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Audit of the Management Control Framework (MCF)  
Spectrum Telecommunication Program (S/TP)

**Final Report**

**Audit and Evaluation Branch**

**November 2005**

**Tabled and approved by DAEC  
on April 13, 2006**

**Canada**

## **1.0 Executive Summary**

### **1.1 Introduction**

The Spectrum/Telecom Program (S/TP) in the Spectrum, Information Technology and Telecommunications Sector (SITT) is one of Industry Canada's Marketplace Service Organizations (MSO). The S/TP uses its policy and regulatory rule-making powers, and marketplace and industry sectoral development services to:

- ensure that Canadians have access to a world class telecommunications and information infrastructure to participate in the networked economy;
- promote the international competitiveness of Canadian information technologies and telecommunications industries;
- ensure effective and efficient use of the radio frequency spectrum as a strategic natural resource; and,
- analyse requirements and propose measures to enhance the cybersecurity of Canada's telecom and information infrastructure.

Three of the sector's branches: Radiocommunication and Broadcasting Regulatory Branch (DGRB), Spectrum Engineering Branch (DGSE) and Telecommunications Policy Branch share responsibility for management of the S/TP with the regional and district spectrum offices of the Operations Sector.

### **1.2 Audit Objectives**

The objective of the audit was to assess whether the Spectrum Telecommunications Program has an effective management control framework. More specifically, the audit involved:

- conducting an assessment of the effectiveness of the management control framework in place at the Spectrum Telecommunications Program; and
- identifying key residual risks to the objectives of the Spectrum Telecommunications Program, stemming from weaknesses in the management control framework.

The audit findings were then mapped against the Treasury Board Secretariat *Management Accountability Framework (MAF)*.

### **1.3 Audit Scope**

The audit covered the management processes at the Spectrum Telecommunications Program at the time of the audit, i.e., August – November 2005. The audit covered the three branches within SITT that encompass the Spectrum Telecommunications Program:

- Radiocommunications and Broadcasting Regulations;
- Telecommunications Policy; and
- Spectrum Engineering.

### **1.4 Overall Assessment**

Overall, the auditors found that the S/TP Management Control Framework (MCF) (organizational elements including its resources, systems, processes, culture, structure and tasks that support people in the achievement of the organizational objectives) is adequate and effective. The MCF provides reasonable assurance that the organization is well positioned to manage risk and achieve stated objectives.

### **1.5 Main Findings, Conclusions and Recommendations**

All elements of the Management Accountability Framework (MAF) are being addressed through activities initiated at the Departmental, Sector, Program, Branch and Directorate levels. There is a general sense of understanding and adoption of the MAF with some initiatives newly implemented and others under review as part of a continuous improvement and transformation process.

The MAF consists of ten elements:

- Governance & Strategic Direction;
- Public Service Values;
- Results and Performance;
- Policy and Programs;
- People;
- Citizen Focused Services;
- Risk Management;
- Stewardship;
- Accountability; and
- Learning, Innovation and Change management.

#### **1.5.1 Governance & Strategic Direction**

S/TP has a corporate management framework aligned to strategic outcomes, results-focused corporate priorities, a strategic resource allocation/reallocation process based on performance, an integrated agenda for management excellence and a cyclical scanning of its environment (domestic and international factors, including client satisfaction and relationships).

*Conclusion*

*The essential conditions of governance and strategic direction are in place to provide effective strategic planning and support to the Minister and Parliament, as well as for the delivery of results.*

**1.5.2 Public Service Values**

S/TP senior managers continually reinforce the importance of values and ethics in the delivery of services and products. While S/TP has not developed a unique values and ethics program, the organization does operate in alignment with ethics and values policies of both the Government of Canada and Industry Canada.

*Conclusion*

*The ethics and values policies that S/TP relies on reflect those used in many government departments and agencies. The adequacy or effectiveness of ethics and values activities, in an S/TP context, has not been evaluated.*

*Recommendation*

*The ADM, Spectrum, Information Technology and Telecommunications Sector, should ensure that an evaluation of the adequacy of the ethics and values program of S/TP is undertaken and, if necessary, a unique S/TP Values and Ethics Program should be developed and implemented.*

**1.5.3 Results and Performance**

Key Results are reported against the Strategic Outcomes and key partners for success are identified. There are linkages to government wide themes and management methodologies such as Results for Canadians and the Management Accountability Framework. Resource allocation and utilization are reported against the identified strategic outcomes. There is evidence that the Program participates fully in Industry Canada and Government of Canada initiatives. The Program has an ongoing initiative to improve performance information definitions, collection and use.

*Conclusion*

*The Program has commenced to establish a results and performance regime that will ensure that relevant information on results is gathered and used to make decisions. Public reporting is balanced, transparent, and easy to understand.*

*Recommendation*

*The ADM, Spectrum, Information Technology and Telecommunications Sector should ensure that work begun to strengthen performance measurement, monitoring and reporting is continued.*

#### **1.5.4 Policy and Programs**

S/TP's membership and support of Canadian and International committees and organizations, as well as bilateral and multilateral negotiations with industry representatives are used as mechanisms to consult, communicate, review and challenge policies and legislative options. Ongoing monitoring and analysis of the public and private sector radio and telecommunication environment supports an ability to provide timely advice to the Minister. There is a recruitment/development succession plan for the policy community associated with the Spectrum Telecommunication Program.

