

Final Report

STRATEGIC NATIONAL APPROACH TO FUNDING AND PARTICIPATION IN INTERNATIONAL STANDARDIZATION ACTIVITIES

Prepared for

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EXECUTIVE SUMMARY

Strategic National Approach to Funding and Participation in International Standardization Activities

The Standards Council of Canada (SCC) commissioned KPMG Consulting LP to undertake a study to provide research and recommendations for a strategic national approach for funding and participation in international standards-related activities. This *Executive Summary* sets out key findings and recommendations, all of which are discussed in detail in the accompanying, comprehensive study report.

This Executive Summary begins by outlining the study's objectives and the approach designed to meet these objectives. It continues by highlighting findings and recommendations that relate to decision-making processes and funding options for international participation in standards-related activities. Recommendations are based on results of a survey of participants in the National Standards System of Canada (NSS), interviews with stakeholders, a review of other research studies, and practices of standards organizations in some of Canada's trading partners.

1. Objectives and Approach

The objectives of this study were twofold:

- assess the pros and cons of the current processes by which official Canadian representation at international standardization forums is decided upon, and develop an approach to making these decisions for effective participation in international standardization work; and
- assess the current Canadian approaches to funding for international standardizing activities and develop recommendations for new or enhanced funding.

The expected outcomes from this project were:

- recommendations for a strategic decision-making model for international participation in standards activities; and
- recommendations for new approaches to funding international participation.

In order to prepare this report, KPMG undertook a number of key activities. First, preliminary consultations with key stakeholders and experts led to the identification of

some fundamental research questions. These questions guided the course of the study and informed the development of a survey questionnaire and an interview guide.

KPMG then surveyed key stakeholders and participants in the NSS on a range of issues related to the strengths and weaknesses of participation in international standards-related activities, priority-setting processes for international participation, and related funding mechanisms. KPMG also interviewed forty-seven stakeholders. These interviews provided an opportunity to discuss in more depth issues and options covered in the survey. KPMG also reviewed best practices models for decision-making, both from within and outside government, to provide insights for this study. Finally, KPMG undertook a benchmark of standards organizations in key Canadian trading partners, as a means to identify what the SCC can learn from other countries.

2. Decision Making: Findings and Recommendations

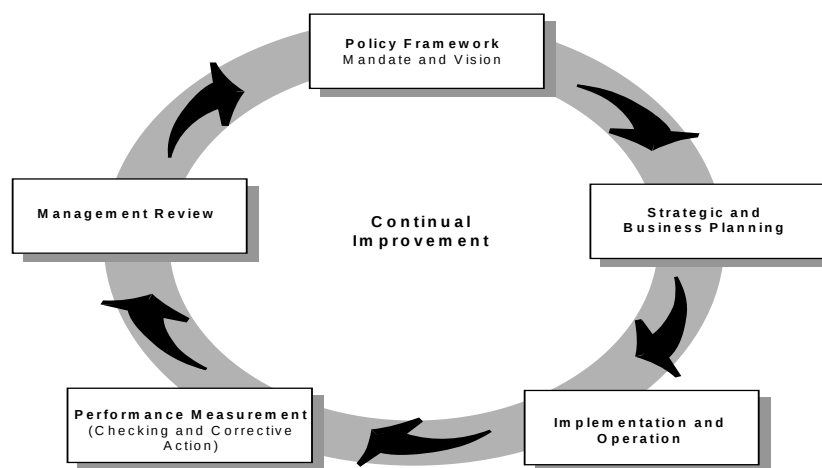
Maintain current committee structure of the NSS: This report recommends change, but only to the extent that change is undertaken while preserving the fundamental principles and structure of the current system. The Standards Council of Canada, and the National Standards System in general, relies on market mechanisms, standards development and conformity assessment organizations, and a network of volunteers and advisory and technical committees to ensure that the right decisions are made in the interests of Canada and Canadian citizens and organizations – including government and industry, and consumer and other public interest groups. This foundation of the Canadian system was not challenged in any serious way by any of the participants in the study. There is certainly a consensus among stakeholders on the fundamental principles and structure that underlie the NSS. Consequently, ***we recommend that the current committee structure and system of advisory and technical committees should be maintained.***

Decision-making model: Notwithstanding, there is an opportunity to improve the decision making model of the NSS without changing the fundamental structure of the system. One of this study's key findings is that there are gaps in the SCC's capacity to make decisions of a strategic nature, and in linking implementation and operational decisions with strategic directions. There is also a gap in performance measurement and review as a feedback mechanism to ensure that a continual improvement management system is in place.

In order to comment on these gaps it is important to put decision-making into context. KPMG evaluated SCC decision-making processes against a management system based on best practices. Exhibit ES-1 depicts the flow of a management system with an integrated decision-making process that provides a structured process for continual

improvement. There is an opportunity to make the NSS more clearly linked to such a decision-making process, to link it to a management system which explicitly encompasses strategic objectives, business and implementation planning, performance measurement and management reviews. By doing this, the system will have a more complete and comprehensive approach to setting priorities, allocating resources, and identifying the appropriate activities as linked to plans and priorities.

Exhibit ES-1: Management System Approach to Decision-Making



We recommend that Council adopt the continual improvement, decision-making model outlined above and presented in more detail in the comprehensive study report. This model will help link the activities of NSS participants to strategic priorities. It will provide a framework for decision-making at all levels of the NSS system – including providing a feedback mechanism for corrective actions and review based on performance. Subsequent recommendations are based on an expectation that Council will adopt such a model.

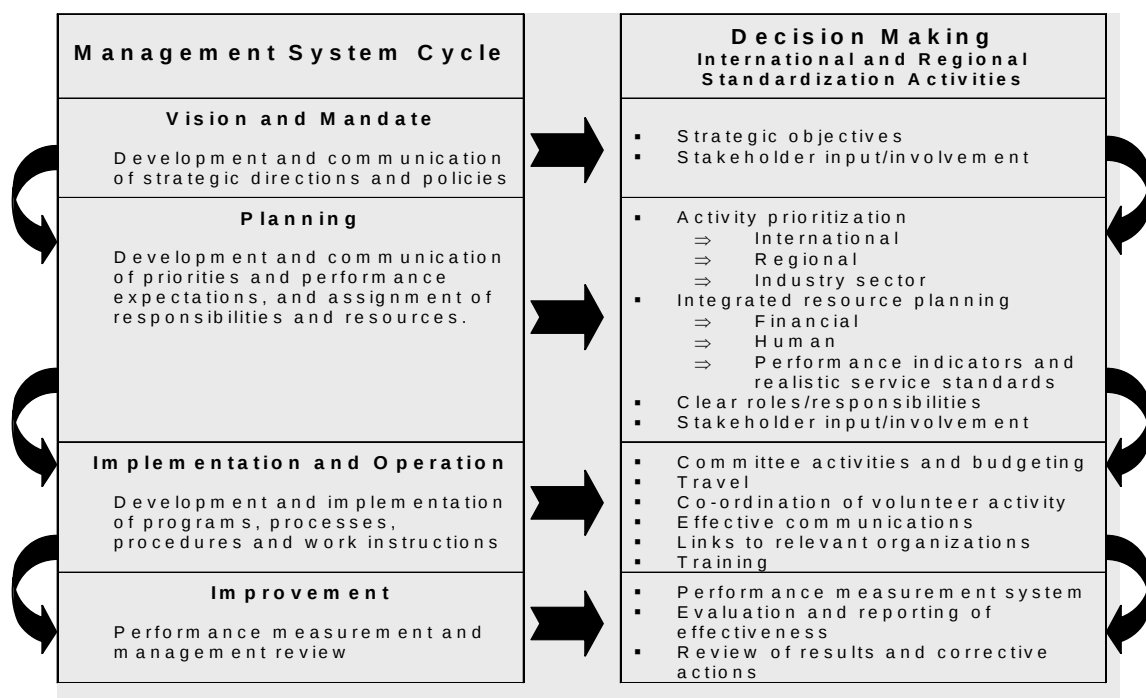
Decision-making checklists: Exhibit ES-1 shows that phases of the management cycle logically feed into each other. Each phase of the management cycle is connected to levels of decisions. It is generally possible to characterize three decision-making levels within the management approach. These are:

- Level 1 (high level): Strategic Decisions
- Level 2 (medium level): Planning Decisions
- Level 3 (low level): Implementation Decisions

As Exhibit ES-2 shows, these decision-making levels are directly linked to the management cycle. Decision making for international standards-related activities are presented in the right-hand side of the exhibit, as they relate to each of the management key areas of the management cycle on the left-hand side.

Strategic decisions relate to the vision and mandate stage of the management cycle and encompass the broad decisions that the NSS makes in an attempt to realize its strategic plan. Planning decisions relate to the planning stage of the cycle, and provide the framework from within which the NSS sets priorities and designs activities that allow it to meet its objectives. Decisions involving NSS committees and volunteer activities relate to implementation and operation; and any activities involving performance measurement or evaluation and review of results of NSS activities relates to the improvement stage of the management cycle.

Exhibit ES-2: Linking the Management System to Decision Making for International and Regional Standards-related Activities



In order to guide the SCC regarding each of the stages of the decision-making model, checklists of the key considerations required for each of the decision-making stages shown in Exhibit ES-2 are provided in the comprehensive study report. These checklists are as follows:

- Checklist for establishing a strategic objective for international participation in standards activities.
- Checklist for making business planning decisions for international participation in standards activities.
- Checklist for stakeholder involvement in international participation in standards activities.
- Checklist for implementation and operation decisions for international participation in standards activities.
- Checklist for process improvement decisions for international participation in standards activities.

We recommend that Council review and endorse the decision-making checklists included in the report as a means to ensure that good decisions are being taken. These decision-making checklists address the requirements of good management practices – as endorsed by the federal government of Canada central agencies, private sector best practices, and internationally recognized quality management systems such as ISO 9000.

Management principles that impact decision-making: In addition to having a management system approach to decision-making, there are certain principles that should underlie the decision-making model of an organization. The key principles that underlie a good management system include:

- **Leadership commitment:** creating and maintaining a climate that fosters effective modern management practices.
- **Standards:** maintaining clear, adaptable performance-based standards and frameworks for acceptable reporting and budgeting.
- **Reporting:** formally reporting on organizational activities, responsibilities and performance.
- **Clear roles and responsibilities:** clearly understanding and respecting the roles and responsibilities of related organizations and of stakeholders.
- **Organizational capacity:** acquiring, developing, deploying and maintaining organizational capacity commensurate with roles and responsibilities.
- **Acting:** responding to gaps between actual performance and expectations.

Unlike the stages of the management cycle or the classification of the decision-making process, these principles cannot be directly pinpointed to either a specific stage in the cycle or to a type of decision. Instead, these principles should underlie all aspects of an

organization and should influence the shape of decisions that the organization takes. These management principles which impact on decision making are consistent with the good management systems guidelines identified in Treasury Board guidelines and Office of the Auditor General reports and reviews. They also happen to be consistent with elements included in quality management system standards such as ISO 9000 series and ISO 14000 series, and are therefore based on recognized best-practices.

We recommend that Council adopt these management principles based on best practices to support decision-making processes within the NSS. These management principles reaffirm the need for SCC to maintain its leadership commitment, its service standards, reporting mechanisms, clarity in roles and responsibilities, and building its organizational capacity.

Stakeholder views: Survey results and stakeholder interviews corroborate the above-listed recommendations. The consultation process revealed that while the SCC and Council are making decisions that correspond to most phases of the management cycle, it is not clear that decisions are being made in a cohesive, logical way. The recommendations that follow link survey responses to decision-making levels within the management cycle and suggest that stakeholders would generally be receptive to Council introducing a decision-making model, following decision-making checklists, and to observing management principles based on best practices.

Vision and mandate: The idea of having a *Canadian Standards Strategy* is a good starting point from which to build a management cycle that incorporates a decision-making model. The consultation process indicated that there is an opportunity to make the CSS a significant guiding document that the NSS can use to set priorities for international standards development and conformity assessment work. 78% of survey respondents agree that a Canadian standards strategy should identify the responsibilities of key Canadian institutions and stakeholders for achieving Canadian international and regional strategic standards goals. 64% of respondents agree that the SCC should oversee the implementation of a consensus-based Canadian standards strategy and that all participants in the NSS should be accountable for achieving the goals of this strategy. 64% of respondents agree that a Canadian standards strategy should prioritize five to ten key strategic initiatives that require special attention and resources. 60% of respondents agree that a Canadian standards strategy should also include regional standardization priorities for Canada.

We recommend that Council adopt a Canadian Standards Strategy that demonstrates a clear linkage between strategic objectives and priorities for stakeholders' international standardization activities. Such a Canadian standards strategy should "ensure that there are realistic and concrete action items that cascade from the strategy", and should be a guiding document for all NSS stakeholders.

Strategic planning: A document like the CSS is only the starting point of a good management system. It is important that an organization plan strategically around such a document so as to implement its vision. When asked whether the strategic planning for the NSS as a whole was effective, 42% of survey respondents did not know or did not answer. Only 29% of respondents felt that the NSS's strategic planning was effective. Likewise, when asked to rate the SCC's effectiveness in setting Canadian national standards priorities for international standards-related activities, 22% did not answer or did not know, 22% found the SCC ineffective, 28% were neutral and 27% rated the SCC as effective. Finally, when asked whether the SCC provides effective support and directions to NSS participants, with respect to helping set priorities in international standards-related activities, 33% did not know, 40% found the SCC ineffective, 18% were neutral and only 9% found the SCC effective.

We recommend that Council continue to make strategic planning a priority. Survey results illustrate that a large number of respondents did not comment on the SCC's capacity to plan strategically. For strategic plans to be effective, it is important that stakeholders are aware of their existence. It is also important for stakeholders to be drawn into the process of drawing-up strategic plans to ensure maximum support and buy-in from those who participate in international standardizing activities.

Business and implementation planning: From strategic plans flow more detailed, activity-oriented business plans. These business plans set out activities that must be implemented in order to meet broad strategic objectives. The consultation process revealed that there are opportunities to improve the business and implementation planning system within the NSS. 64% of respondents to the Survey agree that resource allocation within the NSS (for funding and human resources) should be based on business plans that match up with a consensus-based Canadian standards strategy. 58% of respondents agreed that the CACs for ISO and the CSC's for IEC should develop their own separate business plans that reflect strategic priorities established by a consensus-based national strategy for standardization.

We recommend that Council introduce a business planning and implementation system at the advisory committee level. As the bodies that make recommendations regarding Canada's participation in international standards-related activities, it is essential that advisory committees prepare relevant business or implementation plans. Such business/implementation plans need to include clear performance indicators that will help measure results and impacts of international standards-related activities. The plans also need to include clear and reasonable time lines for achieving results from standards-related activities. Ultimately, such business/implementation plans would be a step towards establishing a more reliable performance measurement system that emphasizes outcomes and results rather than process.

Reporting as a component of the transparency question: To measure the results set out in business plans, mechanisms must exist to report on subsequent activities. Survey and interview results indicate that most participants in the NSS would welcome greater transparency in the system, and consider that more adequate reporting on activities and performance is long over due.

For example, 67% of survey respondents support the notion that a condition for funding support to CAC's and CSCs should be that they provide regular (i.e. quarterly) reports to Canadian National Committees (i.e., CNC/ISO and CNC/IEC) on activities. These reports would potentially include the number of members on the committee, representation of interest groups, details of member contributions and details of meetings. In addition, 75% of respondents believe that there should be regular reports on results of international standards-related activities, for the benefit of all Canadian stakeholders (including industry, consumer and public interest groups, and government).

We recommend that Council introduce an integrated reporting system at the advisory committee level that captures the nature of Canadian contributions in the international standardization arena. Just like business plans, such reports would include clear performance indicators that would help measure results and impacts of international standards-related activities. We also recommend that Council explore incentives or threats (i.e. increased/decreased committee funding) as a means to encourage committees to prepare required reports.

Yet, for any reporting system to work, it is important that the system is transparent – **reports on the results of participation in international standards activities should be widely available to Canadian private and public interests.** In particular, those who participate in the process stand to benefit most from a more transparent reporting system. By making relevant information more accessible the accountability of both the NSS in general, and of stakeholders, stands to increase, thus laying the groundwork on which to build a case for increased funding from various sources.

Performance measurement: Closely related to reporting is performance measurement. Of all the stages in the management cycle, survey results pointed most clearly to gaps in the SCC's ability to measure performance. For example, 53.5% of survey respondents felt that there is little review of performance, or evaluation of impacts or participation, in international standards-related activities. 68.4%, however, agreed that adequate resources should be allocated to undertake performance review and the evaluation of impacts of Canadian participation in international standards-related activities. Furthermore, when asked to rate the effectiveness of the Standards Council of Canada in monitoring and reviewing the performance and results of international standards-related activities, only 20% of respondents rated the SCC as effective, 29% did not know, 27% were neutral and 24% rated the SCC ineffective.

We recommend that Council design performance indicators that help measure the impacts and benefits of activities. As mentioned above, performance measures need to be included in business plans and reports. Yet, performance measurement needs to be seen as discrete from these activities – each advisory committee may design a different, yet equally effective set of performance measures. Despite opportunities for a variety of measures, we also recommend that the SCC develop and coordinate a computer database that would compile and monitor performance measurement information.

Benchmarking lessons: Hitherto now all of the findings and recommendations included in this *Executive Summary* are based on Survey results, interview comments and best practices information. This section relates benchmarking information to decision-making as it relates to Canadian participation in international standardization activities.

Exhibit ES-3 provides a snapshot of the standards systems in some of Canada's trading partners. As the exhibit shows, these organizations take a variety of forms and engage in a variety of activities. For example, where the SCC is a Crown corporation, SAA and BSI are non-profit organizations under Royal Charters, while JISC is a branch of the Japanese government. Furthermore, where the SC and ANSI are primarily accreditors, BSI, AFNOR, SAA and JISC all assist in the preparation of standards. Nevertheless, each organization has a similar mandate, and a study of practices abroad does re-enforce the decision-making recommendations outlined above.

First, the discussion and recommendations above suggest that the SCC's decision-making process is somewhat scattered and fragmented. The SCC can learn from the more streamlined decision-making systems at AFNOR and SAA. These organizations have priority-setting systems integrated within their management structure. They also appear to be more cohesive in exercising their respective roles as national standards bodies. This is not saying that the Canadian system of advisory and policy committees does not help set priorities. Instead, it suggests that without a more clearly defined management structure that underlies the decision-making process it is less obvious how the key players in the system are involved in the decision-making process.

Second, it is worth noting that the committees within the American, British, French and Australian standards bodies appear to play more than an advisory role. To varying degrees, these committees seek consensus, and appear to be involved in setting priorities and funding decisions. The committees seem to be a more integral part of the standards systems in these other countries. A greater emphasis on stakeholder opinion does not necessarily (or automatically) mean that better decisions are made. It does, however, suggest that decisions representative of national stakeholder interests are made, allowing these organizations to claim credibly that they are meeting the general mandate of developing standards systems that enhance competitiveness, meet market needs and reflect stakeholder interests.

Exhibit ES-3: Positioning of the Standards Organization within the Standards System

	Canada: Standards Council of Canada (SCC)	United States: American National Standards Institute (ANSI)	United Kingdom: British Standards Institute (BSI)	France: Association Française de normalisation (AFNOR)	Australia: Standards Association of Australia (SAA)	Japan: Japanese Industrial Standards Committee (JISC)
National Mandate	To promote efficient and effective voluntary standardization in Canada.	To enhance the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards.	To develop standards or services and generic management systems that serve the best interests and needs of stakeholders.	To represent and defend French interests within all standardizing bodies, approve standards, and to promote and facilitate the use of standards.	To excel in meeting national needs regarding standards, which enhance Australia's economic efficiency and international competitiveness.	To improve the quality of products, rationalize production and ensure fair and simplified trade through the establishment of appropriate standards.
Public/Private Orientation	Crown corporation.	Private, non-profit membership organization.	Non-profit organization incorporated under Royal Charter.	Privately incorporated institution supervised by government.	Non-profit organization incorporated under Royal Charter.	Branch of government – MITI.
Standards Activities	Accreditation education/promotion Strategy	Accreditation education/promotion Strategy	Prepares standards Conformity assessment (including certification, quality assurance) Education/promotion Strategy	Prepares standards Quality assurance Education/promotion Strategy	Prepares standards Conformity assessment (including certification) Education/promotion Strategy	Prepares standards Accreditation Conformity assessment (including certification) Strategy
Funding	50% government 50% other	100% other	4% government 96% other	22% government 78% other	3% government 97% other	100% government
Sector Representation	Advisory and policy committees	11 Standards Boards	8 Standards Sector Boards	21 Industry Sector Programs	4 Standards Policy Boards	Industry consultation process and 31 divisional councils
Setting Priorities for International Participation	Committees advise SCC on virtually all aspects of its operations.	Technical Advisory Groups collect input and develop U.S. consensus positions on technical issues.	Sector Committees ensure standards are developed to meet market needs and demand.	Strategic Orientation Committees (COS) define priorities and are involved in funding decisions.	Technical Committees represent national interests and draw on a range of sectors for participation.	Centralized strategic & business planning process, with input from industry sectors.
Decision-Making Structure	Fragmented decision-making structure.	De-centralized decision-making structure.	Decision-making process mirrors private corporation approach.	Streamlined decision-making process.	Streamlined decision-making process.	Central planning process.

Third, Canada is the only country surveyed in Exhibit ES-3 that does not have an explicit sector-specific focus and structure within its decision-making process at the SCC level. Admittedly, the SCC does have a system of advisory committees through which industry stakeholders have an opportunity to communicate their views, but these views are not necessarily considered on a sector-by-sector basis within a formal structure that is sector-based, as is the case in other countries.

We recommend that Council expand the scope of advisory committees beyond simply an advisory role (see earlier recommendations). We also recommend that Council consider giving advisory committees more of a sector specific focus. Such a focus would allow for a more accurate prioritization of activities, and would, potentially, help Canada make a more meaningful contribution to standards-related activities at the international level.

3. Funding: Findings and Recommendations

The success of the NSS depends in part on the availability of funds to maintain the system and to support stakeholders. Stakeholders agree that it is of the utmost importance that Canada participates in international standards activities. This participation is only becoming more important, for as the world becomes increasingly globalized, internationalization of standards and multilateral/bilateral recognition of national standards systems are gaining a new prominence.

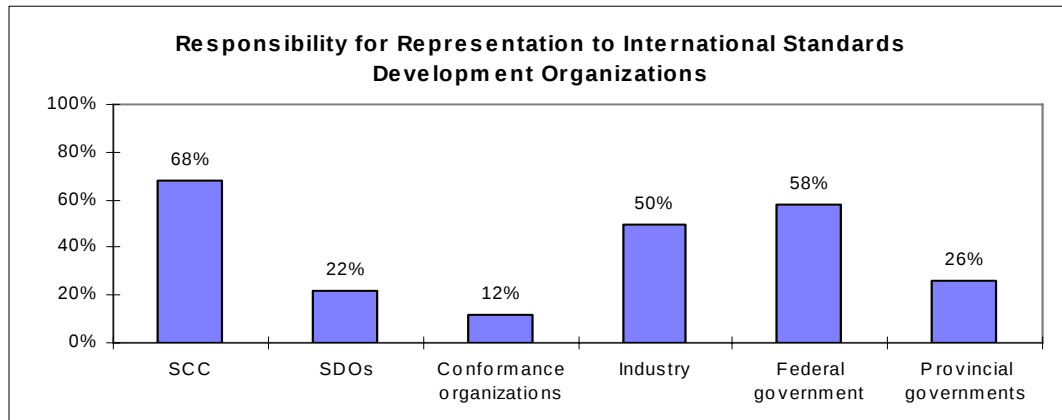
As a result, stakeholder comments regarding funding issues reflect an expectation that costs associated with international standardizing activities are only going to increase. To compound the effects of rising costs, the funds available to offset these costs are decreasing. Already, according to one volunteer, “funding is grossly inadequate.” For Canada to continue to contribute in a meaningful way to international standards-related activities, it is imperative that the SCC explores ways to offset the costs borne by volunteers participating in international activities.

Yet, rather than suggest that the SCC implement a new funding model, this study recommends that Council continue to endorse a funding scheme that depends on a diversity of sources. As Exhibit ES-4 shows, stakeholders generally agree that government (federal and provincial), industry and other affiliated groups should share the responsibility of funding Canada’s participation in international standardization activities.

We recommend that Council maintain a balance of interests. Any funding scheme introduced by Council should not engender a funding rationale that empowers special interest groups – this would run counter to the fundamentals on which the NSS is built (i.e. market mechanisms, public and private stakeholder participation, volunteers).

Exhibit ES-4: Perceived International Funding Responsibilities

(Note that the percentages reflect the proportions of total respondents who believe that a source of funding should be SCC, SDOs, conformance organizations, industry, federal or provincial governments. Most respondents believe that funding should be from a diversity of these sources.)

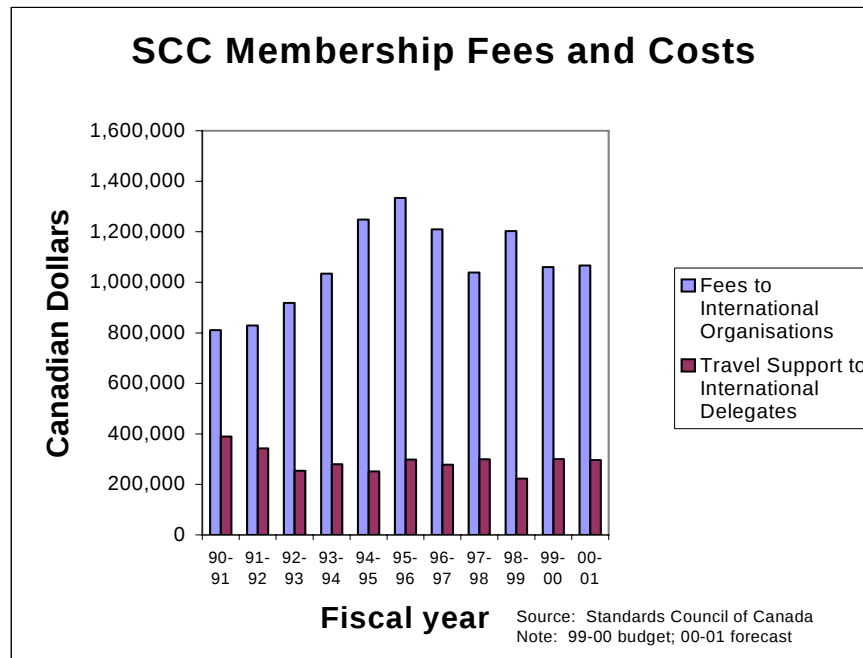


Role of the SCC: Preserving this balance of interests suggests that the SCC continue to play a role in funding the participation of Canadian volunteers in international standardization activities. As Exhibit ES-5 shows, the SCC helps fund Canada's participation in international activities in two ways: it pays fees to international organizations and subsidizes a portion of delegate travel costs.

Stakeholders support this model. 68% of respondents believe that the SCC should continue to be responsible for funding representation to international standards development organizations. 59% believe that the SCC should be responsible for funding the review of results from international and regional participation in standards-related activities. Finally, 66% believe that SCC should continue to fund the administrative aspects of international and regional standards-related activities.

We recommend that Council read the recommendations that follow with a view to maintaining this balance and to continuing to be a source of funding for volunteers participating in international standardizing activities. In particular, recommendations regarding membership fees, training, sales of standards-related information products and services, and collaborative arrangements, offer ways for the SCC to garner revenue that it can use, in part, to offset international travel and other related costs.

Exhibit ES-5: International Fee Commitments



Role of Government: Just as stakeholders believe that the SCC has a role to play in funding international standards-related activities, they also believe that the federal and provincial governments have a role. Many stakeholders highlighted a need for greater government involvement in standards development and conformity assessment – 58% of respondents indicated that increased federal government funding is an appropriate way to fund international participation for standards development. 26% of respondents believe that provincial government funding is also needed, but it seems that provincial government regulators need to incorporate and refer to voluntary standards in their provincial legislation and regulations for it to be more feasible for provinces to assume a greater stake in the NSS.

As Exhibit ES-3 showed, the SCC, unlike other national standards bodies surveyed, relies on a balance of government and other funding. At one end of the spectrum is JISC, an organization that is 100% funded by government; at the other end is ANSI, which is 100% funded by the private sector. BSI, AFNOR and SAA, to varying degrees, rely primarily on private sector support but do receive a certain government appropriation. We believe, however, that the SCC model is appropriate for Canada and encourage the SCC to continue to lobby for increased government appropriations.

