

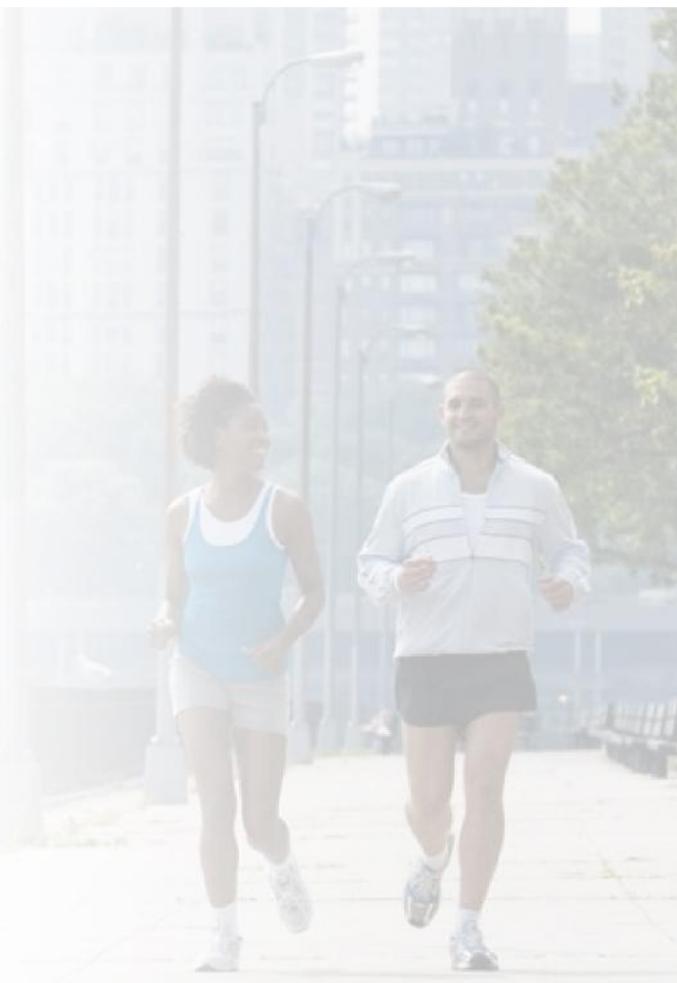
NIST/ANSI Workshop on Challenges to Increased Use of Nanotechnologies Standards

December 13-14, 2011
Washington DC

A Canadian SDO Perspective – by CSA Standards

Brian Haydon, P.Eng.

CSA Standards Project Manager /
SDO Administrator for Canada's Nano Mirror Committee /
JWG1 Secretary for ISO/TC229 & IEC/TC113



Challenges to Increased Use of Nanotechnologies Standards

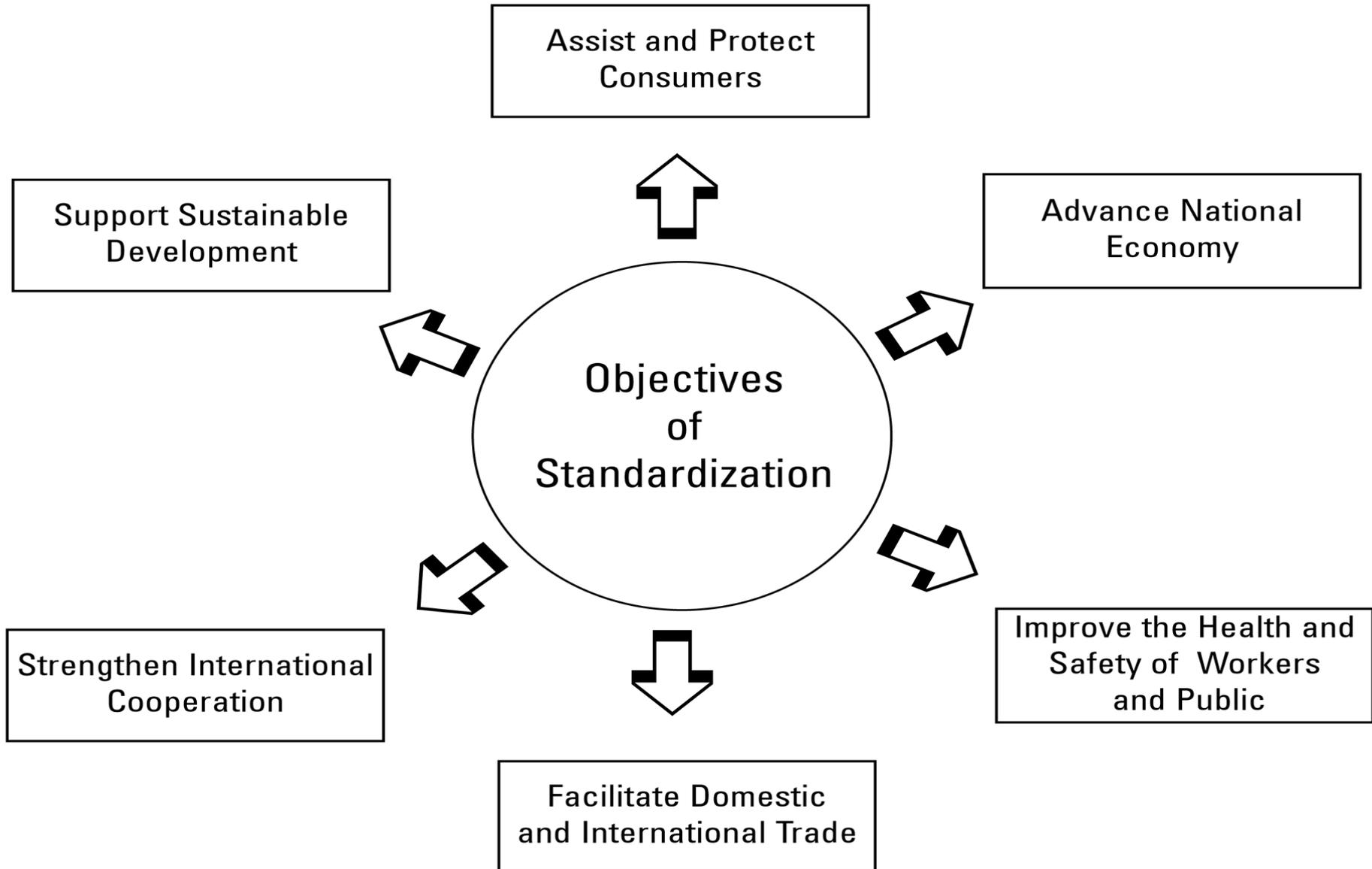
A Canadian Perspective – by CSA Standards