##### ***Conclusion***

***S/TP has a sustainable research and analytical capacity to provide a high level of quality assurance in the areas of developing policy options, designing programs, and providing advice to Ministers.***

#### **1.5.5 People**

Human Resource issues are of critical importance to the S/T Program. The SITT Integrated Risk Management (IRM) Implementation Plan Timeline (January 2005) identified human resource capacity as one of the highest risks for the Program. Work levels and the pace of change have increased dramatically while available resources have remained level or have been reduced over the past few years. Many of the senior and highly specialized positions have incumbents who are near or at retirement age. There are special projects such as the Spectrum Informatics Review and Redesign (SIRR) and the Telecommunication Policy Review Panel that have applied additional work load pressures on key resources in all three Branches. A workgroup of Directors has been formed to assist / support the implementation of Human Resource Modernization. This group will review current HR management practices and strategies and make recommendations for improvements.

##### ***Conclusion***

***S/TP managers demonstrate a commitment to maintaining a positive work environment and a focus on building capacity and leadership to assure future success.***

#### **1.5.6 Citizen Focused Services**

As indicated in 1.3.4 Policy and Programs, S/TP uses a variety of methodologies to ensure that policies and programs are developed in cooperation and partnership with S/TP clients and that Canadian interests are appropriately considered in international and global negotiations and discussions.

##### ***Conclusion***

***S/TP has clearly addressed and is committed to all aspects of providing client-focused services.***

### **1.5.7 Risk Management**

A sector-level Risk Profile and an Integrated Risk Management (IRM) Action Plan, consistent with Treasury Board Secretariat expectations, have been developed. The Risk Profile establishes SITT's strategic organizational context, key risk areas (KRAs), and potential risk events that could evolve from the organization's mandate, as well as the internal and external environment. A sound understanding of the operational environment and risk vulnerabilities establishes a basis for identifying areas where specific risks should be assessed further, in consultation with key stakeholders.

The SITT IRM Implementation Plan Timeline, January 2005, outlines desired outcomes, existing and planned mitigation measures, timelines, lead organizations and participating branches and the progress/status for each key risk area. Program funding levels for S/TP, human resource capacities and coordination of telecommunication – Emergency Response were identified as high risk (probability and impact) areas. Mitigation strategies are being implemented and the S/TP Branches are addressing the major risk areas identified.

#### ***Conclusion***

***S/TP has begun to establish the context and practices for managing organizational and strategic risks proactively.***

#### ***Recommendation***

***The ADM, Spectrum, Information Technology and Telecommunications Sector should ensure that risk management continues as defined in the SITT IRM Implementation Plan and that mitigation strategies for high risk areas continue to be closely managed.***

### **1.5.8 Stewardship**

Financial management practices are standardized throughout the Program. Common sets of spreadsheets are used to monitor HR and financial resource information. Sector reporting requirements are defined through a schedule. Financial transactions are reconciled to the departmental financial system. Sector and Branch committees are used to communicate and coordinate financial, human resource and administrative policies and procedures. Resources are allocated and monitored against strategic priorities.

IT systems are integrated to provide end-to-end support to business activities. The legacy systems are nearly 25 years old. The Spectrum Informatics Review and Redesign (SIRR) project has been initiated to develop a sustainable new IT environment better able to meet current and future business requirements and will replace many of the legacy systems

Critical business activities have been identified and are covered by a fully operational, maintained and tested Business Continuity Plan (BCP) for SITT. The S/TP activities are part of a larger Government of Canada Emergency Preparedness Plan. Testing of the BCP has occurred during actual situations and a lessons learned activity is performed

after each incident. There is no up-to-date Disaster Recovery Plan (DRP) for related legacy systems.

### ***Conclusion***

***The S/TP control regime is integrated and effective and its underlying principles are clear to all staff. However, there is a need to ensure that the Disaster Recovery Plan is current and integrated with the tested Business Continuity Plan.***

### ***Recommendation***

***The ADM, Spectrum, Information Technology and Telecommunications Sector should ensure that priority is given to the maintenance of fully tested Business Continuity and Disaster Recovery Plans, and that such plans are kept up-to-date over time.***

## **1.5.9 Accountability**

Business plans, priority lists, meeting minutes and risk documents define expected outcomes and assign organizational and, in some cases, individual accountabilities. Delegations of authority are established following the Industry Canada directives and are controlled using temporary assignment forms.

A network of committees with clear terms of references and appropriate membership has been established. The committee structure oversees and coordinates performance for S/TP Branches and Regional Offices who deliver parts of the Program.