We recommend that Council continue to look to government both as a source of direct SCC funding (appropriation) and as an indirect source of funding for NSS volunteers. Yet, in order to secure continued government funding we recommend, first, that Council encourage the provinces and federal government departments to incorporate

voluntary standards into their legislation, where appropriate, as a means to garner increased funding (direct and indirect) from them. We also recommend that the SCC prioritize activities and draw up credible strategic and business plans based on the decision-making model recommended earlier, as a way to lobby more effectively for increased government appropriations and support.

Role of Industry: Stakeholders (50% of survey respondents) confirmed that industry has a responsibility for funding representation to international standards-development organizations. Industry stakeholders, however, also impressed that unless the SCC introduces a more effective business planning process it will be difficult to motivate industry to contribute more to the international standardization process. Industry stakeholders also justified industry participation in targeted areas. It seems that if the SCC capitalized on identifying areas of importance to industry more effectively, it might be feasible for the SCC to scale back its support of these areas. The SCC would then be able to channel funds to other areas of national importance

We recommend that Council implement an effective business and strategic planning process as a way to draw more industrial capital into the international standardization funding mix. We also recommend that when neither industry nor a leading federal department (i.e. Industry Canada or DFAIT) is willing to dedicate resources towards developing standards in a certain field, then perhaps Canada should not participate in related standardizing activities.

Membership fees: While membership fees are not a popular option among stakeholders, there is nevertheless a case to be made for Council introducing a fee system. Before outlining this case, however, it is important to understand that only 33% of survey respondents support the membership fee option. 27% of respondents oppose the option, while 40% either did not answer or are unsure about the viability of membership fees.

This opposition, or uncertainty, towards introducing membership fees stems in part from a perception that membership fees would only impose a greater burden on volunteers who are already struggling to find the resources (time and money) needed to carry out international standards activities in an effective manner. Furthermore, there is a perception that if sponsoring organizations had to pay fees, some organizations would become even less likely to contribute a portion of the funds needed to support international standardization activities. In other words, some organizations would most likely sever ties with the SCC and would not pay the required fee. Finally, stakeholders stressed that no reasonably sized membership fee could offset the cost of the infrastructure required to fund international activities.

We recommend that Council design a membership fee, based on a sliding fee scale (similar to ANSI's), that offers members credible services. We believe that a good membership fee structure would rely on a means test so as not to upset the balance that

is one of the NSS's core strengths and to ensure that special interests were not able to take control of the system to the detriment of others. Yet, before introducing a membership fee, we recommend that the SCC ensure that all of its support mechanisms are in place to the full satisfaction of its clients. These support mechanisms include training programs, online information services, and a strategic and business planning system that clearly sets out roles and responsibilities of all participants in the NSS. These plans would also be the vehicle within which the SCC could define the scope of its membership services. Without a clear value-added support service to potential fee-paying members, a membership scheme will not succeed.

Consumer organizations: There is a feeling among consumer stakeholders that Canada does not have the capacity to build consumer interests adequately into the standardization process. Some consumer stakeholders suggested that Canada, or the Americas, needs an effective, standards focused consumer group. Such an organization could be modeled on ANEC (Europe) and would invite governments, consumer groups and individuals to participate. Such an organization, however, would not necessarily alleviate the financial pressures on consumer representatives. In fact, because it would have to charge membership fees it would put another burden on these members. Yet, such an organization would help organize and coordinate consumer interests. As a result, it would potentially allow consumers to make a meaningful contribution to the process, an outcome that in the long run would be more efficient and would ultimately decrease some of the pressure on consumer groups to fund their participation in international activities.

We recommend that Council support an initiative for developing an ANEC-type organization for the Americas by endorsing the idea, and perhaps by fostering its development through sharing facilities, providing information tools, and helping promote the initiative through SCC literature (e.g., Consensus). By endorsing and promoting this project, Council would contribute to making it happen and might facilitate the process of raising funds for the cause.

Training courses: Another funding option for the SCC to consider involves offering training programs on a cost-recovery basis. 50% of respondents support this idea (17% are against it, 33% are unsure). For example, the SCC could run a one-day course on *Understanding the Benefits of Participating in International Standards Activities*. Such a course would be a valuable education tool for stakeholders, and might help draw new players into the international standardizing process.

Furthermore, because training helps bring and keep volunteers “up-to-speed” on how to conduct NSS or SCC activities at the international level, a training course is an opportunity to make NSS volunteers more efficient. Survey results indicate that volunteers are dissatisfied with the training offered by the SCC. Only 14% of respondents believe that the SCC is offering adequate training for its volunteers. It is also worth noting that during the consultation process, many volunteers suggested that

the SCC improve the support it offers its volunteers. Many volunteers believe that they should be seen as “clients” of the standards and conformity assessment systems, and should be treated accordingly.

We recommend that Council introduce training courses on a cost-recovery basis. Training courses would not provide a major source of revenue for the SCC, but they might be a way to make more efficient use of NSS volunteers, and might be a way for Council to recognize volunteers as an essential NSS resource. Furthermore, if Council does introduce membership fees, reduced fees for training courses would be an example of a service that Council could provide for its members.

Sale of standards-related information products and services: Despite outsourcing the sale of standards, other opportunities exist for the SCC to engage in cost-recovery activities. 56% of survey respondents support the SCC capitalizing on the sale of standards-related information products and services as a way to boost funds. Only 15% of respondents are against such an approach, while 29% are unsure.

The SCC is a repository of valuable information. Options exist for the SCC to exploit its position as guardian of this information. In particular, with the advent of information technologies, and by configuring the information in such a way that it can provide added value to a customer, opportunities exist for the SCC to make this information available on a cost-recovery, or for profit, basis to interested customers.

We recommend that Council work to boost the SCC’s capacity to put forth information products and services as a means to boost revenues to finance international standards-related activities.

Collaborative partnerships and cost-sharing arrangements: Another funding option available to the SCC involves collaborative partnerships and cost-sharing arrangements. 62% of survey respondents support the SCC exploring joint funding arrangement with potential partners. Two options in particular seem feasible for the SCC to consider.

First, the SCC should seek corporate sponsorship agreements that cover specific projects. Under such agreements, a corporation provides resources (e.g. money, staff, products or services) and receives a benefit (e.g. specific image and marketing opportunities). These arrangements are pragmatic exchanges, not charitable donations. Furthermore, sponsorship agreements for major initiatives are consistent with the SCC’s mandate of fostering quality, performance and technological innovation in Canadian goods and services through standards-related activities, and of promoting the participation of Canadians in voluntary standards activities.

Second, the SCC should seek joint project agreements that involve federal government departments in the financing of specified outcomes (the SIP program was one example of

this type of funding). Other such joint projects could involve projects that address international standards development to advance the national economy, support sustainable development, benefit the health, safety and welfare of workers and the public, assist and protect consumers, facilitate domestic and international trade and further international cooperation in relation to standardization. Such joint project agreements could be with federal or provincial government departments, or with corporate entities within the private sector. For example, key candidates for such joint project agreements within the federal government include NRC, NRCan, HC, TC, EC, F&O, DFAIT.

We recommend that Council seek out collaborative arrangements and joint projects not only with the private sector but also with federal and provincial government departments. We also recommend that Council be willing to sign Memoranda of Understanding with designated counterparts. These MOUs are an accepted practice within the government as a way to signify a joint commitment to address specific requirements that fall within broad mandates of the two organizations entering the agreement.

Tax incentives misunderstanding: A funding option that appealed to stakeholders was the notion of introducing greater “tax relief” for volunteers. 71% of Survey respondents support tax deduction incentives for standards volunteers as an enhanced funding mechanism. Yet, the perception that the SCC can issue tax receipts for expenses incurred by volunteers participating in international standardizing activities is misleading – a registered charity cannot issue tax receipts in lieu of reimbursement for expenses. The SCC can only issue tax receipts for tangible donations.

The reality is that the primary reason for granting the “charitable organization” designation to SCC is to allow it to “avoid” having to forfeit income tax to Revenue Canada. Article 18 of the SCC Act states that for income tax purposes the SCC is a “registered charity”. This provision allows the SCC to hand out, but only when appropriate, tax receipts. In particular, the SCC will hand a tax receipt for the amount of “cash” received by a third party in lieu of a donation. This donation must be free of any specific objectives, i.e., it should not be “tied” to any precise objective or spending reasons, but should be given freely as a donation towards a charitable activity. In order for the SCC to undertake a charitable activity that fits within the definition of “registered charity”, it would need to consult with Revenue Canada as to the appropriateness of the related activities. Participation in international standards-related activities does not appear to be deemed a “charitable activity”. After consultation with tax experts at KPMG accounting, the charity status appears to be one that will provide very little additional advantage as an important funding source for the SCC.

We recommend that Council clear up any misperception that exists among NSS volunteers about the SCC’s ability to hand out tax receipts for charitable donations. Stakeholders repeatedly claimed that were the SCC to offer tax deductions as an incentive for participating in international standardizing activities they would be less reticent to contribute more of their time and effort. The SCC needs to respond to this miscommunication so that volunteers, particularly those who finance international

standardization activities themselves, understand that SCC can only issue tax receipts for charitable donations that truly fit the definition of charity.

Funding for international travel to standards fora is not considered a charity. Notwithstanding, the SCC is able to issue tax receipts that verify that a business expense (not a charitable activity) was incurred by a volunteer, provided this business expense was incurred as a result of SCC activities (for example expenses related to training courses, conference fees).

Introduction

The Standards Council of Canada (SCC)¹ commissioned KPMG Consulting LP to undertake a study to provide research and recommendations on a strategic national approach to funding and participation in international standardization activities.

1.1 Background

SCC Strategic Plan: In its *1998-2001 Strategic Plan*, the Council undertook a challenge to “develop and implement an alternative funding strategy for international work, and to promote increased industry participation.” The following report is intended to contribute to the research and make recommendations for developing funding alternatives and decision-making processes for prioritizing participation in international standardization activities. This report is not intended to set or recommend priorities for international work, but rather to address the issues related to decision-making processes for setting priorities and related funding mechanisms for international standards-related activities.

International standards activities: The significance of both international standards and conformity assessment has been growing in parallel with the increasing importance of international trade to Canadian economic growth and performance. Expansion and strengthening of international trading system rules concerning standards and conformity assessment provide additional motivation for Canadian industry, government, consumer, and other participants in the standards system, to focus increased attention on international activities. This reality needs to be considered in rationalizing priorities and establishing funding mechanisms for Canadian participation in international standards organizations.

International standards organizations: Two of the predominant international standards development organizations in the world are the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). ISO and IEC develop standards in nearly all sectors of industry and technology. The largest exception to this is standards development in the telecommunications sector, which is the domain of the International Telecommunications Union (ITU). ISO and IEC accept as their members the national standards organizations of countries. Only one member organization for each country can represent that country at ISO and/or

¹ In this report, “SCC” and “Standards Council of Canada” refer to the organization. “Council” refers to the 15 appointed members.

IEC. These respective national organizations can either be public or private entities. For example, the American National Standards Institute (ANSI), a private non-profit organization, is the U.S. representative member at ISO. The Standards Council of Canada, a Crown corporation established by an act of Parliament,² is the designated member of ISO and IEC for Canada.

International standards development processes at ISO and IEC in some respects resemble those of Canadian and United States private or non-profit standards development organizations (SDOs). ISO and IEC prepare standards within a decentralized technical committee structure, drawing on technical experts from various member countries. Administrative support for technical committees is provided by a secretariat, from one of the participating countries. Standards are drafted through consensus. Voting within committees and in the organization at large is done by national delegations.

Canadian standards committees: Volunteer experts in technical advisory committees develop the Canadian standards-related positions that are presented to and discussed at international standardization committees. SCC and the Canadian standards development organizations (SDOs)³ coordinate these technical advisory committees which generally correspond to technical committees at the international level. At ISO these Canadian committees are called Canadian Advisory Committees (CACs); at the IEC they are called Canadian Sub-Committees (CSCs). There is also a Canadian National Committee on ISO (CNC/ISO) which advises and makes recommendations to the Council, through the Advisory Committee on Standards (ACS), on matters related to ISO policies on standards development and conformity assessment. The Canadian National Committee on IEC (CNC/IEC) advises and makes recommendations to the Council, through the Advisory Committee on Standards, on matters related to IEC policies on standards development and conformity assessment.

On issues that Canada considers of particular strategic importance, such as standards-related decisions affecting Canadian trade or consumer protection, the Canadian standards community (including the SCC and Canadian SDOs) takes a proactive role in designated international committees. This proactive role could include chairing a particular international committee, seeking the secretariat position for that committee, and/or ensuring strong representation of Canadian experts on that committee. The aim is to promote Canadian positions effectively to ensure that resulting ISO or IEC standards have the widest possible acceptance in Canada and in nations that are its trading partners.

Other standards forums: Though ISO and IEC are the main forums for international standards activities to which SCC is mandated to represent Canada, they are not the only forums of significance to Canadian strategic standards-related

² *Standards Council of Canada Act*, (Chapter S-16) “an Act to establish the Standards Council of Canada”.

³ The accredited Canadian SDOs are Bureau de normalisation du Quebec (BNQ); Canadian General Standards Board (CGSB); CSA International (CSA); and Underwriters Laboratories of Canada (ULC).

interests. The SCC Act provides that the Council will represent Canada as the Canadian member of ISO and IEC *and any other similar international organization*, and will ensure effective Canadian participation in the activities of these organizations. Other established and emerging forums have become increasingly active in standards development and conformity assessment activities. The world of international standards is complex, comprising both conventional standards development organizations (ISO and IEC) and other organizations that also produce standards and conformance requirements, or that influence the direction of standards development on a regional or global basis. These other standards organizations include regional standards and conformance bodies, trade alliances, private sector consortia, and inter-governmental regulatory organizations.

A 1997 study prepared for the Standards Council of Canada and Industry Canada provided a listing of standards development and conformity assessment organizations categorized by industry sectors.⁴ This listing showed which industry sectors tend to have standards committees at the ISO and IEC for standards development, and which industry sectors tend to use other standards organizations. The significance of non-ISO and non-IEC standardization activities varies on the basis of industry sectors, but also in terms of the importance of trade flows and bilateral and regional agreements in place that may not be part of the ISO or IEC systems. Consequently, actively monitoring or participating in these other standards forums is also important from a Canadian national interest standpoint, particularly if priorities were to be rationalized on the basis of the significance of trade flows. For example, if over 80 percent of Canadian trade in a particular industry sector such as the auto industry was with the United States, it would be reasonable to assume that Canada would place a high priority on Canada-U.S. bilateral standards-related activities for that sector, in addition to the ISO/IEC activities. Similarly, if significant proportions of trade, in a particular industry such as food and agriculture, were with Europe, Canada would need to be vigilant about decisions made at CEN (European Committee for Standardization) that impact on this industry.

Rationalizing priorities: The 1997 study referred to above also undertook a strategic issues review to “identify criteria for setting priorities and objectives for standards-related activities in international standards forums...”⁵. This study summarized Canadian international standardization activities. It also recommended that standards priorities for international work be set in the context of a decision-making framework that identifies priorities on the basis of Canadian economic growth and public interests. The strategic issues review concluded that “the increasing emphasis on trade as a vehicle of growth for the Canadian economy, in virtually all economic sectors, means that standards development and standards-related activities should become a higher priority, for the public and private sectors.” The study recommended that Canada should “provide the necessary new mechanisms or strengthen the existing ones for evaluating priorities.” The case for introducing new decision-making approaches to rationalize priorities was made, particularly in

⁴ *International Standardization: Strategic Issues for Canada*, prepared for Industry Canada by Nordicity Group Ltd., May 7, 1997 (Appendix D).

⁵ *International Standardization: Strategic Issues for Canada*.

terms of establishing a national standards strategy as a basis for decisions that are in the national interest. The Auditor General of Canada, in his Report to Council agreed with this conclusion. In his report to Council, the Auditor General of Canada wrote:

“To maximize the benefit to Canada of the SCC’s participation at ISO and IEC, efforts are needed at two levels. First, through their participation on governing and policy committees, Canadian representatives should help focus the international standards development work in areas vital to Canadian interests. Second, the SCC should prioritize Canada’s participation on international technical committees on the basis of their importance in furthering Canadian interests.”⁶

The Auditor General further concluded that the SCC “has not identified the international committees on which Canadian participation is critical to advancing Canada’s interests based on an articulated view of Canada’s interests, industrial strengths and specialty domains.”⁷ It should be made very clear to the reader of this current report on funding mechanisms and decision-making processes that this report is not intended to set, or recommend, international standards priorities for Canada. This report is focussed only on the decision-making processes and related funding mechanisms that the National Standards System of Canada⁸ could consider in addressing how prioritization is to be decided upon. Priorities and prioritization, on an industry sector-by-sector basis, in the context of economic growth and public interests of Canada, were discussed in a previous document prepared for the Standards Council of Canada.⁹

Government participation in standards activities: While the National Standards System is described as a “system for voluntary standards”, government regulators in Canada also play a significant role in this Canadian standards system. Federal and provincial agencies are active in developing and using standards.¹⁰ Standards written by federal or provincial regulatory departments are characterized as “mandatory” standards, reflecting their introduction through legislation and regulation. In many cases, these mandatory and regulatory standards reference the

⁶ *Standards Council of Canada Special Examination Report to Members of Council*, Office of Auditor General, May 26, 1999, page 9.

⁷ *Ibid.*

⁸ According to the *Standards Council of Canada Act*, “National Standards System” is defined as “the system for voluntary standards development, promotion and implementation in Canada.”

⁹ *Op. cit.*, *International Standardization: Strategic Issues for Canada*.

¹⁰ See *Government Participation in the National Standards System*, Regulatory Affairs and Standards Policy, Industry Canada, prepared for the Federal-Provincial-Territorial Symposium on International and Domestic Standards Issues Facing Canadian Governments, Montreal, February 17-18, 1999.

standards developed by the voluntary standards system (as in the case of the National Building Code of Canada).¹¹

Last year, in February 1999, a *Federal-Provincial-Territorial Symposium on International and Domestic Standards Issues Facing Canadian Governments* was organized by Industry Canada and held in Montreal. Some of the key issues that were discussed in the symposium were presented in a paper prepared for the Symposium Steering Group.¹² Some key findings presented in this paper include the following:

- “There is a trend of declining participation at both levels of government [federal and provincial]. This trend largely reflects the lack of funding and the subsequent change in strategy to accommodate shifts in the priorities of the organizations.”
- “A redistribution of participation from national to international committees illustrates the importance of global trade and the increasing use of standards as a strategic policy tool.”

These general findings emphasize the need for introducing new approaches for funding and priority setting within the National Standards System of Canada.

New approaches to funding and decision-making: Recently SCC hosted a forum for Canadian standards stakeholders and participants (November 17-18, 1999) in Cornwall – *Canadian Forum for International Standardization (C-FIST 99)*. Some key themes and issues emerged from that forum that suggest that there is a case for introducing new approaches for funding and priority-setting within the National Standards System of Canada.¹³ Relevant themes and issues that emerged from this Forum are:

- “There is a need to recruit participants and increase participation in Canadian Advisory Committees (CAC’s) and Canadian Sub-Committees (CSC’s). This will require development of a marketing strategy, tools and a team approach which can be targeted to senior management in industry, government and associations. SCC should continue to pursue the concept of tax incentives and credits and provide feedback to the Advisory Committees on the options, as this would be a powerful element of the promotional/recruitment plans.”

¹¹ Many government regulations make reference to consensus standards in whole or in part. See *Review of Standardization Activities and Opportunities*, prepared for the Standards Council of Canada by Nordicity Group Ltd., July 14, 1997.

¹² *Op. cit.*, *Government Participation in the National Standards System*.

¹³ *Highlights from the Canadian Forum for International Standardization—C-FIST 99*, Standards Council of Canada handout sheet on highlights from C-FIST.

- “[An] Implementation Plan for the *Canadian Standards Strategy*¹⁴ is currently under development and participants have an opportunity to contribute to and to influence the content of this document and this process. The CNC’s should encourage participants to carefully review the draft and to provide critical input as quickly as possible.”
- “CNC/IEC and CNC/ISO should work together to develop common templates for: trip reports; annual reports; and the review and comments on drafts and ballots.”
- “As part of the oversight role for the CNC’s, there is a need to have current policies about participation on international committees. Rules affecting the operations of the CAC’s and CSC’s need to be updated. Once the policies are updated, there is a need for a compliance process (e.g., the CNC’s may need to have an independent verification of compliance).”

These emerging themes and issues suggest that there is a case for change—a case for new approaches to funding and decision-making that is in the national interest of Canada.

Challenge: The growth in international standards activities during the past decade and the increase in strategic significance of standards for trade, have posed a substantial challenge to the traditional structures and standards system of Canada. While the need for effective participation in international standards activities has increased, there continues to be limited allocation of funds for this, not only in federal and provincial government organizations but also within the private sector. There is a perception that SCC’s ability to support international representation has declined.¹⁵ Thus, a need to explore new funding mechanisms has grown. Many of the National Standards System volunteers, and in some cases their employers, have signaled an inability or an unwillingness to sustain the funding contributions necessary for effective international representation. For example, a 1997 National Research Council study concluded that:

“There is evidence of diminishing volunteer ability and/or willingness to cover rising costs of participation in standards development activity, including travel expense and time taken away from normal activities. There also may be a lack of understanding of the importance of this activity, hence lessened interest in participating.”¹⁶

The challenge is to find new ways within the existing National Standards System of Canada to address the needs for greater and more effective participation in international standards activities.

¹⁴ A *Canadian Standards Strategy* is expected to be tabled before Council this Spring for approval.

¹⁵ *Standards Council of Canada Special Examination Report to Members of Council*, Office of Auditor General, May 26, 1999.

¹⁶ *Final Report: Joint CCBFC/PTCBS Task Group on the Future of Standards Referenced in the National Model Codes*, National Research Council, March 1997.

1.2 Objectives

The objectives of this study are:

- to assess the pros and cons of the current processes by which official Canadian representation at international standardization forums is decided upon, and to develop an approach to making these decisions for effective participation in international standardization work;
- to assess the current Canadian approaches to funding for these activities and to develop recommendations for new or enhanced funding models.

The expected outcomes from this project are:

- recommendations for a strategic decision-making model for international participation in standards activities; and
- recommendations for new approaches to funding international participation.

This study is not intended to identify actual priorities for international participation (i.e., to determine actually where, when and how Canada should participate); nor is it intended to impose any decision-making model on any participant organization within the NSS. The decision-making model presented in this report is simply a framework that could potentially provide a cohesive priority-setting approach, with suggested mechanisms to rationalize resource allocations, to meet Canadian national economic and public interests. *It is not* being presented as a decision-making model for individual organizations within the NSS to adopt for their own purposes within their own respective domains and spheres of interest. *It is* being recommended as an overarching framework for the National Standards System of Canada.

1.3 Approach

The approach taken for this study included a number of key activities leading up to the findings and recommendations presented in this report. The following are the key activities:

Research questions: First, preliminary consultations with key stakeholders and standards and conformity assessment experts – including members of SCC advisory and policy committees, staff in NSS standards organizations, and industry and consumer groups – led to the identification of fundamental research questions that address the objectives of this study (see Section 1.4). These questions guided the course of the study and informed the development of the Survey questionnaire and the interview guide.

Survey of stakeholders: A Survey report is provided in Appendix A. The views of stakeholders and participants in the National Standards System of Canada were sought. Out of the SCC database of some 6,238 members involved in standards activities and committee work, a representative stratified random-sample of 1,600 stakeholders resulted. 341 responses were received. This represents a 21% response rate. Details of

the Survey approach and highlights of the findings from each question in the Survey are provided in Appendix A. A copy of the Survey questionnaire is included in Appendix B. The Survey questionnaire covered issues related to strengths and weaknesses of the NSS, setting priorities, and funding mechanisms.

Interviews: Forty-eight interviews were done with key stakeholders in the NSS, including representatives of SDOs, private sector organizations, government departments, and consumer and other public interest groups. A list of the persons interviewed is provided in Appendix C. The questions that guided the interviews are included in Appendix D. Emerging themes and issues about the NSS, as they relate to decision-making processes, planning and priority setting, and funding mechanisms, were discussed during the interviews. Results of the interviews have been integrated into the analysis contained in this report. Where the findings from the interviews confirm Survey results, or contribute to the interpretation of these results, this is pointed out in the report. The interviews provided an opportunity to discuss, in more depth, issues and options covered by the Survey.

Document review: Several documents were reviewed as part of the background research undertaken for this study. These documents are listed in Appendix E.

Comparisons with other countries: It is important to understand, in comparison to Canada, how other countries set their international standards-related priorities, how they fund their activities, and how their strategic framework and decision-making systems work. Comparisons of Canada's approach to decision-making and funding to the systems of some of our trading partners are included in this report. These comparisons are intended to identify what can be learnt from other systems that may represent opportunities or threats to Canada for international standards-related activities.

Analysis of strengths, weaknesses, opportunities and threats: In the Survey and interviews conducted for this study, respondents were asked about the strengths, weakness, opportunities and threats to the NSS. Due to rapidly evolving technologies and liberalization of trade, fueled by communications and information innovations, the world of standards is changing. The opportunities and threats that this situation poses provide much of the rationale for examining new funding mechanisms and effective decision-making processes for the NSS, for international standards-related activities.

1.4 Research Questions

As a starting point, a number of fundamental research questions were posed for this study. The following questions were essential in guiding the consultation process and the research that was done to prepare this report.

- What are the strengths and weaknesses of our current National Standards System in terms of decision making for setting priorities, as well as for funding international standards activities?

- How does the Canadian standards system compare with other countries (e.g., our key trading partners) in terms of decision making and funding of international standards activities?
- Who should be responsible for funding international standards-related activities?
- What new or enhanced funding mechanisms could the Standards Council of Canada introduce to support international standards activities?
- How can the SCC provide support to participants in the National Standards System of Canada, to help them set strategic priorities in international standards-related activities?
- Should there be a direct linkage between the priorities set out in a Canadian Standards Strategy and the business plans of private and public sector stakeholders representing Canadian interests?

These fundamental questions provided the overall guidance for the consultation process, including interviews and a Survey of stakeholders. The Survey questionnaire and the interview guide were derived from these fundamental questions.

1.5 How to Read this Report

This report is divided into two main sections. The first section (Chapter II) deals with the decision-making process as it relates to Canadian participation in international standards-related activities. The second section (Chapter III) focuses on funding issues connected to these activities. Both sections discuss the findings of the study and recommendations for the SCC. Recommendations are included throughout the text as they relate to the analysis and discussion of issues. To facilitate the reader's appreciation of these recommendations, they are specifically highlighted in the report's Executive Summary.

Decision-Making for International Standards-Related Activities

This Chapter of the report provides a discussion on key components of decision-making processes related to international standards activities.¹⁷ This Chapter also compares current NSS and SCC decision-making processes for international standards work with best practices and federal government guidelines, as well as making some comparisons with standards systems in other countries. Strengths, weaknesses and opportunities in decision-making processes of the NSS and SCC, for international standards work, are also discussed.