- Use of standards: to meet objectives, with strategies
- Involvement and leadership to meet Canada's needs
- In-country adoption
- Challenges, and thoughts

How does your organization use nanotechnology standards?

**As an Canada SDO (Standards Development Organization),
towards meeting the following objectives ...**

Objectives of standardization in Canada



Nanotechnologies Standards for use in Canada

- CSA Standards (Canadian Standards Association) serves as **the SDO**, the Standards Development Organization
- **SCC** (Standards Council Canada) serves as **the national accreditation body**, and as the **ISO/IEC-recognized National Standard Body**

Canada's National Standards System

Strategies

- 1) Participate in the development of international standards
- 2) Be involved at early stages of development
- 3) Influence ISO and IEC standards appropriately
- 4) Promote adoption of ISO and IEC Standards for use in Canada

Canada's involvement

- Canada has been involved in nano-standards development since 2005, sending delegations of experts to all 13 meetings of ISO/TC229, to date. Involved in IEC/TC113 as well.
- Technical content is reviewed by a 80-member “Nano-standards” Mirror Committee to develop comments and positions for Canada
- Industry, government, research, NGOs and consumers are represented as volunteer committee members
- Based on stakeholder needs, members participate on relevant WGs of ISO/TC229 and IEC/TC113

Leadership

- **Canada has taken on international leadership roles** at ISO/TC229 and IEC/TC113 with commitment to work items and tasks, from start to finish
 - JWG1, Terminology and Nomenclature
 - ISO/TC229 JWG1 Project Groups led and completed
 - Nomenclature development with IUPAC
 - JWG2 Metrology Study Group

Meeting nanotechnology standards needs

- **For regulatory development and commercialization:**
 - Published ISO/TC229 vocabulary provided input to Health Canada's working definition for nanomaterials
 - Metrology / measurement base for Canada's research community
 - Standards to support responsible EHS for nanotechnologies
 - Close monitoring and participation in labelling guidelines

Promote adoption of ISO and IEC Standards for use in Canada

- **ISO/TC229 and IEC/TC113 combined have now published 23 international nano-related standards**; Similar number of standards underway; Canada continues to participate
- **ISO and IEC nano-standards, when published, can be adopted**, through CSA standards using an SCC-accredited process with balanced, in-country committee review
- **Example:** Canada is adopting **ISO/TR 12885**, adapted and re-titled as *“Nanotechnologies – Exposure control program for engineered nanomaterials in occupational settings”*

Challenges, and some thoughts

- In-country adoption of ISO and IEC standards should be promoted and applied in multiple countries
 - list of countries adopting ISO/IEC nano-standards could be an incentive to others to do likewise; improve global recognition
 - validates standards use, for voluntary or regulatory purpose
- Understanding that the technology is broad; multiple SDOs continue to be involved;
 - common access point to an index of published nano-related standards
 - more joint logo use could be explored

Challenges, and some thoughts (cont'd)

- ISO/TC229 and IEC/TC113 has 10 published standards specific to carbon nanotubes. This, along with applicable generic nano-standards could be offered in a single package.
 - for example, for a family of nanomaterials, like CNT
- A wide breadth of technical content in nano-standards is now available; this needs to be promoted, or be collectively broadcast
 - Need for understanding, as “standards” can have different meanings in research (multiple science disciplines), regulatory, and industry sectors
 - Standard’s title does not always tell all; Scope / abstract expansion may assist to recognize true, useful content of already published work

Challenges to Increased Use of Nanotechnologies Standards

A Canadian Perspective – by CSA Standards

Thank you