ISSUES PAPER

Towards a Canadian Standards Strategy

Stakeholders Advisory Council
Standards Council of Canada

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Preface

The Standards Council of Canada has been mandated by the federal government to develop a Canadian Standards Strategy. This *Issues Paper* is an essential milestone of the development process. Prepared by Council's Stakeholders Advisory Council, the paper is based on extensive input provided by a broad range of standards stakeholders. It highlights key challenges and issues facing Canada's National Standards System as it moves forward into the 21st Century.

The issues raised in this paper are the building blocks for the draft Canadian Standards Strategy I encourage all stakeholders to consider them carefully and to put them through a vigorous process of review within their own communities. Think about how you can take action and how we can work together to develop a stronger, more responsive National Standards System Canada that will continue to benefit all Canadians.

On behalf of the Standards Council of Canada, thank you for participating in this important process.

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Chair, Stakeholder Advisory Council, and
Chair, Standards Council of Canada

I Introduction

Canada has an excellent National Standards System, designed and developed over the past 25 years to support the country's domestic economy and society. But times have changed. Globalization has led to the emergence of an internationally focused economy and Canadian industry and governments are working hard to keep pace. It is becoming increasingly apparent to all players in the standardization arena that the Canadian standards system must be refocused and revitalized to keep pace with economic shifts and social realities, both in Canada and internationally.

This *Issues Paper* is an important step along the way. Intended to stimulate discussion and feedback, it sets out the key issues facing the Canadian economy and standardization stakeholders, and identifies many challenges Canada will face over the next decade. These issues set the stage for developing a Canadian Standards Strategy to guide the National Standards System during the coming years. As well, the paper proposes a number of process steps which might be undertaken as the new Strategy is implemented.

A. The Canadian Standards Strategy: Goals and Rationale

Commissioned by the federal government, the Canadian Standards Strategy is being developed by the Standards Council of Canada with the assistance of its Stakeholder Advisory Council. Aimed at Canadian governments, industry and consumers, the Strategy is designed to provide leadership and guidance on standardization priorities and measures that will enhance Canadian competitiveness and promote Canada's social and economic well-being in the global economy. Moreover, the Strategy will serve as a blueprint for action to renew Canada's National Standards System. Once the Strategy has been finalized and accepted by the federal government, a comprehensive implementation plan will be developed to ensure that the Strategy's vision becomes a reality.

The Strategy is the second major step in the overall revitalization of Canadian standardization activities. The first, a review and revision of the *Standards Council of Canada Act*, strengthened and clearly defined the mandate and role of the Standards Council of Canada as a leader to:

- promote voluntary standardization in Canada – including participation by Canadians and public-private sector cooperation;

- coordinate the work of members of the National Standards System;

- foster quality and technological innovation in Canadian goods and services through standards-related activities; and

- develop strategies and long-term objectives for standards-related activities.

Together, these activities are designed to achieve the overall goals of: advancing the Canadian economy; supporting sustainable development; benefiting the health, safety and welfare of

workers and the public; assisting and protecting consumers; facilitating domestic and international trade; and furthering international cooperation in relation to trade.

B. The Context for Renewal

Research and consultation with stakeholders indicates clearly that the time is right for renewing the system that develops and monitors standardization activities on behalf of Canadians. The environment in which standardization activities take place is changing dramatically. Standardization activities —including standards development and a range of conformity assessment activities— can be a powerful tool for opening doors to international markets and advancing Canada's social and environmental objectives. Participants in the National Standards System —including volunteers, their sponsoring organizations, and the broader range of users— are demanding stronger and more comprehensive support for the growing range and number of activities called for in the globalized economy.

To appreciate the nature and scope of changes required to the National Standards System, it is essential to understand the role that standards play and their potential benefits, as well as the broader domestic and global environment in which standardization activities take place. The following discussion provides such a context and sets out the vision, goals and objectives for a renewed standards system.

A Brief Description of Standards

The ISO and the SCC define a standard as a "document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context."

Many of Canada's standards are developed by committees, comprised of specialists, consumers and users of technology, following a prescribed consensus-based, multi-stakeholder process. In the absence of uniform standards, industries and governments would be required to buy the service of these specialists — at enormous cost — to advise on technology development and implementation. The current process makes leading-edge information on new technologies available inexpensively. In effect, standards and the standards-setting process itself, play a significant role in technology diffusion.

Understanding the relationship between standards and economic performance requires a clear perspective on the reasons for developing and conforming to standards. Conformity assessment is aimed at providing confidence that products and services conform to established standards. Without systematic consideration of the functions of standards and conformity assessment, establishing appropriate priorities for standardization activities would not be possible.

Standards confer many benefits such as enhanced production efficiency, competitiveness, compatibility, technology diffusion, quality process management, commercial communication

and public welfare. Standards can take many forms — they may be informal or formal; they may be developed by the private sector, standards-development organizations or governments, or by some combination of all three; they may be either voluntary or mandatory; and they may be classified according to what they define and for what purpose.

There are three broad types of standards: product design, performance, and process. Each is described briefly below.

Design standards identify specific design or technical characteristics of a product (*e.g*., seat belts, VCRs, electrical sockets, paper sizes, lawn darts, baby walkers).

Performance standards indicate minimum standards that a product's characteristics must meet based on tests that simulate the performance of that product under actual service conditions. Examples of performance standards include professional qualifications, software/computer compatibility, hockey helmet durability, garment sizing, children's nightwear flammability and R2000 housing.

Management, or process, standards set out standards for processes such as driving on the right side of the road, ABM shared networks, test methods for flammability of textiles, quality management (e.g., ISO 9000) and environmental management (*e.g.,* ISO 14000) processes, food packaging, and advertisement approvals.

The National Standards System — Past, Present and Future

The National Standards System (NSS) is the Canadian framework within which voluntary standardization practices are developed and monitored. The NSS has served Canadians well. Built on the efforts of thousands of volunteers from virtually all sectors of the Canadian economy, it is widely regarded as one of the best systems for developing and monitoring voluntary standardization practices in the world. In fact, many countries have modeled their domestic systems on the Canadian system's highly developed consultation and advisory processes, and volunteer support systems. Over the past few years, however, the standardization environment has changed dramatically and the NSS is under growing pressure to adapt to meet new realities. Following is a brief overview of the NSS, its origins, current status and future directions.

■ *Origins of the NSS*

When it was first established a quarter of a century ago, the National Standards System was a relatively closed system, with limited and well-defined roles and responsibilities that were carried out by a defined slate of organizations. As recently as 1992, the System was defined as: "a federation which comprises the Standards Council of Canada, the accredited Canadian standards-writing, certification and testing organizations, and the Canadian national committees (CNC) for international standardization, i.e., the CNC/IEC (International Electrotechnical Commission), and CNC/ISO (International Organization for Standardization) (National Standards System: Criteria and Procedures for the Preparation and Approval of National Standards of Canada" (CAN-P-2).Established to support domestic standardization activities, the

NSS has evolved in response to economic and technological changes in the Canadian context. However, it has become increasingly evident over the past decade that the system for standardization activities needs to be revitalized if it is to continue being an effective tool for Canadian industry, governments and consumers.

■ *The NSS today*

The environment in which Canadian standardization activities operates today is much larger and more complex than it was 25 years ago. The system itself has grown as standardization activities become increasingly relevant in regulatory and public policy environments. The current standardization environment calls for an expanded, renewed system with the capacity to manage more information more effectively for timely decisions that will meet the needs of a growing number of stakeholders with diverse and sometimes competing interests.

"Participants" are now more broadly defined as the volunteers — and the organizations they represent — who are active in monitoring and developing national and international standards, industry representatives active in conformity assessment activities, and the regulators, consumers, government and non-governmental organizations who use the system in increasingly diverse ways.

> **The role of the Standards Council of Canada**
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> The Standards Council of Canada is identified as the lead agency responsible for carrying out many of the recommendations contained in this *Issues Document*. The authority and mandate to take this leadership role is clearly set out in the *Standards Council of Canada Act*. At the same time, the Council works as a "leader-participant" in standardization activities, collaborating with others in the field to achieve consensus in planning and action. In positioning itself as the lead agency for many of the recommended actions, the Standards Council affirms its commitment to lead, coordinate and work with all members of the National Standards System.

This new definition supports the concept that standards and conformity assessment tools are means used to support broader Canadian public policy and regulatory goals. Rather than specifying which organizations are members, it suggests a more open and fluid standardization community which overlaps with other communities (particularly in the regulatory, and social and environmental policy spheres), and with a range of non-governmental and consumer organizations.

■ *Looking ahead*

As a result of rapid globalization, a domestic focus on standardization activities is no longer tenable for Canada or for other industrialized countries. Globalization of trade is opening up new markets and opportunities for Canadian industry. At the same time, international standards practices are increasingly being adapted for use in Canada. With standards inextricably linked to trade, Canada's participation in the development and monitoring of international standards practices is now a fact of life. Likewise, Canada must ensure that its domestic standards practices reflect international norms.

Other major changes which are pressuring the NSS to adapt and shift the focus of its work include the following:

- **regulatory and public policy environments in Canada are becoming increasingly relevant to standardization issues, and vice versa**. The linking of domestic standardization practices to regulations means that regulatory and standards communities must work together more closely. Similarly, environmental and social policies are increasingly reflected in, and contribute to, standardization activities and outcomes.

- **responsibility for standards practices is being shared among a wider range of stakeholder groups**, including small- and medium-sized enterprises, NGOs and consumer groups, many of which are poorly supported and ill-equipped to contribute effectively.

- **costs of developing and monitoring standards are increasing and public funding is declining**. As standards are more widely used domestically and internationally, the resources required to stay abreast of the issues are skyrocketing. At the same time, public funding to support standardization has declined drastically.