2.1 Building Blocks for a Relevant Decision-Making Model

Management system approach to decision making: The building blocks of a good decision-making model for an organization is a system which integrates all the components of good management practices. Recently, an Independent Review Panel, which studied modern management practices in the federal government, indicated that effective decision making as an integrated function depends on having a system in place which:

“bring[s] information together into a meaningful whole and communicate[s] it to all those who have need of it to discharge their managerial responsibilities. It should also ensure that important gaps and deficiencies in information are identified and rectified. Few organizations that are ‘information driven in their decision-making processes’ have reached this position without an ability to integrate and communicate performance information.”¹⁸

In another document, from the Office of the Auditor General of Canada, the recommended management system with an effective decision-making process in place is

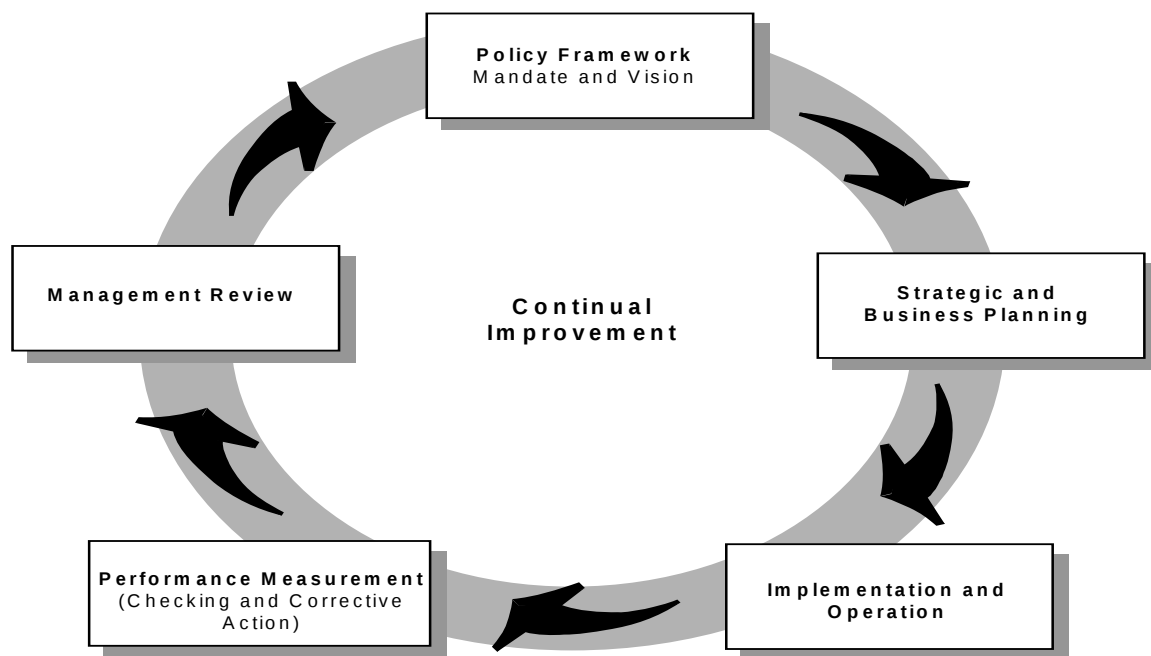
¹⁷ Various federal government guidelines (e.g., Treasury Board Secretariat and Office of the Auditor General of Canada guidelines) and industry best practices were reviewed to identify relevant components of decision-making processes (see references in Appendix E).

¹⁸ *Report of the Independent Review Panel on Modernization of Comptrollership in the Government of Canada*, report to Parliament, 1998, page 26.

one that provides “a cyclical process that systematically links an organization’s objectives, action plans and results.”¹⁹ A good management system with an integrated decision-making process is one that provides a structured process for continual improvement. “It is a tool that enables an organization to achieve and control the level of performance it sets for itself.”²⁰

Exhibit 2-1 below graphically depicts the “continual improvement” management system approach that provides a framework for an effective, integrated decision-making system. Any decision-making model should be just as focussed on results as it is on process. This is why, as indicated in the left-hand-side of the chart in Exhibit 2-1, there is a strong emphasis on performance checking and management review of results.

Exhibit 2-1: Management System Approach to Decision Making



¹⁹ *Report of the Commissioner of the Environment and Sustainable Development – 1999*, Office of the Auditor General, page 1-13.

²⁰ *Ibid.*, page 1-13.

The existence of a well-functioning management system, such as that shown in Exhibit 2-1, is a strong indicator that the organization is set up to accomplish its intended results. Exhibit 2-1 illustrates the four stages associated with the management cycles. These four stages can be characterized as follows: vision, planning, implementation and operation, and process improvement. In an ideal situation, each stage should flow smoothly from the previous stage to operate optimally, with no breaks in the flow. The success of the system hinges on continual improvement, for each stage must continually be updated to reflect changing conditions and realities.

After communicating its vision, the organization needs to develop a series of detailed plans that will enable it to meet its objectives. The planning stage is an opportunity for the organization to prioritize its activities, and to adjust these activities based on requirements of its mandate and vision. It is also important that the planning process takes into consideration the views and interests of relevant stakeholders.

The organization then needs to implement its plans. For the management cycle to flow smoothly, the organization needs to draft action plans that outline the key steps needed to implement an action item. Action plans should describe how and when the organization expects to meet its objectives and targets. It is also important that the roles and responsibilities of the participants responsible for contributing to the achievement of strategic objectives are clearly defined throughout the organization.

Finally, an organization should have a process improvement system in place that monitors the implementation of activities. First, the organization needs an effective performance measurement system. Such a system should help the organization identify gaps relative to good management practices and should help it identify ways it can improve its operations. The organization also needs to review its management control system in order to identify weaknesses in existing practices and, ideally, to identify solutions and to take corrective action before performance problems arise. While such a review may include an assessment of progress relative to performance objectives, its focus should be on identifying the causes of performance problems and then identifying opportunities for improvement and corrective action.

The management cycle is also characterized by a need for continual improvement (Exhibit 2-1). The organization should monitor progress at each stage of the cycle to ensure that the organization is operating in line with its vision and that this vision remains relevant.

Decision making: It is generally possible to characterize three decision-making levels within the management system approach. These are:

- Level 1 (high level): Strategic Decisions
- Level 2 (medium level): Planning Decisions
- Level 3 (low level): Implementation Decision

These decision-making levels are directly linked to the management cycle shown in Exhibit 2-1. Strategic decisions relate to the vision and mandate stage of the

management cycle and encompass the broad decisions that an organization makes in an attempt to realize its strategic plan. Planning decisions relate to the planning stage of the organization. These decisions provide the framework from within which the organization can design activities that will allow it to meet its objectives.

Finally, implementation decisions relate to the implementation and operation and process improvement stages of the management cycle. While the decisions made at these stages are quite low level – i.e., they set out detailed plans that relate narrowly to specific activities – different types of implementation decisions are made at each stage of the management cycle. Implementation and operation decisions relate to how an organization should conduct its activities; process improvement decisions relate to whether the activity was/is being conducted effectively. These types of decisions are often closely related and generally support and reinforce each other.

Decision-making for international standards-related activities: The table shown in Exhibit 2-2 illustrates the specific links between the management cycle and the decision-making process as it relates to international participation in standards-related activities. Different types of decisions are linked to each stage of the cycle. For example, decisions concerning activity prioritization and resource planning should be part of the planning phase of the cycle; budgeting and volunteer coordination decisions should be part of the cycle's implementation and operation phase.

Ultimately, Exhibit 2-2 strives to delineate key internationally oriented decisions as a means to clarify activities associated with each stage of the management cycle, and hopefully to clarify the authority and venue best charged with making each type of decision. For example, international travel-related decisions should be addressed at the implementation and operation management cycle phase. However, these decisions on travel, and related priorities, should also be made within the context of action plans developed during the planning phase of the management cycle.

Just as each stage of the management cycle feeds into the next stage, decision-making levels should also feed into each other. For example, while the budget relating to a specific activity within the organization may be deemed a low level implementation decision, an earlier, medium level planning decision had to have been made to allocate responsibility centres with the funds needed to carry out these activities. In order for these funds to be allocated, however, the activity, or the group charged with implementing it, must be consistent with the organization's overall strategic plan.

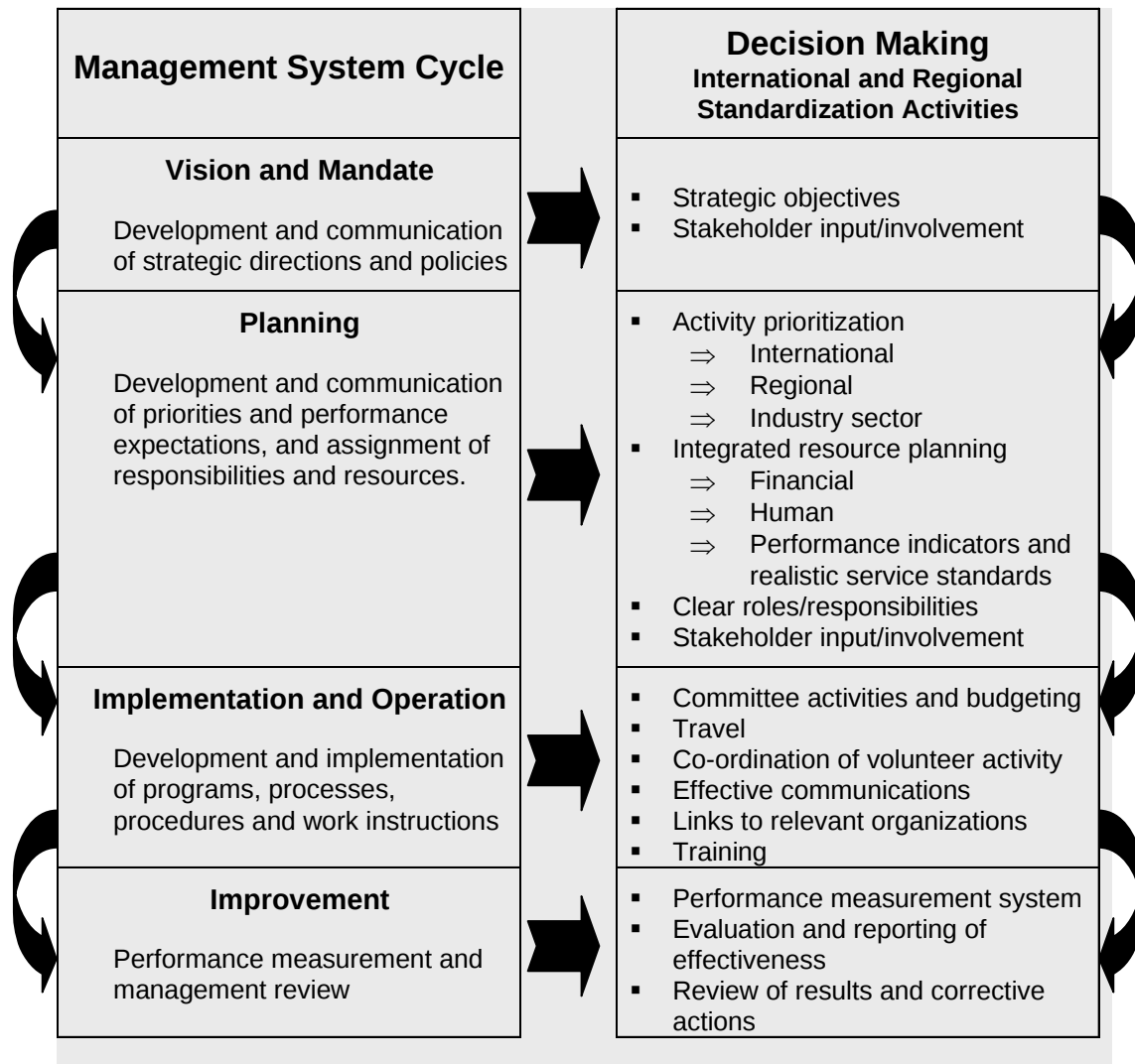
A good decision-making process runs top down. Strategic decisions should lead to planning decisions that should lead to implementation/process decisions that tie back to early strategic decisions. When the process is not operating effectively, implementation decisions may be made in isolation, making them at odds with planning and strategic decisions.

It is important to understand that an organization that is not running an effective decision-making process can still make good decisions. Good decisions generally:

- reflect a majority of stakeholder opinions and interests;
- accurately reflect resource capabilities; and,

- are integrated across organizational systems.

Exhibit 2-2: Linking the Management System Cycle to Decision Making for International and Regional Standards-related Activities



Without an effective decision-making process, an organization's decisions tend to be fragmented and scattered. Even "good" decisions, if not in line with the organization's capabilities, will generally prove to be ineffective decisions. In particular, if decision-making processes are not integrated across an organization, it is possible that there will be overlapping decisions – i.e., conflicting or incompatible decisions might be made. It is also possible that important decisions will not be made, or that decision makers will make decisions without accessing or consulting all relevant information. Ultimately, an organization should strive to create a cohesive decision-making system that supports all decisions and ensures that all areas of the organization are working toward achieving common objectives.

Management principles which impact on decision making: In addition to having a good management system approach to decision-making for international standards activities, there are certain principles that should underlie the decision making model for the NSS. The key principles that underlie a good management system include:

- **Leadership commitment:** creating and maintaining a climate that fosters effective modern management practices.
- **Standards:** maintaining clear, adaptable performance-based standards and frameworks for acceptable reporting and budgeting.
- **Reporting:** formally reporting on organizational activities, responsibilities and performance.
- **Clear roles and responsibilities:** clearly understanding and respecting the roles and responsibilities of related organizations and of stakeholders.
- **Organizational capacity:** acquiring, developing, deploying and maintaining organizational capacity commensurate with roles and responsibilities.
- **Acting:** responding to gaps between actual performance and expectations.

Unlike the stages of the management cycle or the classification of the decision-making process as it applies to international standards-related activities, these principles cannot be directly pinpointed to either a specific stage in the cycle or to a type of decision. Instead, these principles should underlie all aspects of organizations involved in the NSS and should influence the shape of decisions that these organizations take. These management principles which impact on decision making are consistent with the good management systems guidelines identified in Treasury Board guidelines and Office of the Auditor General reports and reviews. They also happen to be consistent with elements included in quality management system standards such as ISO 9000 series and ISO 14000 series, and are therefore based on recognized best-practices.

2.2 The Current System in Canada

Diversity of organizations and stakeholders: A key issue in implementing a good management system approach to decision-making within the National Standards System of Canada, is the diversity of organizations and stakeholders that participate in the system. Any one of these organizations could be viewed separately against the model management and decision-making framework described in Section 2.1. However, the focus of this study is on the National Standards System as a whole and on the Standards Council of Canada as the organization that is mandated “to promote efficient and effective voluntary standardization in Canada”.²¹

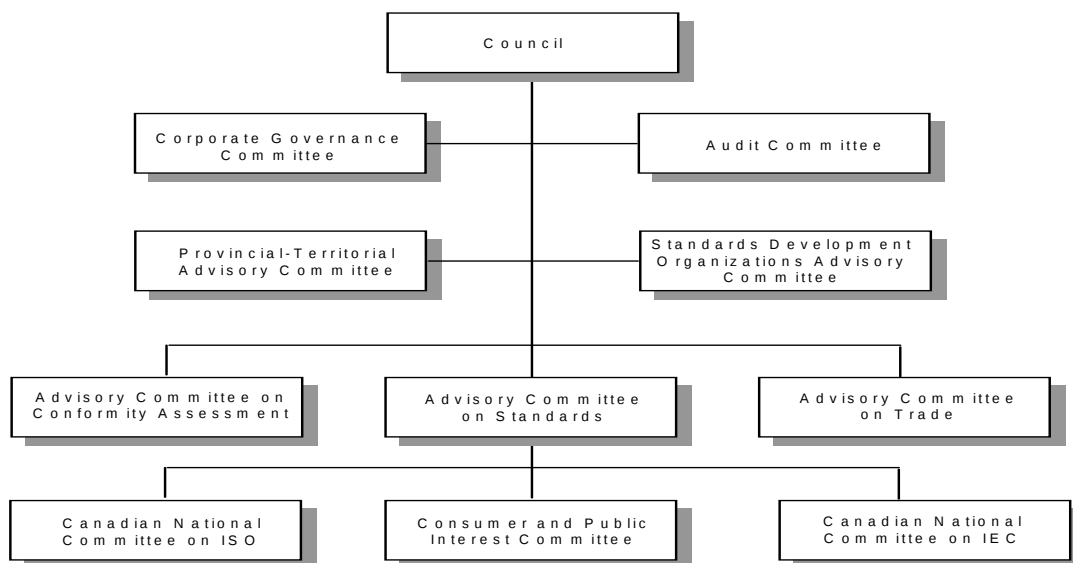
²¹ *Standards Council of Canada Act.*

In carrying out its mandate and exercising its powers, the Council is mandated to “make use of the services and facilities of existing organizations in Canada engaged in standards development and conformity assessment and consider all alternatives before providing any new services.”²²

Focusing on decision-making for representation at international standardization forums: Given SCC’s mandate within the context of the NSS, the approach taken in this study – for assessing the pros and cons of the current processes by which official Canadian representation at international standardization forums is decided upon – is based on comparisons of the current system against the building blocks for the decision-making model described in Section 2.1. A major premise of this analysis is that the decision-making process for Canadian representation in international standardization forums, cannot be adequately evaluated outside a management context such as that described in Section 2.1 above.

The SCC committee structure: The SCC 1998-2001 Strategic Plan noted that SCC would “evaluate and improve the effectiveness of all Council Advisory Committees...”. Accordingly, a new committee structure was approved by Council in June, 1998. A Task Group was established to revise the mandates and terms of reference of the Committees, and to develop membership matrices for each.²³ The new Committee structure terms of reference are to be reviewed by Council in its next meeting in 2000. Exhibit 2-3 provides an overview of the new Committee structure. This chart does not provide an adequate depiction of decision-making processes and flows within the system. It should be examined in conjunction with the individual terms of reference for each of the committees to understand the relationships involved.

Exhibit 2-3: The SCC Committee Structure

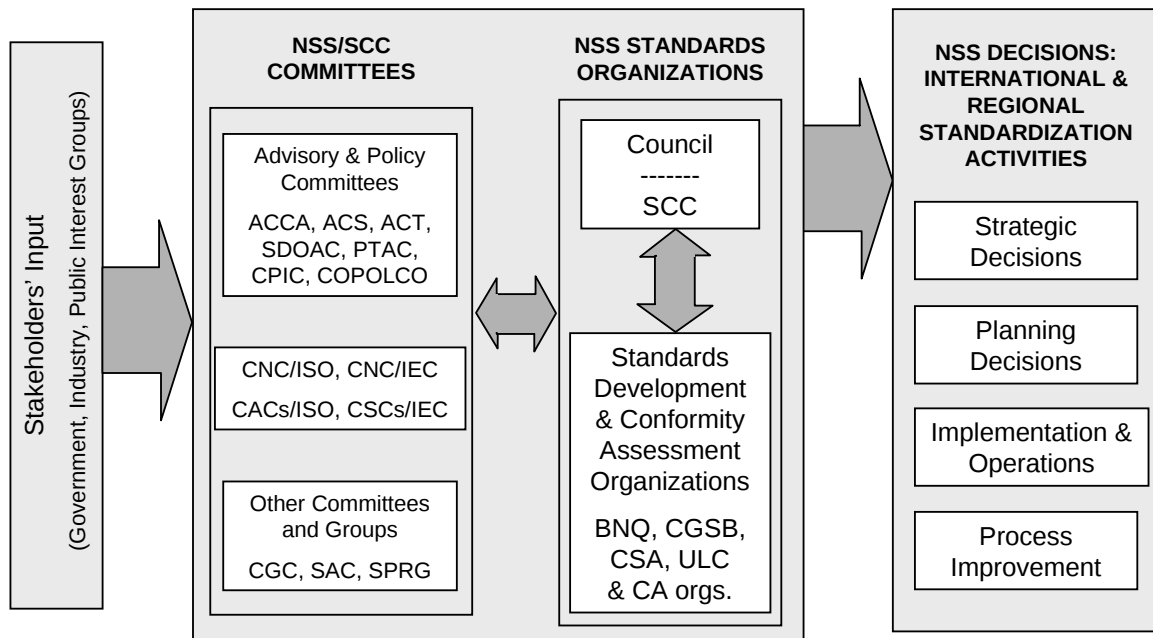


²² *Standards Council of Canada Act.*

²³ *Summary of the Corporate Plan, FY 1999-2000 to FY 2003-2004, Standards Council of Canada, page. 8.*

The SCC decision-making structure for international standardization activities: The participants in the current decision-making process of the NSS, for international standardization activities and a simplified depiction of the decision-making structure are illustrated in Exhibit 2-4. The participants in the NSS decision-making process include Council, the committees indicated in Exhibit 2-3 above, and the standards development and conformity assessment organizations. The acronyms shown in Exhibit 2-4 are spelled out in Appendix F.

Exhibit 2-4: Participants in the NSS Decision-Making Process for International Standardization Activities²⁴



This Exhibit tends to over-simplify the decision process, for links between standards organizations/committees and decisions are not as linear and ordered as the Exhibit might suggest. Nevertheless, the Exhibit does attempt to present the decision-making structure in a manner that can be easily understood.

Stakeholder input and committee structure: The NSS depends on the contribution of a variety of stakeholders. These stakeholders represent a cross-section of interests and come from government, standards development and conformity assessment organizations, industry and relevant public-interest groups. Stakeholders feed into policy and advisory committees and also into Council and the SCC.

Standards related committees are organized in a structured way. Each committee consists of a Council appointed Chair and a prescribed number of members. While there is at least one member of the SCC on each committee, other committee members are appointed from fields that fit within or are related to the committee's mandate. Efforts

²⁴ Definitions of acronyms of committees used in the text and in Exhibit 2-4 are found in Appendix G.

are made to ensure a balanced geographical and interest group distribution to ensure that no single interest benefits from a dominant position.²⁵

The membership of a particular committee, however, generally depends on that committee's mandate. For example, the membership of the Provincial-Territorial Advisory Committee (PTAC) is representative of each Canadian province and territory; most members of the Standards Development Organizations Advisory Committee (SDOAC) and the Advisory Committee on Conformity Assessment (ACCA) represent those organizations.. Members of the Advisory Committee on Standards (ACS) and of the Canadian National Committees on ISO and IEC (CNC/ISO and CNC/IEC), however, represent a cross section of government, industry and standards organizations. Likewise, even though the Consumer and Public Interest Committee (CPIC) has a majority of consumer and other public-interest members, the committee membership is ultimately intended to include government, industry and standards developers.²⁶

Yet, while efforts are made to balance stakeholder representation on each committee, it is important to understand that many of the same stakeholders sit on a variety of committees. At times such a recycling of members is understandable. For example, the purpose of the Advisory Committee on Trade (ACT) is to advise the Council on internal and international trade. It follows that the ACT addresses trade issues raised in other committees, making it logical that some ACT members are also members of these other committees. There is not the same need to recycle membership on other committees. Most members of the Provincial-Territorial Advisory Committee (PTAC) sit on at least one other committee; many government representatives also sit on more than one committee. As a result, while each committee may be charged with different responsibilities, the same people are often influencing more than one standards-related recommendation that committees pass on to the SCC.

Decision-making process: Ultimately, the Council and accredited standards development and conformity assessment organizations have the power to make standards-related decisions that impact on the whole of the NSS and that have an impact on Canadian strategic interests. As a result, the Council and these organizations play a significant role in making all types of decisions – i.e., strategic, planning, implementation and operation, and process improvement. In simple terms, the Council makes decisions that relate to policy and operation; SDOs also make technical, policy and operational decisions – and committees advise the Council and implement certain decisions.

The linkages between the SCC, other NSS standards organizations and all the committees shown in Exhibit 2-4, however, are not particularly very clear cut. For example, regarding technical decisions, decisions that are generally operational in scope, SDOs feed relevant information to committees such as CNC/ISO and CNC/IEC. These committees then make decisions based on this information that affect Canadian participation in international forums like ISO and IEC. In making such decisions, however, the CNC/ISO and CNC/IEC must also consider technical issues raised by ACCA, ACS and ACT that might also impact the nature of Canada's international

²⁵ *Terms of Reference*, Advisory Committees document, Standards Council of Canada, October 26, 1998, p. 1.

²⁶ *Standards Council of Canada*, Directory of Council document, November 4, 1999.

participation in standards forums. It is important to note, however, that committees like ACCA, ACS and ACT themselves make decisions based on SCC policy. Ultimately, a decision regarding ISO or IEC, even if it is technical in scope, is potentially influenced by input from, among others, SDOs and the SCC.

Both the SCC and SDOs make policy/operational decisions. Yet, the Council and SDOs feed their decisions through different channels. SDOs generally contribute to decisions on international participation through CACs and CSCs, and through CNC/ISO, CNC/IEC and SDOAC. Council decisions pass through PTAC, SDOAC, COPOLCO and SAC. SCC decisions are also passed to ACCA, ACS, ACT and CPIC. The role each committee plays in actually carrying out any of these decisions depends on the committee's mandate. Nevertheless, the system expects that committees will assume some measure of responsibility with respect to SCC and SDO policies.

Similarly, even the mechanisms in place for bodies to offer advice are confusing. For example, SDOs do not necessarily communicate directly with the SCC, except perhaps in informal communications. Instead SDOs communicate with the SCC through the SDOAC. Regarding trade issues, while most committees report independently to the Council, committees report through the ACT on trade issues. The ACT is then expected to report to the Council. The ACT, however, is also expected to advise the CNC/ISO and CNC/IEC on trade issues, giving the committee a large measure of influence over a certain type of decision.

Although the capacity exists for the NSS to make decisions related to international standardization activities, the apparently complex nature of the decision-making process makes it very difficult to create a structured picture of the process – hence the simplified version depicted in Exhibit 2-4. The NSS decision-making system is fragmented. It appears to lack cohesion and does not necessarily have adequate measures in place to ensure that there is no overlap in terms of decisions taken, or to ensure that decisions that meet the needs and interests of stakeholders are always taken – notwithstanding the final oversight role of the Council itself, which is the recipient of advice in some form or other, either directly or indirectly, from all the committees and organizations shown in Exhibit 2-4.

Decision-making and the management cycle: A description of how decisions are made within the current NSS system does not adequately demonstrate the strengths and weaknesses of this system. In order to assess the system, the system needs to be tested against the management cycle set out in Exhibit 2-1. Ideally, the roles and responsibilities of decision-making bodies would be spaced evenly throughout the five stages of the management cycle. In the case of the SCC, this means that committees would be charged with advising the Council on decisions taken throughout the life of the cycle. Yet, when the terms of reference of these committees are interpreted with the management model in mind, some of the gaps in the Canadian system become clear.²⁷

²⁷ *Proposed Mandates of the Restructured SCC Advisory Committee*, SCC Advisory Committee document – to be brought forth to Council by end of February 2000.

The first step in the management cycle is the policy framework stage – the stage during which an organization defines its mandate and vision. Ultimately, the Council makes strategic decisions, yet committees do feed into the process; a large number of committees are charged with advising and making recommendations to the SCC on matters related to their respective mandates.

There is an even greater role for committees during the strategic and business planning phase of the management cycle. For example, the terms of reference of PTAC, SDOAC and CPIC all claim that the committees are to identify and address relevant issues for the Council to consider in its planning process. Likewise, ACCA is to provide input into the development of new procedures relating to conformity assessment and ACT is to coordinate appropriate strategies for the development of MOUs and MRAs. ACT is also charged with identifying priority sectors and markets in which Canada could take a leadership role. In essence, the committee structure backs up the SCC's ability to make strategic and planning decisions and ensures that the Council is able to make such decisions with the interests of relevant stakeholders in mind.

The committee structure also backs up the implementation and operation stage of the management cycle. ACCA is charged with ensuring that operational procedures are implemented for accreditation programs. The committee must also ensure that appropriate mechanisms are in place to deal effectively with conformity assessment. The ACS promotes the involvement and participation of consumer and other public interest groups in the process and monitors the development and implementation of the recruitment of volunteers. Finally, CNC/ISO and CNC/IEC coordinate and represent the Council's and Canada's interest in relevant international work and make recommendations to the Council on policy matters concerning international work. In other words, a system is in place to work through the low-level operational decisions that ultimately support the larger structure.

Yet, while support mechanisms are in place during the first three stages of the cycle, the system breaks down in the fourth and fifth stages: performance measurement and management review. Of the committees described in the *SCC Advisory Committees* document, only PTAC has a performance measurement function (to assess and provide feedback on the efficiency and effectiveness of the Council's programs and activities in meeting the needs of provinces and territories). Whether or not it is feasible for the above-mentioned committees to assume similar responsibilities is unclear. What is clear, however, is that there is a gap in the Council's ability to measure the performance of the advisory committees, and to review the consequences (results) of strategic and business planning decisions within the context of a sound management cycle.

This is not saying that groups do not exist that could potentially fill the gaps in this area. For example, a Strategic Policy Review Group (SPRG) and a Corporate Governance Committee (CGC), such as those listed in the SCC's *Directory of Council*, October 4, 1999, could both potentially assume performance measurement functions. While the mandates of these groups was not available at the time of writing this report, it does not appear that either one is playing an active part in assessing Council activities, reviewing their effectiveness, or suggesting changes in the Council's ultimate direction in this regard.

