets it could best serve given the resources available. The market segmentation process has guided the Corporation’s museums in their approach to the local marketplace. Next steps include the development of a comprehensive approach to marketing the Corporation and its three museums nationally.</p>
Strategic and operational planning	
<p>83. The Canada Science and Technology Museum Corporation should</p> <ul style="list-style-type: none"> • ensure consistency of operational plans across the Corporation, including consistency between operational plans and strategic framework objectives and in terms of their level of detail; and • set clear measurable targets in its operational plans. (75–82) 	<p>The Corporation’s response. The Corporation agrees with the recommendation and will reinstate its training program on operational planning with increased emphasis on the identification of measurable targets. Operational plans will be monitored and reviewed to ensure consistency between the operational plans and the strategic framework and to ensure that measurable targets are set.</p>

Recommendation	Response
<p>Environmental management</p> <p>95. The Canada Science and Technology Museum Corporation should formalize existing environmental procedures and practices, and establish clear accountabilities. (89–94)</p>	<p>The Corporation’s response. The Corporation agrees with the recommendation and will undertake a review of its procedures, develop proper documentation, and officially assign responsibility for environmental management and oversight.</p>