### ***Conclusion***

***There is clear accountability for results and delegations are appropriate to capabilities.***

## **1.5.10 Learning, Innovation and Change Management**

The commitment of Spectrum and Telecommunication managers to learning, innovation, and change management is evident in the number and types of ongoing and special projects at the time of the audit. Organizational learning and knowledge management practices are being improved through the establishment of personal learning plans, the implementation of an electronic information management system, and the implementation of the Human Resources Modernization initiative. Transformation and continuous improvement projects include the renewal of the informatics and business support systems (SIRR), the use of rotational and acting assignments to facilitate the passage of corporate knowledge, and the ongoing analysis and review of performance indicators and performance measurement practices. The Certification and Engineering Bureau of Spectrum Engineering Branch is ISO9000 certified.

All managers interviewed were receptive to the audit and keen to have areas requiring attention identified.

*Conclusion*

*S/TP manages in an environment of continuous innovation and transformation.*



## **2.0 Introduction**

### **2.1 Background**

The Spectrum/Telecom Program (S/TP) in the Spectrum, Information Technology and Telecommunications Sector (SITT) is one of Industry Canada's Marketplace Service Organizations (MSO). The S/TP uses its policy and regulatory rule-making powers, and marketplace and industry sectoral development services to:

- ensure that Canadians have access to a world class telecommunications and information infrastructure to participate in the networked economy;
- promote the international competitiveness of Canadian information technologies and telecommunications industries;
- ensure effective and efficient use of the radio frequency spectrum as a strategic natural resource; and,
- analyse requirements and propose measures to enhance the cybersecurity of Canada's telecom and information infrastructure.

Three of the sector's branches share responsibility for management of the S/TP with the regional and district spectrum offices of the Operations Sector.

**Radiocommunication and Broadcasting Regulatory Branch (DGRB)** develops spectrum management regulatory and operational policies and procedures. The Branch plans, authorizes and manages radio frequency spectrum, certifies broadcasting facilities and takes appropriate action to ensure compliance with the rules and conditions applicable to the industry.

**Spectrum Engineering Branch (DGSE)** negotiates internationally for spectrum allocations, orbital slots and frequencies, carries out technical analysis and evaluation on network vulnerability to malicious actions and develops business informatics tools for spectrum management.

**Telecommunications Policy Branch (DGTP)** develops policies, regulations and legislation for the Canadian telecommunications services industry and provides analysis and advice on the evolution of the competitive marketplace for telecommunication services.

**Regional & District Offices** offer a full range of services and programs to the public pertaining to spectrum management and telecommunications, information highway, information and communication technologies, and e-commerce, including:

- Radiocommunication Licensing and Certification;
- Broadcasting Procedures, Rules, Standards;
- Radiocommunication Interference;

- Enforcement of Radiocommunication Regulations;
- Certification of Low Power FM Broadcast Stations;
- Radio frequencies Management;
- Industrial Development and International Commerce;
- E-commerce marketing; and
- Prime contact for local inquiries on Industry Canada services.

The mandate of the Spectrum Telecommunication Program is to ensure that Canada has a policy and regulatory framework to govern its spectrum and telecommunication industries and the digital economy.

The program's regulatory basis is firmly rooted in legislation:

- *Radiocommunication Act*
- *Telecommunication Act and*
- *Industry Canada Act.*

## **2.2 Audit Objectives**

The objective of the audit was to assess whether the Spectrum Telecommunications Program has an effective management control framework. More specifically, the audit involved:

- conducting an assessment of the effectiveness of the management control framework in place at the Spectrum Telecommunications Program; and
- identifying key residual risks to the objectives of the Spectrum Telecommunications Program, stemming from weaknesses in the management control framework.

## **2.3 Audit Scope**

The audit covered the management processes at the Spectrum Telecommunications Program at the time of the audit, i.e., August – November 2005. The audit covered the three branches within SITT that encompass the Spectrum Telecommunications Program:

- Radiocommunications and Broadcasting Regulations;
- Telecommunications Policy; and
- Spectrum Engineering.

## **2.4 Audit Approach**

The audit was conducted in three phases in accordance with both the Treasury Board Policy on Internal Audit and the Institute of Internal Auditors *Standards for the Professional Practice of Internal Auditing*.

## **2.5 Audit Criteria**

Detailed audit criteria used during this audit were drawn from authoritative sources and internationally recognized control models. The audit findings were then mapped against the Treasury Board Secretariat *Management Accountability Framework (MAF)*. See Appendix A: Audit Approach and Methodology.

## **2.6 Appreciation**

The audit team wishes to express its appreciation to the S/TP managers and staff for their cooperation during the conduct of this audit.

### **3.0 Main Findings, Conclusions and Recommendations**

All elements of the Management Accountability Framework (MAF) are being addressed through activities initiated at the Departmental, Sector, Program, Branch and Directorate levels. There is a general sense of understanding and adoption of the MAF with some initiatives newly implemented and others under review as part of a continuous improvement and transformation process.

The MAF consists of ten elements:

- Governance & Strategic Direction;
- Public Service Values;
- Results and Performance;
- Policy and Programs;
- People;
- Citizen Focused Services;
- Risk Management;
- Stewardship;
- Accountability; and
- Learning, Innovation and Change management.

#### **3.1 Governance & Strategic Direction**

S/TP has a corporate management framework aligned to strategic outcomes, results-focused corporate priorities, a strategic resource allocation/reallocation process based on performance, an integrated agenda for management excellence and a cyclical scanning of its environment (domestic and international factors, including client satisfaction and relationships).