2.3 Decision-Making Checklists for International Participation

Checklists of key considerations: Section 2.1 identified different types of decisions within a national standards system – e.g., strategic, planning, implementation and operations, and process improvement. Some key standards-related decisions were also identified in Exhibit 2-2. This section of the report provides a checklist of key considerations for each of the key decision areas identified. These checklists are developed from results of the consultation process (including interviews and Survey feedback comments) and a review of relevant documents (see Appendix E). ***These checklists provide the backbone for a model decision-making framework for international participation in standards related activities.***

Strategic objectives: Establishing a strategic objective is the first step in a decision-making model that is based on a management system approach. Key considerations for establishing a strategic objective related to international standards activities are as follows:

Key Considerations for <i>Establishing a Strategic Objective</i> for International Participation in Standards Activities
1. Is it clearly understood by all the participants that it affects in the system?
2. Does it address an issue that has been clearly identified (e.g., within a context of public safety or national economic interests)?
3. Does it have the general support of stakeholders and interest groups?
4. Is it clear whether it is a long-term or short-term endeavour?
5. Has it been developed through an effective stakeholder involvement process?
6. Is it measurable? In other words, can specific results be linked back to it?
7. Is there executive commitment to the objective, especially by stakeholder organizations?

A decision establishing a strategic objective for international participation needs to respond to all these questions. Other considerations may also be appropriate, depending on the context and scope of the strategic objective. However, those listed appear to be the most relevant for establishing an objective within the context of the National Standards System as it relates to international participation.

Business plan decisions: As indicated in Section 2.1, the effectiveness of a decision-making model is contingent on the existence of an appropriate business plan. Key business planning decisions include: activity prioritization, resource planning, and clarity of roles and responsibilities.

Key Considerations for <i>Making Business Planning Decisions</i> for International Participation in Standards Activities	
Activity prioritization:	
1.	Are the activities linked to specific objectives supported by stakeholders and interest groups?
2.	Are the objectives consistent with an approved strategic plan?
3.	Are the desired results, benefits and priorities clearly stated in the business plan?
Resource planning:	
4.	Have adequate financial and human resources been assigned to each activity in the business plan?
5.	Have the appropriate funding sources for these resources been identified?
6.	Is there a responsible accountability mechanism in place for dispensing these resources?
7.	Are plans and resources revised periodically to reflect performance and results?
8.	Is there a mechanism to review and reallocate resources, based on continued relevance?
Clarity of roles and responsibilities:	
9.	Is each activity in the business plan assigned to a responsibility group?
10.	Does the business plan identify specific roles and responsibilities of each participant in the plan?
11.	Are the roles and responsibilities clearly understood by the participants?
12.	Are the roles and responsibilities consistent with mandates? Do they conform to expectations?

It is worth noting that ISO has launched a Business Plans program to ensure a seamless fit between the standards it develops and the standards needed by the market, as well as to avoid wasting resources by developing standards for which there is little demand. It is expected that by mid-2000, each of ISO's active technical committees will be expected to have completed a business plan that also covers the activities of its subcommittees. These ISO business plans are intended to analyze conditions and trends in the market sector served by the technical committees and will be required explicitly to link work programs and sector needs. This ISO initiative is expected to generate clear priorities for which standards are needed, by when, and what resources are needed to do the job.

In Canada, a 1999 report by the Office of the Auditor General of Canada concluded that "the current staff management practices do not provide the assurance that the SCC will have the required number of staff with the right skills at the right time to fulfill its objectives."²⁸ This is a significant point to bring out here, in that an appropriate business planning process that responds to all the key considerations provided in the checklist above, would create the necessary conditions that would address this gap. To this end, the SCC has launched an independent review of staffing, compensation and performance

²⁸ *Standards Council of Canada Special Examination – Report to Members of Council*, Office of Auditor General, May 26, 1999.

management structures that is expected to report on its results by March 2000. In addition, there is a heightened urgency to establish a business planning process for international participation in the NSS, to ensure that the appropriate mechanisms are in place which provide the means to prioritize international standards-related activities, resource planning, and clarity of roles and responsibilities. Such a business planning process would provide the assurance that the system can deliver the appropriate resources to fulfill its objectives.

Stakeholder input/involvement: In Canada, a standard for stakeholder involvement has been developed. It is appropriate to identify the key considerations of this standard in this segment of the report, since it sets a basis against which to compare the current practices and activities for stakeholder involvement in international standards-related activities, as part of the current decision-making process of the NSS.

The CSA standard, *Z764-96 A Guide to Public Involvement, March 1996*, provides a good basis to assess stakeholder involvement in general within the NSS decision-making process as it relates to international participation. There are 12 key considerations that are relevant and can be derived from the CSA standard as follows:

Key Considerations for Stakeholder Involvement for International Participation in Standards Activities
Planning the process:
1. The purpose of the process needs to be clearly defined and understood by everyone.
2. The process needs to be clearly linked to when and how decisions are made.
3. All relevant interests have to be represented in the process.
4. The process has to be designed to meet the circumstances and needs of the specific situation.
Managing the process:
5. Flexibility needs to be designed into the process.
6. Appropriate measures should be in place to support stakeholder participation.
7. All relevant information should be accessible to stakeholders in a timely and understandable manner.
8. The diverse values, interests and knowledge of stakeholders should be recognized and respected.
9. Roles and responsibilities should be clear, and understood by everyone associated with the process.
10. A reasonable and clear time frame for the process should be established.
Using the results to learn from and improve the process:
11. The results should be communicated and implemented.
12. The success and results of the process should be measured.

Since stakeholder involvement is such an important component of the National Standards System, at all levels of internationally related decision-making (see Exhibit 2-2), the stakeholder involvement process in the NSS will be examined against these considerations in Section 2.6.

Implementation and operation decisions: The existence of a well functioning management system, which supports an effective decision-making process, depends on effective implementation and operational capabilities within the system. Where the system is committed to achieving results, such a system will enhance an organization's capacity to address the issues and strategic objectives. A well functioning management system helps to operationalize the strategic and business plans aimed at effective international standards-related activities. It is important to respond adequately to the checklist of questions indicated below, to provide reasonable assurance that actions will be consistently and reliably implemented, and to improve confidence that intended results will be achieved.

Key Considerations for <i>Implementation and Operation Decisions</i> for International Participation in Standards Activities	
Committee activities, budgeting and travel	
1.	Does the committee have terms of reference clearly identifying its objectives and scope?
2.	Are the committee's activities consistent with these terms of reference?
3.	Are the committee's activities well defined?
4.	Have the sources of funding for this committee been identified and appropriately committed by activity?
5.	Is there a travel plan included in the budget?
6.	Have travel funds been explicitly identified and committed?
Effective communications:	
7.	Do participants in the system have easy access to relevant information?
8.	Are the participants in the system well informed?
9.	Have the participants been provided with functional support and tools for information sharing activities?
Coordination of volunteer activity:	
10.	Is there an assigned coordinator for volunteer activities?
11.	Are volunteers kept well informed about the strategic and business planning decisions?
12.	Is there an appropriate volunteer recruitment process in place?
13.	Are volunteers appropriately recognized for their contributions?
14.	Have volunteers been provided with functional support and tools to fulfill their responsibilities?

The NSS relies heavily on volunteers for international standardization and conformity assessment activities. Its volunteer base is composed of private and public sector organization representatives, from both national and provincial forums, as well as individuals from small and medium sized enterprises, private consultants, and consumer and other public interest groups. Clearly, the level of expertise and effort required to accomplish the strategic objectives of the NSS require that the organization rely heavily on its volunteer base. As such, this essential resource must be managed and tended to in an effective manner. The key considerations in the above checklist, to be dealt with in

the decision-making process for international standards-related activities, contribute to addressing this issue.

Within the federal government, volunteers have contributed significantly to program delivery in the past and may likely be involved more extensively in the future as government looks for cost saving innovations. There are, however, special considerations for government departments and organizations using volunteers. Volunteers allow organizations such as the SCC to achieve substantial leveraging of their resources and expertise, a greater and narrower proximity to specific areas of expertise, a better understanding of industry and public interest needs, greater efficiency and greater credibility within industry and government. On the downside, mismanaged volunteer resources could allow for a potential for mishandling of sensitive information, the wasting of public (taxpayer) dollars, diminished departmental or organizational recognition or visibility, significantly less advantages for the private sector it wants to support, and diminished direct interaction between the organization and the volunteer base it so heavily relies on.

Process improvement decisions: Process improvement refers to that part of an effective management system which ensures continual improvement decisions are made and corrective actions are taken. It is absolutely necessary, by all accounts of best-practices for decision-making models, that a performance review process be in place. To measure performance against strategic and business plans, and to identify progress for critical success factors, there must be clear performance indicators identified that will measure how the business performs in each of its key activity areas. In the 1999 Office of the Auditor General of Canada report on the SCC²⁹ it was concluded that “there is currently no process in place to review and provide feedback on the performance of individual volunteers on advisory committees ...”.³⁰ In addition, the Auditor General of Canada concluded that although “broad public policy objectives are reflected ... in the strategic plan, we found that they have not been officially interpreted or defined in measurable terms...”.³¹

The process of performance measurement helps to ingrain the strategy in the system and implement the required business plan. Such a written business plan should identify the key measures and the benchmarks against which the system will be held accountable. If properly done, this will also help the participants in the system to understand their roles and responsibilities, and what is expected of them as a contribution to the overall success of the system.

²⁹ *Standards Council of Canada Special Examination Report to Members of Council*, Office of Auditor General, May 26, 1999.

³⁰ *Ibid.*, page 14.

³¹ *Ibid.*, page 4.

Key Considerations for <i>Process Improvement Decisions</i> for International Participation in Standards Activities	
Performance measurement:	
1.	Is there an effective performance measurement system in place?
2.	Have appropriate performance indicators been identified in the business plans?
Reporting:	
3.	Is there an effective reporting system in place, to report on results of activities at all decision levels?
4.	Are the performance reports disseminated to all responsibility groups in the system?
Training:	
5.	Are appropriate training options and resources available to staff in the NSS standards organizations?
6.	Are appropriate training options and resources available to volunteers?
7.	Are the available training options consistent with approved strategic and business plans?
Review of results and corrective action:	
8.	Do the senior executives of organizations that participate in the system review the results of performance reports?
9.	Do the various relevant advisory and policy committees review the results of performance reports?
10.	Are the results of performance reports fed back into the policy and strategic planning process?
11.	Are the results of performance reports used to improve implementation and operations decisions?
12.	Is timely corrective action routinely done to make adjustments recommended by performance reports?

While it is true that the *FY 1999-2000 Corporate Plan* of the Standards Council of Canada included critical performance indicators for 1999-2000, these indicators are focused on SCC performance and have not permeated the NSS system as a whole. They include performance indicators for customer satisfaction, human resources, communications, Canadian participation in international standards development committees, conformity assessment, and QMS-registrar accreditation.

The conformity assessment targets are defined in terms of revenue targets and in terms of achieving a certain acceptable average accreditation time. The international standards development committee performance measures are modest, in that they measure total membership in CACs, number of Canadian delegates to international standards committees, and number of IEC/ISO/JTC committees chaired by Canadians. They do not provide any insights on the effectiveness of the participation, and how it relates to strategic priorities for Canada. More robust results-based analyses, using performance indicators that help measure impacts of activities and benefits, are needed for this exercise. At a minimum, attendance figures should be monitored on a regular basis, representation of stakeholders on committees, and reports submitted on the results of trips should be part of the performance measurement process. A computer database to

compile and monitor these performance indicators should be developed and coordinated by the SCC.

2.4 How Others Do It

A number of standards organizations from other countries were examined, to identify characteristics that could contribute to new ideas for the NSS decision-making process. The following provides a description of structures and practices within these organizations. The organizations selected are the standards bodies that represent their respective countries at ISO and/or IEC.

2.4.1 ANSI – American National Standards Institute (U.S.A.)

Organization structure: ANSI is a private, non-profit membership organization that administers and coordinates the voluntary standardization system in the U.S. It has a membership of 1,000+ individual members, 280+ professional, trade, educational, consumer and labor institutions, and 30+ government agencies. ANSI does not develop standards, but acts as a central clearinghouse and coordinating agency for member organizations.

Board of Directors: The Institute's Board of Directors ensures ANSI's financial integrity. There is an Executive Committee made up of members of the Board. Below the Board there are four Membership councils. (organization, company, government, consumer). These operational committees propose policy to the Board, implement Board approved policy and act on behalf of the Board. Within these committees there are information panels which are neutral forums where members identify, discuss and agree upon solutions to standards and conformity assessment issues. These forums bring together parties with like interests for mutual benefits (e.g. the Information Infrastructure Standards Panel is a group of more than 80 companies, organizations and agencies that focus on identifying standards needed for the global information superhighway.

Committee structure: Technical Advisory Groups (TAGs) collect input and develop U.S. consensus positions on technical issues. All U.S. proposals for the initiation of new work items for the development of international standards are approved by the appropriate TAG and announced for public review and comment.

Decision making: The ANSI Executive Standards Council coordinates the overall national and international standardization activities of the Institute, including the procedures and criteria for its national and international standards development activities. ANSI Standards Boards established by the ExSC have planning and coordinating responsibilities on a continuing basis for a defined scope of activity in an industrial sector.

Standards setting: ANSI accredits technical societies, trade associations and other groups to coordinate and lead technical development efforts. Accredited developers voluntarily submit the results of their work as candidate standards to ANSI for approval as American National Standards (ANS). The ANS designation signifies that ANSI's criteria for due process have been met and that a consensus for approval exists among

those directly and materially affected persons who chose to participate in the approval process. There are 189 ANSI-accredited standards developers and more than 13,000 ANS.

Standards apply to many areas of industry: Eleven Standards Boards are representative of the following sectors: acoustical, computer integrated, manufacturing, construction, healthcare informatics, image technology, medical devices, nuclear, safety and health, information infrastructure.

International standardization activities and decisions: ANSI makes internationally related decisions in part based on the feasibility of fast-tracking American National Standards into ISO and IEC. In order to do this and to promote U.S. standardization policies globally, the institute communicates regularly with regional standards bodies and with the standards organizations of other countries. Ultimately, however, relevant TAGs must approve the initiation of new work items for the development of international standards, giving industry an important voice in setting international priorities. ANSI is also very instrumental in contributing to the establishment of strategic directions for U.S. standards policies. It works closely with both private and public standards organizations such as the National Institute of Standards and Technology (NIST), which is a public organization that is part of the Department of Commerce.

2.4.2 BSI – British Standards Institution (United Kingdom)

Organizational status: BSI is a non-profit organization. It is independent of government, industry and trade associations. Its Royal Charter sets out how it is organized and its functions.

Board of Directors: BSI is lead by a Board that has a Chairman, six non-executive members and six executive members. It is run just like a corporation.

Sector committees: Below the Board, there are eight Sector Committees. Sector committee members are appointed by the standards policy and strategy committee on the recommendation of the sector committee chairman. Sector committees are responsible for ensuring that standards are developed that meet agreed needs in an effective manner. They are the senior level forum at which members from business organizations and users (both private and public) meet BSI staff to review and agree all aspects of standards development within the committee structure for management systems. Sector committees manage technical committees. These committees actually prepare standards. There are 3000 technical committees covering 16,000 standards projects.

Decision making: The Board meets formally at least five times a year and approves the BSI corporate strategy and medium term operation plan. Operational control and the implementation of strategy and policy are delegated by the Board to the Chief Executive, supported by an Executive Committee. Each of BSI's main activities is presented to the Executive Committee. BSI's policies are made by the BSI Board, under which are industry sector committees. Sector committees authorize work on new standards projects and decide the broad program and priorities for work in the fields. Sector committees are responsible for ensuring that standards are developed to meet agreed needs in an effective

manner. They are the senior level forum at which members from business organizations and users (private and public sector) meet BSI staff to review and agree on all aspects of standards development within the committee structure and management system.

Sector Boards: BSI has eight sector boards for: building and civil engineering; consumer products and services; health and environment; material and chemicals; electrotechnical; management systems; engineering; DISC–information technology to manage specific areas of standardization.

Each sector Board is responsible for developing and maintaining policies and strategies related to standards activities in the relevant area, in consultation with the Business Development and Planning Units of BSI; reviewing and approving new standards projects, ensuring that the need is justified, that priorities are defined and that resources are available to complete the projects that have failed to meet targets; reviewing the TC structure and ensuring that it is appropriate to the planned workload, establishing new TC and disbanding redundant committees; and appointing Chairs of TCs.

Standards setting: Standards are drawn up by committees made up of representatives who have a particular interest in the subject, including manufacturers, users, research organizations, government departments and consumers. 3,000 technical committees and working groups cover 16,000 standards projects.

International standardization activities and decisions: When setting international priorities, BSI focuses on areas that potentially impact British competitiveness. The Institute is also committed to maximizing its impact and influence in the international arena by obtaining key secretariats and chairs at international standards organizations. Ultimately, BSI is working towards garnering greater accountability for the coordination of its input into international standardization, and it is seeking to reduce resource levels committed to low priority projects – the institute is making an effort to remain focused on those standardizing areas that have been identified as priorities.

2.4.3 AFNOR – Association Francaise de normalisation (France)

A government approved organization, under the supervision of the Ministry for Industry: AFNOR responds to standardizing needs, elaborates on standards strategies and coordinates the activities of the standards bureau. It is incorporated by private law but recognized by a governmental authority. AFNOR initiates and organizes dialogue so that all sectors of the French economy can define strategies on the standardization work being carried out in all French, European and international authorities.

Government-appointed director: At the top of the organization there is a government-appointed director. The managerial staff include the Director General and the Deputy Director General.

Strategic orientation sectoral committees: AFNOR supervises all the technical work within major standardization programs. Each program is piloted by a strategic orientation committee (COS) which consolidates the principle decision makers of each of

the economic sectors in questions. AFNOR has organized its standards activities into 21 sectoral programs corresponding to major industries. The COS are responsible for defining priorities, for participating in the quest for financing, for its allocation, and for ascertaining action items between the available means and the selected programs.

Decision making: Each sector is responsible for getting input from standards committees and from experts in the field. Each sector is responsible for formalizing standardizing projects and informing AFNOR about their viability. Sector committees propose people to assume positions in each sector. Generally, these *bureaux de normalisation* are attached to professional sectoral organizations and are financed by business and partners in the relevant sector.

Business planning: The strategic orientation committees for each major industrial sector evaluates the priorities, identifies technical objectives, and assesses corresponding resources and costs so that the interests of manufacturers, consumers and administrators are consistently put forward. The industry sectors are: food; building and public works, electrical engineering and electronics, environment, fundamental standards, gas, health, household equipment, sport and leisure, hygiene and work safety, information technology and communication, iron and steel, management and services, materials and material processing, mechanical engineering, petroleum, transport, and water. A certain number of work areas remain independent of the strategic orientation committees, but do not constitute sectors that are any less important in terms of industrial, European or social significance such as fireworks, fuels, fire-fighting equipment, horticulture, ophthalmologic and optic equipment, and tobacco.

Orientation and Programming Committee (COP): COP provides an overall coordinating role and is responsible for setting objectives and priorities to ensure coherence of programs, evaluating all resources, and proposing measures to facilitate, develop or improve standardization work.

Related organizations and internal staff: AFNOR is surrounded by a group of competent and specialized related organizations and internal staff that participate in the standards system of France. Experts are the backbone of the AFNOR system. These experts hail from every economic sector. They bring experience and determine what kind of standards are needed. They also provide the technical content of standards documents.

International standardization activities and decisions: AFNOR's mandate is to represent and defend French interests within all standardizing bodies. The AFNOR strategic orientation committees, however, make decisions related to international participation. As a result, the industry sector linked to each COS influences the direction and priorities of AFNOR at the international level.

2.4.4 DIN – Deutsches Institut für Normung (Germany)

Organizational structure: DIN is a private, not-for-profit association. Relations between DIN and the German government are regulated by contract. DIN provides roundtable forums, where manufacturers, trade associations, consumer service groups,

(and “anyone with an interest in standardization”) meet. All work is voluntary and anyone can participate.

DIN is organized in the following way. There is a general assembly of members; which includes the President of the organization, the Director, and standardization committees. The general assembly meets at least every two years. It needs a fifth of its members for a quorum. The general assembly is responsible for the receipt and review of the business report and the selection of the members of the Presidency. The Presidency is a group of at least 30, and at most 45, selected members. The President and the Director belong to the Presidency. The President has a two-year term. You can be a member of the Presidency for six years. The President and two deputies are selected by the members with the agreement of the standardization committees. The Director of DIN is appointed at the suggestion of the President and the deputies. The Director is an employee of DIN.

Standards committees: There are 99 standards committees within DIN. These committees prioritize their work according to industry demand and whether the project is more suitable for international or regional standards development. Larger committees focus on issues such as building and construction, electro-technology and machinery, while smaller committees work on subjects such as units and symbols and terminology.

Business planning: The budget and program of work for each standards committee are under the responsibility of a relevant steering committee. The precondition for running individual projects is the availability of appropriate resources. There are 4,600 working committees within the DIN and 28,500 external experts.

International standardization activities and decisions: DIN sees its participation in the international arena as a way to be operationally prepared to enter foreign markets. Establishment of global networks for standards-related interests of German industry is seen as a significant strategic advantage. DIN participates aggressively in the global standards process, to develop strong relationships with other countries at regional and international standards organizations, but also on a bilateral basis with developed and developing economies.

The DIN stresses the importance of international standards as a means to protect society against the unintended harmful effects of technology. DIN standards themselves are meant to keep technical matters in hand and are geared towards technological development. This same principle underlies DIN’s approach to making internationally associated decisions for participation in standards-related activities, and for nurturing strong relationships (and alliances) with other standards organizations around the world.

2.4.5 DGN – Direccion General de Normas (Mexico)

Mandate and organization: Until 1992 it was the only government agency responsible for the preparation of standards. In 1992, mandatory standards became the responsibility of different government departments within their specific jurisdictions. All voluntary standards have been developed and promoted in conjunction with the private sector through DGN. The standards department of DGN is part of the Ministry of Trade and Industrial Development.

Advisory committees and representations: Several National Standards Advisory Committees (NSACs) work for the DGN in preparing standards. Private standards development organizations (SDOs) develop voluntary standards. The criterion for accreditation as an SDO includes that the sole corporate purpose of the organization must be in the area of standardization and that standards are to be developed utilizing committees comprising representatives of national producers, distributors, traders, service providers, consumers, postgraduate and scientific institutions and professional associations. These committees are known as National Technical Standards Committees.

Consultation with stakeholders: Government agencies prepare drafts of standards and submit these drafts to the appropriate National Standards Advisory Committees (NSACs). The NSACs consult with Mexico's private sector. It is within these NSACs that standards are determined. The same procedure is followed to modify or revise an existing standard.

Standards setting (mandatory): Mexican standards (NOMs) are drafted by Mexican government agencies within the various ministries responsible for regulating or monitoring the products, services, processes or facilities within their respective jurisdictions. An agency may request information or samples of products from manufacturers, importers, service providers, consumers or labs. Information provided is confidential. The agencies also take into account existing international standards.

Standards setting (voluntary): The process for setting voluntary standards includes research and identification of relevant and related international standards and industrial consultation and research to determine the national level of technology in the sector. A standard is prepared in accordance with NOMs specifications and requirements for national approval by DGN.

2.4.6 SIS – Standardiseringen I Sverige (Sweden)

Organizational structure: SIS is an independent non-profit association. It has a Board of Directors with representatives from private enterprise, the public sector and public interest groups. It also operates commercial enterprises. All major industrial and trade associations are members of SIS. It is incorporated by private law but is granted official recognition by the government.

General assembly: A general assembly forms SIS's highest decision making body. It has fifty members representing the Federation of Swedish Industries, the government and the standardizing bodies. Active members can appoint one representative, each authorized standardizing body can appoint one representative. The federation of Swedish Industries appoints fifteen members, and the government appoints another fifteen members. The general assembly meets once a year and decides on the size of membership fees and appoints an Executive Board.

Executive Board: The Executive Board consists of a chair, deputy chair and eight members. The chair is appointed by the government on the recommendation of the Federation of Swedish Industries. The Executive Board approves the authorizing of standardizing bodies and determines, among other things, regulations, the budget and guidelines for SIS activities. There is also a Swedish Standards Board that consists of a

chair and three other members appointed by the general assembly, as well as SIS's managing director.

Committees: Standardization is carried out in more than 600 technical committees or working groups. A total of about 1,300 meetings are held annually. The work is administered by the authorized standardizing bodies within Sweden. More than 6,300 Swedish experts from manufacturers, users, and other stakeholder groups take part in standardization activities. Most represent business and industry. Many of the representatives are small and medium-sized companies.

Standards development bodies: Swedish standards are prepared by eight separate standards bodies authorized by SIS for standardization work within their special fields of activity. About 1,500 new or revised standards are approved every year, of which more than 95% are based on global or European standards.

International standardization activities and decisions: Since SIS is supported by all sectors of Swedish industry, trade and business life, and by the government, SIS represents the consensus position of all its stakeholders. The SIS decision-making process reflects its membership and a joint government-industry partnership in the national standards process. For example, while the government appoints the chairman of SIS, it only does this after consultation with the Federation of Swedish Industries, a strong coalition of industry interest groups.

2.4.7 SNZ – Standards New Zealand

Organizational structure: SNZ is the trading arm of the Standards Council, a crown entity operating under the Standards Act. The Standards Council is an appointed body with representatives from all sectors of the community. It oversees the development and adoption of standards and standards-related products. There are twelve members on the Standards Council. The Council reports to Parliament through the Ministry of Commerce.

The core staff of the Council manages over 1,755 projects with over 2,397 representatives on 1,139 standards development committees, which are often internationally based in their orientation.

Sector advisory boards: SNZ works closely with a number of sector advisory boards to determine what standards products should be developed and in what priority. In general, development of standards documents is done by committees which represent the interested parties.

Standards development: SNZ has three standards development divisions: energy and communications; health, safety and environment; building, fire and local governments. Each of the standards development divisions has widespread links with government, industry and concerned individuals nationwide. Participation of stakeholders in the standards development process is through technical and advisory committees and consultations.

SNZ does not receive government funding and can only develop those products that have full contractual support from stakeholders or that have sales revenues sufficient to cover costs.

Joint technical committees with Australia: New Zealand participates in joint technical committees with Australia. These are composed of balanced representation of interested parties and are permanently constituted entities, with members representing relevant nominating organizations. The policies under which these committees are constituted and managed, are determined by the standards policy boards of the national standards bodies of Australia and New Zealand.

International standardization activities and decisions: SNZ is primarily involved in the development of international standards that might have a significant effect on trade in New Zealand. Within this trade-related priority, SNZ is also focusing on aligning its national standards more closely with international standards. SNZ also works closely with its Australian counterpart, to impact on regional and international standards activities.

2.4.8 SAA – Standards Association of Australia

Organizational structure: SAA is a non-profit organization incorporated under a Royal Charter. It has no shareholders, but it operates in a very commercial manner. It is always seeking ways to improve efficiency. SAA owns QAS (Quality Assurance Services). QAS provides a range of system and product certification services. It operates internationally through a network of offices and strategic alliances.

An SAA Council: The governing body of SAA is a Council that is comprised of representatives from Commonwealth and State governments, manufacturing and commercial associations, professional institutes, academia, trade unions, consumer and community interest groups. The Council has 120 members. Every year the Council elects a board that oversees the normal business operations and appoints a Finance and Audit committee to supervise financial budgetary control. Four Standards Policy Boards provide the formal link between the Standards writing committees and the Board. They establish general policy direction for standards preparation activities.

Technical committees and volunteers: There are 8,500 voluntary experts serving on 1,600 technical committees. Technical committees are meant to represent national interests. Members are representatives of sectors of interest nominated by government bodies, industry associations, community based and consumer organizations, and trade unions. These technical committees prepare standards. Because they are unpaid they represent the broadest possible spectrum of interests. Each committee has a volunteer chair and a project manager from SAA.

Sector groupings: SAA is involved in the following three generic standardizing areas: building and construction (ensuring contemporary standards, increased national liaison and cooperation, risk management); electrotechnology (safety and efficient energy, the environment, electricity, radiation, information technology and health); multitechnics (management standards, ISO 9000, ISO 14000, health and safety standards).

International standardization activities and decisions: While the SAA makes some international decisions based on issues deemed nationally important, such as safety or health, trade issues are also a primary determinant of the association's international participation. It is important to understand that there are close links between Australia's trade priorities and its major industry. Since SAA is generally responsive to and dependent on external sources – i.e., industry associations, government departments and consumers – these groups play an important part in shaping the nature of the association's international participation.

2.4.9 UNI – Ente Nazionale Italiano di Unificazione (Italy)

Organizational structure: UNI is a non-profit organization. It is an open and transparent organization that acts as a means of support to the market and producers. There is an Assembly that oversees the work of UNI. The Assembly is made up of various members (business, scientific and academic institutions, professionals and the government). The Assembly nominates a Board which is partly made up of UNI members and partly of affiliated bodies. A UNI President and four Vice Presidents are elected by the Board. There is also an Executive group made up of the President, the VPs, a representative from each department of Industry and from affiliated bodies. The Executive group also includes representation from a Central Technical Committee and a Director of UNI.

