

CSA Group's Standards-Based Approach

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**CSA
Group**

- Overview of CSA Group
- A Standards-Based Approach
- Case Studies
- Establishing Sector Solutions
- How A Sector Approach Can Benefit the Mining Sector
- Conclusion

Overview of CSA Group



**Consumer
Product
Evaluation**

Standards

**Product
Certification
& Testing**

**1,600+
Employees**

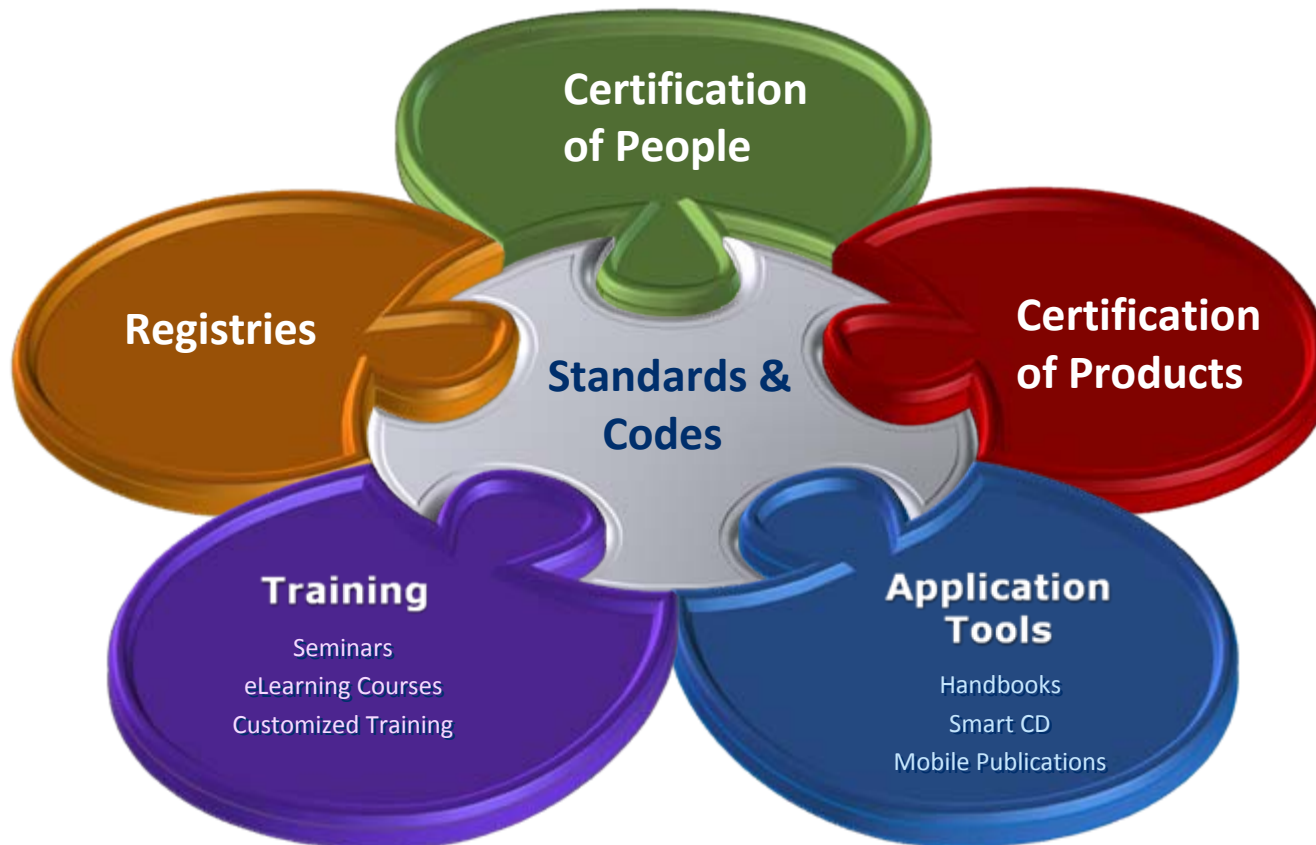
Offices in:
- Canada
- United States
& Mexico
- Asia
- Europe