The Industry Canada Performance Report for the period ending March 31, 2005 displays performance accomplishments and resources utilized against identified strategic outcomes. The same themes are carried forward into the Industry Canada Main Estimates for 2005 – 2006.

The SITT Baseline Data Collection Exercise 2004 – 2005 links strategic outcomes with performance indicators, 2004-2005 baseline data, Branches, responsible managers and reporting frequencies - a start “towards strengthening internal coherence, corporate discipline and alignment of outcomes”.

The Spectrum Management Operations Directorate, Radiocommunications and Broadcasting Branch, has a Business Plan that links the Industry Canada priorities with SITT priorities, then places the Spectrum Telecom Program within this context and identifies the priorities and activities of the Directorate - an example of using the corporate management framework for priority setting, reallocation and alignment of resources and day-to-day management.

### ***Conclusion***

***The essential conditions of governance and strategic direction are in place to provide effective strategic planning and support to the Minister and Parliament, as well as for the delivery of results.***

### **3.2 Public Service Values**

S/TP senior managers continually reinforce the importance of values and ethics in the delivery of services and products. While S/TP has not developed a unique values and ethics program, the organization does operate in alignment with ethics and values policies of both the Government of Canada and Industry Canada.

A customized values and ethics statement was posted in the S/TP area, however, there were no indications from the interviews conducted that ethical guidelines had been discussed with staff. A slide show presentation outlining a proposed governance model for the coordination of Program activities in the regions referred to values and ethics “Success Factors” of trust, openness and honesty, and sharing of information. A half day course was provided on the new Code of Conduct for the Government of Canada and some staff interviewed were aware that harassment sensitivity training had been given.

Increasingly there is a reliance on ethics and values rather than direct controls to ensure compliance with policies, procedures and legislation. Compliance with internal controls is dependent not only on the clarity with which control responsibilities are documented and communicated, but also on the willingness of personnel at all levels of the organization to carry out control processes. There is therefore a need for every organization to optimize its overall control framework by ensuring that employees: are aware of their responsibilities and accountabilities, recognize potential and real conflict of interest situations and have a mechanism to assist them when there is a dilemma of what they should be doing. There were no indications that a staff assessment of organizational performance against public service values and ethics had been done.

### ***Conclusion***

***The ethics and values policies that S/TP relies on reflect those used in many government departments and agencies. The adequacy or effectiveness of ethics and values activities, in an S/TP context, has not been evaluated.***

### ***Recommendation***

***The ADM, Spectrum, Information Technology and Telecommunications Sector, should ensure that an evaluation of the adequacy of the ethics and values program of S/TP is undertaken and, if necessary, a unique S/TP Values and Ethics Program should be developed and implemented.***

### **3.3 Results and Performance**

Key Results are reported against the Strategic Outcomes and key partners for success are identified. There are linkages to government wide themes and management methodologies such as Results for Canadians and the Management Accountability Framework. Resource allocation and utilization are reported against the identified strategic outcomes. There is evidence that the Program participates fully in Industry Canada and Government of Canada initiatives

The Program has an ongoing initiative to improve performance information definitions, collection and use. In May 2004, a Performance Management Working Group was tasked with “developing a performance measurement framework (PMF) that would address the following specific objectives:

- clearly link resources, activities and outputs to a sequence of outcomes;
- measure outcomes, support evaluation and enable continuous improvement;
- provide a reporting capability based on credible information, that would become our main tool in responding to corporate demands for information;
- permit the measurement of progress towards goals and the Department’s Strategic Objectives;
- facilitate the analysis of historical resource consumption and planning for the future; and
- form a sound governance structure, clarifying roles and responsibilities for the delivery of initiatives”.

A presentation dated June 2005 reviewed the consolidated PMF (draft) and identified the next steps as:

- continuing to identify and select performance indicators;
- recommend targets or benchmarks against which performance can be measured; and
- capture and analysis of the performance information.

The long-term activities included:

- Data collection tools – which ones? buy or build
- Data integrity – why? who? how?

- Marketing Strategy – how will the data be used? Not used?
- Implementation when? how?
- Reports – standardization flexibility.

### ***Conclusion***

***The Program has commenced to establish a results and performance regime that will ensure that relevant information on results is gathered and used to make decisions. Public reporting is balanced, transparent, and easy to understand.***

### ***Recommendation***

***The ADM, Spectrum, Information Technology and Telecommunications Sector should ensure that work begun to strengthen performance measurement, monitoring and reporting is continued.***

## **3.4 Policy and Programs**

S/TP's membership and support of Canadian and International committees and organizations, as well as bilateral and multilateral negotiations with industry representatives are used as mechanisms to consult, communicate, review and challenge policies and legislative options. Ongoing monitoring and analysis of the public and private sector radio and telecommunication environment supports an ability to provide timely advice to the Minister. There is a recruitment/development succession plan for the policy community associated with the Spectrum Telecommunication Program.