Technical committees and affiliated bodies: There are 54 internal technical committees and 14 external affiliated bodies. These committees are entrusted with the development, publication and promotion of technical standards for all areas of industry, commerce and for the services field.

International standardization activities and decisions: Since the members of UNI represent a cross section of industrial and commercial concerns, academics, and members of industrial associations and private citizens, UNI tends to reflect the consensus positions of its varied membership at international venues.

2.4.10 JISC – Japanese Industrial Standards Committee (Japan)

Organizational mandate and structure: JISC is established under the Industrial Standardization Law as an advisory organization to Ministers in charge of the elaboration of the Japanese Industrial Standards (JIS) and the designation of the JIS Mark to products.

JISC consists of the “General Meeting”, a standards council, 31 divisional councils and 1,008 technical committees, which have an elaborate membership which include producers, consumers, distributors, and academics as their members.

International standardization activities and decisions: JISC recognizes that standards and certification systems may have adverse effects on trade when they are different among countries. As a result, JISC pays careful attention when defining its international priorities. In general, the international emphasis is on standards that respond to consumer protection, industrial interests, welfare of the aged and environmental protection – with significant interest in international activities that stand to

impact trade flows. Since JISC is made up of 31 divisional councils which have all concerned interests of producers, distributors, users, consumers and academic circles as their members, these groups have a significant opportunity to impact on establishing national standards priorities for Japan. The decision-making process is based on a central planning system, with extensive consultation with stakeholders.

2.4.11 Positioning of Standards Organizations

Exhibit 2-5 compares the positioning of certain other national standards organizations with that of the Standards Council of Canada. This Exhibit is by no means an exhaustive Survey of national organizations. Instead, it is a representative set of national standards bodies: ANSI, BSI, AFNOR, SAA and JISC. Each of the chosen organizations is organized in a different way. The different structures of these organizations ensure a

Exhibit 2-5: Positioning of the Standards Organization Within the Standards System

	Canada: Standards Council of Canada (SCC)	United States: American National Standards Institute (ANSI)	United Kingdom: British Standards Institute (BSI)	France: Association Française de normalisation (AFNOR)	Australia: Standards Association of Australia (SAA)	Japan: Japanese Industrial Standards Committee (JISC)
National Mandate	To promote efficient and effective voluntary standardisation in Canada.	To enhance the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards.	To develop standards or services and generic management systems that serve the best interests and needs of stakeholders.	To represent and defend French interests within all standardising bodies, approve standards, and to promote and facilitate the use of standards.	To excel in meeting national needs regarding standards, which enhance Australia's economic efficiency and international competitiveness.	To improve the quality of products, rationalise production and ensure fair and simplified trade through the establishment of appropriate standards.
Public/Private Orientation	Crown corporation.	Private, non-profit membership organization.	Non-profit organization incorporated under Royal Charter.	Privately incorporated institution supervised by government.	Non-profit organization incorporated under Royal Charter.	Branch of government – MITI.
Standards Activities	Accreditation education/promotion Strategy	Accreditation education/promotion Strategy	Prepares standards Conformity assessment (including certification, quality assurance) Education/promotion Strategy	Prepares standards Quality assurance Education/promotion Strategy	Prepares standards Conformity assessment (including certification) Education/promotion Strategy	Prepares standards Accreditation Conformity assessment (including certification) Strategy
Funding	50% government 50% other	100% other	4% government 96% other	22% government 78% other	3% government 97% other	100% government
Sector Representation	Advisory and policy committees	11 Standards Boards	8 Standards Sector Boards	21 Industry Sector Programs	4 Standards Policy Boards	Industry consultation process and 31 divisional councils
Setting Priorities for International Participation	Committees advise SCC on virtually all aspects of its operations.	Technical Advisory Groups collect input and develop U.S. consensus positions on technical issues.	Sector Committees ensure standards are developed to meet market needs and demand.	Strategic Orientation Committees (COS) define priorities and are involved in funding decisions.	Technical Committees represent national interests and draw on a range of sectors for participation.	Centralized strategic & business planning process, with input from industry sectors.
Decision-Making Structure	Fragmented decision-making structure.	De-centralized decision-making structure.	Decision-making process mirrors private corporation approach.	Streamlined decision-making process.	Streamlined decision-making process.	Central planning process.

more fruitful comparison, for the main purpose of the Exhibit is to highlight how different countries address similar standards-related decisions.

Mandates are similar: As the Exhibit shows, the mandates of the various standards organizations are very similar. In general, these organizations are all striving to develop standards systems that enhance competitiveness, meet market needs and reflect stakeholder interests. To an extent, this is where the uniformity ends, for while each organization ultimately makes decisions concerning international participation and priorities, the path taken towards arriving at these decisions is generally quite different.

Public/private affiliations: For one thing, national standards bodies are spaced out along the public/private spectrum. At one end sits JISC, an organization that is a branch of the Japanese Ministry of Industry, Trade and Investment (MITI). ANSI, an organization that is completely independent of government, is at the other end of the spectrum. SCC, BSI, AFNOR and SAA fit somewhere in the middle. These four organizations all have an affiliation with government, be it through a Royal Charter, government supervision or by means of Crown Corporation status. It is important to note, however, that unlike the SCC, an organization that depends on government for about half its funding, BSI, AFNOR and SAA are redesigning their relationships and reliance on government – they are moving towards the private sector model.

Decreasing reliance on public funds: These organizations have managed to decrease their reliance on public funds by increasing the scope of their commercial activities. BSI, AFNOR and SAA all sell memberships, standards and other services. Yet, these organizations are also involved in a wider range of activities than is the SCC. While the SCC accredits standards developers and conformity assessors, BSI, AFNOR and SAA actually prepare standards and perform conformity assessment themselves. Without discussing some of the funding challenges facing the SCC (see Chapter III), it is sufficient to note that standards organizations that are more closely involved in the standards-preparation/testing process have more options available to them to seek alternative funding mechanisms. Nevertheless, ANSI, an organization that like the SCC is an accreditor, not a developer, does manage to fund itself through commercial activities, i.e. selling publications and memberships.

The gist of this discussion is that the funds an organization has available to it impact the scope of decisions the organization is able to make. Generally, the more commercial activities an organization undertakes, the more opportunities that organization has to raise additional funds. The better funded an organization is, the higher the probability that the organization will be able to make sound decisions that are not constrained by resource issues.

Stakeholder contribution to decision-making process and sector representation: While funds impact how an organization makes decisions, the frameworks that guide organizational decision-making capacities also impact the scope of decisions organizations make. In many ways, an organization's decision-making framework begins with the input of key stakeholders. Each organization examined in Exhibit 2-5, including Canada's SCC, has a system in place whereby stakeholders contribute to the decision-making process. Canada, however, is the only country that

does not have an explicit sector-specific focus and structure within its decision-making process at the SCC level. Admittedly, the SCC does have a system of advisory committees through which industry stakeholders have an opportunity to communicate their views, but these views are not necessarily considered on a sector-by-sector basis within a formal structure that is sector-based, as is the case in other countries.

The nature of sector representation differs between countries. For example, JISC relies on an extensive system of industry sector consultations. Thirty-one divisional councils make up part of the JISC system, and relevant sectors are consulted before JISC makes decisions. ANSI, BSI, AFNOR and SAA all have sector-specific boards or programs in place. These boards generally help focus the decision-making process by allowing relevant sectors to play a part in setting standards related priorities.

Fragmentation vs. cohesiveness in the system: The decision-making process in Canada appears to be more fragmented than in other countries. In Japan, there is a well-organized central planning system that makes decisions based on stakeholder inputs. In addition, the systems at AFNOR and SAA appear to be much more streamlined than the Canadian system. This is not saying that the Canadian system of advisory and policy committees does not help set priorities, but that without a more clearly defined management structure that underlies the decision-making process, with clear definitions of roles and responsibilities, it is less obvious how the key players in the system are involved in the decision-making process, when compared to other national systems. Exhibit 2-1 provided the notion of what is meant by a “management structure that underlies the decision-making process”. For example, because BSI mirrors a private corporate management system, and SAA and AFNOR have priorities-setting systems that appear to be streamlined within an integrated management structure, they appear to be more cohesive in exercising their respective roles as national standards bodies.

More than an advisory role: It is also worth noting that the committees that arise from sector and stakeholder boards from within the American, British, French and Australian standards bodies, appear to play more than an advisory role. To varying degrees, these committees seek consensus, and appear to be involved in setting priorities and funding decisions. In this respect, the committees, and a wider range of stakeholders, appear to be a more integral part of the standards systems in these other countries. A greater emphasis on stakeholder opinion does not necessarily (or automatically) mean that better decisions are made. It does, however, suggest that decisions representative of national and stakeholder interests are made, allowing these organizations to claim credibly that they are meeting the general mandate of developing standards systems that enhance competitiveness, meet market needs and reflect stakeholder interests.

2.5 Strengths and Weaknesses

During the Survey and interview components of this study, participants in the NSS were asked about the strengths and weaknesses of the Canadian standards system with respect to the key issues being addressed in this study – i.e., decision-making and priority-setting activities, and funding as these relate to international standards-related activities. This

section of the report presents the views expressed to the study team regarding strengths and weaknesses through the Survey and interviews. These views are organized by the two key focus areas of this study: (i) decision making and priorities setting for international participation in standards activities, and (ii) related funding issues.

2.5.1 Strengths

In response to a question in the Survey about whether “Canada has one of the best national standards systems in the world – i.e., the NSS [National Standards System of Canada]”, only 8% strongly agreed and 28% agreed with this statement. The low level of agreement with this statement suggests that, in general, the Canadian standards community believe that there is much room for improvement in the NSS, at this point in its development, for it to be considered “one of the best in the world”. Nonetheless, respondents did provide many positive comments about the system. The following summarizes the main strengths.

Decision making and priorities setting for international participation: The SCC, and the NSS in general, relies on market mechanisms, standards development and conformity assessment organizations, and a network of volunteers and advisory committees to ensure that the right decisions are made in the interest of Canada and Canadian citizens and organizations – including government and industry, and consumer and other public interest groups. This foundation of the Canadian system was not challenged in any serious way during the course of the consultations undertaken by the study team. There certainly does appear to be a clear consensus on the fundamental principles underlying our National Standards System of Canada.

One of the most cited strengths of the NSS is that it is a volunteer-based system that provides very well developed and widely accepted standards, and provides effective Canadian standards positions (on the international standards development and national scenes). The decision-making process of the NSS is well served in that it is a volunteer-based system (however, this is not to say that, in the same instance, it is as good as it can be, and should be).

Another strength is that all stakeholders are given the opportunity to be represented in the system. Although this does not always happen because of resources and timing (see weaknesses section below), the system is nevertheless set up to be inclusive, with full representation of stakeholders.

The NSS as a whole, including the SCC, is considered to be moving towards becoming more effective in using new methods of communication to advance the decision-making process for standards development and to render more effective the activities completed by the various stakeholders in international standards activities.

As a national standards decision-making body, and international representative for Canada, the SCC is recognized amongst other national standards bodies as a leader. This is an important distinction, to present a positive image of Canada in the world of standards.

While much was spoken about ineffective information dissemination, the SCC has made great strides in developing new approaches for disseminating information on standards development and on activities and outcomes – including outsourcing some of these functions.

A more structured *Canadian Standards Strategy* approach has been introduced into the system, and this is considered to be a strength, and “the right step in the right direction”.

The NSS is also considered to be strong in the sense that the mechanisms that are in place for revising and updating (or withdrawing) standards are effective. In addition, appropriate NSS mechanisms are in place, to ensure important international and national standards-related issues are brought forward and discussed in the right forums.

The accreditation programs of the SCC, and other mechanisms for ensuring that standards development and conformity assessment organizations have credible practices, is one of the NSS’s most convincing strengths.

Finally, it is recognized by many of those who were consulted for this study that the SCC has taken many significant steps towards addressing most of the weaknesses in the system (as identified below in Section 2.5.2 and in other parts of this report). Many of these steps require some time to mature before they can be fully evaluated for effectiveness and impact.

Funding: While there are many challenges cited that are related to funding (see weaknesses section below) for international standards-related activities, most respondents to the Survey and interviews indicated that there is in fact a diversity of funding sources in the system. This diversity is considered to be a strength. For example, Exhibit A-24 in Appendix A, shows that the sources of funding are generally distributed between government, industry, and other non-profit or public interest groups, and personal funding. Many volunteers actually contribute their own time and money in many situations.

To a certain extent, funding mechanisms (but not necessarily funding amounts) within the NSS are considered appropriate in that they are based on a “checks and balances” system that preserves the balance of stakeholder participation in the system – industry, government, consumer and public interest groups, and volunteers. If the system were to engender a funding rationale which empowers special interest groups, then this would run counter to the fundamentals of what the NSS system is built on (i.e., market mechanisms, public and private stakeholder participation, volunteers). It is most important to consider this principle when striving to find new mechanisms for funding. Perhaps this principle should be enshrined within the NSS – for example, it would be useful to include an appropriate description of this principle in documents that concern the NSS (e.g., the *Canadian Standards Strategy*) and in documents that describe the activities of SCC within the system (e.g., SCC’s Corporate Plan).

There does appear to be a consensus on this balanced approach to funding within the standards and conformity assessment community in Canada. A balance of interests needs

to be preserved, and funding mechanisms that currently exist generally strive to reflect this balance, albeit not always successfully.

2.5.2 Weaknesses

Decision making and priorities setting for international participation: Many issues related to international decision making and priority setting were raised by the individuals that were consulted for this study (in the Survey and the interviews). These issues range from the appropriate representation that results on committees, to the speed in which decisions are made – and whether these decisions are proactive based on strategic objectives, or reactive based on competitive pressures from trading partners or domestic special interests.

The key weaknesses in the NSS that relate to international decision making and priority setting, as identified by participants in this study, are as follows.

- The system as a whole needs to become more diligent in ensuring that mechanisms are in place for appropriate stakeholder representation in the decision-making process (particularly representation of consumer and public interest groups, and representation of small and medium-sized enterprises). (45% of the Survey respondents agreed that there was under representation of stakeholders in the system, and 39% either did not know or were neutral.)
- The system provides inadequate training to help volunteers participate in international standards activities that involve setting priorities and making decisions – particularly training that the SCC could be providing. (49% of Survey respondents agreed that this was the case, and 37% either did not know or were neutral.)
- The system needs to resolve issues of succession planning, because in many instances the skills and professional expertise required for reviewing decisions and setting priorities is highly specialized. When an expert retires from the system, it is often very difficult to find an adequate replacement. (50% agreed that the NSS lacks adequate succession planning, and 46% did not know.)
- There is no or little review of performance, or evaluation of impacts of participation, in international standards-related activities. (53% agreed, 40% were either neutral or did not know.)
- While it is well recognized that the *Canadian Standards Strategy* (CSS) – a potentially important component in the decision-making process of the NSS as it relates to international participation – is “a work in progress”, the NSS strategic planning process in general needs improvement. (About 29% of respondents agreed that the strategic planning process was not effective, and a high 60% were either neutral about this issue or simply did not know. Only 11% did not agree with the statement that strategic planning for the NSS as a whole is not effective.)
- The roles and responsibilities of organizations involved in the NSS are not clearly defined or well understood, particularly in terms of international standards activities

and priorities setting. (Over 50% of Survey respondents agree that roles and responsibilities of organizations involved in the NSS are not well understood by stakeholders.)

- International and regional standards development and conformity assessment activities are not well linked to strategic or business plan priorities within the NSS. (For example, 49% of respondents agreed that they cannot clearly link their participation in international standards development activities to priorities included in any Canadian national standards strategy. At the same time, a large percentage of respondents, 52%, said they were not familiar with the draft *Canadian Standards Strategy*.)
- Resource allocations for international standards participation priorities are not well linked to, or based on, business plans developed within a strategic framework that reflects stakeholders' interests and needs. (For example, 49% of respondents could not link their activities in international standards development to priorities set on the basis of a national standards strategy, and 36% gave a neutral answer to this question or simply did not know.)
- Organizational capacity building within the SCC (which encompasses the human and financial resources, and the supporting tools and facilities, that make up the organization) could be improved to provide more assurance that NSS-wide objectives will be achieved. Given the lack of clear links of international or regional activities with strategic or business planning objectives (see above point), it makes it very difficult to develop the kind of operational (or implementation) plans that will clearly identify the way that the SCC will fulfill its mandate.
- From many of the persons that were interviewed, the issue of providing guidelines for decision-making was raised. Developing a set of checklist questions to help the decision-making process was suggested by some interviewees. Checklists were provided for different types of decisions in Section 2.3 above. However, checklists by themselves are not the answer. Some of the questions on these checklists require, or pre-suppose, that a proper strategic and business planning process is in place, and that these plans are developed from within a continual improvement management structure. For the SCC, the decision-making process needs to be linked to such a management structure, to ensure that the Council has the assurance that the SCC will realize its mandate as the body responsible for effective Canadian participation in the activities of international standards organizations.

Funding: Chapter III will provide more information about funding issues for the NSS as these relate to international standards activities. Generally, the basic funding weakness that most contributors to this study have raised is that there simply is not enough of it. In Appendix A, Exhibit A-25 reveals that only 33% of respondents stated that resource allocations by their employers was adequate for Canadian international and regional standards priorities. Exhibit A-27 reveals that about 12% of respondents believe that the NSS as a whole provides adequate resources for Canada's international and regional activities.

In addition, the Survey results reveal that a large proportion of respondents (ranging from 25% to 50% on the funding-related Survey questions) simply “don’t know” or appear to be neutral about whether the funding is adequate or not. This suggests a weakness in the system that funding may not be clearly tied to priorities, or that no clear measures of relevance and performance, of funded or non-funded activities, are transparent to the participants in the system. Hence, when put to the test, respondents to the question of adequacy of funding could not readily answer. This can be considered a weakness in the system. Funding could be more appropriately tied to strategic objectives and business plans – with performance measures indicated – to provide the necessary basis to evaluate adequacy of funding.

In addition, the results of the Survey show (see Exhibit A-15 in Appendix A) that only 6% of respondents believe that the SCC provides effective funding support for international standards-related activities, and even fewer respondents (2.5%) believe that the SCC provides effective funding support for regional standards-related activities. Again, the fact that a large proportion of respondents simply “don’t know” or are neutral on this question, suggests that the system is not transparent enough – i.e., the system does not provide a clear understanding of what is appropriate funding for international standards-related activities.

2.6 Building Organizational Capacity

This section of the report discusses issues of organizational capacity within the NSS. The best of plans and decision-making models or management systems will not bear fruit unless the infrastructure is present for implementation. In this respect, there were many comments and suggestions from the Survey and the interviews regarding the NSS infrastructure (i.e., the organizational capacity which encompasses the human and financial resources, and the supporting tools and facilities, that make up the system). The findings on organizational capacity are discussed below. The organizational capacity situation in other standards organizations of other countries is also examined for comparison in this section.

Leadership and commitment: It is essential that the SCC establish a continuous strategic planning exercise to chart the medium and long term vision for the NSS, and more particularly to minimize disruptions that a change in leadership may naturally cause on such an organization. The SCC needs to impart a sense of continuity and commitment at the helm of its organization. Recent changes in management structure and leadership, and restructuring of advisory and policy committees, suggests that the SCC has been in a period of transition. Implementing a good management system approach to strategic planning and decision-making, along the lines discussed in earlier sections of this Chapter, helps address the continuity and leadership imperative.

Strategic and business planning: To many of the interview respondents, the SCC’s international involvement in standards-related activities appears to be more responsive and less pro-active. This could stem in large part by the lack of appropriate business plans, for all levels of decision making and for all participating committees and

organizations in the system. In other words, there is no clear perception by participants as to how the strategic objectives in the *Canadian Standards Strategy* (CSS) would be translated into operational priorities spelt out in a business plan. This situation may be resolved once the *Implementation Plans* that are now being developed are approved and/or revised to reflect the requirements and desires of stakeholders in the system.

Many of the stakeholders consulted for this study are quite convinced that the benefits of the CSS can only be produced if relevant business plans are derived from the strategic objectives, and if decisions about priorities (particularly those priorities of a strategic nature) are closely linked to these objectives and plans. While only about half of the respondents were actually familiar with the CSS, those that were considered this to be an important step in the right direction. However, there is a great deal of skepticism in terms of its effectiveness and timeliness. A large portion of Survey respondents (81%) agree that a Canadian-made national standards strategy is needed, but only 41% believe that the current CSS is effective and would lead to a consensus-based national strategy. Only 31% believe that the current process for developing the CSS is too slow to be considered an effective priority setting process (see Survey results in Appendix A). Clearly there is a need to build the organizational capacity within SCC to turn around the strategic planning process more quickly, to gain credibility and “buy-in” to the process by stakeholders.

ISO principles for business planning: ISO standards-related activities are conducted according to the following principles:

- *consensus*: the views and interests of all are taken into account (manufacturers, vendors and users, consumer groups, testing laboratories, governments, etc.);
- *industry wide*: global solutions to satisfy industries and customers worldwide;
- *voluntary*: international standardization is market-driven and therefore based on voluntary involvement of all interests.

The key concepts underlying ISO’s operational model and business stance are: *value, partnership, optimization*. These words summarize the key strategic lines to be pursued by ISO, concerning the capability to understand, serve and possibly anticipate market needs, to ensure maximum participation and collaboration among all the relevant parties at the various stages of the ISO system, to reengineer the core business processes making extensive use of information technologies, to be able to better gather the resources required to support the ever growing standardization demands of the 21st century and to make the most effective use of them for the improvement of ISOs services and total system cost reduction. This emphasis on business planning by ISO signifies a new trend towards addressing long standing issues about standards development (e.g., speed of development and update, focus on priorities, resource management and allocation). These same issues represent challenges not just for ISO or IEC, but also for all national standards organizations such as SCC and others.

SCC is not unique in having to deal with the challenges of better business planning and improved decision making processes.

Organizational capacity building of standards organizations in other countries: In the U.S. the ANSI strategy for organizational capacity building is aimed at enabling it to:

- facilitate the development of US standards policy objectives through such organizations as the TABD, APEC and FTAA;
- promote U.S. standardization policies globally by increasing communication with national and regional standards bodies and by supporting the fast tracking of American National Standards into ISO and IEC;
- promote and facilitate the active participation of U.S. representatives in international standardization activities, particularly by determining the priorities of industry sectors for standards development.

In the United Kingdom the BSI strategy for building organizational capacity includes: increase BSI's impact and influence in international forums; obtain key secretariats/chairs; streamline standardization processes, including prioritization and project management; enhance reputation to become facilitator; promote change in CEN/CENELEC and ISO/IEC; develop Sector Board capabilities; invest in new technology; and develop a more visible customer focus. In this respect some of BSI's priorities are: better targeting of resources; clearer prioritization of objectives for BSI staff and committee members; greater accountability of BSI for its coordination of the agreed U.K. input into European and international standardization; a managed reduction in the resources devoted to low priority projects; and managed shift in the focus of the national standardization efforts from one area to another as priorities change.

SNZ (New Zealand) is committed to the rationalization and prioritization of its own international standards-related activities. SNZ has continued to withdraw standards activities for which financial support cannot be found. This approach has apparently resulted in a greater level of financial support by stakeholders and has allowed a consolidation of organizational capacity with a focus on narrower priorities. In New Zealand it is very difficult to find the funds necessary to influence the development of international standards that may have a significant effect on NZ trade. NZ invests very little in this area. The trend is to focus more on participating in regional committees and to assist with the alignment of international standards through these regional committees. For example, SNZ is very active in APEC and PASC.

Standards Australia has also undergone similar prioritization and rationalization of its activities to consolidate its organizational capacity – moving from a reactive to a more proactive role, particularly in regional standards organizations. SA's priority is to focus on standardization with national significance, such as safety and health. SA is also aware of the impact of trade. There are close links between SA and Australia's trade priorities and industry. SA is essentially responsive to external sources such as industry associations, government departments and consumers. It appears to have been successful in streamlining its activities – realizing greater efficiencies and organizational capacity to respond to national priorities.

Support mechanisms: The consultation process revealed that many stakeholders believe that the support mechanisms that the SCC provides for its volunteers need improvement. Stakeholder comments were along the following lines: administrative support is lacking, training is insufficient, funding is minimal and information dissemination is ineffective.

Most stakeholders have requested that the SCC do a better job at supporting their network of volunteers. As such, the volunteers will be able to concentrate their finite efforts and resources on added-value efforts to the community rather than administrative activities, or inefficient work.

Knowledge management and information technologies: Many of the interviewees suggested that the SCC should continue to vigorously build its capacity to deliver technology based products and to improve its knowledge management capabilities. As many stakeholders pointed out, in order for the SCC to play its pivotal leadership and “nerve-centre” role for standards development and conformity assessment in Canada, it must provide timely and accurate information.

Many stakeholders also indicated that they were swamped with information and documents, either in paper format or electronically. As such, many expressed the need for the SCC to do a more effective job at filtering the information that cascades down to the technical committees and their subcommittees. The SCC should perfect its role of a “clearinghouse” of information with the use of information technologies and knowledge management techniques. It may prove beneficial for the SCC to further its use of web-based technologies in order to provide the correct and timely information to volunteers (for example, when ballots and supporting documentation is sent out to the volunteers). The results of the Survey of volunteers indicate that a large percentage of respondents, when asked if the SCC’s Internet-based standards information system had helped to improve the standards development, the conformity assessment, and the decision-making process for standards-related activities, could not respond and replied that they “don’t know”. The responses presented in Appendix A (Exhibit A-19) suggest that many volunteers are as yet still unfamiliar with SCC’s Internet-based standards information system. Of those who are familiar with the system, only a small percentage about 25% agree that the SCC Internet-based standards information system has helped improve the information support mechanisms and decision-making process for standards-related priorities and activities.

Results of the interviews also confirm the views of participants in the NSS that the SCC should place a significant emphasis on utilizing electronic and information technologies to conduct SCC and technical committee related business – as one person put it, “due to the vastness of our national geography and the enormous resource base (time and money) it takes to travel to meetings”.

Use of information technologies as part of the infrastructure in other countries: Many countries have risen to the challenge and opportunity that new information technologies have presented to the standards community. Australia was the first national standards body to provide a significant portion of standards in electronic

form. SNZ is in the process of establishing a Web site that provides an electronic shop for standards, products and services.

SA is a key player in the government's secure online strategy. SA is also embarking on a major re-engineering program. SA wants to reduce the time and cost of developing standards. SA is looking for ways to transform information into knowledge. They want to deliver knowledge at an economically sustainable price. The key is to find balance between commercial pressures and the need to maintain the integrity of the standards development process.

BSI has invested in the development of secure PC-based networks that allow for the electronic delivery of drafts and other papers to committee members. BSI is also updating its standards in electronic form. Products are now available on CD. BSI is developing their on-line capabilities for the production and delivery of standards.

To meet client information needs better, AFNOR has developed a new tailor-made on-line information service and a new Web site for improving access to information. Bibliographic information is now available from AFNOR on CD-Roms.

As the demand for hardcopy versions of standards declines, DIN is developing a range of electronic products that now contribute 10% of DINs total income.

Risk management: In the context of international standards activities, there is no current evidence of risk management activities performed by the SCC, nor does it appear that there is a notion of this within the NSS as a whole. The SCC could introduce the practice of risk management and contingency planning into the system, by highlighting major risks in strategic and business plans. Risk management implies that systems are in place to monitor risk, and to determine acceptable risk levels. Significant risks are communicated to stakeholders on an on-going basis. The major risks in the context of international standards-related activities are the consequences of not participating in critical situations that impact on Canadian citizens and Canadian businesses.

As a means for managing risk, some stakeholders that were consulted as part of this study wished that funding decisions be taken with a greater participation of the experts at the operational (technical committee) level. As such, the experts at the helm of the different technical committees are better suited to make more informed decisions as to the validity and value of certain expenses. In other words, it may prove more effective, and not so risky, to allow the leaders of technical committees more say in funding considerations.

How other organizations in other countries manage risk: There is a clear process established at the DIN for drafting a standard. First, a standardizing committee needs to determine whether demand exists or is anticipated for the project; whether the interests affected are prepared to participate; whether work is already being undertaken in regional or international standards organizations; whether the subject to be standardized is appropriate for regional or international standardization; whether the financing of the associated secretariat costs is assured. The funding issue here is key. If the financing is not assured, the standard is not going to be prepared. The focus is on managing the financial risks of inappropriate international standardization decisions.