■ *Vision and objectives for a renewed NSS*

To meet the challenges of a rapidly changing environment, the Standards Council of Canada has developed a vision for a revitalized National Standards System. This vision is intended to capture the essence of where Canada's standardization system should be in five years, if it is to be relevant and effective in the national and international arenas:

> *By 2005, Canada's National Standards System will be recognized as a leader with a well-coordinated infrastructure that clearly defines the roles of the various partners and that gives Canadians a comprehensive advantage when purchasing and selling products and services, both domestically and internationally, and promotes Canada's social, economic and environmental well-being in a timely and responsive manner.*

As Canada's National Standards System equips itself for the millennium, it must be organized and structured to achieve the following objectives:

On the international front ...
- influence global markets
- improve access to existing and new markets
- offer a competitive advantage for Canadians

On the domestic front ...
- meet the needs of an evolving regulatory and policy environment
- represent the broad range of stakeholders
- communicate effectively the role and benefits of standards and conformity assessment

A solid foundation ...

- build capacity to handle new domestic and international directions in standardization
- redefine the roles and responsibilities of NSS members
- effectively support membership through skill-building, training and strategic use of limited resources

A diversified resource base ...

- develop innovative funding models
- forge partnerships and strategic alliances to maximize the impact of limited resources
- devote resources to monitoring international developments on order to make strategic decisions

■ *Key issues for consideration*

This document examines five broad issue areas to be considered in developing a Canadian Standards Strategy. The focus for the remainder of this *Issues Paper*, these issue areas provide the framework for defining the challenges facing the National Standards System, and ultimately for setting out broad strategic directions which will form the core of Canada's Standards Strategy for the coming decade. The issue areas are:

A. Information-Sharing and Knowledge-Development Processes
B. Participation in Standards Activities
C. Leadership, Accountability and Coordination
D. Linkages with Regulatory and Policy Priorities
E. Promoting and Sustaining Standardization Activities

II Key Issues

This chapter of the *Issues Paper* sets out five broad areas of concern affecting Canada's National Standards System as it moves into the 21st century. The following sections explore these issues, identifying the factors and challenges which must be considered in the development of a Standards Strategy. As well, each section proposes a number of process initiatives to be undertaken as part of this overall plan. The five issue areas are:

A.   Information-Sharing and Knowledge-Development Processes
B.   Participation in Standards Activities
C.   Leadership, Accountability and Coordination
D.   Linkages with Regulatory and Policy Priorities
E.   Promoting and Sustaining Standardization Activities

A.   Information-Sharing and Knowledge-Development

Overview

The National Standards System is a knowledge-based system. Standards are developed by technical experts, embody "best practices," and are themselves vehicles for information exchange and technological diffusion. The standards-development process relies upon information and knowledge to perpetuate itself and to advance the goals and objectives of those who participate in it.

There is no shortage of information available. As Canada's world of standardization grows, so too does the volume of information about standardization and related activities. For systems as diverse as the National Standards System, effective approaches to monitoring, collecting and using information are vital for day-to-day decision-making, and for the development of a solid knowledge base that helps to educate and inform stakeholders over the long term.

As the 21st century begins, the National Standards System faces some important challenges with respect to the collection and use of information. First, are the right issues being monitored and the right information being collected and disseminated to the right organizations to make decisions that will benefit Canadian industry and consumers? Second, what needs to be done to develop a solid knowledge base that links Canada's system with international standardization decisions and with broader decisions in the social, economic and environmental policy and regulatory fields?

Various factors are contributing to make information management and knowledge development of prime importance to the National Standards System. These include ever-increasing information needs, a growing number of relevant issues to be monitored, and decisions that are increasingly complex and inter-related. Finding better ways to monitor and use information for effective decision-making is vital to the process of renewing the National Standards System.

This section identifies specific challenges related to improving information and knowledge management, and sets out a number of process steps for consideration in addressing them. The challenges are organized under two key themes —the first encompasses a range of regional and national issues of interest, while the second theme addresses specific issues on the international front:

1. Broad Monitoring and Dissemination Issues in Standards Development

2. International Trends in Conformity Assessment
   a) Mutual Recognition Agreements
   b) Self-Declaration

1. Broad Monitoring and Dissemination Issues in Standardization Activity

While the demand for information and knowledge is increasing, current information-sharing systems in Canada are not up to the task. Ad hoc and inadequate, these systems rely on fragmented information from private and public sector participants in standards bodies, inconsistent links with international, regional and national fora, and poor communication among Canadian policy agencies. A key issue is the lack of a centralized mechanism for collecting and disseminating standards information.

■ *Standards activities are on the increase around the world*

As recently as 1960, there were only a few dozen ISO standards in place. By 1987 the number had grown to approximately 7,000, and by the end of 1997, there were almost 12,000 standards. Although many international standards are developed by formal bodies with broad international representation (e.g., ISO and IEC), some are developed by national SDOs that have achieved an internationally pre-eminent position in certain areas (e.g., the American Society of Mechanical Engineers' Boiler and Pressure Vessel Code). Others are developed by NGOs (e.g., the Forest Stewardship Council's certification program for sustainable forest management), and still others emerge through marketplace competition as the preferred *de facto* standard.

> **The information quagmire:**
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> The world of standards can be a quagmire of information — unless leading-edge information management methods and technologies are used to help users make sense of issues and options. Failure to provide these methods and technologies will render the National Standards System irrelevant, and will condemn standards players to struggle with too much, too little or inconsistent information.

Numerous new regional standards-setting fora have emerged in recent years, including the NAFTA Trilateral Standardization Forum, COPANT, PASC, and the CEN and CENELEC in the European

Union. Although Canada is committed principally to international standards development, many of these regional and bilateral standards development fora and activities serve a useful purpose.

■ *U.S. standards activity is increasingly important for Canada*

The U.S. is a significant player in the international standards world and by far Canada's largest market for products and services. In many areas, such as health, safety and transportation, Canada relies upon U.S. standards, by accepting them as equivalent, or by referencing them directly in Canadian legislation.

It is in Canada's interest to be well informed about the advantages and disadvantages of U.S. standards-related activities in any particular sector. This suggests that NAFTA-related venues should be a high priority for Canadian standardization. Moreover, Canada should develop an integrated and strategic approach for relating to U.S. standards, and standardization bodies and processes, and for responding to U.S. priorities and activities —both within and outside the U.S.— in a manner that addresses Canadian interests.

Although Canadians are frequent participants in U.S. standardization activities, mechanisms to systematically collect information, determine priorities, consult with stakeholders and provide for a coordinated Canadian (national) position in standards activities vis-à-vis the U.S. are at best poor and frequently non-existent. A range of stakeholders, including the Standards Council of Canada, are concerned that opportunities for effective decision-making are often overlooked or lost.

Making informed choices

Sound decisions can only be made based on a thorough knowledge and understanding of standardization options and of the wider context in which these decisions will be implemented. Access to good information and intelligence is an essential part of this process. NSS participants are faced with an array of choices related to, for example:

- voluntary or mandatory standards (technical regulation)
- "private" or publicly developed standards (such as a National Standard of Canada or National Code of Conduct)?
- new domestic standards or existing international or foreign standards as equivalent
- process or service standards
- independent third-party testing and certification or self-declaration
- use of certification "marks"

Competition exists among standards developing, testing and certification organizations, and accreditation organizations, and industry must make choices about the organizations that will best serve their needs. Moreover, in this era of globalized markets, competition has emerged as firms "shop around" for the regulatory regime that best suits their needs and interests.

To stay well informed, Canada needs to develop a more systematic approach to participation in U.S standards activities. Such an approach would match Canada's trade interests in the U.S. to participation in both traditional and non-traditional standards fora.

■ *The use of non-traditional approaches is on the rise*

The Canadian standards participant typically faces a confusing array of standards and standards approaches. For example, many participants must consider *de facto* or "consortia" standards that have been developed informally by leading members of their sector. In some sectors, U.S. standards are the *de facto* international standards, while in others, they are in direct competition with international or regional standards. In the latter case, companies are faced with making the critical choice of *which* standard to adopt. (In extreme cases, Canadian ISO representatives have adopted different positions at ISO than in the U.S.). The construction industry is one example in which Canadian harmonization with U.S. standards is already well under way. However, due to climate-related factors, Canada may benefit more by harmonizing its building standards with an alliance of northern countries.

Consideration must also be given to the broader international standards community. As regional trading blocks and major trading countries promulgate their own standards, Canada is faced with an increasing number of competing standards for the same products and services.

■ *Small- and medium-sized enterprises (SMEs) are at a particular disadvantage in accessing information*

Small- and medium-sized enterprises have the greatest difficulty in choosing among a range of standards. They generally lack the resources to research international standards information and the contacts to monitor new developments in the standards world. Unlike larger corporations, they are often unable to commit the personnel and travel funds required to attend international, regional and sectoral standards meetings.

■ *Canada must choose among an array of standards fora*

The need for comprehensive and current information is illustrated by the range of standards-setting fora from among which Canadian stakeholders must choose. Under these circumstances, the knowledge and ability to determine the appropriate venue for participation is a key strategic strength.

Knowledge management is …

… an organization's strategies and processes for identifying, creating, capturing and sharing knowledge to enhance organizational performance, customer service, and marketplace competitiveness.

Some regional fora carry out important standards-setting activities that can substantially affect a country's interests, but do so without that country's participation. For example, Canada does not participate in the standards-setting processes in the European CEN and CENELEC, yet these organizations are extremely influential at ISO and IEC, organizations whose decisions have an important impact on Canadian industry.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- Working in collaboration with federal government departments, industry representatives, and standards-development organizations in Canada, the Standards Council of Canada design a knowledge management system, including an approach and mechanisms to scan for, assess and distribute information and timely intelligence on international, regional and U.S. standards-development and conformity assessment trends and activities. This system would ensure that Canadian practices are consistent with international norms (where appropriate), and would take full advantage of current information technologies.

- The public and private sectors nurture and develop Canadian standards expertise to ensure that professional services are available to industry clients (especially SMEs), including advice on how to navigate the complex world of standards and conformity assessment.

- Canada's Standards-Development Organizations work together to develop a systematic and coordinated approach to monitoring and advising the SCC on binational (Canada-U.S.) and trinational (NAFTA) standards-development activities.