The Spectrum Telecommunication Program uses such organizations as: The Radio Advisory Board of Canada, the Information and Communications Technology Standards Advisory Council of Canada and the Industry Canada Terminal Attachment Program Advisory Committee to ensure client (citizen) engagement. The Telecommunication Policy Review Panel, established by the Minister of Industry April 25, 2005 and supported by the Telecommunication Policy Branch, has been tasked to review Canada's telecommunication framework and make recommendations on how to move Canada towards a modern framework which benefits industry and consumers – "make it a model of 21<sup>st</sup> century regulation".

### ***Conclusion***

***S/TP has a sustainable research and analytical capacity to provide a high level of quality assurance in the areas of developing policy options, designing programs, and providing advice to Ministers.***

### **3.5 People**

Human Resource issues are of critical importance to the S/T Program. The SITT Integrated Risk Management (IRM) Implementation Plan Timeline (January 2005) identified human resource capacity as one of the highest risks for the Program. Work levels and the pace of change have increased dramatically while available resources have remained level or have been reduced over the past few years. Many of the senior and highly specialized positions have incumbents who are near or at retirement age. There are special projects such as the Spectrum Informatics Review and Redesign (SIRR) and the Telecommunication Policy Review Panel that have applied increased workload pressures on key resources in all three Branches. A workgroup of Directors has been formed to assist / support the implementation of Human Resource Modernization. This group will review current HR management practices and strategies and make recommendations for improvements.

The management of the S/T Program has been aware of the HR issues for some time and has worked to define the problems and develop and implement mitigation strategies. A gap analysis, a regional environmental scan and a high level succession plan have been undertaken. Rotational assignments and shadowing have been used to address the development of staff and to promote corporate learning and knowledge retention. Competency profiles and generic job descriptions have been established for some common job types.

The Spectrum/Telecom Training Committee coordinates the national training program for all S/T employees and provides advice on the definition of requirements for individual training and the implementation of national training programs. Personal Learning Plans (PLP) were introduced in 2004. Linked to the performance review process, the PLPs address the current and future professional development and training needs of each employee. Training and conference attendance are centrally and closely managed. A new employee orientation program was prepared by the Spectrum Management Operations Directorate, Radiocommunication and Broadcasting Branch to introduce new staff to the spectrum telecommunication program.

#### ***Conclusion***

***S/TP managers demonstrate a commitment to maintaining a positive work environment and a focus on building capacity and leadership to assure future success.***

### **3.6 Citizen Focused Services**

As indicated in 3.4 Policy and Programs, S/TP uses a variety of methodologies to ensure that policies and programs are developed in cooperation and partnership with S/TP clients and that Canadian interests are appropriately considered in international and global negotiations and discussions.

Interviews identified that there is ongoing communication, coordination and cooperation with Canadian and International groups and agencies. This is a normal and necessary



part of the business activity. A Client Satisfaction Survey of Radio Station Licensing Clients was undertaken in April 2005.

### ***Conclusion***

***S/TP has clearly addressed and is committed to all aspects of providing client-focused services.***

### **3.7 Risk Management**

A sector-level Risk Profile and an Integrated Risk Management (IRM) Action Plan, consistent with Treasury Board Secretariat expectations, have been developed. The Risk Profile establishes SITT's strategic organizational context, key risk areas (KRAs), and potential risk events that could evolve from the organization's mandate, as well as the internal and external environment. A sound understanding of the operational environment and risk vulnerabilities establishes a basis for identifying areas where specific risks should be assessed further, in consultation with key stakeholders.

Industry Canada (IC) has demonstrated commitment to Integrated Risk Management (IRM), by placing a priority on its implementation within the departmental Modern Comptrollership (MC) Action Plan. In line with the MC Action Plan, the SITT Sector has adopted a more organization-wide and systematic risk management approach that will be linked with its strategic planning activities.

Established in March 2004, the development of a sector-level Risk Profile and IRM Action Plan, which are consistent with TBS expectations, is a crucial first step in enhancing existing risk management capabilities and embedding IRM strategies into operational planning.

This Risk Profile establishes SITT's strategic organizational context, Key Risk Areas (KRAs), sources and potential risk events that could evolve from the organization's mandate, as well as the internal and external environment. A sound understanding of the operational environment and risk vulnerabilities establishes a basis for identifying areas where specific risks should be assessed further, in consultation with key stakeholders. The Profile provides valuable input into the development of focused IRM capabilities development strategies.

The SITT Risk Profile Integrated Risk Management Action Plan, which outlines what activities are to take place to implement risk management practices and activities, was developed in October 2004. The underlying purpose of the SITT IRM Action Plan is to advance the incorporation and implementation of IRM strategies into decision-making and operations at all levels of the organization through clearly identifying:

- key required actions to implement the plan;
- timelines to implement the action items;
- office(s) of Primary Interest (OPI);

- actions to Date; and
- upcoming Activities.

The SITT IRM Implementation Plan Timeline, January 2005, outlines desired outcomes, existing and planned mitigation measures, timelines, lead organizations and participating branches and progress/status of each key risk area. Program Funding Levels for S/TP, Human Resource Capacities and Coordination of Telecommunication – Emergency Response were identified as high risk (probability and impact) areas. Mitigation strategies are being implemented and the S/TP Branches are addressing the major risk areas identified.