ANSI used to underwrite the costs of international participation. In a move to manage the financial risks of international standards activities, ANSI now no longer pays for the participation of those who receive the benefit of national or international participation but who are not paying their fair share. In other words, ANSI is now more in a mode of managing risk by *sharing the risk*.

Promoting private sector involvement as a means of increasing capacity: It is generally felt that provincial and federal governments should work closer together in encouraging (motivating) private sector involvement in international standards activities. While the SCC aims to promote the participation of Canadians in voluntary standards activities, and promote both private and public sector cooperation and involvement in relation to voluntary standardization activities in Canada and abroad, there does not seem to be any concerted program or plan to do this. It is true that the SCC is in fact involved in many “promotion” type activities, but these activities are not explicitly spelt out in business plans, with dedicated resources – except perhaps for ad hoc occasions and annual events.

Promotion activities of other standards organizations: ANSI’s membership allows it to promote itself as having 1,000+ member companies, 280+ professional, trade, educational, consumer and labor institution members and 30+ government agencies as members. External stakeholders are involved and included in the whole standards setting process. As a result, because others are integrated in the process from the beginning, ANSI does not need to include the promotion of others in the process in its mission. Instead, it is able to look further afield to stress the importance of developing fair standards, and to promote and facilitate the active participation of U.S. representatives in international standards-related activities.

AFNOR is seen as an organization that initiates and organizes dialogue so that all sectors of the French economy can define strategies on the standardization working being carried out in the French, European and international activities. Again, stakeholder involvement is integrated, and seen as a logical part of the standards process. Like ANSI, AFNOR’s mission is broader than SCC’s. AFNOR is very focused on promoting participation of public and private interests in international standards activities – with an emphasis on safeguarding French interests.

DIN describes itself as the roundtable where manufacturers, trade, consumers, services (anyone with an interest in standardization) meets. Again, external stakeholders are integrated into the process. It is often taken for granted that interested organizations will participate vigorously, because they do.

SIS is a private and independent non-profit organization supported by all sectors of Swedish industry, trade and business. Like the SCC, SIS’s mission is to contribute to the development of national industry and society by promoting mutual understanding and voluntary agreement between different parties in business and industry, governmental authorities, consumers and other organizations with regard to standardization. In other words, the organization’s mission is very focused on harnessing the support of stakeholders.

SNZ and SAA have both integrated stakeholders into their standards processes. SNZ aims to provide excellence in the facilitation and provision of standards solutions in partnership with the NZ standards community... “that benefit the community and national prosperity”. SAA seeks to excel in meeting national needs for contemporary, internationally aligned Standards...that enhance the nation’s economic efficiency and international competitiveness, and fulfill the standard’s community’s demand for a safe and sustainable environment. The role of stakeholders is not explicitly stated in strategic or business plans, as in the case of AFNOR or ANSI, but throughout the standards process, and through membership activities, it seems clear that there is a high level of involvement of stakeholders in SNZ and SAA international standards activities.

Transparency: Many of the persons who were interviewed considered greater “transparency” in the NSS would be a strength for the system, and an opportunity to make improvements that are beneficial to all stakeholders. In order to achieve its strategic objectives for Canada, as set out in the *Canadian Standards Strategy*, it is perceived by many of the public and private interest groups consulted, that the SCC should “get it’s house in order”, and that the organization be viewed as well managed and well lead. This is considered important, to increase the credibility of the organization, and to lay the foundation for commitments by stakeholders and interest groups to invest in the system. No one individual or organization is likely to contribute their time or money unless there is a reasonable assurance that any time and money spent is a good investment. A likely consequence of introducing a continual improvement management system approach (see Exhibit 2-1), as a basis for decision-making for international standards activities, is that it allows for a greater degree of transparency, and hence a heightened confidence in that it can deliver on all its goals. If decisions are made within a prescribed management framework (taking into account all the key considerations laid out in Section 2.3), transparency can be achieved to the benefit of all participants in the NSS.

Reporting as a component of the transparency question: Many of those who were interviewed for this study indicated that reports on the results of participation in international standards activities should be made more widely available to Canadian private and public interests. It is the experts who participate in the process, on their respective committees, that stand to benefit the most from their involvement – but there appears to be insufficient accountability mechanisms in place to review the performance of individual committee members (Office of the Auditor General’s *Report to Members of Council, op. cit.*). Notwithstanding, the results of the Survey and interviews of stakeholders indicate that most participants in the NSS welcome greater transparency in the system, and consider that more adequate reporting on activities and performance is long over due. For example, a large proportion (over 64%) of respondents believe that there should be regular reporting on CAC and CSC members’ voting records on draft standards and on their attendance record at international meetings, and to report this information regularly to the SCC. In addition, 75% of respondents believe that there should be regular reports on results of international standards-related activities, for the benefit of all Canadian stakeholders (including industry, consumer and public interest groups, and government).

One way to measure an organization's transparency is to evaluate the information found on their Web site: The SCC's Web site (www.scc.ca) is hard to navigate, by comparison to the Web sites of other standards organizations (see below). The content on the site is deemed only average. Based on the Survey results, the rating of SCC's Internet presence was very low (see Exhibit A-15 in Appendix A, question 16(e) – only 26% of respondents thought that the SCC was effective in using Internet to support the activities of the NSS). There are databases of standards that one can search, but most other information is restricted. The site is generally a working site for those involved in the standards process and not an information site that could keep private or public interest groups informed on the process and results of standards activities and decisions. The site is in English and French. Some interviewees wondered why the SCC site was quite restricted when other organizations with members have much more transparent sites. Another issue raised regarding the SCC Web site was that it was unclear who was using it? The Web site is an opportunity to make the organization more transparent, and an opportunity for SCC to market itself to its constituencies and related stakeholders. In essence, the SCC Web site needs to be promoted as a tool for those participating in, and interested in, international standards-related activities.

Developing performance indicators that could provide an evaluation of the SCC Web site could be a useful initiative to more accurately assess the usefulness of the Web site. In other words, there is an opportunity for SCC to “test” its Web site to determine its effectiveness. This is appropriate in that a large proportion of respondents to the Survey, when asked if the SCC's Internet based standards information system had helped to improve the standards development, the conformity assessment, and the decision-making process for standards-related activities, could not respond and replied that they “don't know”. The responses suggest that many volunteers who participate in international activities are as yet not sufficiently familiar with SCC's Web site.

ANSI's Web site (www.ansi.org) is very easy to navigate. Like the SCC's site, the ANSI's site is geared to those involved in the standards process, but since there is a clear path for becoming a member this is more acceptable. Nevertheless, the site contains a lot (perhaps too much) general information. It is only in English. Much more relevant and useful information is available on this site, making the standards process in the U.S. easier to understand, which is good not only for American users but Canadians too.

AFNOR's Web site (www.afnor.fr) is only moderately easy to navigate but the site's content is excellent. There is almost too much information (activities, services, selection, exchanges). The site is not a working site for members but it is a window into the organization's activities. There is, however, a database that catalogues available standards. The site is in English and French. It provides a very appealing image, which helps market this organization.

DIN's Web site (www.din.de) is excellent. It is very easy to navigate and the information included on the site is comprehensive and easy to find. The site is exclusively in German, but an English translation is promised. Like AFNOR, the DIN site is primarily an information site, and not a working site for members. As a result, it gives the appearance that DIN is a much more transparent organization, which contributes to the marketability of the DIN organization.

SIS's Web site (www.sis.se) is easy to navigate and includes a lot of information about the organization. It is not a working site for members, for example, one cannot search for standards on this site. It is in English and Swedish.

SNZ's Web site is only average (www.standards.co.nz). There is much room for improvement. The site provides information on what the organization is doing but there are no extras. It is now a working site. Yet, it is possible to search for relevant documents, to download handbook product sheets and the annual report on the organization.

The SAA Web site (www.standards.com.au) is excellent. It is very easy to navigate. There is a wealth of information on it: how to contact the organization, a guide for preparing standards, etc. Many documents the standards community would require seem to be available on line. This is not a working site for members only, but a working site for the public or general user as well – providing a real window into this standards organization's activities.

2.7 Opportunities

Canadian Standards Strategy: A *Canadian Standards Strategy* (CSS) has been evolving over the past year or so. The Survey and the interviews that were done for this current study reveal that, in general, volunteers/stakeholders involved in international standards-related activities support the concept of a Canadian standards strategy – 80% of Survey respondents agree that a Canadian standards strategy is needed for international standards development activities; 68% agree that such a strategy is needed for international conformity assessment activities. This support for a CSS, however, must not be confused with volunteer/stakeholder endorsement of the current CSS. In fact, 52% of respondents indicated that they were not familiar with the contents of the CSS; 23% indicated that they have not made much use of it for international standards-related activities. Ultimately, Survey results suggest that while the concept that underlies the CSS is good, further opportunities exist to fine-tune and promote such a strategy.

On the other hand, of those who were familiar with the CSS, only a small proportion of respondents (12%) felt that the process for developing the CSS would not lead to a consensus-based national standards strategy; and a small proportion (18%) felt that this would not be an effective strategy. Approximately 21% believed that it was too early to tell whether the CSS would be considered consensus-based or effective.

There is a clear opportunity to make the *Canadian Standards Strategy* a significant guiding document for the NSS, to set priorities for international standards development and conformity assessment work. 78% of respondents agreed that the CSS should identify the responsibilities of key Canadian institutions and stakeholders for achieving Canadian international and regional strategic standards goals. 64% of respondents agreed that the SCC should oversee the implementation of a consensus-based CSS and that all participants in the NSS should be accountable for achieving the goals of this strategy. 64% of respondents agreed that the CSS should prioritize five to ten key

strategic initiatives that require special attention and resources. 60% of respondents agreed that the CSS should also include regional standardization priorities for Canada.

These Survey results suggest that there is a majority of participants in the NSS that believe there is an opportunity for the NSS to develop the kind of strategy that will be national in scope, and will address Canadian interests in setting priorities. However, it is also true that many of the respondents to the Survey did not believe that there was much linkage between their current international standards development and conformity assessment activities to any strategic plan or planning process.

Business and implementation planning: There is an opportunity to improve the business and implementation planning system within the NSS. 64% of respondents to the Survey agreed that resource allocation within the NSS (for funding and human resources) should be based on business plans that match up with a consensus-based Canadian standards strategy. 58% of respondents agreed that the CACs for ISO and the CSC's for IEC should develop their own separate business plans that reflect strategic priorities established by a consensus-based national strategy for standardization. Such business plans would need to include some clear performance indicators, to measure results and impacts of international standards-related activities. A reasonable and clear time for achieving results from standards-related activities needs to be identified, which would help establish a more reliable performance measurement system emphasizing outcomes as opposed to process.

Clarity of roles and responsibilities: The results of the Survey indicate that very few respondents (9%) believe that participants in international activities have a clear understanding of their roles and responsibilities as they pertain to meeting Canada's strategic standards priorities. This can be achieved if a business and implementation planning process is built into the international decision-making system. The business and implementation plans would be expected to assign clear roles and responsibilities to the participants in the system, especially concerning various action items and related work instructions. 52% of respondents felt that roles and responsibilities of organizations involved on the international side of the NSS are not well understood by some important stakeholders.

Better training, continuous information dissemination and more formal business plans that are derived from strategic planning documents will ensure that each volunteer in the NSS better understands his/her roles and responsibilities regarding international participation. To supplement this need for better defined roles and responsibilities, there is an opportunity to introduce a more results-based management system as discussed earlier in this report. This system would require that each committee or group of volunteers establish precise goals or outcomes for its activities in order to be monitored on a regular basis by the SCC. The goals or outcomes to be targeted should complement and flow from the strategic goals the NSS establishes for Canada.

Decision-making model: There is an opportunity to improve the decision-making model of the NSS without changing the fundamental structure of the system. The opportunity is to make it more clearly linked to a continual improvement management system cycle, as discussed in earlier segments of this report. By linking the decision-

making process to a management system encompassing strategic objectives, business and implementation planning, performance measurement and management reviews, the system will have a more complete and comprehensive approach to setting priorities, allocating resources, and identifying the appropriate activities as linked to plans and priorities.

There is evidence that the current decision-making process of the NSS is not generally well understood by stakeholders. During the interviews conducted for this study, for example, many of the respondents were not aware of the specific terms of reference of the various committees in place that provide advice to Council. Most respondents to the Survey and the interviewees felt that the NSS and the SCC processes, for international standards development and conformity assessment activities, are not clearly linked to a formal decision-making system (i.e., a system that sets strategic priorities, and lays out business plans from which decisions and activities can be taken and prioritized).

At first glance, the NSS decision-making process seems to be flexible enough to accommodate changing circumstances and needs. However, a second look indicates that the process is flexible because it does not have structure built around an appropriate continual improvement management system approach. The process tends to be more ad hoc and responsive, and hence in this sense it is flexible. However, this decision-making model, while flexible, does not lend itself to adequate planning and implementation needed for setting priorities, acting on them, and measuring results.

Stakeholder input/involvement: The high percentage of “don’t know” answers on some of the questions in the Survey sends a very significant message to the officials who are in charge of the NSS. It appears that many stakeholders are not well informed about many key aspects of the NSS. For example, as indicated in the discussion above, too many respondents are not clear about the roles and responsibilities of different stakeholder groups and organizations in the system. Too many participants (50%) in the system cannot link their activities to strategic priorities. Too many participants (52%) in the system are not aware of the CSS. Too many participants (60%) in the system cannot provide an opinion about the SCC’s Internet-based standards information system as a support tool for standards-related decision-making and activities.

What is the significance of these findings with regards to “stakeholder input/involvement”? The significance is that this strongly suggests that too many stakeholders are not sufficiently linked up with the system, are not aware of its strategic directions and support mechanisms, and are consequently less likely to provide relevant and informed input for setting priorities and making decisions. One respondent during an interview for this study suggested that the greatest threat to our NSS system is “*ignorance*.” The Survey findings, unfortunately, confirm this observation.

There is an opportunity to improve the stakeholder representation in the NSS. For example, 45% of respondents to the Survey agreed that there is under-representation of certain stakeholders (e.g., small and medium-sized enterprises, SMEs) in the NSS (26% did not know). Analysis of SCC’s volunteer list also suggests that industry is under-represented, especially for SMEs. Significant resources need to be invested to reaffirm

the importance of standards development for industry, in order to augment their participation in standards and conformity assessment related activities.

The SCC does provide considerable support to its committees and their members in the accomplishment of their standards related activities. Nonetheless, many interviewed volunteers have indicated that the SCC total contribution to their participation is minimal (e.g., travel allowances cover only partial travel costs). Therefore, the level of support required needs to be supplemented. For example, training is a key activity in bringing and keeping volunteers “up-to-speed” on how they should conduct NSS or SCC related activities for international standards work. Survey results indicate that volunteers are very dissatisfied with the training offered by the SCC. Only 14% of respondents believe that there is adequate training offered by SCC to help volunteers participate in standards activities. There is an opportunity for SCC to improve its training programs – and there are initiatives currently underway within SCC to address this issue.

Performance measurement: A large proportion of respondents to the Survey (67%) indicated that a condition for funding support to CACs and CSCs should be that they provide regular (e.g., quarterly) reports to Canadian national committees (e.g., CNC/ISO and CNC/IEC) on their activities, including the number of members, representation of interest groups, details of contributions from members and details of meetings. Such reports would also need to include some clear performance indicators, to measure results and impacts of international standards-related activities.

Generally, all the organizations involved in the NSS came up short in the Survey in monitoring and reviewing performance and results of international standards-related activities. Only 20% of respondents indicated that SCC is effective in this, only 15% thought SDOs are effective. Worst of all, only 3% of respondents thought that “Canadian governance and policy committees” were effective in monitoring and reviewing performance and results of international standards-related activities – with the caveat that actually a whopping 73% had no opinion about the matter at all because they “don’t know”.

There clearly is room for improvement in this area for the NSS, and for SCC as the responsible representative of Canada in international standards forums such as ISO and IEC. 54% of respondents to the Survey agreed that there is no or little review of performance within the NSS, or evaluation of impacts of participation in international standards-related activities (a relatively large proportion, 25%, did not know whether there was or not any review of performance). On the other hand, 68% of respondents indicated that there should be adequate resources allocated to undertake performance review and evaluation of impacts of Canadian participation in international standards-related activities – to feed into the strategic planning and priority-setting process.

Measuring the success and results of international standards and conformity assessment activities is undoubtedly the weakest link in the entire standardization process of the NSS and the SCC. Very little effort and resources appear to be dedicated to measuring and monitoring the results, outcomes and successes of the activities of volunteers and their respective committees. As the results of the Survey show (see above), there is little evidence of performance measurement or results-based management systems that feed

information into the strategic planning and priority-setting activities of the NSS and the SCC. As such, there is an opportunity for the SCC to implement monitoring and measurement systems for it to evaluate the performance and outcomes of current NSS activities.

Organizational capacity: The best of plans and management systems will not bear fruit unless the infrastructure is present for implementation. In this respect, there are opportunities to further build the NSS infrastructure (i.e., the organizational capacity which encompasses the human and financial resources, and the supporting tools and facilities, that make up the system). As discussed earlier in Section 2.5, opportunities for improvement in areas of management practices organizational capacity include: leadership at SCC (e.g., stability/continuity, and vision); management of volunteer input and involvement; knowledge management; business planning and resource allocation; reporting on results and performance measurement.

There has been a recent attrition at SCC leadership positions within the organization, which has created a void and is likely having an impact on the day-to-day management and long term direction of the organization as a whole. It is essential that the organization establish effective strategic and business planning practices to chart a long term vision, and more particularly to minimize any disruptions that changes in leadership may naturally impose on the organization.

There are similarities in the leadership situation of SCC with standards organizations of some of our trading partners. For example, like in Canada, the heads of AFNOR (France), DGN (Mexico) and SIS (Sweden) are appointed by the State. In Sweden, however, the chair is appointed by the government on the recommendation of the Federation of Swedish Industry. The Swedish Standards Board consists of the chair and three other members appointed by the DA, as well as SIS's Managing Director. The President of the DIN (Germany) has a two year term. The President and the two deputies of DIN are selected by the members of the DIN with the agreement of the Director of the DIN and of the Directors of the major standardizing committees. The Director of the DIN is appointed at the suggestion of the President and the deputies. The Director is an employee of the DIN and can make suggestions to the President as to how to run the association.

Generally, however, in these standards organizations of other countries, the decision-making process is more formally structured than in Canada, allowing for priorities to be set that are more closely linked to strategic and business planning systems.

III

Funding for International Standards-Related Activities

This Chapter begins by setting out key funding issues for international standards-related activities raised by stakeholders in the Survey and during interviews. It then looks at how the SCC is funded, and discusses some funding trends over the past decade. This Chapter also provides background information that clarifies the nature of international funding questions facing the SCC. Funding options that relate to international participation are also presented for Council to consider.

3.1 Issues Raised by Stakeholders

The success of the NSS depends in part on the availability of funds to maintain the system and to support stakeholders. Stakeholders agree that it is of the utmost importance that Canada participates in international standards activities. This participation is only becoming more important, for as the world becomes increasingly globalized, internationalization of standards and multilateral/bilateral recognition of national standards systems are gaining a new prominence.

As a result, stakeholder comments regarding funding issues reflect an expectation that costs associated with international standards-related activities are only going to increase. To compound the effects of rising costs, the funds available to offset these costs are decreasing. Already, according to one volunteer, “funding is grossly inadequate.” For Canada to continue to contribute in a meaningful way to international standards-related activities, it is imperative that the SCC explores ways to offset the costs borne by volunteers participating in international activities.

Stakeholders and volunteers identified a number of funding related issues. Key issues are listed below:

- While the federal government plays an important funding role, there is room for the government to become even more involved in the development of standards at the international level.
- Volunteers devote more time and resources to the development of international standards than does or could the SCC.

- Many volunteers undertake international activities during their spare time in part or fully at their own expense. This raises two additional issues:
 - Volunteers can only afford to devote a minimal amount of time to international activities.
 - Volunteers should not fund professional activities.
- Despite the fact that industry tends to benefit greatly from the existence of well-considered and harmonized international standards and conformity assessment systems, industry does not always see participating in standardization activities as adding value to short term profitability.
- There is no clear consensus as to what share of the process industry should assume. Some feel that industry should contribute more; others feel that it is already costing industry too much to participate in international activities.
- Small and medium-sized enterprises (SMEs) cannot afford to contribute towards the development of international standards and conformity assessment systems to the same extent that large organizations can.
- Similar to SMEs consumer and other public interest groups cannot afford to contribute towards the development of international standards and conformity assessment systems.

All of the above-mentioned issues, however, are linked to the issue of prioritization. Stakeholders stressed that the SCC needs to devise a system for prioritizing its activities and funds. (Chapter II of this report sets out a decision-making model that includes activity prioritization). Until international activities are prioritized, it will be difficult for the SCC to credibly request additional resources from government or for the Council to convince industry to assume a larger funding role.

Underlying all of this is the fundamental principle of balance in representation within the NSS. To a certain extent, funding mechanisms (but not necessarily funding amounts) within the NSS are considered appropriate in that they are based on a “checks and balances” system that preserves the balance of stakeholder participation in the system – industry, government, consumer and public interest groups, and volunteers. If the system were to engender a funding rationale which empowers special interest groups, then this would run counter to the fundamentals of what the NSS system is built on (i.e., market mechanisms, public and private stakeholder participation, volunteers). It is most important to consider this principle when striving to find new mechanisms for funding.

3.2 SCC Funding

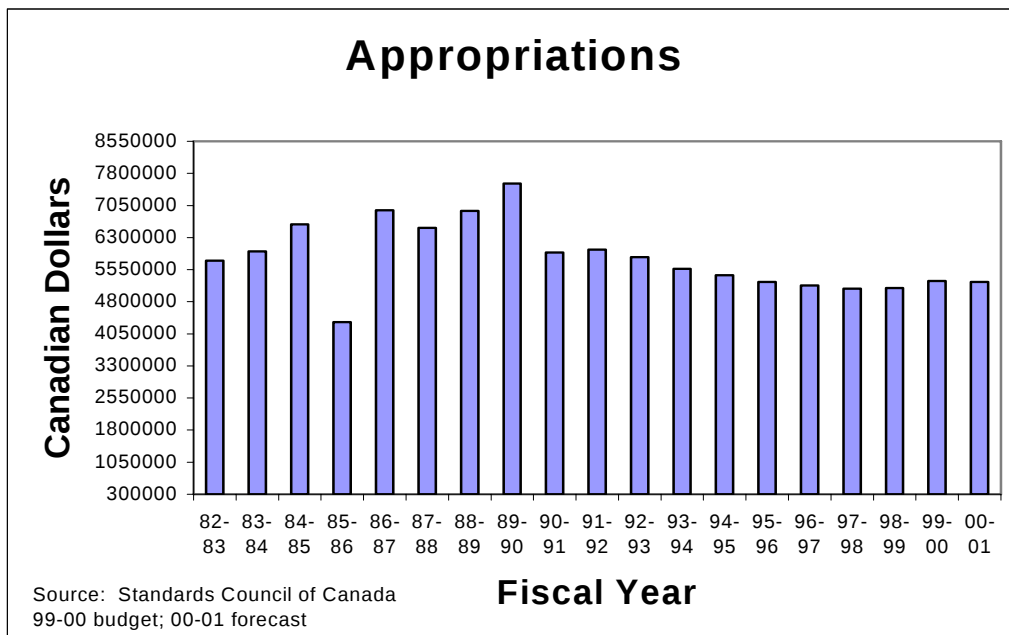
The SCC relies on a variety of sources for its income. First, the SCC receives a large government appropriation that currently makes up about half its income. The SCC also

receives some revenue from the sale of standards and information research services, and gets a large proportion of its revenue from accreditation fees. Finally, the SCC has received funding in the past from a miscellany of other sources (e.g., Standards Initiatives Program (SIP) project funding, WTO/NAFTA Enquiry Point requests, interest and advertising) for the rest of its income.

The purpose of this section is to discuss the reality of SCC funds and to note some related funding trends over the past two decades.

Government appropriations: For the fiscal year that ended March 31, 1999, the SCC had revenues of \$4,239,185 and expenses of \$9,189,185. Parliamentary appropriations (and some industry contributions) of \$4,950,000 made up the shortfall.³² As noted above, the major portion of SCC funding is from government appropriations. Yet, as a proportion of SCC funding, government appropriations have declined substantially since 1982. Not only are appropriations less on a dollar-per-dollar value, but since the SCC participates in certain commercial activities, such as the sale of standards and standards information research services, and more particularly, receives accreditation fees, the government grant is a smaller percentage of the SCC's funding than it was in years past. Exhibit 3-1 illustrates appropriation levels from 1982 to the present day. The exhibit also includes the budgeted appropriation for fiscal year 1999-2000 and the forecasted appropriation for fiscal year 2000-2001.

Exhibit 3-1: Government Appropriations

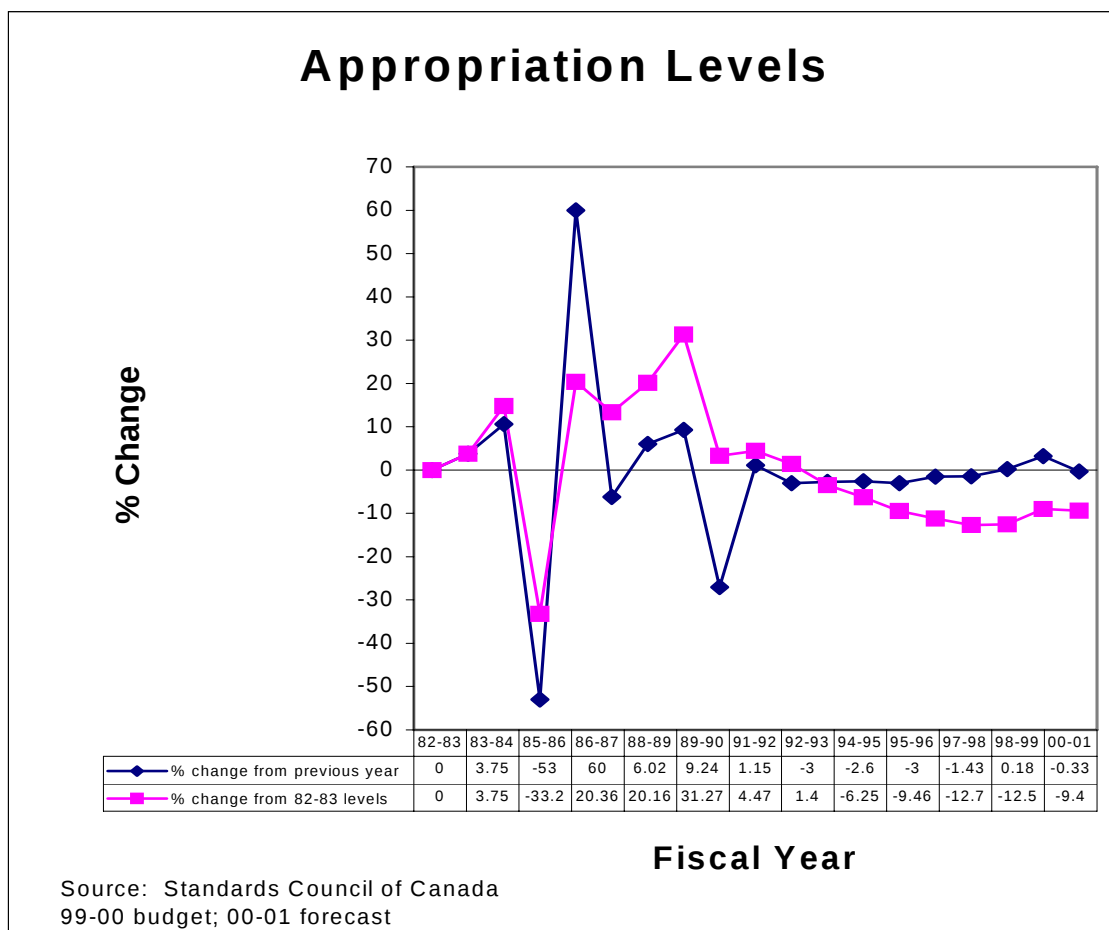


³² Summary of the Operating Budget, FY 1999-2000, Standards Council of Canada.