2. International Trends in Conformity Assessment

While many of the issues presented above are generally applicable to standards development and conformity assessment, two international trends in conformity assessment have already had a major impact on the National Standards System and should be considered in the current renewal activities. These trends —specifically, the increasing use of Mutual Recognition Agreements and Self-Declaration— illustrate clearly the importance of monitoring information and channeling it to the right people, at the right time, to ensure effective decision-making.

a) *Mutual Recognition Agreements (MRAs)*

International standardization activities include conformity assessment (CA) practices for demonstrating compliance with standards (including both voluntary and mandatory compliance). Examples of conformity assessment standards include common criteria and procedures for testing and certifying products and calibrating instruments, as well as criteria and procedures for assessing laboratory competence (ISO/IEC Guide 25) and granting ISO 9000 or ISO 14000 registration.

Internationally harmonized testing and certification procedures and accreditation processes help to promote widespread confidence in the ability of two or more countries or organizations to correctly test and evaluate products and processes to a set of agreed-upon standards. Such mutual confidence, in turn, opens the door to bilateral and multilateral Mutual Recognition Agreements (MRAs).

Mutual Recognition Agreements are important tools for improving regulatory cooperation and expanding market access for Canadian industry.

They eliminate redundant testing and certification procedures, helping to lower costs, reduce delays and expand trade opportunities among signatories without compromising product quality and compatibility, or assurances that important health, safety and environmental objectives are being met. The WTO explicitly encourages mutual recognition as a means of eliminating barriers to trade.

> **About MRAs**
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> Mutual Recognition Agreements (MRAs) can be negotiated between governments (e.g., the recently signed Canada-EU MRA), between accreditation bodies (e.g., the agreement between the SCC and the American National Standards Institute and the Registrar Accreditation Board on quality registration), and between testing and certification organizations (e.g. the agreements on electrical equipment testing with standards bodies from more than 30 countries under the IECEE CB Scheme).

■ *Use of MRAs is on the rise*

MRAs are an innovative and increasingly popular tool that can be used to address regulated or voluntary conformity assessment procedures, or applied on a bilateral or multilateral basis. Several new international organizations have emerged in the 1990s with the explicit objective of promoting mutual recognition among their members. There is every indication that this trend will continue into the future.

Canadians are active participants in the move to adopt MRAs. Hundreds of MRA-type arrangements are currently in force or being negotiated between Canadian governments, federal departments, accreditation bodies, and testing and certification organizations and their foreign counterparts.

■ *The benefits of, and appropriate uses for, MRAs are not well understood in Canada*

Knowledge and understanding about the nature and benefits of MRAs is limited among members of the standardization community, including government, industry and other stakeholders. This has impeded informed debate and priority-setting, and reduced demand for MRAs. In fact, mutual recognition arrangements are sometimes negotiated without the participation of key Canadian clients and stakeholders.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- The lead agent in planning and negotiating an MRA be required to ensure that all relevant and appropriate parties in Canada, including the SCC, are informed about the MRA. Wherever possible, existing consultation mechanisms and fora should be used.

- The Standards Council of Canada develop, maintain, and make available to members of the National Standards System a comprehensive listing of all MRAs signed on behalf of federal, provincial and territorial governments, agencies, bodies, etc.

b) *Self-Declaration*

Self-declaration is a procedure by which a supplier gives written assurance that a product, process or service conforms to specified requirements, thereby changing the emphasis for detecting fault from pre-market inspection to post-market surveillance.

■ *There is growing pressure to use self-declaration*

Canada's regulatory agencies are faced with growing stakeholder pressure to consider self-declaration as a substitute for, or complement to, third-party assessment of conformity to standards. Many of these stakeholders are inadequately informed, or even misinformed, about the concept of self-declaration, including its benefits and costs.

Traditionally, ensuring conformity to both product and process standards has been done through independent, third-party assessment. However, a growing number of multinational companies, concerned about the cost of obtaining third-party certification in diverse markets, are advocating for governments to allow them to "self declare" their conformity with relevant product or process standards.

It is important to recognize that self-declaration applies both to products and to quality management systems. While the concept is the same, the context differs considerably (i.e., products vs. processes, mandatory vs. voluntary requirements), and with profoundly different implications. For example, self-declaration of conformity to regulated product standards raises complex and difficult issues related to regulatory reform.

■ *Self-declaration can promote innovation and reduce costs*

For certain products and processes, self-declaration of conformity has received some degree of government endorsement as an important component of regulatory reform. In fact, the concept has been broadly accepted by governments in Europe and the U.S. as a means of ensuring quicker time to markets for low-risk, high-technology products.

As for MRAs, self-declaration can promote innovation, lower costs and enhance consumer choice. Moreover, the process is often accompanied by post-market surveillance and sanction regimes. Canada is under increasing pressure from some countries and sectors to follow the U.S. and European lead. This is particularly true in the context of negotiating MRAs, when incompatible national systems of conformity assessment can present a major stumbling block to reaching agreement.

■ *Canadian standards players require more information*

When assessing the merits of allowing self-declaration for specific Canadian sectors or products, and in trade agreements signed by Canada, governments and consumer groups must determine the full implications of such a policy for Canadian domestic product liability.

A major challenge is that stakeholders are not well informed about self-declaration. Moreover, there is widespread misunderstanding about the nature and consequences of self-declaration in the marketplace, a situation that is exacerbated by the fact that self-declaration is defined and implemented differently among Canada's various trading partners.

Process Issues for Consideration:

Consider whether the following process step should be taken to address these issues.
It has been suggested that

• A group comprised of consumers and representatives from federal-provincial-territorial governments and industry groups, and relevant National Standards System partners, study the legal and economic implications to consumer protection of manufacturers' self-declaration of product conformity. The goal of the study would be to determine implications related to both management systems and product standards, and to develop a tool for informing stakeholders and decision-makers about the various options for, and uses of, self-declaration.

B. Participation in Standardization Activities

Overview

The previous section focused on information and knowledge as foundations of the National Standards System and a Canadian Standards Strategy. Equally important is the broad-based involvement of stakeholders in standards-development and conformity assessment processes. This section examines the benefits of ensuring more effective participation by all Canadian interests in standardization activities.

The effectiveness of voluntary standards depends on obtaining broad-based, balanced and expert input into their development and adoption —a condition which applies equally to "domestic" voluntary consensus standards and international standards. Wider participation in the standards-setting process generally means better results and a greater likelihood of standards being understood and adopted. For all stakeholders, one of the major incentives to participation is the opportunity to influence outcomes, whether they be economic or social. For businesses, incentives include substantial networking and intelligence-gathering opportunities, and "first-mover" marketing advantages when delivering products to market.

Today, international standards are a key element of global linkages. Well-defined, widely applied standards create niche opportunities for small- and medium-sized companies to develop new accessories and applications for standardized equipment. The development of globally-harmonized standards for social and public policy issues —such as protecting and promoting privacy, the environment and health and safety— also presents unparalleled opportunities for governments, regulators, consumers and other non-governmental groups to help shape the world. For these reasons, it is essential for Canadians to be involved.

There is a need to broaden the range of stakeholders participating in the standards-development process, particularly small- and medium-sized enterprises and non-governmental organizations. One obstacle to effective participation in domestic and international standardization is the high cost of travelling and attending meetings. Greater use of electronic communication holds great promise in this regard.

Another obstacle to volunteer participation has been the lack of adequate training and support. There is a need to refresh and renew the "stock" of volunteers and technical experts currently involved in domestic and international standardization, and to attract and retain new clients and beneficiaries of the National Standards System.

Finally, broad-based Canadian representation and participation is essential for determining and pursuing national standardization priorities in international standards-development and conformity assessment fora, and in trade negotiations and agreements.

Challenges

This section explores challenges related to increasing effective participation in the standards development and conformity assessment process, setting out a number of proposed process initiatives designed to meet them. The challenges are organized under four key themes: the first two encompass a range of issues of domestic interest, while the second two themes address key issues in the international forum:

1. Engaging New Participants and Interests
2. Training and support to volunteers
3. Representation of SMEs, NGOs, and consumers
4. Participation in international activities

1. Engaging new participants and interests

Canada's National Standards System is founded on the services provided by the thousands of volunteers who contribute their time and expertise to standardization work, and by the many accredited organizations that ensure these standards are met.

Over the past decade, a number of factors have strained this foundation. The volunteer base of the Canadian standards system is aging and many volunteers are retiring. Recruitment has been hindered by a general lack of awareness about standards. Some organizations and sectors remain outside the NSS, choosing to pursue their standardization interests through other avenues. Other organizations are not fully engaged in the NSS. For example, some testing and certification laboratories remain unconvinced of the benefits of SCC accreditation, or are unable to meet the necessary criteria for accreditation, registration or certification.

■ *The NSS needs to broaden its voluntary participant base*

The National Standards System needs a variety of inputs to maintain its relevance and viability. As it continues to evolve into a more dynamic and responsive system, the NSS should benefit from, and be supported by, a wider range of sectors and organizations seeking voluntary standardization solutions. An ongoing challenge for the NSS is to ensure the continued and balanced growth of participants in the National Standards System. This can, in part, be accomplished by making the system more open, transparent and accessible.

Process Issues for Consideration:

Consider whether the following process step should be taken to address these issues. It has been suggested that:

- The SCC marketing plan promote the benefits of voluntary consensus standardization and accreditation within the NSS to members of industry and their trade associations.

2. Training and support to volunteers and sponsors

As noted above, the NSS depends on the services provided by thousands of volunteers who contribute their time and expertise to domestic and international standardization work. By extension, Canada's National Standards System is a reflection of how effectively these individuals carry out their work. Increasingly, lack of adequate training and support is becoming a barrier to volunteer effectiveness. Active volunteers report little ongoing training and new volunteers frequently must rely on a limited number of training resources and little peer support.

In part, the reduction in participation rates for volunteers reflects the decline in formal government support for standards activities. For example, the SCC budget for volunteer travel to international standards meetings has declined from $800,000 in 1989 to approximately $200,000 in 1998.

■ *Volunteers must be equipped to participate*

It is important that Canadians have the opportunity to participate in domestic and international standardization activities affecting their interests, and that they be equipped to participate effectively. As the stakes associated with (international) standards have risen, so has the complexity of the negotiations. Although technically competent, many Canadian representatives on International Technical Committees (TCs) are poorly trained in the negotiation process and receive little support domestically. Moreover, there is little coordination among Canadian representatives on different TCs. A recent study conducted by the SCC found that participants in international standards development believe they need more training, financial support and access to information.