There is evidence of risk considerations in strategic planning and action has taken place to mitigate the risks in two key areas – funding, at the operating and project level, and human resource succession planning to mitigate the risk associated with an aging workforce. Program risks associated are known and managed within the business operational environment.

### ***Conclusion***

***S/TP has begun to establish the context and practices for managing organizational and strategic risks proactively.***

### ***Recommendation***

***The ADM, Spectrum, Information Technology and Telecommunications Sector should ensure that risk management continues as defined in the SITT IRM Implementation Plan and that mitigation strategies for high risk areas continue to be closely managed.***

## **3.8 Stewardship**

Financial management practices are standardized throughout the Program. Common sets of spreadsheets are used to monitor HR and financial resource information. Sector reporting requirements are defined through a schedule. Financial transactions are reconciled to the departmental financial system. Sector and Branch committees are used to communicate and coordinate financial and human resource and administrative policies and procedures. Resources are allocated and monitored against strategic priorities.

Information Technology (IT) systems, which are up to 25 years old, are integrated to provide end-to-end support to business activities. The Spectrum Informatics Review and Redesign (SIRR) project has been initiated to develop a sustainable new IT environment better able to meet current and future business requirements and will replace many of the legacy systems. The benefits of the SIRR project will be realized in a phased approach over the next one to two years.

As part of the SIRR contract, a Spectrum management IT Process Improvements Review was completed in March 2005. It reported that structured processes in application maintenance and support were employed but there was limited formality and

inconsistencies between project teams. An action plan to address the review recommendations was developed.

Audit interviews indicate that similar observations could equally apply to the management of IT operations. For example, the Disaster Recovery Plan (DRP) is not up-to-date and a system administration manual is in the process of being documented.

Critical business activities have been identified and are covered by a fully operational, maintained and tested Business Continuity Plan (BCP) for SITT. The S/TP activities are part of a larger Government of Canada Emergency Preparedness Plan. Testing of the BCP has occurred during actual situations and a lessons learned activity is performed after each incident. As indicated above, there is no up-to-date disaster recovery plan for related legacy systems.

### ***Conclusion***

***The S/TP control regime is integrated and effective, and its underlying principles are clear to all staff. However, there is a need to ensure that the Disaster Recovery Plan is current and integrated with the tested Business Continuity Plan.***

### ***Recommendation***

***The ADM, Spectrum, Information Technology and Telecommunications Sector should ensure that priority is given to the maintenance of fully tested Business Continuity and Disaster Recovery Plans, and that such plans are kept up-to-date over time.***

## **3.9 Accountability**

Business plans, priority lists, meeting minutes, and risk documents define expected outcomes and assign organizational, and in some cases, individual accountabilities. Delegations of authority are established following the Industry Canada directives and are controlled using temporary assignment forms.

A network of committees with clear terms of references and appropriate membership has been established. The committee structure oversees and coordinates performance for S/TP Branches and Regional Offices who deliver parts of the Program. Coordination and integration of committee work is accomplished through overlapping memberships, as well as regular cross committee status reports and, in some cases, a coordination committee of chairpersons.

Regional operations coordination is accomplished through organizational interactions between Assistant Deputy Ministers or Directors General and through working level coordination committees such as the Spectrum Telecom Operations Committee and the Professional Development / Training Committee. Evidence indicates that there is an ongoing, proactive, structured and cooperative partnership with Regional offices / staff. A presentation deck outlines the regional governance model and depicts the intent to move from a strictly vertical program line governance model to a more horizontal and

vertical model with increased cooperation and ability to better monitor progress against the global SITT Agenda.

The IT governance and accountability structure is well defined. Committees oversee and coordinate ongoing operations, the continued support of the legacy systems and the new SIRR project.

***Conclusion***

***There are clear accountabilities for results and delegations are appropriate to capabilities.***

**3.10 Learning, Innovation and Change Management**

The commitment of Spectrum and Telecommunication managers to learning, innovation and change management is evident in the number and types of ongoing and special projects at the time of the audit. Organizational learning and knowledge management practices are being improved through the establishment of personal learning plans, the implementation of an electronic information management system, and the implementation of the Human Resources Modernization initiative. Transformation and continuous improvement initiatives include the SIRR Project, the use of rotational and acting assignments to facilitate the passage of corporate knowledge, and the ongoing analysis and review of performance indicators and performance measurement practices. The Certification and Engineering Bureau of Spectrum Engineering Branch is ISO9000 certified.

All managers interviewed were receptive to the audit and keen to have areas where improvement could be made brought to their attention.