The exhibit shows that while government appropriations generally increased between fiscal years 1982-1983 and 1989-1990 (fiscal year 1985-1986 being the exception), since fiscal year 1990-1991 appropriation levels have dropped substantially. Appropriations are expected to increase slightly in fiscal year 1999-2000, but ultimately, the appropriation that is forecasted for fiscal year 2000-2001 is lower than the appropriation of fiscal year 1982-1983. This picture becomes more dramatic if one considers that these figures are given in nominal dollars, with no adjustments for inflation.

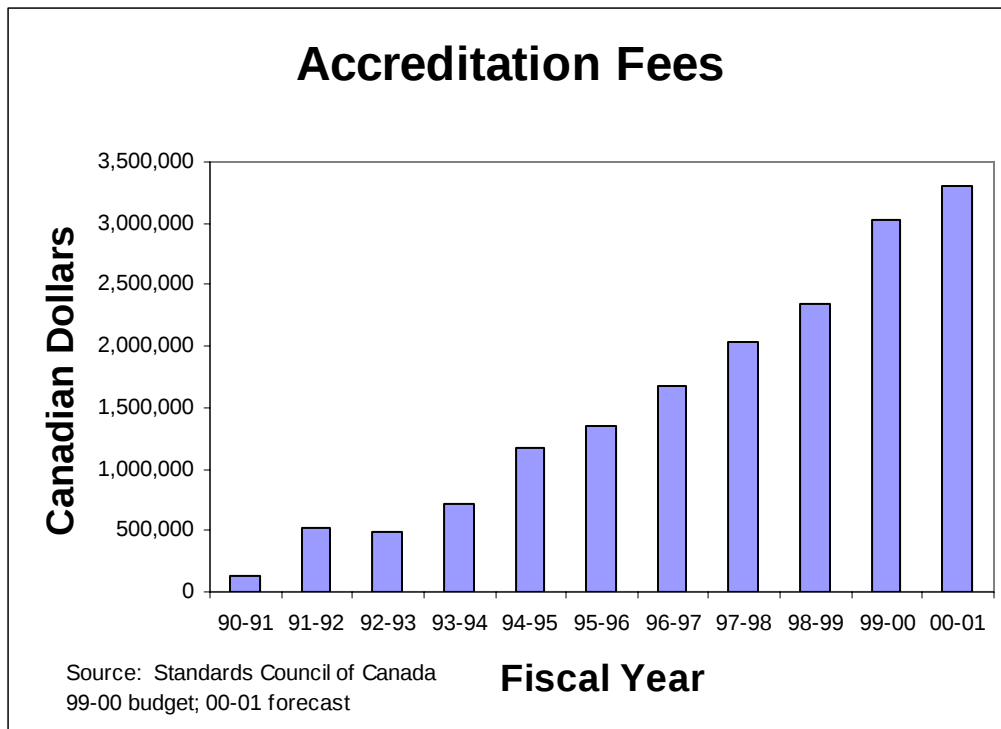
Exhibit 3-2 emphasizes this decrease in appropriations. The exhibit charts the percentage change in government appropriations year-to-year and against fiscal year 1982-1983 levels. The exhibit shows that despite a small increase in appropriation levels budgeted for fiscal year 1999-2000, government appropriations in 2000-2001 are expected to be 9.4% lower than they were in fiscal year 1982-1983, in nominal terms (without adjustments for inflation).

Exhibit 3-2: Percentage Change in Appropriation Levels



Accreditation fees: It is a fair conclusion that the Standards Council of Canada in recent years has relied less on government appropriations for funding than it did in the past. The SCC has had to look for alternative funding means. In particular, the SCC now garners a substantial portion of its revenue from accreditation fees. Exhibit 3-3 illustrates the growth in income from accreditation fees since fiscal year 1990-1991 to fee income forecasted for 2000-2001.

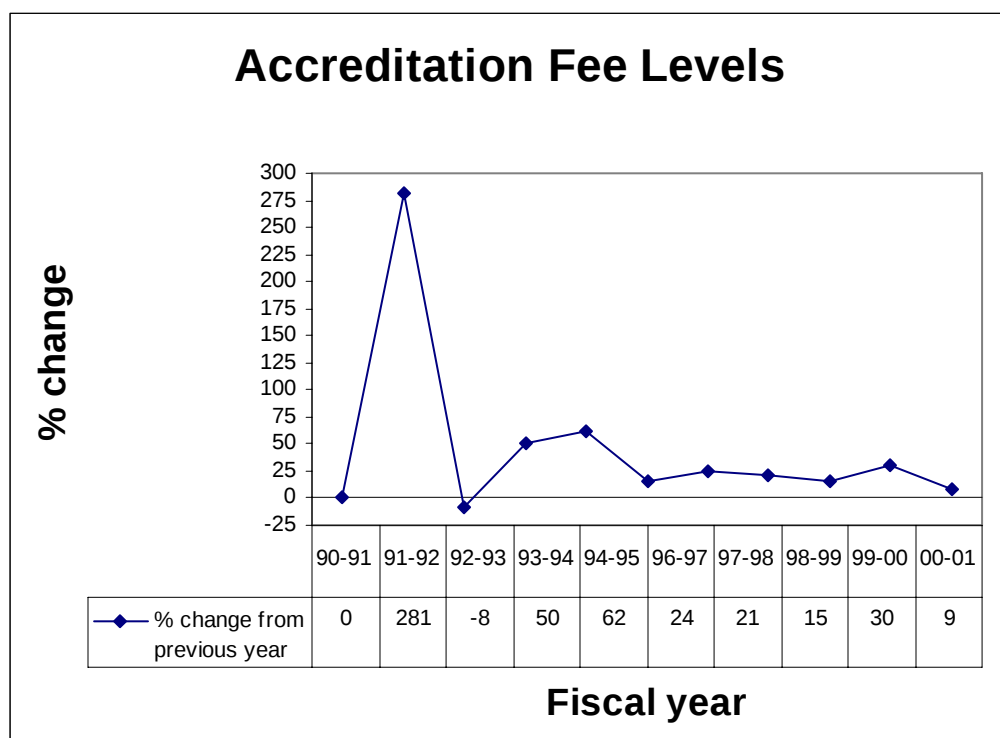
Exhibit 3-3: Revenue from Accreditation Fees



As the exhibit shows, the SCC has seen tremendous growth in its revenue from accreditation fees since fiscal year 1990-1991. Exhibit 3-4 reinforces the magnitude of this growth by tracing the percentage change in year-to-year growth in SCC revenue from accreditation fees.

While it is not likely that the Council will see triple digit growth rates in its revenues in the near future, partly because there is a limit to how high accreditation fees can be set, the SCC can nevertheless count on a steady income from accreditation fees, and can expect some growth in this area over the next few years.

Exhibit 3-4: Percentage Change in Accreditation Fee Levels



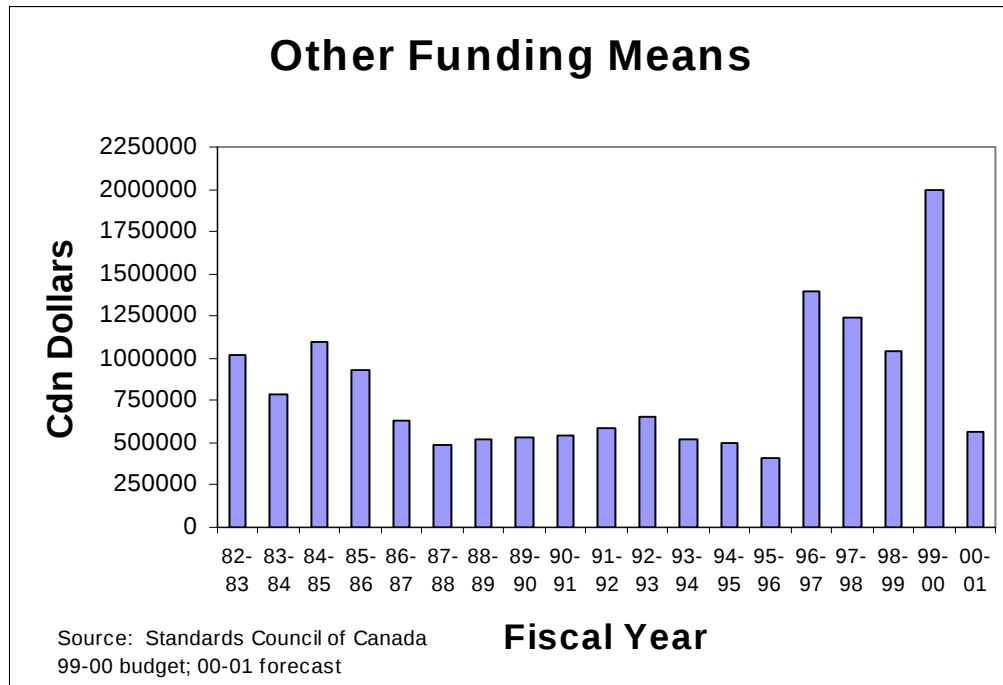
Standards sales: The Council also receives some income from the sale of standards. In fiscal year 1998-1999 the SCC out-sourced the sale of standards. Revenues from standards sales do not comprise a large share of the Council's revenue. Furthermore, with the advent of the Internet, the SCC does not expect to see an increase in revenues from the sale of standards – in fact, the Council expects that net revenue from the sale of standards will actually decrease as standards are increasingly available electronically from many other sources, in Canada, North America and worldwide.

Other revenue: The SCC also receives revenues from other sources. These other sources include: WTO/NAFTA Enquiry Point, special projects funding (e.g., SIP), interest, advertising and other miscellaneous income. Exhibit 3-5 illustrates levels of other funding from fiscal year 1982-1983 to those forecast for fiscal year 2000-2001.

Exhibit 3-5 makes an interesting point. The exhibit shows that while revenue from other sources generally decreased between fiscal years 1982-1983 and 1987-1988 and then was relatively constant between fiscal years 1987-1988 and 1995-1996, it increased substantially in fiscal year 1996-1997. The exhibit, however, also shows that revenue from other sources is forecast to dip back to early to mid 1990s levels in fiscal year 2000-

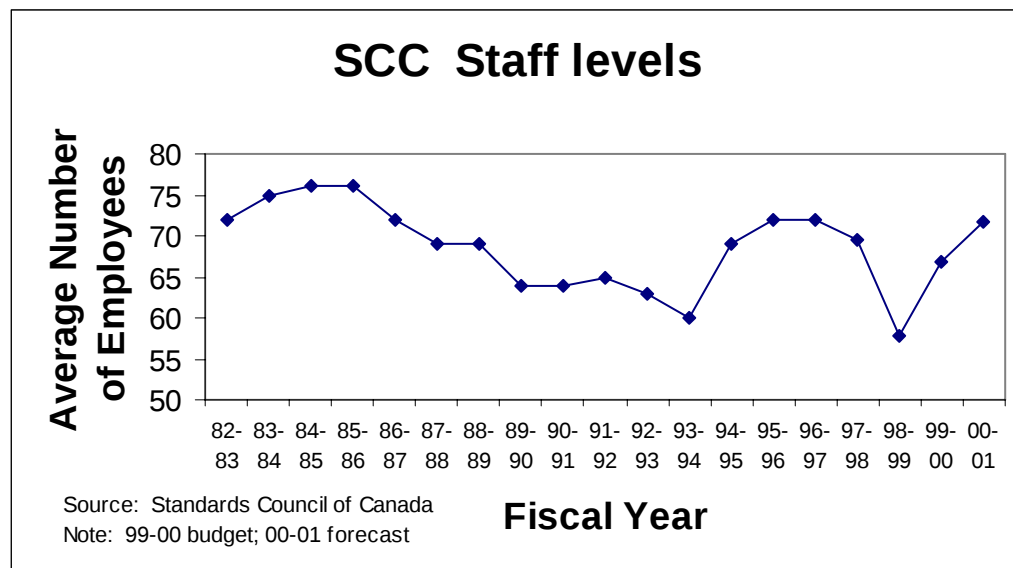
2001. There is a partial explanation for this trend. The SCC received an injection of SIP funding in fiscal year 1995-1999. This funding will terminate in fiscal year 2000-2001. The SCC can therefore not expect to rely, to the same extent, on these types of other funding means in coming years as it has in the past – unless it looks for new funding mechanisms or can rationalize additional funding from existing mechanisms.

Exhibit 3-5: Other Revenue Sources



Staff levels: While only tangentially related to funding, but nevertheless important, the SCC also faces issues regarding its levels of staff. As Exhibit 3-6 shows, while SCC staff levels have risen in recent years, the trend since 1982 has been for staffing to decrease.

Exhibit 3-6: SCC Staff Levels



As Exhibit 3-6 shows, the SCC forecasts that in fiscal year 2000-2001, it will be employing about the same number of people as it did in fiscal year 1982-1983. It is interesting to note, however, that staff levels reached a trough in fiscal year 1998-99, but have since increased and are forecasted to increase further.

The roller-coaster trend of SCC staff levels suggests that the organization may not have had a fair opportunity to improve its organizational capacity to meet the increasing needs of participation in international standards-related activities.

3.3 Funding Participation in International Standards Work

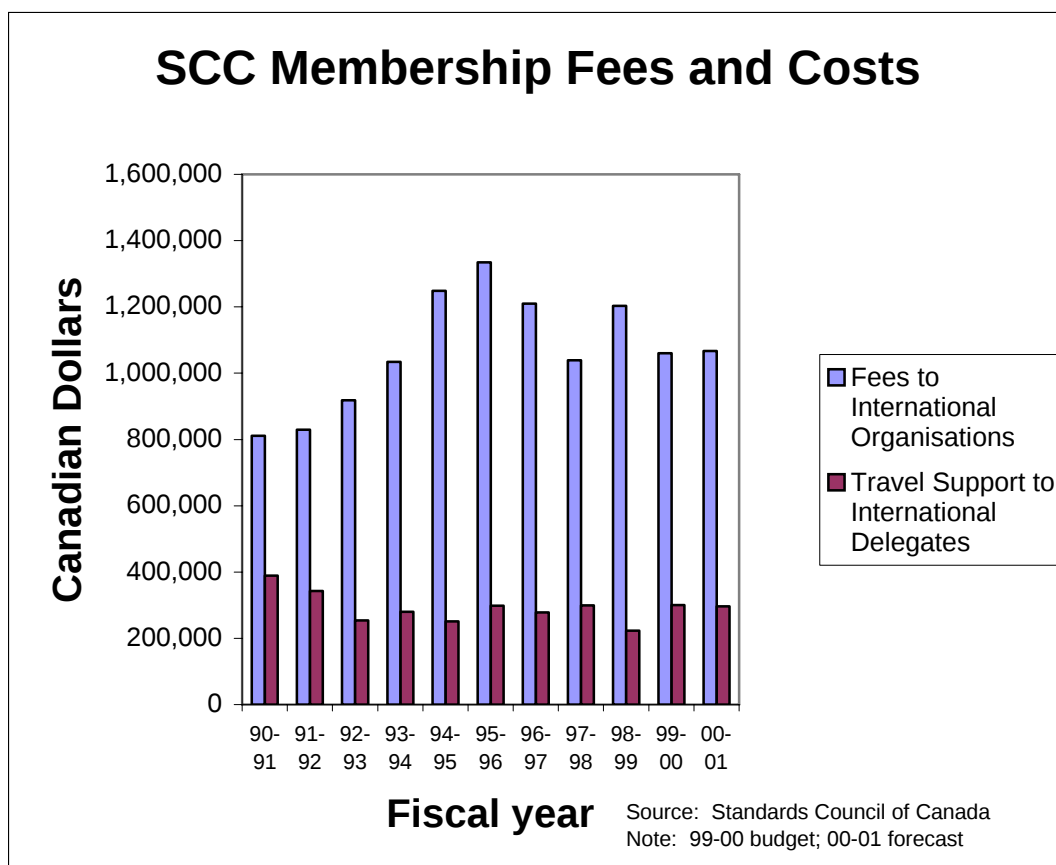
The above section was meant to provide background information as a means to clarify the nature of SCC funding in general. The following section delves into the particulars of funding mechanisms that are specifically geared towards Canada's participation in international standards-related activities.

International fee commitments: The SCC helps fund Canada's participation in international standardization activities in two ways: it pays fees to international organizations and subsidizes a portion of delegate travel costs.³³ As Exhibit 3-7 shows, while the SCC's international fee commitments have dropped in recent years, the SCC travel subsidies have substantially remained the same.

³³ The majority of these fees support ISO and IEC, but the SCC also forecasts paying fees to IECEE, COPANT, IAF, APLAC, PAC, ILAC, ASQC, SWEDAC and IATCA in fiscal year 2000-01.

Despite the fact that there has been no substantial change in the support the SCC offers to international delegates, it is worth noting that while in fiscal year 1990-1991 the SCC offset costs by \$389,090, the SCC only plans to offset costs by \$296,000 in fiscal year 2000-2001. Considering that there is increasing pressure on volunteers to fund international activities, this decrease in available travel funding from SCC could impact on Canada's ability to support able volunteers to participate in international standards-related activities. This observation is confirmed from interviews with delegates and from comments made in response to Survey questions. The ability of volunteers to finance their own participation is also limited.

Exhibit 3-7: International Fee Commitments



Volunteer funding realities: While a portion of the SCC's budget goes towards the subsidization of travel costs of delegates, the SCC is actually only one of a number of sources of funding for volunteers. As Exhibit 3-8 shows, the main sources of funding are: industry, government sources, and the SCC (*nota bene*: the exhibit does not measure proportion of funding, only source – most volunteers are funded by a variety of sources). However, a large number of volunteers supplement their personal participation in international standards-related activities with personal funds.

The high proportion of stakeholders that are partially funding their participation in international standards development activities is compounded by the fact that 31% of Survey respondents do not feel that there are adequate resources available to fund their participation (see Exhibit A-25, Appendix A). Furthermore, 31% feel that industry, and 42% feel that the National Standards System, are not providing adequate levels of resources for volunteers to effectively address participation in international standards development activities (see Exhibits A-26 and A-27, respectively, Appendix A).

Exhibit 3-8: Volunteer Funding Sources

Main Sources of Funding for Stakeholder Participation in International Standards-Related Activities	
	Number of Respondents
Standards Council of Canada (SCC).....	85
SDOs and CA organizations.....	29
Government department.....	96
Industry.....	118
Consumer group/association.....	13
Personal funding.....	69
An international standards development entity (e.g., ISO, IEC).....	10
An international conformity assessment entity (e.g., ILAC).....	0
Other organization.....	19

The net result is that there is pressure on both the SCC and its volunteers to find the funds needed for Canada to participate in relevant international activities in a meaningful way.

3.4 Role of Government

Justification for government participation: As discussed in Section 3.2, the SCC receives government appropriations to help fund international standards-related activities. Stakeholders generally support the involvement of government in the NSS. In fact, there is a feeling among certain stakeholders that government departments have a responsibility to fund the development of standards in their respective fields as a means to ensure that effective standards are developed. Furthermore, there is a feeling that since small and medium-sized businesses are often not able to afford to allocate funds to participate in the international standards development process, government has a responsibility towards the interests of these businesses at the international level. The same holds true for consumer and public interest groups.

Both stakeholder interviews and Survey results corroborate the importance of government playing a role in funding the NSS. In fact, many stakeholders highlighted a need for greater government involvement in standards development and conformity assessment. For example, approximately 58% of Survey respondents indicated that

increased federal government funding is an appropriate way to fund international participation for standards development (see Exhibit A-23 in Appendix A). Some stakeholders (26% of respondents) also indicated that provincial government funding was needed. Some stakeholders who were interviewed also suggest that in order for provinces to assume a greater stake in the NSS, provincial government regulators need to incorporate and refer to volunteer standards in their provincial legislation and regulations.

It is also interesting to note that 50% of respondents also thought that federal government departments should be involved in funding technical research and review of standards-related issues.

Fifty percent of respondents thought that industry has a responsibility in funding representation to international standards development organizations, and 54% thought that industry has a responsibility in funding technical research and review of standards-related issues.

A relatively high proportion of respondents (68%) believes that SCC should continue to be responsible for funding representation to international standards development organizations. 59% believe that the SCC should be responsible for funding the review of results from international and regional participation in standards-related activities. And, 66% believe that SCC should continue to fund the administration aspects of international and regional standards-related activities.

Since Question 26 on the Survey (see Appendix B) allowed for more than one response regarding sources of funding, most respondents indicated that funding should be from multiple sources. It is clear from the responses to this question (see Exhibit A-23 in Appendix A) that there is a consensus that funding is a shared responsibility between government (federal and provincial), industry and other stakeholders in the standards and conformity assessment arena (namely the organizations that make up the NSS).

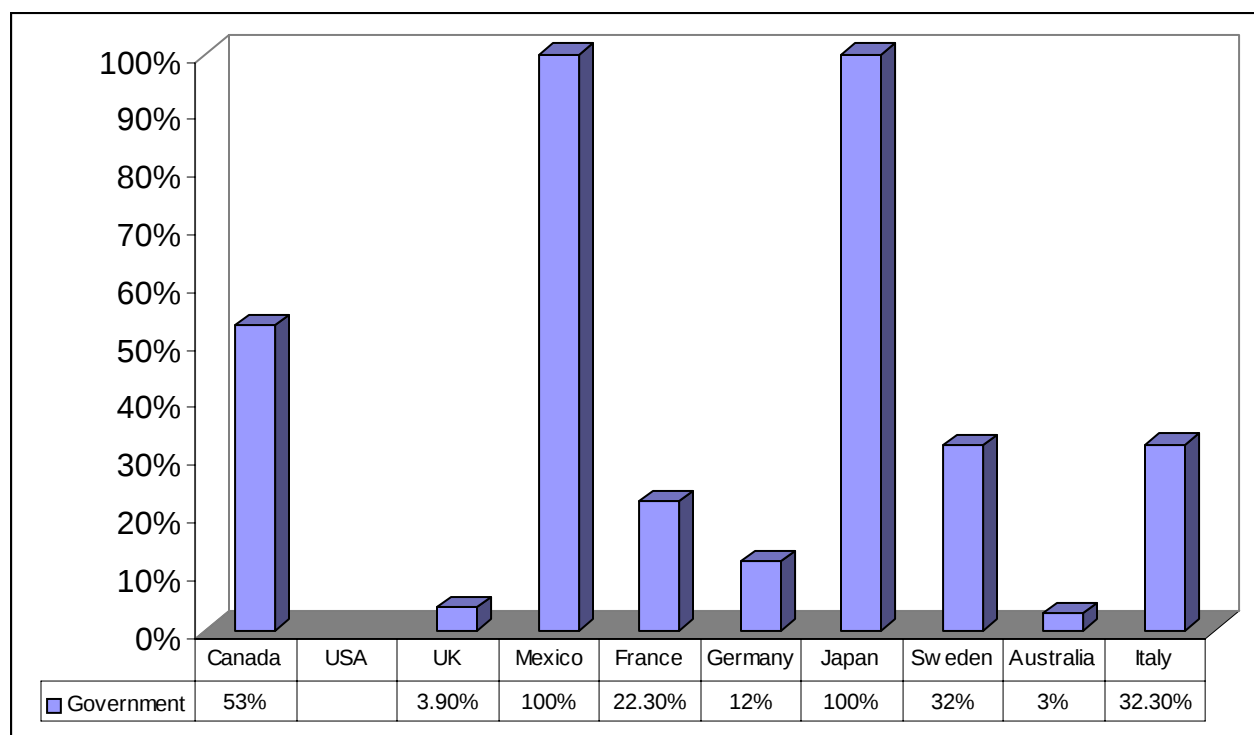
Role of governments around the world: It is interesting to compare the role of government in the NSS with the role of government in other countries. Exhibit 3-9 compares government funding levels across national standards system.

Of the countries surveyed, only Mexico and Japan have standards systems that are 100% government funded. The standards systems in these countries, however, are branches of government rather than separate entities. In general, the European standard systems are government funded, but to a lesser degree than is the Canadian system. In particular, 32% of the Italian and Swedish systems, 22.5% of the French system and 12% of the German are funded by government. It is interesting to note, however, that historically, a much larger percentage of AFNOR and DIN funding came from government. The organizations, however, have both faced major government cutbacks and are increasingly relying on commercial activities to fund their national standards systems.

At the other end of the funding spectrum are those countries that rely on little or no government funds. ANSI, for example is funded entirely by commercial activities and membership fees (corporate and individual). SAA is 3% government funded; BSI is 4%

government funded. The purpose of government appropriations in these countries, however, is clearly defined. Government funds are to support costs incurred by industry participating in international standards work.

Exhibit 3-9: Government Support of Other National Standards Systems



Source: ISO, *Memento*, 1999, International Organisation for Standardization, Geneva.

Note: For U.S.A., ANSI is not supported by government appropriations.

As noted in Section 2.4.11, other national standards organizations, like AFNOR, BSI and SAA, participate in a wider range of standards related activities than does SCC. As a result, these organizations have more options available to them to seek alternative funding means. Nevertheless, the SCC can borrow from some of the experiences and practices of other national standards organizations.

Allocation of resources: Perhaps the most important lesson for the SCC is that other countries have managed to sustain their systems despite relying on less money from government. While it is not certain whether or not the SCC can rely on increased government appropriations, it is clear that the SCC can use its existing government funds more appropriately – i.e., more clearly allocated based on key priorities.

In particular, as identified by the Auditor General, “The SCC has not developed plans or allocated resources to increase the use of the National Standards System by all levels of

government.”³⁴ Yet, the SCC has been developing a *Canadian Standards Strategy*. This strategy should be aimed at providing concrete direction to NSS participants regarding roles, responsibilities and opportunities. It is featured on the Council’s Web site for feedback by stakeholders. Once the SCC and its stakeholders complete an appropriate Canadian standards strategy, this strategy could provide a basis for the SCC to set strategic priorities and allocate funding based on key strategic areas, thereby potentially realizing an allocation of funds that reflect priorities.

The use of the NSS by all levels of government has always been an important aspect of the SCC’s mandate. To carry this out, the SCC needs to encourage all levels of government to use standards development organizations and conformity assessment organizations when they are a viable alternative to the development of their own regulations and enforcement mechanisms. Yet, in order to draw federal and provincial government departments more effectively into the NSS, the SCC needs objectives, strategies, policies, action plans and resources in place to increase the use of voluntary standards and the NSS by all levels of government.

By more clearly defining roles and allocating resources, the SCC stands to make more efficient use of its resources. Making more efficient use of existing resources has a positive effect on funding – funds are utilized for high priority areas. Furthermore, if the SCC is able to draw federal and provincial government departments more effectively into the system, these government departments will have a greater stake in the system and will then be more likely to commit more funds towards international participation.

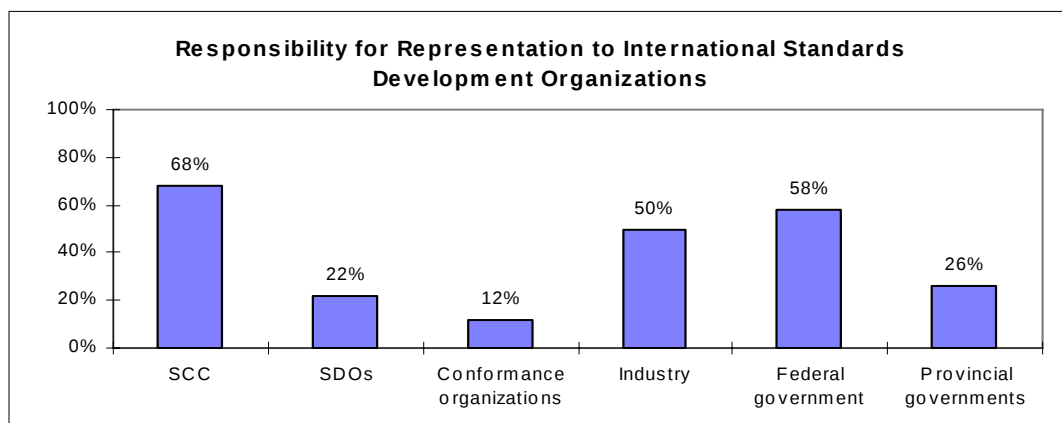
3.5 Role of Industry

As discussed in Section 3.4, there is clearly a perceived role for government contributing to the cost of preparing international standards. Yet, as Exhibit 3-10 shows (based on Survey question 26 – see Exhibit A-23), many stakeholders also believe that industry has an important role for funding these activities.

In general, industry representatives and stakeholders concur that industry has an important role to play in funding a portion of international standards-related activities, not least because industry and consumers are the major beneficiaries of the existence of international standards. There is little question from the results of the interviews and Survey that industry intends to continue supporting, getting involved and funding the development of such standards.

³⁴ *Standards Council of Canada Special Examination Report to Members of Council*, Office of Auditor General, May 26, 1999, page 8.