A key challenge for the NSS, over both the short and long term, is to equip and support volunteers, their sponsors and other contributors to the standards system, at the same time ensuring that the right people are being trained for effective participation.

Process Issues for Consideration:

Consider whether the following process step should be taken to address these issues.
It has been suggested that:

- The SCC coordinate a system-wide initiative to develop and regularly deliver a comprehensive program to ensure sustained, effective volunteer representation within the Canadian standards system.

3. Balanced representation: involving SMEs, NGOs and consumer groups

The effectiveness of voluntary consensus standards and the benefits to be derived from them depend on balanced representation, in which the right people participate in a meaningful way in the decision-making process. The issue of balanced participation is a key concern for Canada's small- and medium-sized enterprises (SMEs), non-governmental organizations (NGOs), and labour and consumer groups, particularly in standards and standards-related activities affecting social and public policies.

■ *SMEs, NGOs and consumer groups are vital players in standardization activities*

Factors such as government and consumer reliance on voluntary consensus standards, the responsiveness of standardization to Canadians needs, and the credibility of the consensus process depend, at least in part, on the active participation of SMEs and NGOs in domestic standardization activities. However, the increasing cost of traditional standards participation and reductions in government funding have created significant challenges for enhancing participation of these groups.

These challenges become more critical when Canadian-developed standards are presented abroad, or when international standards are considered for adoption in Canada. Situations such as these represent a significant and growing trend in standardization, and require meaningful involvement of all affected stakeholders.

■ *Participants are bearing an increased financial burden*

As a response to decreases in government funding, Canadian SDOs, businesses and NGOs have assumed a greater share of the costs of participating in domestic and international standardization activities. These costs are particularly onerous for small- and medium-sized businesses, as well as for Canada's already over-taxed consumer and NGO community. The principle of balanced representation stresses that the right people must participate in the decision-making process — however, this principle does not address how participation will be funded.

Responding to increased demand, governments, industry, NGOs and consumers have been active in establishing —at their own expense— mechanisms to assist in consultation and coordination on standards-related issues. Moreover, the incorporation of public policy objectives into voluntary consensus standards processes and practices has resulted in additional costs for all participants.

SMEs and NGOs can benefit greatly by having information about, and participating in the development of domestic and international, regional and bilateral standards. Participation enables these groups to shape outcomes, stay informed about their competitive environment, and obtain first-hand information about anticipated developments within their industry sector and markets.

Process Issues for Consideration:

Consider whether the following process step should be taken to address these issues. It has been suggested that:

- The Standards Council of Canada co-ordinate the development of ways and means (e.g., funding mechanisms, accreditation requirements) to increase the effective involvement of NGOs and SMEs in standardization activities.

4. Participation in international standardization and conformity assessment activities

A vibrant National Standards System, with strong, broad-based involvement and support is essential if Canadians are to project a credible and effective voice on the international stage. Given the increasing importance of international standards to global trade, it is vital that Canada continue to participate and provide leadership at the international level. For this reason, priority should be given to increasing the number of Canadian secretariats, chairs and convenors at ISO and IEC. It is essential that Canada have a strategy linking its participation and leadership at ISO and IEC to Canadian trade interests, industrial strengths and specialty domains (products and services in which Canada is competitive), as well as environmental and health and safety concerns. This will ensure that Canadian industry gets the best possible value from its investments in international activities.

■ *Canada must choose the most appropriate fora for participation*

In addition to ISO and IEC, Canada would benefit from participating in other fora for standardization activities, such as the *Codex Alimentarius* for the agriculture, food and beverages sectors, and the U.S. SAE for the automotive, aerospace and defense sectors. Moreover, new bilateral, regional and international standards-related organizations are emerging each year, and standards-related trade agreements are multiplying both in number and complexity. Decisions must be made about whether, and to what extent, Canadians are prepared to engage in any or all of these fora.

An ongoing challenge is the development and support of mechanisms that ensure adequate representation and input by all interested Canadian parties into international standardization activities. Meeting this challenge will

> **On the Value of Participation:**
>
> A recent ISO example illustrates the importance of Canada's participation in international standards setting. A European member of an ISO subcommittee proposed changing the long-established industrial reference temperature for measuring length from 10 to 23 degrees Celsius, a change that would have cost Canadian industry more than $200 million. Canada's involvement on this subcommittee ensured that Canadian industry received early warning of the proposed change, and industry was able to mobilize and defeat the proposal.

require the involvement and support of relevant government departments and agencies as formulating and advancing a national Canadian standards position must involve all Canadian interests, including the dozens of federal and provincial departments and agencies with an economic, social and jurisdictional stake in the outcome.

■ *Federal and provincial governments have an important stake in voluntary standardization activities*

Federal and provincial governments retain significant interests in a wide range of standardization issues. They play an instrumental role in representing the interests of the public and their clients in standards activities, coordinating their views and interests, and taking positions and actions on their behalf. In addition to supporting the standardization activities of their constituents and clients, they are important participants in their own right. This participation should be strengthened as regulatory agencies and line departments rely increasingly on voluntary consensus standardization measures as a complement to traditional command-and-control regulation, and as new and innovative international trade agreements are negotiated containing standards-related components which affect their interests.

Participation in almost all international, regional and bilateral standards-setting fora is uncoordinated and carried out primarily on an *ad hoc* basis. Ensuring the participation of Canadian representatives with the knowledge and abilities to take part effectively in standards development, monitoring and conformity assessment is crucial to the future success of standardization. This includes representatives of relevant provincial and federal departments.

In the international arena, no mechanisms currently exist for developing a national standards position for trade agreements or for ensuring proper consultation and participation of affected Canadian stakeholders and jurisdictional representatives. If the right organizations, with the right skills and expertise, are not at the negotiating table, Canada's voice will be weak and ineffective. A consolidated and coordinated Canadian approach is required to secure real reciprocity in trade agreements.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- SCC and NSS participants, working with industry and relevant government departments and agencies, develop a mechanism to ensure effective representation in international standardization venues. Consideration should be given to existing sectoral advisory groups, industry associations, PTAC, C-Trade and other ongoing consultation fora as possible consultation mechanisms.

- Government departments and agencies, in cooperation with the Standards Council of Canada (or otherwise represent the interests of their clients) should establish national positions on international standardization issues.

C. Leadership, Accountability and Coordination

Overview

Canada's national system of standards development and conformity assessment is adapting to a variety of challenges, from the globalization of trade, commerce and standards to emerging regulatory, fiscal and political pressures, and long-standing commitments to social and environmental objectives. As described in the preceding two sections, part of this adaptation process involves improving awareness and knowledge of standards issues, and enhancing participation in standardization activities. Enhanced participation, in turn, involves balancing input and sharing responsibility among a wider range of stakeholder groups than ever before.

As the roles and responsibilities of key participants in the standards system evolve to meet changing requirements and needs, the issues of coordination, leadership and accountability become critical. For example, government has an important role to play in "operationalizing" its economic and social objectives into the language of standards. Likewise, industry's role in championing standards development and conformity assessment has yet to be fully realized, while consumers and NGOs need to find innovative ways to remain at the standards table in the face of reduced government funding.

Negotiating trade agreements with standards-related components presents a particularly strong challenge to traditional roles and responsibilities. For this reason, the establishment of coordinated national positions on international standardization issues is a high priority, as are integrated approaches to negotiating Mutual Recognition Agreements (MRAs).In addition to comprehensive trade agreements and current fiscal constraints, the many demands of a globalized economy are placing pressure on provincial governments and agencies to become better coordinated on standards-related jurisdictional issues of concern.

Standards-development processes must ensure that industry, government and other stakeholders receive high-quality, cost-effective service. Investments must be made to find ways of expediting the standards-development process and reducing the costs of conformity assessment, without unnecessarily compromising quality, safety or environmental objectives, or the consensus process itself. In fact, growing pressure to reduce the time and cost of achieving consensus in the standards-development process raises important questions of responsibility and accountability.

Challenges

This section addresses a range of important challenges related to coordination, leadership and accountability, and sets out a number of process issues for consideration. These challenges are organized under five key themes:

1. Roles and Responsibilities
2. Trade Agreements
3. Mutual Recognition Agreements
4. Federal-Provincial Partnerships
5. Efficiency and Speed

1. Roles and Responsibilities

The emerging global orientation of Canada's National Standards System has created new challenges and opportunities for participants. There has been an acceleration of the scope and depth of voluntary standards development and conformity activities, particularly in the fields of laboratory testing, certification and registration, and in service and process standards.

Management systems standards are a new feature on the traditional standards landscape, as are new specialty accreditation programs for sector-specific industries such as the program recently developed for the mineral analysis laboratories. New approaches to regulation encourage the use of innovative standards, such as national performance-based building codes, as regulators increasingly incorporate voluntary consensus standards into regulations and use private-sector conformity assessment processes to promote and monitor compliance to regulations. Mutual recognition-type arrangements and similar equivalency arrangements have introduced new forms of cross-border regulatory cooperation and competition into the regulatory landscape.

■ *The standards environment has changed*

In the standards industry —as in other spheres— consumers, industries, NGOs and governments are demonstrating a growing preference for market-based approaches as traditional solutions and mechanisms emphasizing the responsibility of governments prove to be costly and unbalanced. Client demand (most often from international sources) is driving standards programs, and cost-recovery business practices are becoming the norm in what have traditionally been government-sponsored programs. Voluntary standards are now being measured for their contribution to economic efficiency, harnessed in the service of technology diffusion and enhanced productivity. At the same time, standardization activities are increasingly affecting, and affected by, social policies related to the environment, health and safety.

■ *Participants' roles and responsibilities are evolving to meet new conditions and demands.*

As a result of these changes, some of the traditional roles and responsibilities of Canadian standards system participants have evolved and will need to be reevaluated and redefined. This process will involve taking a fresh look at clients of the National Standards System and at the kinds of services they receive.

The Standards Council of Canada has a mandated leadership role to play in standardization activities. This role is set out in the *Standards Council of Canada Act*, which identifies the Council as the lead organization responsible for the coordination of standards activities in Canada. In support of this leadership role, the federal government expanded the Council's mandate to: "coordinate and oversee the efforts of the persons and organizations involved in the National Standards System," which is defined inclusively as "the system for voluntary standards development, promotion and implementation in Canada."