Overview of CSA Group



- Not-for-profit, membership-based association since 1919
- Mission of public safety and sustainability
 - 88,000 customers globally
- Largest and most diversified Standards Development Organization in Canada
 - 7,500 expert Committee Members
 - Over 3,000 standards and codes
- One billion products worldwide bear a CSA product safety mark





€17 BN

Annual economic benefit of standards to the German economy

Source: Deutsches Institut für Normung (DIN), 2011

GBP2.5BN

Annual contribution of standards to the U.K. economy

Source: U.K. Department of Trade and Industry, 2005

17%

Growth in labour productivity in Canada from 1981-2004 as a result of standards

Source: Standards Council of Canada, 2007

US\$28-55BN

Cost reduction in global auto industry supply chain due to standards

Source: International Organization for Standardization, 2010

- Accredited in Canada and U.S.
- Standards developed in partnership with industry, regulators, government, and consumers
- Independent, honest broker, consensus based
- Supporting Government of Canada priorities
 - Harmonization across jurisdictions
 - Labour mobility
- Strong international standards involvement
- Major role in emerging technologies
 - Technology neutral
 - Speed development

3,000

Standards and Codes

7,500

expert Committee
Members

63,000

customers

40%

of standards referenced
in government
regulation

170

highly dedicated staff

\$60-70M

annual in-kind contribution
by Committee Members

Health & Safety



Energy



Sustainability



Fuel Burning



54

areas of technology

94%

member satisfaction

95%

of customers recommend the use of CSA standards

Customers and Members say CSA exhibits the following key attributes:

**Professional
Trustworthy
Integrity**

International Standards



- Complements policy and regulations
- Complements and adds value to existing initiatives
- Increases credibility and transparency



- **Support Canadian Federal Energy Efficiency Act**
 - Electricity savings of 15,600 GWh/year by 2020 with cost savings of \$1.7 Billion
 - Phased targets and timelines
 - Cost effective for OEMS with proven results
- **CSA Group develops standards for Nuclear Industry**
 - Standards are referenced by the Canadian Nuclear Safety Commission
 - Investment is heavily leveraged
- **Canadian Electrical Code - C22.1**
- **Occupational Health & Safety Standards**
- **Petroleum & Natural Gas Industry Systems - Z662**

- **Industry Issues**

- Public sensitivity
- Risk of reacting to perception rather than fact
- Regulator under increased pressure to respond
- Market access and trade key driver to pipeline infrastructure development



- **CSA Group's Role**

- Work with Governments and industry to harmonize requirements
- Transparent process by technical experts
- Developed by Industry, for Industry

- **Results**

- Risk based
- Supports both Industry and Regulatory needs
- Verified reduction in incidents at a reduced cost to Industry
- Adopted into Regulation across jurisdictions (Federal/Provincial/Territorial)





Relevant Existing Standards Areas



- Electrical – Use of Electricity in Mines
- Occupational Health and Safety
- Sustainability
- Quality
- Risk Management
- Built Environment
- Renewable Energy
- Fuel Cells
- Industrial Energy Efficiency
- Energy Management
- Fire Protection in Uranium Mines

How Can this Approach Benefit the Mining Sector?



- Canadian resource sectors face similar challenges
- Many existing and new standards solutions will be equally applicable across different sectors
- Working together across sectors could minimize cost, increase credibility
 - Result is a coordinated national approach with international recognition
- Potential areas identified for Standards Development
 - Terms and Definitions
 - Interoperability
 - Personnel certification
 - Tailing ponds – site selection & design, water sampling & measurement

- CSA process is a transparent, consensus-based, balanced matrix approach
- Maximizes the resource base and expertise
- CSA is an accredited conduit to ISO
- Bi-national standards development & jurisdictional alignment
- Risk management vs. prescriptive approach
- Standards development time greatly improved



Thank You / Merci Beaucoup!
