



Standards Council of Canada

Conseil canadien des normes

Canada

Helping Canadian Companies Scale-Up Through Standards Setting

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Standards **experts**. Accreditation **solutions**.

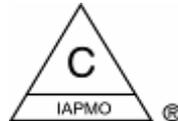
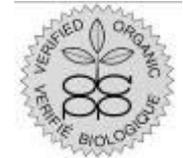
Key SCC Activities

- **SCC coordinates Canada's participation in international standardization bodies (ISO-IEC)**
- **Approves National Standards of Canada**
- **Accredits:**
 - **Standards development organizations (SDOs)**
 - **Conformity assessment bodies (CABs)**
- **Manages programs and services designed to support the integration of standardization into F/P/T regulatory practices**
- **Works with industry to drive Canadian technology commercialization through standardization**

Standards development organizations (SDOs) accredited by SCC in Canada



Conformity assessment bodies (CABs) accredited by SCC in Canada





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STANDARDIZATION

Standards are not neutral

They reflect the views of those who invest time and expertise in the development process



Once a standard is set, the die is cast

Specifications and guidance address key issues



Around the world, in 2015, there were more than



335,000

**international standards
maintained**

Source: Austrian Standards Annual Report, 2015

The number of made-in-Canada national standards has declined

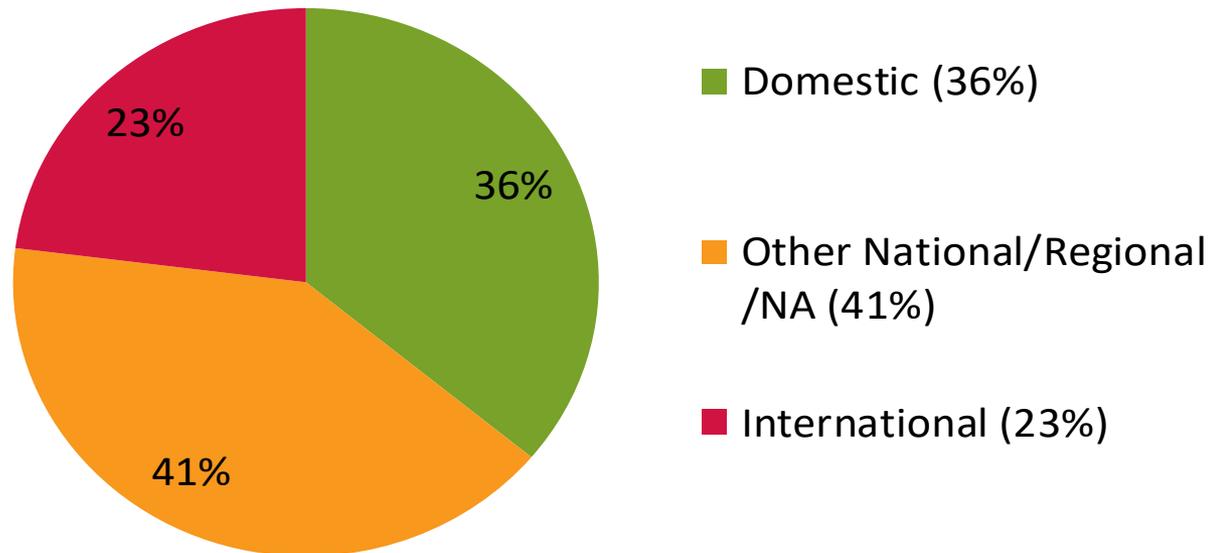


↓ **2,978**

In 2016 from more than 4,000 in year 2000

Standards in Federal Regulations

SCC is monitoring 1,328 references to standards in 135 Canadian federal regulations maintained by 18 departments/agencies:



Thousands of technical standards are also included in procurement documents and specs

Standards in provincial and territorial regulations

To date, SCC has identified 4,150 references to standards in provincial/territorial regulations:





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CURRENT CANADIAN APPROACH TO INTERNATIONAL STANDARDIZATION



International standardization is an important strategic issue if Canada is to help its entrepreneurs succeed on the global stage

In the past, Canada was generally successful in protecting the interests of **well established, traditional, resource and manufacturing sectors** of our economy

However, opportunities for gains in new and emerging sectors are

BEING MISSED

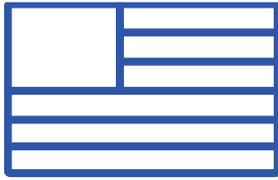


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CANADA'S KEY COMPETITORS ARE INVESTING IN INTERNATIONAL STANDARDIZATION

China is becoming a global leader in standardization

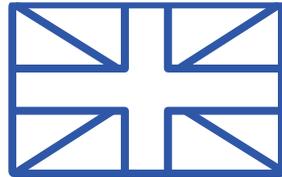
In 2010, **China** began to implement its strategy for securing key positions on **ISO technical committees** and working groups



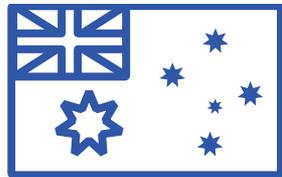
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72



72



24



15

China now manages 72 ISO technical committees

Many are of strategic economic interest to Canada:

- earth minerals
- aluminum ores
- pipeline transportation systems

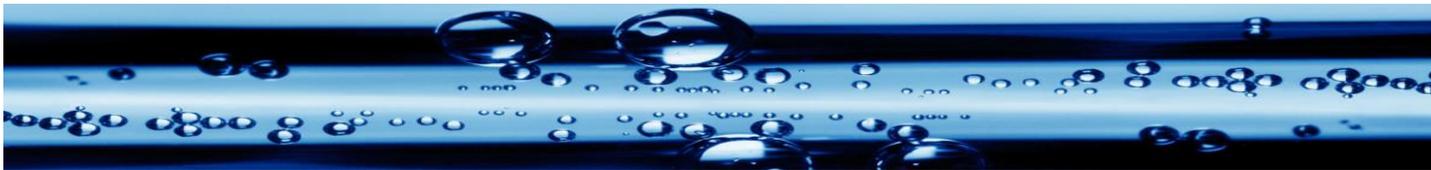
Other countries are implementing sector specific strategies

In 2013, Japan proposed a new ISO committee for **Fine Bubble Technology**

Nanotubes are used to inject gases into liquids

It has shown utility as an effective means of **removing ice from airplanes and highways** as well as **accelerating agricultural growth**

Research has demonstrated potential in the fields of **food, beverages, cosmetics, chemicals and medical care**



ISO/TC 281 – Fine Bubble Technology

The Government of Japan, the Japanese Industrial Standards Committee (JISC), and the Japanese Standards Association (JSA) hosted **several targeted outreach events around the world** in order to garner support from other member bodies

The proposal was successful. **The Secretariat for the newly established committee was assigned to Japan**

Fine bubble technology is estimated to reach **USD\$4.3 billion in revenues by 2020**



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CREATING SUCCESSFUL EXPORTERS THROUGH NEW INTERNATIONAL STANDARDS

Goods exporting firms are responsible for a disproportionate share of GDP

**Total number of enterprises:
1.15 millions**

**Total value of GDP:
\$1,983 billions**



- Number of Non-exporting Enterprises: 1,103,203
- Number of Enterprises exporting to 1-19 countries: 42,964
- Number of Enterprises exporting to 20 or more countries: 836

- Other GDP: \$1,514 billions
- Export value of Enterprises exporting to 1-19 countries: \$318 billions
- Export value of Enterprises exporting to 20 or more countries: \$151 billions



Canada

43,800

enterprises in Canada export their products abroad

Value of exports in 2014:
\$469B CAD



While the majority of exporters
trade with **1 partner country**
(69.1%)



The more diverse the export portfolio of an enterprise, the more likely it is that the enterprise will face potentially diverging regulatory requirements across countries

The greatest share of export value (41.1%) comes from only 805 enterprises

They are trading with more than 20 partner countries



International standardization is an important strategic issue if Canada is to help its entrepreneurs succeed on the global stage

SCC's Innovation Role

- **Canada's Innovation & Skills Plan** highlights the value of **standards-setting** in advancing Canada's economic interests, and growing globally successful companies.
- By working directly with **Canadian innovators**, SCC is providing tailored, end-to-end support to companies in **developing effective standardization strategies** to accelerate commercialization and remove barriers to the adoption of new Canadian technologies.

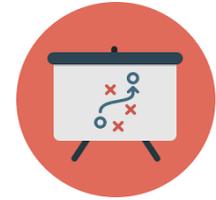
Implementing a new approach

- **SCC is helping Canadian innovative companies become standards setters**
- **Funding for this was approved through the superclusters initiative**
- **Sector specialists have been hired and trained**
- **Areas of focus are aligned with 6 key economic sectors**
- **SCC is actively supporting superclusters**
- **Engaged with portfolio members to identify high potential companies**

End-to-end support

- ✓ Identify **promising innovations** that would benefit from international standardization;
- ✓ Build case internationally as to why Canada should be entrusted with **leadership in developing relevant standards**;
- ✓ Garner support from key standardization allies, and obtain **approval for new work item proposals**;
- ✓ Support Canadian innovators to be elected as **chairs / secretaries of technical committees** to manage standards drafting process;
- ✓ Embed **Canadian intellectual property**, platforms or approaches in standards where appropriate;
- ✓ Design **international certification programmes** to facilitate global market access / regulatory compliance;
- ✓ Engage **regulators** to ensure standards supporting Canadian innovations embedded in F/P/T regulations where appropriate.

Challenges



Regulatory and standardization landscapes can be complex, and sometimes fragmented:

- Navigating the environment can be difficult, especially for SMEs

Prescriptive requirements in regulations and standards:

- Can create potential barriers to adoption (*certification, regulation*)

Lack of foundational definitions, regulations and standards in emerging areas:

- Can limit and slow the pace of innovation and commercialization

Solutions



- Ongoing engagement with innovators on **market access and commercialization strategies**:
 - Identification of barriers to adoption/market access for emerging Canadian technologies
 - Identify opportunities to strategically embed Canadian approaches in international standards
 - Development and implementation of sectoral and company-specific standardization strategies

Solutions (Cont'd)



- Ongoing dialogue with regulators and policy-makers on the role of standards in **regulating for innovation**:
 - Harmonization and alignment of standards in regulations
 - Updating standards, codes and related processes to address the modern pace of innovation
 - Developing foundational standards to support the regulation and integration of new technologies
 - Leveraging standards in procurement policies to drive the adoption and commercialization of Canadian technology



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