Other mandated roles of the Council include: promoting Canadians' participation in voluntary standards activities; promoting public-private sector cooperation on voluntary standardization;

fostering quality, performance and technological innovation in Canadian goods and services through standards-related activities; and developing standards-related strategies and long-term objectives. It is noteworthy, however, that public funding appropriations to the Standards Council have been reduced by half over the past several years.

■ *Government and industry have no clearly defined role*

While standards are becoming increasingly important in government activities, there is no clear perception of leadership by governments as to how economic and social interests can be translated into standards objectives. One key challenge involves quantifying the various benefits of standards activities. Appropriate government mechanisms/processes need to be established to provide regular analysis and evaluation of standards priorities.

Similarly, within many industry sectors, there are no clear champions/leaders for various stages of standards development and conformity assessment. Many private organizations contribute to the development of standards by participating in standards-development committees and various standards fora in Canada and around the world. However, industry-wide associations and societies have not generally embraced standards issues as a high-priority item, or even as part of their mandate in representing their respective industry sectors.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- The SCC conduct a review of its resources, operating procedures and stakeholder relationships to ensure consistency with the Canadian Standards Strategy.

- All participants in the Canadian standards system examine and articulate their roles and responsibilities to ensure alignment with the Canadian Standards Strategy.

2. Trade Agreements

The need for leadership and coordination is particularly acute in the negotiation of international trade agreements. As the use of tariffs declines, the role of standards in determining market access has increased. Differing standardization practices from one jurisdiction to another may result in producers of goods and services being denied access to markets or being subjected to standards-related costs, delays and other "technical" obstacles in their transactions. Nations that depend heavily on trade are particularly at risk from these discriminatory standards practices.

To reduce non-tariff trade barriers and promote greater cooperation among member jurisdictions, the 130+ member World Trade Organization (WTO) established a set of binding international disciplines to govern the creation and use of standards. These disciplines are mirrored in various regional trade initiatives (including NAFTA, the EU, APEC and the FTAA), and are increasingly built into cooperation arrangements such as Mutual Recognition Agreements (MRAs).

■ *Canada must present a coordinated position on national standards at the international bargaining table.*

Trade agreements between governments are proliferating at all levels: international, regional, and bilateral. Moreover, standardization issues such as non-tariff barriers to market access are increasingly on the negotiation agenda and are often the subject of trade disputes. For this reason, it is vitally important to agree on national standardization issues and priorities that are most relevant to Canadians, and to advance a coordinated negotiating position that builds on Canada's strengths and interests, and has the broadest possible input from, and support of, Canadians.

Currently, there are relatively few effective mechanisms available to either develop a national standards position for these trade agreements or to ensure proper consultation and participation of affected stakeholders and jurisdictional representatives. Without coordinated Canadian stakeholder input and the establishment of national priorities, Canada will have a weak and ineffective voice at the international bargaining table. In order to secure reciprocity in trade agreements, the Canadian approach must be both consolidated and coordinated. For this to be a reality, clear leadership roles and responsibilities must be defined.

Process Issues for Consideration:

Consider whether the following process step should be taken to address these issues.
It has been suggested that:

- DFAIT, in cooperation with SCC, continue to take the lead in and accelerate efforts to create consultation mechanisms designed to develop national positions on international standardization issues and ensure effective representation at the international negotiating table. Possible mechanisms to be explored include existing sectoral advisory groups, industry associations, consumers, PTAC, C-TRADE and other ongoing broad policy consultation fora.

3. Mutual Recognition Agreements (MRAs)

The federal government and its departments and agencies involved in standardization issues (e.g., Standards Council of Canada) are active proponents of bilateral and multilateral MRAs. As more countries, regions and sectors become interested in MRAs, it will become increasingly important for Canada to establish policy priorities for areas of mutual recognition, identifying the countries, products or sectors, and testing, certification, accreditation and registration processes that should be negotiated.

> **MRAs**
>
> Mutual Recognition Agreements can be negotiated between governments (e.g., the recently signed Canada-EU MRA), between accreditation bodies (e.g., the agreement between the SCC and the American National Standards Institute and the Registrar Accreditation Board on quality registration), and between testing and certification organizations (e.g. the agreements on electrical equipment testing with standards bodies from more than 30 countries under the IECEE CB Scheme).

■ *Canadian needs to develop a coordinated approach to mutual recognition-type agreements.*

Despite being an active proponent of MRAs, Canada currently does not have articulated public policies or

guidelines that set out the necessary or desirable conditions for becoming a signatory to an MRA. To date, Canada's approach to bilateral and international MRA initiatives has been largely *ad hoc* and responsive in nature.

The absence of adequate consultation and funding arrangements for negotiating and implementing government-to-government MRAs has been problematic in the past and demonstrates the need for an integrated approach to negotiating these agreements. This problem, which is particularly acute in the case of MRAs involving provincial jurisdictions, is exacerbated by a proliferation of untracked MRA activity. Moreover, negotiating MRAs is extremely labour intensive and typically requires extensive consultations with all affected stakeholders. Due to limited resources, Canada's efforts need to be concentrated in areas that provide the greatest return on investment

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- DFAIT take the lead in coordinating federal-provincial-territorial involvement in planning and negotiating MRAs affecting their jurisdictions.

- The Standards Council of Canada, working with appropriate stakeholders, develop a method for making strategic decisions about Canada's involvement in MRAs, including identification of appropriate MRA fora, products and sectors, and standardization activities.

4. Federal-Provincial Partnerships

There is a need for improved coordination and leadership on a wide range of standardization activities among the thirteen provincial/territorial governments, as well as between these jurisdictions and the federal government. Increasingly, standards activities are impinging on issues affecting both federal and provincial/territorial jurisdictions. These issues include: the growing use of voluntary standards and conformity assessment practices in regulatory matters related to environmental, health and safety, and consumer issues; standards for interprovincial trade in goods and services; and the negotiation of international standards agreements in areas of provincial or territorial jurisdiction and/or enforcement. Further, despite signing the 1995 Agreement on Internal Trade and some limited successes in coordinating consumer protection standards, the provinces and territories have made limited headway in identifying and tackling other standards-related barriers to trade. This has resulted in various interprovincial trade disputes.

- *The federal government has an important role to play in harmonizing standards*

Sometimes, provinces/territories adopt differing standardization practices to address the same issue, for example, with respect to the environment, building and construction, or analytical methods in the laboratory. The federal government has the opportunity to play an important role in helping to harmonize or "reconcile" regulatory requirements across jurisdictions. However, governments must cooperate if they are to maximize the potential benefits to be derived from developing common standards practices. National codes —for example, in the fields of food

inspection, electrical safety and hazardous products— can help businesses reduce their regulatory burden and increase productivity, while also promoting common national objectives.

Lack of coordination of standards activities among the provinces and federal government departments has the potential to confound Canada's efforts to achieve its trade and social objectives internationally. It should be noted that several mechanisms for promoting intergovernment and interdepartmental coordination already exist, most notably the Standards Council of Canada's Provincial/Territorial Advisory Committee (PTAC) and the federal government's Interdepartmental Committee on Standards-Related Measures.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues. It has been suggested that:

- Federal/Provincial/Territorial governments establish or strengthen mechanisms that promote interdepartmental coordination on standardization activities and enhance coordinated input to the standards system.

- The federal government take the lead in establishing a Federal/Provincial/Territorial Council of Ministers responsible for standardization.

- Where possible, provincial/territorial and federal governments harmonize standards by making use of existing national voluntary codes.

> **The SCC defines "consensus" as:**
>
> "... substantial agreement reached by concerned interests involved in the preparation of a standard. Consensus includes an attempt to resolve all objections and implies much more than the concept of a simple majority, but not necessarily unanimity."
>
> *Criteria and Procedures for the Preparation and Approval of National Standards of Canada, CAN-P-2E, 1992.*

5. Efficiency and Speed

Accountability and responsibility are important considerations in speeding up the standards-development process in response to market pressures. In fact, traditional approaches to developing voluntary consensus standards and processes for conformity assessment may not be adequate in the new standardization framework. Challenges include redefining the role of consensus, responding to the proliferation of new approaches outside of the formal standards-setting process, and meeting the needs of a broader range of interests.

■ *Timeliness and efficiency are increasingly valued commodities in the standards-development process.*

Consensus has traditionally been a key feature of standards-development and conformity assessment practices. However, factors such as globalization and the limited lifespan of many new products and technologies have resulted in growing pressure from some sectors to reduce the time and resources required to achieve consensus. Similarly, government officials and business representatives cite the time required to develop standards and conformity assessment processes using the consensus process as one of the main impediments to increased use of the Canadian standards system.

In some cases, there is a perceived danger that relaxing the consensus process in favour of timeliness and efficiency will lead to the development process being "hijacked" by well-funded special interests, effectively excluding important interests and voices, and compromising key health, safety and environmental (as well as competition) objectives. In such instances, critical questions of accountability, responsibility, and liability may become paramount in determining any settlement. Similarly, accountability and liability issues are major factors in assessing the merits of speeding up the conformity assessment process in order to reduce costs and marketing delays for some products.

Speeding up the process

Recognizing the potential limitations of streamlining consensus-based standards development processes, both ISO and the IEC now offer alternative products. For example, the IEC recently approved industry use of technical agreements which set out minimum specifications for fast-paced technology. Despite the time-saving effects of these and other changes to the standards development process, however, some industries are establishing their own *de facto* standards.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- Factors contributing to the time required for, and costs of, standards development be assessed (e.g. consensus process, face-to-face meetings, support services, language capacity, etc.), and the means identified for addressing them.

- Ways of expediting and reducing the costs of conformity assessment processes be explored.

D. Linkages with Regulatory and Policy Priorities

Overview

Standardization activities do not take place in isolation. Increasingly, the National Standards System is becoming an open system with activities that both affect, and are affected by, activities in other spheres, particularly the regulatory, social and environmental spheres. By definition, standardization activities support and strengthen other Canadian priorities. Logic therefore dictates that the standards system will reflect, and at the same time contribute to, directions and trends outside of its own boundaries.