Exhibit 3-10: International Standards Support Sources



Industry players, however, are selective as to the fields of standardization that they support. Just as the SCC has been downsized, many industries have also scaled back their operations. Limited funds are available for international standard-related work. As a result, and because, rightly or wrongly, the development of international standards is not seen in the short term as a major profit driver, most industries are only interested in participating in international activities that are directly relevant to their respective fields.

The fact that industry only participates in targeted areas, however, is not ineffective. In fact, if the SCC capitalized on identifying areas of importance to industry more effectively, it might be feasible for the SCC to scale back its own support of these areas. The SCC would then be able to channel funds to other areas of national importance (of public or industrial interest). In essence, if industry is not willing to dedicate resources towards developing standards in its field, and if a leading federal department (e.g., Industry Canada or the Department of Foreign Affairs and International Trade) does not view this field as being a national priority, then perhaps Canada should not participate in related international standards-related activities.

A fundamental underlying principle for Canada's democratic system is to rely, up to a point, on market mechanisms to help shape economic growth and prosperity. The NSS is also founded on this principle. So, as a prioritization approach, the NSS should continue to rely on market mechanisms. But it should also make sure that it has the appropriate strategic, business and implementation planning processes in place, so that it can make the right decisions and effectively exercise its full mandate over the NSS as a service to all stakeholders in the system (i.e., government, consumer and public interest groups, volunteers and industry).

Ultimately, industry stakeholders stressed that if there is a perception that industry is not contributing enough towards the development of international standards, then perhaps there is a flaw in the system. The Survey and interview results suggest that industry in

general is indeed contributing significantly to the international standards-related activities. Many of the interviewees, particularly from industry, suggested that for the SCC to motivate industry to contribute further to international standards activities, they will need to gain greater credibility by preparing the kind of strategic and business plans that identify the key priorities for Canada and for all the stakeholders in the NSS. The analysis in this report suggests that the way to do this is by adopting the kind of decision-making model discussed in Chapter II.

3.6 Consumer Groups

Sections 3.4 and 3.5 both make it clear that government and industry have important roles to play in the funding of international standardization activities. A third party that has an important stake in the international standards process is the consumer sector. Consumer groups are an important part of the National Standards System. Consumer representation on standards committees provides an effective means by which the ultimate clients of standards are consulted and protected. Yet a perennial issue involves how to finance consumer groups to ensure their continued presence in the system. This section of the report provides some insight on this issue.

European Association for the Coordination of consumer representation in standardization (ANEC): There is a feeling among consumer stakeholders that Canada does not have the capacity to build consumer interests adequately into the standardization process. Some consumer stakeholders suggested that Canada, or the Americas, needs an effective, standards focused consumer group like that of ANEC in Europe.

ANEC, the European Association for the Coordination of Consumer Representation in Standardization was set up in 1995 in response to a perceived need to channel consumer participation in European standardizing activities. Member countries of the association include: Austria, Belgium, Switzerland, Germany, Denmark, Spain, France, Finland, Greece, Ireland, Israel, Italy, Luxembourg, Norway, Netherlands, Portugal, Sweden and the United Kingdom.

The association was formed as a way to ensure that consumer interests are genuinely represented in the work of European and international standards institutions. It comments on and makes recommendations regarding general policy issues involving consumer standards and formulates proposals for incorporating consumer related issues into standards. Ultimately, ANEC is a means of improving consumer participation in the European standardization process.

ANEC's primary means of funding is through membership subscriptions. National governments and consumer groups can each join the organization. There is a different fee structure in place for each class of member (governments pay more than do consumer groups). Members who do not pay their fees lose their voting rights.

ANEC influences standards work in three distinct ways. First, the association coordinates national consumer representatives from European countries in international standardization. As a result, involved and dedicated consumer representatives are more likely to participate in international standards-related activities than if the selection process were more haphazard and random. The more consumer representatives involved in the national system, the more likely that consumer views will be incorporated into the national view that is presented at international meetings. Second, ANEC members can participate directly in international standards projects by acting as observers through Consumers International and third, ANEC members have observer status on the ISO/COPOLCO committee.

A North American, or Canadian organization modeled on ANEC might be a way to ensure that consumers are able to participate in international standards-related activities in a meaningful way. Such an organization, however, would not necessarily alleviate the financial pressures on consumer representatives. In fact, because it would have to charge membership fees it would put another burden on these members. Yet, such an organization would help organize and coordinate consumer interests. As a result, it would potentially allow consumers to make a meaningful contribution to the process, an outcome that in the long run would be more efficient and would ultimately decrease some of the pressure on consumer groups to fund their participation in international activities.

Council support: Council could support this initiative for developing an ANEC-type organization for the Americas by endorsing the idea, and perhaps by fostering its development through sharing facilities, providing information tools, and helping promote the initiative through SCC literature (e.g., *Consensus*). By endorsing and promoting this project, Council would contribute to making it happen and might facilitate the process of raising funds for the cause.

3.7 Funding Options

3.7.1 Survey Results

Government funding: The results of the Survey indicate that most stakeholders and participants in the NSS (73%, as shown in Exhibit A-28 in Appendix A) still feel that the federal government should continue to support the SCC, by providing funding for activities related to participation at international standards bodies and forums. In addition, 61% of respondents believe that the provincial governments should also contribute.

SCC registered charity status: A large proportion of respondents (71%) believe that the SCC should take advantage of its status as a charity organization (see *Standards Council of Canada Act*) to provide tax deduction incentives for standards volunteers for expenses that are neither reimbursed nor otherwise expensable. Yet, an examination of the particulars of registered charities as defined in the *Income Tax Act* reveals that it is not feasible for the SCC to issue tax receipts in lieu of reimbursement for expenses under its status as a registered charity. The SCC can only issue tax receipts for tangible donations (the SCC, however, can and does provide receipts that allow businesses to

validated their write-offs for international standardization activities as a business expense). In light of this, it seems that there is a misperception among SCC volunteers as to the breadth of tax relief that SCC as a registered charity can provide.³⁵ It is, therefore, important that SCC clarify this issue to the cadre of volunteers within the NSS.

Grants and donations: In the Survey of volunteer, over 60% of respondents agreed that the SCC should also explore grants and donations by stakeholder interest groups and partnerships, or joint funding arrangements, with government and industry organizations. Technically, the SCC can carry out a public interest campaign to raise donations for standards-related activities under its registered charity status, provided these activities can be defined as charity-related. International travel expenses for standards-related activities are not in themselves deemed eligible as such.

Accreditation fees and other cost-recovery mechanisms: Generally, there is support for the regular cost-recovery funding mechanisms of accreditation fees (only 17% of respondents disagree with this option as a funding mechanism for SCC) and sales of standards-related information products and services (only 15% disagree with this option for SCC).

Membership fees: The least appealing of the funding mechanism options is the option of membership fees (only 33% of respondents support this option, although a relatively large proportion of 20% appear to be neutral about the issue and 20% indicate that they “don’t know”).

In general, it appears that most respondents to the Survey seem to recognize that there are a number of funding options available to SCC and that it should consider all these options.

3.7.2 Options

Government appropriations: The SCC has the ability to request funds directly from Treasury Board Secretariat (TBS). Historically, the SCC has had very little success in this type of request to TBS. Invariably, success in this approach to additional appropriations will depend on a sound business planning process, with approval from the Minister of Industry Canada. This option for additional funding for the SCC activities should not be ruled out on the basis of historical failure, or because of government cutbacks. In fact, many new programs and appropriations have been successful in recent years because proponents within government have been able to “make a strong case for it”.

In this sense then, increased government appropriations could be made more likely if the SCC leads the NSS in adopting more “business-like” preparation of its business plans,

³⁵ IC80-10 R Registered Charities: Operating a Registered Charity, Part III, 29 (d).

and in converting the NSS to practical and operational business practices that follow the continual improvement decision-making model recommended in Chapter II.

Throughout the interviews conducted with stakeholders, one common request was brought forward when questioned on the appropriateness of the NSS: “ensure that there are realistic and concrete action items that cascade from the *Canadian Standards Strategy*”.

While many stakeholders did not disapprove of the CSS, its content and the method through which it was derived (consensus gathering, and Web site exposure), many highlighted the necessity to bring forth actionable items from the “somewhat generic” strategic statements of the CSS. In other words, the CSS must be transformed or translated into business plans (with actionable items), containing key operational targets, accountabilities and implementation measures – consistent with the good management practices for decision-making exemplified by the continual improvement model recommended in this report.

It is felt that with the right strategy and the right business planning process, the SCC could have a case to go to government for additional appropriations as necessary. The list below provides some of the key elements and qualities of a solid business plan (which should include actionable items and implementation measures). These elements are a synthesis of many private and public sector documents on business planning practices. They should be reviewed alongside of the checklists provided in Chapter II.

An effective business plan contains seven key elements as follows:

1. A clear vision, broken into a clear set of operational objectives.
2. A clear statement of commitment from stakeholders in the system.
3. A detailed work plan, breaking the strategy into work phases that are easy to measure and monitor.
4. A set of target dates for completion and attainment of objectives.
5. A set of contingency plans (with clarity about possible problems and with plans to resolve these problems through risk management).
6. A schedule for regular reporting on activities and attainment of goals.
7. A plan for change (when change is inevitable).

Business planning is consistent with strategic thinking. The business plan describes in details the tactics that the system is planning to take in order to achieve the goals it has laid out for itself. Therefore, from objectives stem a strategy and from the strategy cascades the business plan and its related action items and tactics. Finally, business planning should be run continuously while running the business and not just on a yearly “audit and improve” basis. While the SCC has made great strides over the past few years

in creating and implementing its business planning capacity, it has not been able to develop a credible system-wide planning process for international participation in general. The Survey responses confirm that SCC's strategic and business planning processes for international participation need much improvement, but it also confirms that there is support in the Canadian standards community for SCC to build up its capacity to do this.

Volunteers as an NSS resource: The SCC relies heavily (not to say entirely) on the contribution of volunteers to advance standards development and conformity assessment in Canada as well as to advance the Canadian agenda for international standards activities. Volunteers participate on various committees, such as the CAC/ISO and CSC/IEC committees. They come from various organizations, both public and private sector in origin: private sector corporations, public utilities, industry sector associations, consumer associations, and federal, provincial and municipal government, and non-profit and other public interest groups.

The participation of many of these volunteers stems from them having been delegated the responsibility from their respective organizations, or their position within these organizations either entitles them, or requires them, to participate on some committee or other. While these volunteers do come with "an agenda or mandate" (due to their allegiance to their respective organizations and employers), most conduct their work in a highly professional manner with devotion to the primary objectives of their respective committee mandates and activities.

As such, these volunteers must be regarded as an "invaluable resource" and treated in such a fashion that their participation is as unencumbered and effortless as possible. Because the standards development and conformity assessment environment in Canada depends largely on the contribution of volunteers, great care must be spent on maintaining this army of professionals. They are also considered as a "funding option" since they, as was shown earlier in this report, also provide their own personal contribution to the system (either in kind or in covering some of the expenses).

Throughout this project, the consultants sensed that there is much room for improvement with regards to maintaining and development of the relationship the SCC has with its volunteers. In addition, many of the interviewed volunteers have indicated that the support required for the accomplishment of their work and provided by the SCC could stand to be improved. Many of the volunteers have observed that they should be viewed as "clients" of the standards and conformity assessment system. The volunteers should be treated as such in that they provide a vital service to the NSS and the national interests of Canada. In practical terms, the SCC could stand to learn from the experience of such organizations as the Canadian Bar Association or the IEEE in the U.S.A. These large organizations use volunteers to advance and promote their mandates and initiatives. In return for their time and energies, the volunteers receive added value in the form of networking ability, news sources, reference materials and other membership type services and products. The SCC should look into this environment and observe some of the parallelism that can be made and potentially adapt or adopt the processes and services of similar organizations for its own members.

Membership fees: One of the more obvious funding alternatives available to the SCC is the introduction of membership fees. The *Standards Council of Canada Act* states that the Council may make by-laws that establish a membership scheme “to allow broader participation by the public in Council activities.”³⁶ It is thus feasible for the SCC to consider this option.

Yet, as Exhibit A-28 (see Appendix A) shows only 33% of Survey respondents favour the membership fee option. 27% of respondents do not support membership fees, while 40% either did not commit an answer or are unsure about the viability of membership fees.

This opposition or uncertainty towards introducing membership fees stems in part from a perception that membership fees would only impose a greater burden on volunteers who are already struggling to find the resources (time and money) needed to carry out international standards activities in an effective manner. Furthermore, there is a perception that if sponsoring organizations had to pay fees, some organizations would become even less likely to contribute a portion of the funds needed to support international standardization activities. In other words, some organizations would most likely sever ties with the SCC and would not pay the required fee. Finally, stakeholders stressed that no reasonably sized membership fee could offset the cost of the infrastructure required to fund international activities.

Yet, when the membership fee structures of other national standards systems are considered it is clear that the purpose of membership fees is not so much to fund a system as to increase the commitment of stakeholders to the system. Even ANSI, an organization that is completely funded through commercial activities, only garners 14% of its revenue from membership fees. Admittedly, any proportion of revenue helps, but it is important not to see fees as a funding solution, but rather as a way to supplement other revenue sources.

Other national standards systems promote their membership schemes as a way for members to obtain a competitive advantage in the global marketplace. For example, AFNOR members are given the opportunity to help define the organization’s strategic orientation. They are also invited to participate in priority AFNOR work. ANSI members have a louder voice in the decision-making process than do non-members. At the DIN, membership privileges are primarily economic – members have access to a range of standards related material and receive a 15% discount on all products and services.

It is important to understand that in general, these organizations do not charge a uniform subscription fee. For example, ANSI has set up a fee scale whereby corporate, academic, non-governmental and government organizations all pay an adjusted fee. Within this fee scale, corporate members pay a fee that reflects their dollar value of sales. SAA and SNZ, among others, have introduced a similar sliding fee scale.

³⁶ *Standards Council of Canada Act*, 13 (1) c.

Ultimately, however, the key lesson for the SCC is that those countries that have implemented a membership scheme provide a service for their members. At the very least, these other organizations send privileged information to members. Some, like BSI and SNZ, send members complementary copies of a standards magazine. Many others, like the DIN, AFNOR and ANSI, offer members substantial discounts on products and services. The benefit of offering such services to members, as long as the membership fee structure ensures that a range of individuals and organizations can join, is that by attaching a measure of privilege to membership, members have a greater interest in renewing their fees and in making a meaningful contribution to the standards development process.

The National Standards System of Canada prides itself on its balanced representation. Ironically perhaps, an effective way to preserve this balance might be to introduce a membership fee that would help ensure that only those truly committed to the standards-related process participate in relevant activities. However, great care must be taken when designing a membership fee structure. A good membership fee structure would rely on a means test so as not to upset the balance that is one of the NSS's core strengths and to ensure that special interests are not able to take control of the system to the detriment of others. A sliding scale membership formula, somewhat like that provided by other organizations (e.g., ANSI) where corporate fees and individual fees are charged, would be an appropriate model for the SCC to follow.

Of course any membership fee scheme has to be predicated on a credible service being offered to the members in return for the fee. As it appears now, the SCC is not ready to provide such a service and will need to build this into its current strategic and business planning cycle, to consult with stakeholders, and to devise the services that justify charging a membership fee. Notwithstanding all of the above, membership fees are a viable alternative for SCC to consider as a funding option.

Tax deductions: A funding option that appealed to stakeholders was the notion of introducing greater “tax relief” for volunteers. As Exhibit A-28 (Appendix A) shows, 71% of Survey respondents support tax deduction incentives for standards volunteers as an enhanced funding mechanisms. 20% are uncertain about this option as a funding mechanism. Yet, as discussed above, the perception that the SCC can issue tax receipts for expense incurred by volunteers participating in international standards-related activities is misleading – a registered charity cannot issue tax receipts in lieu of reimbursement for expenses. Moreover, international travel expenses are not considered to be reimbursable for registered charity purposes. The SCC can only issue tax receipts for tangible donations.³⁷

There is nevertheless a perception that the SCC can issue such tax receipts. Stakeholders repeatedly claimed that were the SCC to offer tax deductions as an incentive for participating in international standards-related activities they would be less reticent to contribute more of their time and effort. The SCC needs to respond to this miscommunication so that volunteers, particularly those who substantially fund

³⁷ IC80-10 R Registered Charities: Operating a Registered Charity, Part III, 29 (d).

international standards-related activities themselves and who are not able to write off these expenses as business expenses, understand that a registered charity cannot issue tax receipts that cover expenses.

The reality is that the primary reason for granting the “charitable organization” designation to SCC is to allow it, as an organization to “avoid” having to forfeit income tax to Revenue Canada. The SCC Act states in Article 18 that the SCC, for the purposes of the Income Tax Act, will be deemed a “registered charity”. This provision allows the SCC to hand out, but only when appropriate, tax receipts. In particular, the SCC will hand a tax receipt for the amount of “cash” received by a third party in lieu of a donation. This donation must be free of any specific objectives, i.e., it should not be “tied” to any precise objective or spending reasons, but should be given freely as a donation towards a charitable activity. In order for the SCC to undertake a charitable activity that fits within the definition of “registered charities”, it would need to consult with Revenue Canada as to the appropriateness of the related activities. Participation in international standards-related activities does not appear to be deemed a “charitable activity.”

As such, the SCC rarely hands out tax receipts. Corporations who donate sizeable sums of money (in the tens of thousands range), donate for specific causes (e.g., requesting the SCC to host a standards development meeting) and therefore will “claim the expense” and reap the taxable avoidance benefit by claiming it as a business related expense. In other words, rarely do third parties donate significant sums of money or land in order to benefit from the issuance of a tax receipt. Most would simply rather claim their expense as a regular, common business expense. After consultation with tax experts at KPMG accounting, the charity status appears to be one that will provide very little additional advantage as an important funding source for the SCC.

Cost-recovery mechanisms: The consultation process also revealed that there are cost-recovery options available to the SCC beyond accreditation fees. Two options in particular, the sale of standards-related information products (e.g., using online techniques and the SCC Web site) and the provision of training programs stand out.

As Exhibit A-28 (Appendix A) shows, 56% of Survey respondents support the SCC capitalizing on the sale of standards-related information products and services as a way to boost funds. It should be clear that this does not necessarily mean selling standards as such, but value-added information products on standards activities and related activities. Only 15% of respondents are against such an approach, while 29% are unsure. As the revenue figures shown earlier in this Chapter show, this has not been a major source of revenue for SCC. However, continued growth of SCC’s capacity to put forth these types of information products and services could potentially help boost revenues to finance international standards-related activities. The SCC will have to think creatively in identifying information products that provide a value-added service to the cadre of Canadian standards volunteers.

The SCC is a repository of valuable information. Options exist for the SCC to exploit its position as guardian of this information. In particular, with the advent of information technologies, and by configuring the information in such a way that it can provide added

value to a customer, opportunities exist for the SCC to make this information available on a cost-recovery basis to interested customers.

The SCC might also consider offering training programs for a cost-recovery fee. As Exhibit A-28 shows, 50% of respondents support the SCC running cost-recovery training courses, 17% are against the idea and 33% are unsure. While these numbers suggest that stakeholders are essentially mixed in their opinions regarding the introduction of such courses for a fee, the SCC should not simply dismiss the notion. For example, the SCC could run a one-day course on *Understanding the Benefits of Participating in International Standards Activities*. Such a course, if done right, would be a valuable education tool for stakeholders, and might help draw new players into the international standards-related process. The SCC could potentially charge each participant a fee ranging from \$300-\$400 per course. While on the surface this amount does not seem large, because there would be little overhead associated with such courses, the SCC could ultimately have a significant impact on the standards community within Canada with a series of courses focussed on its mission to promote efficient and effective voluntary standardization in Canada.

Collaborative partnerships and cost-sharing arrangements: The Survey results showed that respondents (62%) are in favour of seeing the SCC explore joint funding arrangements with potential partners. The SCC has a crucial responsibility towards the Canadian standards development and conformity assessment community: it must support the building of relationships and networks that will help flourish the development of standards and conformity assessment systems in Canada. The following are some of the practical types of funding mechanisms used in collaborative arrangements in which public organizations can develop.³⁸

1. Sustainable grants can ensure the continuity of organizations whose objectives are compatible with or necessary to government objectives (e.g., the Red Cross).
2. Grants have particular purposes but do not involve recipient accountability for use of the funds. Grants are quasi-legislative and require parliamentary authority.
3. Contributions contain terms and conditions specifying outcomes for which the recipient is accountable.
4. Loans and loan guarantees.
5. Cost-sharing agreements allow the federal government to share in financing specified outcomes without participating in any other way (e.g., the Canada Assistance Plan).

³⁸ These are a synthesis of options listed in the following document: *The Federal Government as Partner: Six Steps to Successful Collaboration*, from a series for *Stretching the Tax Dollar*, developed by the Information, Government Review and Quality Services Financial and Information Management Branch, Treasury Board Secretariat, November 1995.

6. Cooperative agreements provide non-financial input by government into undertakings of mutual benefit to the federal government and other incorporated body without involving the government in day-to-day operations.
7. Corporate sponsorship agreement covers a specific performance of work. The corporation provides resources (e.g., money, staff, products or services) and receives a benefit (e.g., specific image and marketing opportunities). This is a pragmatic exchange, not a charitable donation.
8. Joint project agreements commit the federal government to share in financing specified outcomes and to participate in other ways such as sharing non-monetary resources, and hiring personnel.

Of all the above collaborative mechanisms the last two appear to be the most relevant for the SCC as potential funding options. The SCC should seek to obtain corporate sponsorship agreements for major initiatives that are consistent with its mandate for fostering quality, performance and technological innovation in Canadian goods and services through standards-related activities, and for promoting the participation of Canadians in voluntary standards activities. For example, the funding for the development of a world class Canadian standards network database need not come out of government appropriations, but could potentially be sponsored by a corporate entity or a consortium of corporate and public interests. There are examples of such sponsorship arrangements in many U.S. organizations. For example, the development of the U.S./ANSI Internet-based standards information system (NSSN) benefited from such a consortium arrangement.

Similarly, SCC can seek out joint project agreements with other government departments (the SIP program was a good example of this type of funding). Other such joint projects could involve projects which address international standards development to advance the national economy, support sustainable development, benefit the health, safety and welfare of workers and the public, assist and protect consumers, facilitate domestic and international trade and further international cooperation in relation to standardization. Such joint project agreements could be with federal or provincial government departments, or with corporate entities within the private sector. For example, key candidates for such joint project agreements within the federal government include NRC, NRCan, HC, TC, EC, F&O, DFAIT. One option in entering these types of joint project agreements is developing and approving a Memorandum of Understanding (or Agreement) with the designated counterparts. These MOUs or MOAs are an accepted practice within the government, to signify a joint commitment to address specific requirements that fall within the broad mandates of the two organizations entering the agreement.

Generally, the funding option of seeking collaborative arrangements, as a funding mechanism for SCC, would be less controversial than the membership fee option. As a funding mechanism it provides targeted resources which help address specific, identified needs in which the agreeing parties have an expressed interest and stake. This is a highly recommended option for funding special projects, and is likely to receive very little

resistance from the NSS stakeholder community – unlike the membership fee option, which is likely to receive a lot of resistance.

3.8 Opportunities

A number of funding-related key messages (i.e., opportunities) for the Standards Council of Canada are contained in the above sections. This final section of the Chapter summarizes these opportunities.

International standards activity prioritization: The key message that emerges from a study of funding issues facing the SCC is that until the SCC prioritizes its international activities effectively, based on a continual improvement decision-making model as recommended in this report, it will most likely not be able to use its funds for international standards-related activities in the most efficient way possible. In essence, the issue facing the Council may not be simply that there are not enough funds available to do all the work that is expected of it, but that the SCC is not channeling existing funds effectively through an appropriate management system and decision-making process.

Furthermore, by prioritizing international standards activities in an effective way (within a logical decision-making and management system), the Council might be able to make a stronger case to government, industry and other organizations to elicit more funds from these sources to undertake international activities consistent with its mandate.

Shared responsibility: Stakeholders generally agree that government (federal and provincial), industry, and other stakeholder groups should share the responsibility of funding Canada's participation in international standardization activities. Yet, they also believe that the SCC has a responsibility in this area and that the Council should therefore consider all realistic funding means at its disposal.

Membership fees: While membership fees are not a popular option among stakeholders, there is nevertheless a case to be made for the Council introducing a fee system. In particular, membership fees are a way to ensure a balanced representation among stakeholders as long as a fair, sliding fee scale is used. For a fee system to work, however, the Council needs to offer members certain services. Otherwise, there is no point of joining the organization as a "member". A sliding scale which differentiates between corporate, government and individual memberships would insure that there is a means tested concept included in the fee structure, and would also ensure that stakeholders contribute in a way that is commensurate with their interests in international standards activities. The SCC should study membership fee structures such as those of organizations such as ANSI and the IEEE, to determine various price ranges that may be appropriate. However, at the same time, the SCC would have to phase in such a fee structure once it can ensure delivery of similar membership services to its cadre of volunteers. At the moment, these services are not present.

Consumer representation: There is room to create a consumer organization focused on standards in North America. Such an organization could be modeled on

ANEC and would invite governments, consumer groups and individuals to participate. Such an organization would potentially help organize and coordinate consumer representation in standards-related activities and might ultimately make it easier for consumers to participate effectively in the process of developing international standards.

Volunteers as an NSS resource: The NSS relies heavily on the contribution of volunteers to advance standards development and conformity assessment in Canada as well as the Canadian agenda on the international standards arena. As such volunteers must be regarded as important “clients” of the system and regarded as a valuable “funding option” since they, as was demonstrated, also provide their own personal contribution to the system (either in kind or in covering some of the expenses).

Collaborative partnerships and cost-sharing arrangements: Corporate sponsorships and joint project agreements appear to be realistic options to pursue as collaborative initiatives which involve shared funding of projects. Generally, the funding option of seeking collaborative arrangements, as a funding mechanism for SCC, would be less controversial than the membership fee option. As a funding mechanism it provides targeted resources which help address specific, identified needs in which the agreeing parties have an expressed interest and stake.

IV

Concluding Remarks

This report provided the results of a comprehensive study of the views of NSS stakeholders regarding Canada's participation in international standards-related activities, comparisons with practices in other countries, and an analysis of decision-making approaches and funding options that relate to international participation. The results of the study confirm many of the views currently being expressed on the need for change in the National Standards System of Canada.

Change in the system is recommended in this report, but only to the extent that this change is undertaken while preserving the fundamental principles of the current system. The SCC and the NSS in general rely on market mechanisms, standards development and conformity assessment organizations, and a network of volunteers and advisory committees to ensure that the right decisions are made in the interest of Canada and Canadian citizens and organizations – including government and industry, and consumer and other public interest groups. This foundation of the Canadian system was not challenged in any serious way during the course of this study. There certainly does appear to be a clear consensus on the fundamental principles underlying the NSS.

There are many challenges cited in this report for both the decision-making process and the funding of international standards-related activities. There is an opportunity to improve the decision-making model of the NSS without changing the fundamental structure of the system. The opportunity is to make it more clearly linked to a continual improvement management system cycle. By explicitly linking the decision-making process to a management system encompassing strategic objectives, business and implementation planning, performance measurement and management reviews, the system will have a more complete and comprehensive approach to setting priorities, allocating resources, and identifying the appropriate activities as linked to plans and priorities that relate to Canada's participation in international standards-related activities.

To a certain extent, international participation funding mechanisms (but not necessarily funding amounts) within the NSS are considered appropriate in that they are based on a "checks and balances" system that preserves the balance of stakeholder participation in the system – industry, government, consumer and public interest groups, and volunteers. If the system were to engender a funding rationale which empowers special interest groups, then this would run counter to the fundamentals of what the NSS system is built on (i.e., market mechanisms, public and private stakeholder participation, volunteers). It is most important to consider this principle when striving to find new mechanisms for funding. Perhaps this principle should be enshrined within the NSS – for example, it would be useful to include an appropriate description of this principle in documents that

concern the NSS (e.g., the *Canadian Standards Strategy*) and in documents that describe the activities of SCC within the system (e.g., SCC's Corporate Plan).

There does appear to be a consensus on this balanced approach to funding within the standards and conformity assessment community in Canada. While a balance of interests needs to be preserved in the system, there is consensus that current funding mechanisms have not been successful in responding to all the needs of the NSS. A number of funding options for international participation have been recommended in this report, but not at the expense of changing the balance of interests and empowering special interest groups.