***Conclusion***

***S/TP manages in an environment of continuous innovation and transformation.***

## APPENDIX A

### Audit Approach and Methodology

#### Approach

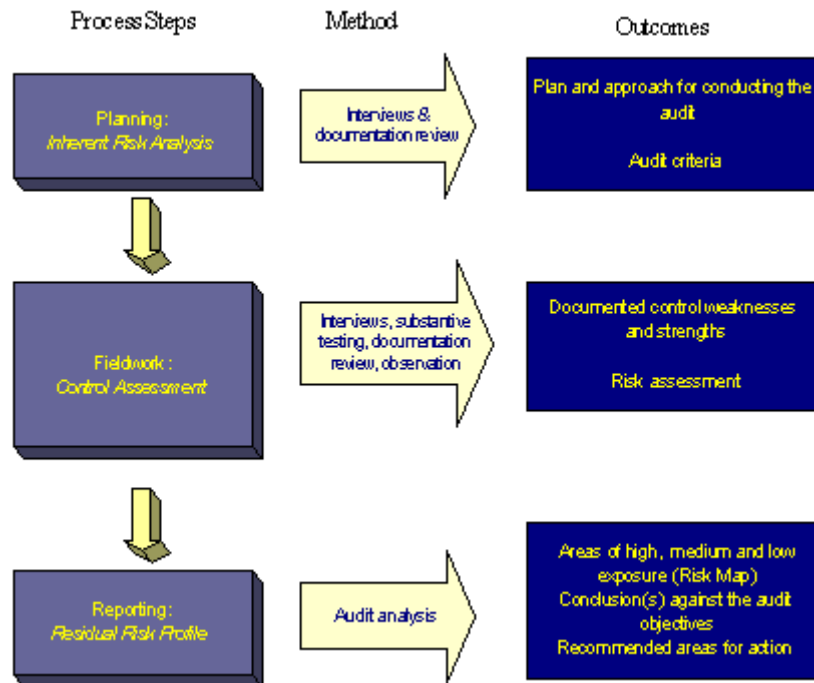
The audit was conducted using a standard audit process, based on professional standards that are in compliance with the IIA's Standards for the Professional Practice of Internal Auditing.

The detailed audit criteria were customized for the assignment and were drawn from authoritative sources including, but not limited to internationally recognized control models. Please see the section on Methodology for more detail on the control model.

The approach was developed from a synthesis of experience conducting management control framework audits. The audit was conducted in three phases:

- Planning
- Fieldwork
- Reporting

The process used is illustrated in the following figure and is described below.



During the Planning phase, documentation (business plan, policies, procedures, and other relevant sources of information) are gathered and reviewed and senior management is interviewed. During this phase the scope of the audit is verified and key stakeholders,

interviewees and project potential constraints are identified. The Planning phase culminates in the development of a detailed audit work plan that summarizes audit criteria, planned audit procedures, approach and timing of the fieldwork phase of the audit.

During the Fieldwork phase, the audit work plan is executed systematically. Interviews and workshops are conducted with departmental management and relevant stakeholders, and documentation reviewed. In addition, detailed testing, including inspection, observation, enquiry, confirmation, computation and analysis is performed in accordance with the level of assurance required. Findings are analyzed and conclusions, impacts and recommendations are developed and discussed with the Project Manager and departmental management. The analysis, conclusions and recommendations are always supported by sufficient, quantifiable and/or persuasive evidence, all of which are organized into comprehensive working papers, for the review and retention of the client.

During the Reporting phase, a report is prepared that provide conclusions on the adequacy and effectiveness of controls as well as detailed results of the control assessment. In all cases, reports strive to identify both strengths and opportunities for improvement. Constructive solutions to identified weaknesses are recommended and linked to the risks.

## **Methodology**

The control model used to structure and guide risk-based audits is based upon the Canadian Institute of Chartered Accountants’ (CICA) Criteria of Control (CoCo) model and provides a way of understanding the important elements of control, including the important relationships between them. These elements of control are defined by seventeen (17) control criteria, as described below in Figure 2:

According to the CICA, control comprises those elements of an organization (including its resources, systems, processes, culture, structure and tasks) that, taken together, support people in the achievement of the organizational objectives. Control is effective to the extent that it provides reasonable assurance that the organization will manage its risk and therefore achieve its objectives reliably.

<b>Control Framework Element</b>	<b>Categories of Audit Criteria</b>
Planning and Direction: <i>“Knowing What to Do”</i>	Accountability Framework
	Policy Framework
	Planning, Priority-Setting and Resource Allocation
Commitment: <i>“Wanting to Do It”</i>	Corporate Values and Ethics
	Information and Communication
	Work Environment and Employee Recognition
Capability: <i>“Being Able to Do It”</i>	Training and Capacity-Building
	Physical Safeguards
	Knowledge Management
	Business Continuity

Control Framework Element	Categories of Audit Criteria
	Operational Controls
	Financial Integrity Controls
	Information Technology Controls
	Environmental Scanning
Monitoring and Learning: <i>“Doing it Better”</i>	Performance Management and Continuous Improvement
	Managerial Oversight
	Third Party Oversight