An earlier section of this *Issues Paper* identified the need to collect and use information and knowledge to help set priorities. Similarly, improving linkages with both regulatory and policy priorities is an important consideration in strengthening Canada's National Standards System.

Assessing regulatory and policy priorities in the broader operating environment of the NSS can provide a legitimate and rational means of setting priorities for standardization activities, and for allocating scarce funds to these activities. Improved links will also serve to increase awareness and understanding of Canada's role in, and the benefits of, standards development and conformity assessment.

Because it promotes a greater reliance of federal departments and agencies on the programs and practices housed within the National Standards System, the federal government's regulatory reform policy presents a special challenge to improving linkages. This trend has manifested itself in a number of ways, including the investment of public/social policy objectives in standards development and conformity assessment processes. Currently, no formal mechanisms are in place for doing so are in place and inclusion has been ad hoc and random. Critics have suggested that the system may not be able to "marry" social policy objectives and standardization as the necessary linkages between the National Standards System and the regulatory communities often do not exist.

Challenges

This section presents a number of important challenges related to improving linkages with regulatory and policy priorities, and sets out related process issues for consideration. They are organized according to three themes:

1. Standardization and International Trade Priorities
2. Standardization and Regulation Activities — an Essential Partnership
3. Public Policy — Social and Environmental Issues

1. Standardization and International Trade Priorities

Trade agreements between governments are proliferating at all levels: international, regional, and bilateral. For example, it is expected that two major international trade negotiations will be launched next year, under the WTO and the FTAA. At the regional level, negotiations continue under APEC and NAFTA. Bilaterally, Canada is pursuing a wide range of agreements and initiatives with various trading partners around the world, such as the European Union and Japan. Standardization issues are increasingly on the negotiation agenda as non-tariff barriers to market access

There is substantial evidence of the increasingly important relationship between trade and global standardization issues, including economic globalization, rapid technological advancements, increased competition, regulatory convergence, and the growth of regional trading blocks coupled with the growing number of international and regional organizations engaged in standards-related activities (*e.g*., ISO, IEC, IAAF, NACC, APLMF, EOTC, as well as the WTO, FTAA, and APEC).This proliferation of activity has created an urgent need for Canada to make a systematic and strategic response to international standardization activities.

■ *Setting international standardization priorities is vital for Canada*

As a small trading nation, Canada's ability to exert influence and reap the benefits in a changing international standards environment depends more than ever upon its ability to identify priorities and to act collectively on the world stage. For this reason, it is vitally important to secure agreement among key standardization players on the national standardization issues most relevant to Canadians, and to advance a coordinated negotiating position that builds on Canada's strengths and ensures the widest possible input and support of Canadians.

■ *Standardization must be linked to trade priorities*

Trade is a key criterion for determining the focus of standards priorities. Free trade and globalization of the world economy are the primary drivers of Canadian standards activity. In turn, standards activities make an essential contribution to Canada's competitive position in international markets, particularly in the U.S.

In setting standards priorities, it is crucial to undertake ongoing analysis of trade flows for Canada's key export/imports of products and services, and of markets, competitors and market opportunities. But it is also necessary to gain an understanding of the Canadian players involved in trade, and the implications of standards for these players. Analyses such as these must be channeled regularly into a rational process of priority-setting for standards activities, putting an end to decisions made in isolation of the larger standardization and trade picture.

As an example, a strategy linking Canada's participation and leadership at ISO and IEC to its trade interests, industrial strengths and specialty domains (products and services in which Canada is competitive) is crucial to ensure that Canadian industry gains the maximum possible value from the money spent on international standards activities.

■ *A strategic approach is essential given the limited resources available*

As it stands, Canada's participation in international standardization is fragmented, with decisions made on an *ad hoc* basis without the benefit of a rational process for decision-making. The increasing role of trade and decreasing funding for standardization activities highlight the need for Canada to adopt a systematic, coordinated, and strategic approach to international participation. For example, Canada currently does not have a common framework or mechanism for identifying and negotiating Mutual Recognition Agreements with foreign trading partners.

Due to the growing range of activities at the international and regional levels, and the costs involved in participation, Canada will not be able to participate in all monitoring and development initiatives. Moreover, a blanket approach such as this one may not be useful or necessary. In fact, it may be more beneficial to focus on priority issues in trade, including monitoring Canada's trading markets, to determine where standards activity should be targeted.

■ *Sector-based approaches may be the direction of choice in the international arena*

The ISO is currently contemplating sector-based approaches to the organization of standardization activities. Canada should actively monitor ISO discussions in this area, and consider adopting this approach as a tool or structure for setting priorities.

Sectoral Advisory Groups on International Trade (SAGIT) have provided a useful framework for establishing Canadian government priorities and international business strategies through industry participation. Several SDOs in Canada maintain sectoral advisory committees. These may offer useful mechanisms for determining sector-based priorities in standards development and conformity assessment activities.

■ *International conformity assessment activities should be strategic and proactive*

The increasing volume of trade among nations calls for attention to conformity assessment requirements across borders, and mutual recognition of conformity assessment infrastructures and procedures. As Canada's volume of trade increases and diversifies, the issue of conformity assessment will become even more important.

Canada is an active participant in international conformity assessment activities. Wherever possible, national conformity assessment programs are based on widely accepted international standards and guidelines and, in combination with Canada's advanced technical infrastructure and capabilities, confer credibility, influence and leadership to Canada on the international stage.

However, lack of planning and prioritization of issues has left Canada with no consistent policy on international conformity assessment priorities and activities. Nor is there a mechanism to adequately engage a broad spectrum of stakeholders —including regulators and consumers— in decisions about participation in international conformity assessment fora. As a consequence, Canada's actions are generally *ad hoc* and reactive, rather than strategic and pro-active.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- Working with DFAIT, the SCC monitor international trade policy to help set priorities for Canada's involvement in standardization activities.

- Working with appropriate committees such as the ACT and CNC/ISO and CNC/IEC, the Standards Council of Canada establish strategic priorities for international standardization activities and involvement — including conformity assessment activities —and for ensuring a coordinated approach to monitoring and developing international standards. Wherever possible, existing sector groups should be used as a mechanism for identifying sector-based priorities.

2. Standardization and Regulation — An Essential Partnership

Over the past decade, governments have made increasing use of voluntary standards practices in regulations, for example, by incorporating standards into regulations, using standards as alternatives or supplements to regulations (*e.g.* national voluntary codes), and using private-sector conformity assessment processes to promote and monitor compliance with regulations. This shift in the use of standards has been instrumental in reducing the costs of regulation, facilitating internal and external trade and technology transfer, and enhancing Canada's overall competitiveness without jeopardizing consumer safety.

Merging standards and regulations: some examples

➤ Under the Ontario *Highway Traffic Act*, regulations relating to vehicles that provide transportation services to people with a disability refer to CSA Standard D409. This standard prescribes the structure and performance of such vehicles, and regulates the type of equipment that may be used in specific circumstances.

➤ CAN/CSA-Z262 describes the requirements for, and testing of, helmets worn during ice hockey. The *Hazardous Products Act* and its regulations require that hockey helmets comply with this standard before they can be imported, advertised or sold in Canada. Compliance with this standard, which has an associated certification program, is demonstrated by means of a certification mark.

➤ Under the *Transportation of Dangerous Goods Act*, regulations respecting the handling and transportation of dangerous goods, reference voluntary standards established by both the Canadian General Standards Board (CGSB) (*e.g.* CAN/CGSB-43.147-94) and Underwriters Laboratory of Canada (ULC) (*e.g.* ULC CAN-4-5508-M83).

■ *Relationships between the standards and regulatory communities need to be stronger*

The relationship and linkages between standards and regulatory agencies have not kept pace with increased activity between the two. In fact, it is becoming evident that the development of close and effective relationships between these two communities is vital to the health of standardization and regulatory activities.

Regulatory reform has created a demand for voluntary standardization solutions to traditional regulatory challenges. For this to happen, there must be an established relationship between the regulator and the NSS participant. The regulator must trust in the ability of the standards system to deliver credible, reliable and consistent results and, for this reason, must have a clear and concise understanding of how to use the NSS effectively. One of the obstacles to increased use of standards in the regulatory environment is the perception that it will result in a loss of control and authority. In fact, referencing standards and conformity assessment practices in regulation serves to maintain control and authority with the regulator.

In spite of the growing reliance on voluntary, consensus-based standards and independent conformity-assessment processes, regulators have voiced concerns about issues of liability and recourse for the consumer. As regulatory and standardization organizations work together more closely, the level of understanding and trust will increase, with positive spin-offs for decision-making and priority-setting.

Regulatory Reform

An important focus of current regulatory reform initiatives is finding and using alternative means for achieving regulatory goals. The increased use of standards offers benefits to both business and government by removing regulatory duplication and overlap, and helping to streamline the system. Business benefits when regulations rely on standards and conformity assessment processes that are voluntarily developed and adopted internationally. In the world trading community, regulations and standards are regarded as complementary.

To federal government regulators, trade is not the only issue of concern. Many of Canada's regulations focus on issues related to public health and safety, and the environment. The goal of these regulations is to preserve the public interest, which is of paramount concern in federal social policy. Therefore, priority-setting criteria should thus take into account both the social and economic (trade-related) rationale.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- Mechanisms be created for promoting co-operation and understanding among government regulators, standards developers, and members of the conformity assessment community. The Standards Council of Canada should work with regulatory agencies and standards development organizations to develop such mechanisms.

- Federal, provincial and territorial governments be required to consider standards system approaches to new regulatory and policy initiatives.

3. Public Policy: Social and Environmental Issues

One of the major challenges facing the National Standards System is how to effectively address and reflect Canada's public policy priorities in standardization activities, both at the domestic and international levels.

Increasingly, social and environmental issues are being drawn together with standardization issues. Traditionally viewed as well outside the scope of standardization and conformity assessment, these issues are new to the standardization arena. For example, service standards and the ISO 14000 series of environmental management standards —both of which have been developed recently —touch on virtually all areas of social and environmental policy in Canada. Notably, many of the traditional standardization tools and processes are inappropriate for these fields. For example, the traditional standards development "matrix approach" (*i.e.*, the types and numbers of stakeholder representatives involved in standards-development processes) was not designed to deal with broader policy issues. Standards-development organizations are working to accommodate the expanding needs of government in the areas of social policy. While still in its infancy, this burgeoning relationship holds great promise for ensuring a range of high-quality services and processes, from conflict resolution to environmental impact assessment.

■ *The consensus-based standards system can offer effective solutions to social and environmental policy challenges*

As a credible and respected forum for the development of consensus-based solutions, the National Standards System offers excellent opportunities for developing standardization solutions to a range of social, economic and political issues, including such emerging concerns as the aging population, the special needs of persons with disabilities, sustainable development, the global marketplace, electronic commerce and health care.

At the same time, many emerging social, economic and political policy issues are controversial, with polarized interests that may have a dramatic impact on traditional standardization work in Canada. Moreover, domestic policy issues move quickly to the international forum where it may be even more difficult to reach consensus. To avoid potential conflicts —and the impact of resulting trade barriers— Canada must work to achieve consensus on a range of potentially contentious policy issues, including political and trade relationships, social and environmental policies, and technology development.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues.
It has been suggested that:

- Working with standards-development organizations and conformity assessment bodies, the Standards Council of Canada target broader audiences to ensure that non-technical and other policy issues and priorities are addressed by standardization activities.

- Standards-development organizations work with governments to adapt existing tools and, where appropriate, develop new mechanisms, in support of social and environmental policy issues and priorities.

E. Promoting and Sustaining Standardization Activities

Overview

The context of standardization activity has changed considerably over the past decade. Government funding for standards development and conformity assessment has been drastically reduced. At the same time, the use of standards in the domestic and international arena has expanded. In the face of these pressures, there continues to be a fundamental lack of knowledge about the role that standards play and the benefits they offer to a broad range of stakeholders. If the National Standards System is to maximize its usefulness to existing and potential stakeholders and remain viable over the long term, it will be necessary to aggressively promote the NSS and the benefits and applications of standards and standards-development activities.

Another major challenge for the NSS is ensuring its own sustainability. Fundamentally, sustainability is an issue of resourcing, both human and fiscal. Many of the responsibilities and costs of regulatory standardization are currently being downloaded into the voluntary standardization sector. Standards organizations are faced with expanded workloads as standards increasingly encompass public policy issues, and the proliferation of MRAs and trade agreements continue to tax conformity assessment stakeholders. At the same time, public support is often inadequate to sustain standardization activities undertaken for the "public good." A reassessment of funding responsibilities is required to ensure that the costs of standardization activities are equitably distributed among stakeholders.

Challenges

This section examines issues related to promoting and sustaining standardization activities in some detail, and sets out some process initiatives which can help achieve positive change. More specifically, these issues are:

1. Promotion of Standards and the National Standards System
2. Financial Sustainability

1. Promotion of Standards and the National Standards System

Promoting awareness and understanding about standardization and the important contribution it makes is critical to the long-term success of the Canadian standards system. Section A of this chapter addressed this issue from an internal perspective — *i.e.*, ensuring that standards system participants and standards-related organizations are well-informed about activities and initiatives in the field.

Equally important is the need to promote standardization in spheres outside the traditional standards system. Efforts must be made to increase awareness and understanding of standards and conformity assessment activities among broader audiences, including their potential roles, applications and benefits. This will ensure that standardization activities are firmly entrenched as tools to achieve broader Canadian economic and social priorities. It will also attract a level of funding from a variety of sources that is in keeping with the benefits accrued through standards use.

■ *The benefits, applications and roles of standardization are not widely known.*

Reports from a range of stakeholder groups indicate that there is a substantial lack of awareness about the Canadian standards system among sponsors, clients and the public. Moreover, there is considerable evidence that current communication and marketing activities have had limited success. For example, the recent marked decline in the number of standards-development volunteers can be attributed, in part, to a lack of awareness by sponsoring employers about the importance of standards to their businesses.

Research conducted by Industry Canada and the Standards Council of Canada demonstrates that federal regulators and the public have limited awareness and understanding of the role of standards in daily life. For their part, regulators and businesses are not taking full advantage of standardization opportunities due to a fundamental lack of knowledge about the standards system. One of the major challenges in the closer interaction/integration between the standards and regulatory systems is the friction resulting from a lack of communication between the two spheres. Findings such as these are consistent and pervasive, despite numerous marketing campaigns designed to promote awareness among Canadian standards system partners.

■ *The benefits of standardization activities need to be promoted to government regulatory agencies and policy groups*

Individual marketing efforts to date have tended to duplicate each other unnecessarily and have not focused on the Canadian standards system as a whole. However, a number of useful studies and handbooks have been published —most notably by Treasury Board and Industry Canada— to inform regulators of the possibilities inherent in voluntary standardization and closer regulatory cooperation. This is a good start, but a comprehensive plan to inform and educate policy-makers in federal and provincial governments is called for.

The challenge is to enhance understanding of the Canadian standards system and expand its reach among members of the public and non-traditional stakeholders. Suggestions have emphasized various approaches, including improving information sharing, and focusing on business leaders and/or non-traditional stakeholders such as the WTO/TBT.

The Standards Council of Canada is currently leading the development of a National Standards System marketing and communications program. This program must be integrated with other promotion efforts to ensure that a consistent and coordinated approach is applied to position standardization activities within the broader Canadian context.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues. It has been suggested that:

- The Standards Council of Canada finalize its marketing and communication plan (currently in development) and, in collaboration with members of the National Standards System, implement the plan and target it to decision-makers in industry, governments, and consumer groups and NGOs. These organizations should, in turn, collaborate to promote the Canadian standards system within their broader constituencies. Specifically, the plan would:

  - promote to industry and their trade associations the benefits to customers of international standards development

  - target key senior federal, provincial and territorial organizations (*e.g.*, CCME, Deputy Ministers, Health Ministries)

  - include case studies promoting the benefits and impact of standardization in public policy (SCC and SDOs) and highlight opportunities for integrating standards into one or two high-profile policy/regulatory initiatives (*e.g.*, in the federal, provincial or territorial governments)

2. Financial Sustainability

One of the major challenges facing the standards system is ensuring its sustainability in the face of mounting financial pressures. In a period where the directions, boundaries and players in the system are changing rapidly, funding responsibilities are becoming increasingly unclear. Similarly, the system has mixed public and private benefit, and the economic and social benefits of standards for various publics are not easily defined. This makes it difficult to promote the benefits of standards to a wide range of users and to attract broad-based funding support for standards initiatives.

■ *Public sector support for standards development activities is declining*.

The decline in formal government support for standards activities is reflected in government funding for volunteer travel to international standards meetings, which has dropped from $800,000 in 1989 to approximately $200,000 in 1998.

In the regulatory sphere, shifts in responsibilities are not being accompanied by shifts in funding. While governments continue to incorporate standards and conformity assessment practices into the regulatory process, little provision has been made for the costs currently being borne by SDOs and other standards bodies that provide support to the new regulatory reform/public policy agenda. The current trend toward federal "downloading" into the voluntary standards sector has put considerable stress on the ability of the Canadian standards system to deliver high-quality products to its clients. Costs traditionally assumed by government for compliance activities are now being borne by the private sector. For this reason, government regulatory agencies, which have traditionally funded regulations development from their operational budgets, must now consider funding-related standards development and conformity assessment work from their capital budgets.

■ *The volume and variety of standards-related work has increased dramatically.*

In the last ten years, there has been significant growth in the volume of conformity assessment activity conducted by the Standards Council of Canada. All program areas —including Certification, Testing and Registration Organizations— have experienced a tenfold increase in activity. While federal appropriation has traditionally covered the costs of program development and delivery, the practice has been radically reduced as a result of the current fiscal environment. Instead, there has been a move to full cost recovery for all program work, shifting the costs for accreditation from the federal purse to the private sector.

Other factors affecting standardization resources include the proliferation of MRAs and trade agreements, which has necessitated that Canadian standards system partners and industry provide substantial financial support. Responding to increased demand, governments, industry, NGOs and consumers have been active in establishing —often at their own expense— mechanisms to assist in consultation and coordination on standards-related issues. In addition, the incorporation of public policy objectives into standards processes and practices has resulted in additional costs for all participants.

■ *The burden of costs must be distributed more equitably among stakeholders*

As the Canadian standards system considers more market-based approaches to standardization activity, imbalances are emerging between who pays for standards and who benefits from them. Traditional Canadian standards system funding mechanisms, particularly for international representation, have emphasized public supports even where the focus and the benefits of the activity were specific to a narrow industrial sector. Supports such as these have declined substantially.

With decreases in government funding, Canadian SDOs, businesses and NGOs have had to assume a greater share of the costs for participating in international standardization activities. These costs are particularly onerous for small and medium-sized businesses as well as for Canada's already over-burdened consumer and NGO communities. The principle of balanced representation stresses that the "right" people must participate in the decision-making process. To achieve this goal, some participants who have limited resources must be supported.

As standards work expands to involve more public policy issues, responsibility must be assigned for the additional costs of public consultation and input. Similarly, private sector standards-development work that contributes to public sector regulation must be compensated.

The reassessment of funding responsibilities must be viewed in the larger context of standards-funding models. Canadian standards-system partners have suggested a range of potential models, including tax supports, grant programs and fee structures.

While individual roles and responsibilities as well as costs and benefits must be determined, there should also be recognition and support of the Canadian standards system as a united entity. System-wide initiatives such as planning, policy development, marketing, communications and advocacy require the support of all Canadian standards-system participants.

Process Issues for Consideration:

Consider whether the following process steps should be taken to address these issues. It has been suggested that:

- The Standards Council of Canada establish a Canadian Standards System Funding Models Task Group to develop innovative approaches to funding standards activities both at the domestic and international levels.

- Federal, provincial and territorial regulatory authorities develop new approaches to funding the development of standards used in regulations.

Appendix 1:
Overview of the National and
International Standards Systems

A. The National Standards System

The Standards Council of Canada

The Standards Council of Canada (SCC) coordinates the activities of the NSS, a loose federation of more than 250 organizations and 15,000 volunteers that develops, promotes and implements Canadian standards. Representatives from the federal and provincial governments and a wide range of public and private interests sit on the Council in an advisory capacity. The SCC prescribes policies and procedures for developing National Standards of Canada, coordinates Canada's participation in the international standards system, and accredits the organizations involved in standards development, product or service certification, testing, and management systems registration activities.