**Figure 2:**

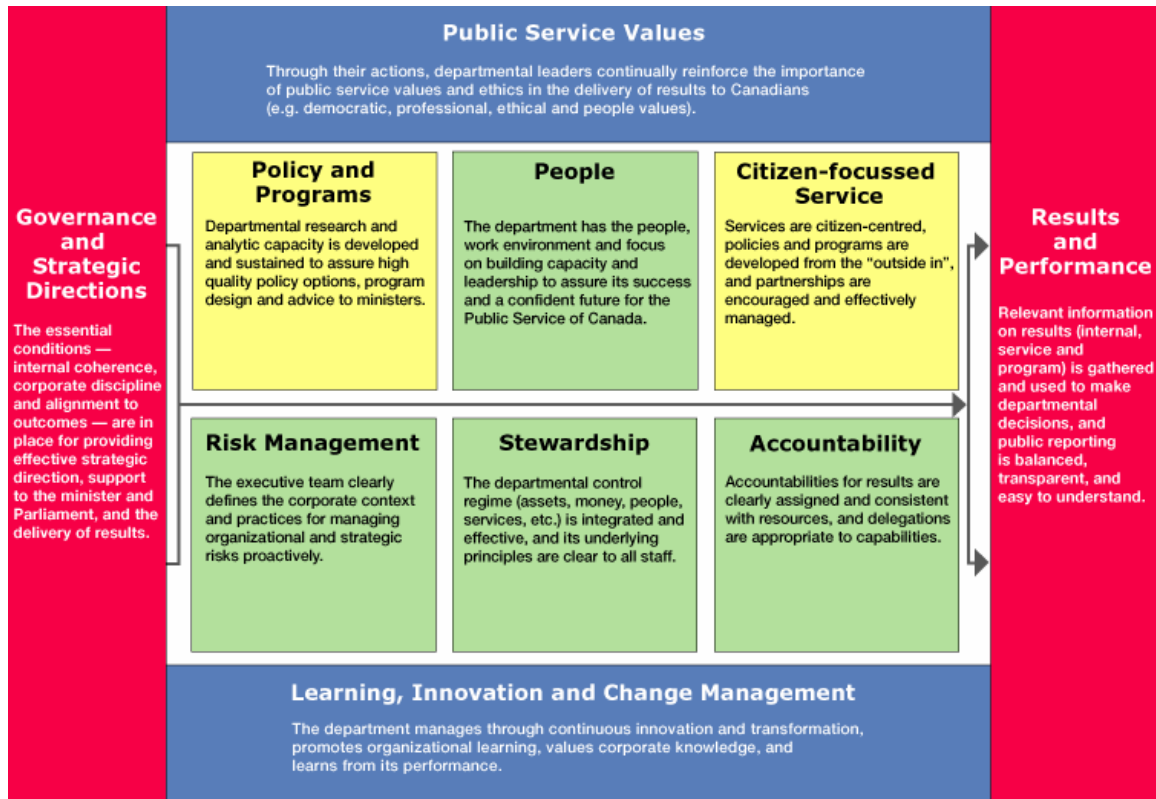
### **Treasury Board Secretariat Management Accountability Framework (MAF)**

The Treasury Board of Canada Secretariat (TBS) Management Accountability Framework (MAF) was developed to provide deputy heads and all public service managers with a list of management expectations that reflect the different elements of current management responsibilities.

The Framework, which focuses on management results rather than required capabilities, reflects the many initiatives currently underway and brings together the principal elements of frameworks like those on Modern Comptrollership, Human Resources Modernization, Service Improvement and Government On-Line.

Below is a graphical presentation of the ten elements of the MAF.

**Audit of the Management Control Framework (MCF)  
Spectrum/Telecommunication Program (S/TP)**





## **APPENDIX B**

### **Recommendations and Responses to the Audit of Spectrum (MCF)**

#### **Recommendation #1**

The ADM, Spectrum, Information Technologies and Telecommunications Sector, should ensure that an evaluation of the adequacy of the ethics and values program of S/TP is undertaken and, if necessary, a unique S/TP Values and Ethics Program should be developed and implemented.

#### **Response to Recommendation #1**

*We agree. The Spectrum/Telecommunications Directors General Committee will initiate this evaluation and consider the resulting recommendations.*

#### **Recommendation #2**

The ADM, Spectrum, Information Technologies and Telecommunications Sector, should ensure that work begun to strengthen performance measurement, monitoring and reporting is continued.

#### **Response to Recommendation #2**

*We agree. This work will continue and adjustments will be made to track the evolving nature of Modern Controllershship.*

#### **Recommendation #3**

The ADM, Spectrum, Information Technologies and Telecommunications Sector, should ensure that risk management continues as defined in the SITT IRM Implementation Plan and that mitigation strategies for high risk areas continue to be closely managed.

#### **Response to Recommendation #3**

*We agree. The SITT IRM Implementation Plan is an on-going and evergreen initiative which facilitates the sector's management of risk and ensures that mitigation strategies are in place for high risk areas.*

**Recommendation #4**

The ADM, Spectrum, Information Technologies and Telecommunications Sector, should ensure that priority is given to the maintenance of a fully tested Business Continuity and Disaster Recovery Plans, and that such plans are kept up-to-date over time.

**Response to Recommendation #4**

*We agree. The program's Business Continuity Plan is reviewed quarterly and updated as required to reflect any changes resulting from these reviews. The informatics component of that plan is updated weekly and posted on a secure server.*

*The Disaster Recovery Plan is currently under review and, should we decide to develop and implement, it will require substantial funding.*