Standards Development Organizations

The SCC accredits four standards-development organizations (SDOs) to develop standards in Canada. They are: the Canadian Standards Association; the Canadian General Standards Board; the Underwriters' Laboratories of Canada; and the Bureau de normalisation du Québec. To avoid duplication, each standards-development organization assumes primary responsibility for a different area of activity. The standards developed by these organizations are designed to promote safety and facilitate trade.

Some of the standards developed by the SDOs are adopted by the SCC and become National Standards of Canada. These standards must meet SCC criteria, for example: they must be developed through a balanced consensus process involving all interested parties; they must not restrict trade innovation; and they must be consistent with existing national or international standards. There are currently more than 2,600 National Standards of Canada.

Key attributes of standards:

➤ developed by a consensus-based multi-stakeholder process;
➤ stipulate requirements that a product, process or service must meet; and
➤ prepared under the auspices of a recognized standards development organization.

The first National Standard of Canada was the *International System of Units (SI)*, commonly known as the metric system. The Standards Council does not enforce the use of standards; however, it does approve National Standards, which may become mandatory if referenced in federal or provincial legislation.

Types of standards

SDOs develop four different types of standards:

➤ **performance standards** set out the required characteristics of a product, based on performance tests that simulate the actual service conditions. These have been used for food safety standards, fuel economy standards, and package design standards for transporting hazardous goods.

➤ **prescriptive standards** identify product characteristics such as "material thickness," "material type," and "material dimensions" (e.g., ULC-S603-1992, Standard for Underground Steel Storage Containers for Flammable and Combustible Liquids).

➤ **design standards** identify specific design or technical characteristics of a product (e.g., CSA Z183 Oil Pipeline Systems).

➤ **management standards** set out standards for quality management (e.g., ISO 9000) and environmental management (e.g., ISO 14000) processes.

Conformity Assessment Bodies

It is important to have a reliable means of determining whether products, services and systems conform to standards. To this end, the SCC accredits more than 200 conformity assessment organizations involved in certification, testing and management systems registration. These organizations, which are also part of the NSS, verify that a product or service conforms to applicable standards, usually by means of a report, a certificate or a mark applied to a product. Conformity assessment bodies include:

Certification organizations (COs) attest that products or services conform to a standard by authorizing the display of their certification mark. They regularly conduct on-site audits, and sampling and testing of certified products and services. There are currently 19 COs in Canada.

Testing and calibration organizations (TOs) determine whether a product, service or measuring instrument meets the appropriate standard. There are more than 200 accredited testing organizations in Canada. They include private research laboratories, government and industry facilities and most certification organizations. The SCC accredits them based on their ability to perform tests in accordance with standards and procedures, and to document their findings.

Management systems registrars issue registration certificates to companies that meet one of the four ISO 9000 series of standards for quality management or the IS0 14000 environmental management standard. The process of demonstrating conformity to a management standard is known as management systems registration. Management systems registration is a relatively new arrival to the NSS. By mid-1998, there were more than a dozen accredited management systems registrars in Canada and a growing number of ISO 14000 registrars.

B. The International Standards Regime

The NSS operates within an international standards regime that includes both the domestic standards systems of other countries and the various international and regional standards development and conformity assessment organizations. Foreign and international standards practices are becoming increasingly important as Canadian firms look for business abroad and Canadian consumers have access to more products and services from offshore. Canadians are involved in the international standards regime in two principal ways.

Firstly they represent Canada —usually through the SCC— in international standardization activities. Some 3,000 Canadian volunteers take part in hundreds of international standards-development committees. A number of key international committees, subcommittees and working groups are chaired by Canadians.

Secondly the SCC encourages Canadian adoption of international standards. Many standards developed by ISO and IEC (see below) have become National Standards of Canada. Some National Standards have also been developed jointly with foreign standards organizations such as Underwriters Laboratories in the United States.

Major international standards-development organizations include:

- The International Organization for Standardization (ISO), a worldwide federation of national standards bodies, comprises more than 127 member countries. The goal of ISO is to promote the development of standardization and related activities, thereby encouraging international trade and cooperation among countries across a range of intellectual, scientific, technological and economic activities. The results of ISO's technical work are published as International Standards.

- The International Electrotechnical Commission (IEC) consists of 42 countries which account for 80 percent of the world's population and 95 percent of its electrical energy production. Members are drawn from the principal standardization bodies at the national level. The IEC maintains advisory committees on electromagnetic compatibility, electronics and telecommunications, and safety.

There are many other international standards-setting organizations, for example, the International Telecommunications Union and the International Organization for Legal Metrology, the International Bureau of Weights and Measures, the World Health Organization, and the International Labor Organization.

Canada is also involved in several important regional standards-setting forums, such as the Pan-American Standards Commission (COPANT), an umbrella organization for American countries to promote the development of technical standardization and related activities, and the Pacific Area Standards Congress (PASC), which is comprised of 20 standards bodies in Asia and the Pacific Rim. PASC is a forum for consultation on matters of common interest relating to the

development and adoption of international standards. Canada is an active COPANT and PASC member through the SCC.

Several international bodies deal with conformity assessment, including:

- The International Accreditation Forum (IAF) is a group of international accreditation bodies that have joined to promote international recognition of accreditation.

- The International Laboratory Accreditation Cooperation (ILAC) is the world's principal international forum for the development of laboratory accreditation practices and procedures, the promotion of laboratory accreditation as a trade facilitation tool, the assistance of developing accreditation systems, and the recognition of competent testing facilities around the globe.

A number of regional conformity assessment bodies are also becoming important to Canada:

- The Inter American Accreditation Cooperation (IAAC) was formed in 1996 to facilitate the accreditation of conformity assessment bodies in countries in the Western hemisphere and to harmonize the existing accreditation procedures to facilitate mutual recognition agreements. The SCC attends meetings but has not yet joined IAAC.

- In 1994, two committees were established to coordinate North American cooperation in the field of metrology, the North American Calibration Cooperation (NACC) and the North American Metrology Cooperation (NORAMET) which establishes and documents the degree of equivalence of the calibration services offered by its members.

- The Asia Pacific Laboratory Accreditation Cooperation (APLAC) is a forum that brings together laboratory and inspection body accreditation organizations in the region. It has recently developed and implemented a multilateral recognition agreement for laboratory accreditation.

- The Pacific Accreditation Cooperation (PAC) is an association of approximately 16 accreditation bodies dealing with conformity assessment in the region.

Similar regional bodies exist in Europe. The European cooperation for Accreditation (EA) was recently formed by the marriage of EAC (European Accreditation of Certification) and EAL (European cooperation for Accreditation of Laboratories), which are concerned with registration certification, and calibration and testing, respectively.

Appendix 2:
Glossary of Terms

AIT Agreement on Internal Trade.

ANSI American National Standards Institute: a private sector body that coordinates the standards work of approximately 30 percent of the US SDOs.

APEC Asia-Pacific Economic Cooperation.

ARSO African Regional Organization for Standardization.

BNQ Bureau de normalisation du Quebec.

CAEAL Canadian Association of Environmental Analytical Laboratories.

CAN-P-1 Standards Council of Canada, Accreditation of Standards Development Organizations, CAN-P-1E, (Draft, 1998).

CAN-P-2 Standards Council of Canada, Criteria and Procedures for the Preparation and Approval of National Standards of Canada, CAN-P-2E, January, 1992.

CCMSC Caribbean Common Market Standards Council.

CEN European Committee for Standardization.

CENELEC European Committee for Electrotechnical Standardization.

CGSB Canadian General Standards Board.

CO Certification Organization: an organization accredited by the Standards Council of Canada (or equivalent foreign accrediting body) to certify products or services as meeting a particular standard.

Conformity assessment The determination of whether a product, process or service conforms to particular standards or specifications; including conformity assessment services such as: certification, testing and quality management or environmental management systems registration.

Consensus "Substantial agreement reached by concerned interests involved in the preparation of a standard. Consensus includes an attempt to resolve all objections and implies much more than the concept of a simple majority, but not necessarily unanimity." (CAN-P-2E).

COPANT Pan American Commission on Technical Standards.

COPOLCO ISO Committee on Consumer Policy.

CSA Canadian Standards Association.

ETSI European Telecommunications Standards Institute.

GATT General Agreement on Tariffs and Trade.

IEC International Electrotechnical Commission.

ISO International Organization for Standardization.

ISONET An information exchange network for members of ISO.

ITU International Telecommunications Union.

JTC 1 ISO/IEC Joint Technical Committee on Information Technology.

JESI Joint European Standards Institute (comprised of CEN and CENELEC).

MFN Most favoured nation: a trade principle that requires that the rules applying to one trading partner should not be "less favourable" (i.e., more demanding) than the measures applied to any other member of the trade agreement.

MRA Mutual recognition agreement: an agreement between or among standardization bodies or countries to accept some or all aspects of the other's work, e.g., accreditation, testing, certification.

NAFTA North American Free Trade Agreement.

NIST National Institute of Standards and Technology.

NGO Non-governmental organization, such as a consumer or environmental group.

NSC(s) National Standard(s) of Canada.

NSS National Standards System.

OECD Organisation for Economic Co-operation and Development.

ORD Other Recognized Document: a requirement that is submitted to regulatory councils for approval and used for certification by COs.

PASC Pacific Area Standards Congress.

Responsible Care An environmental and occupational health and safety program run by the Canadian Chemical Producers Association.

SARRP Standards and Regulatory Reform Program.

SCC Standards Council of Canada.

SDO Standards development organization.

SPS Sanitary and Phytosanitary Standards Agreement: a sub-agreement under the GATT focused on food and health standards that may affect international trade.

Standard "A published document which contains requirements, procedures or definitions for a specific activity" (CAN-P-2E).

TBT Technical Barriers to Trade Agreement: a sub-agreement under the GATT focused on both mandatory "technical" regulations and voluntary standards, applying to all products, including industrial and agricultural products. Also known as the "Standards Code."

ULC Underwriters' Laboratories of Canada.

WTO World Trade Organization: the international trade regime that succeeded the GATT.