



# Measurement Canada's requirements for evaluating software on measuring devices approved and used in trade

Anne-Marie Monteith  
President, Measurement Canada

# Regulatory context



Measurement Canada is responsible for ensuring integrity and accuracy of the measuring devices used in trade.



Measurement Canada is also responsible for developing and enforcing the laws related to measurement accuracy.



Measurement Canada's strategic vision for 2021-2026 prioritizes increasing digital capabilities.

# Need for software requirements



New technology

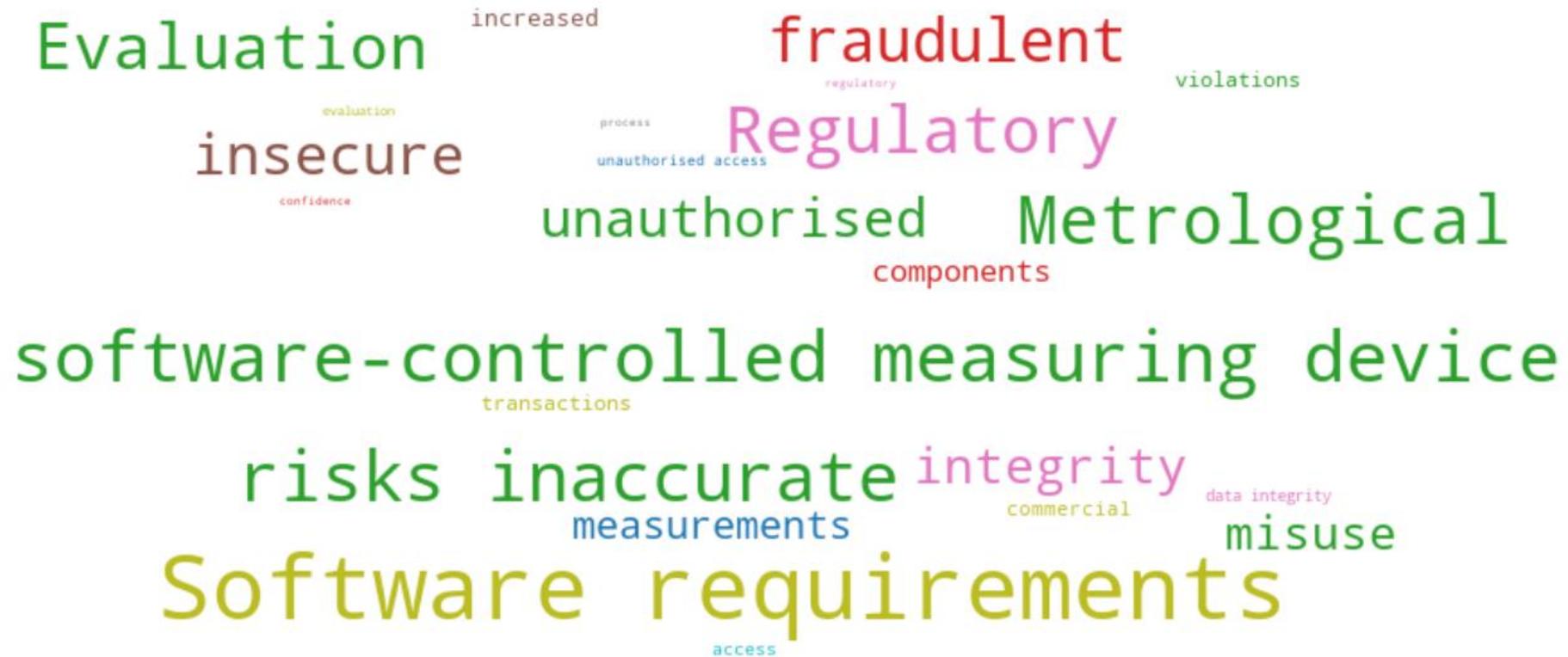


Regulatory requirement



Security and Risk  
management

# Background



# Rationale

Increased reliance on software for measurement

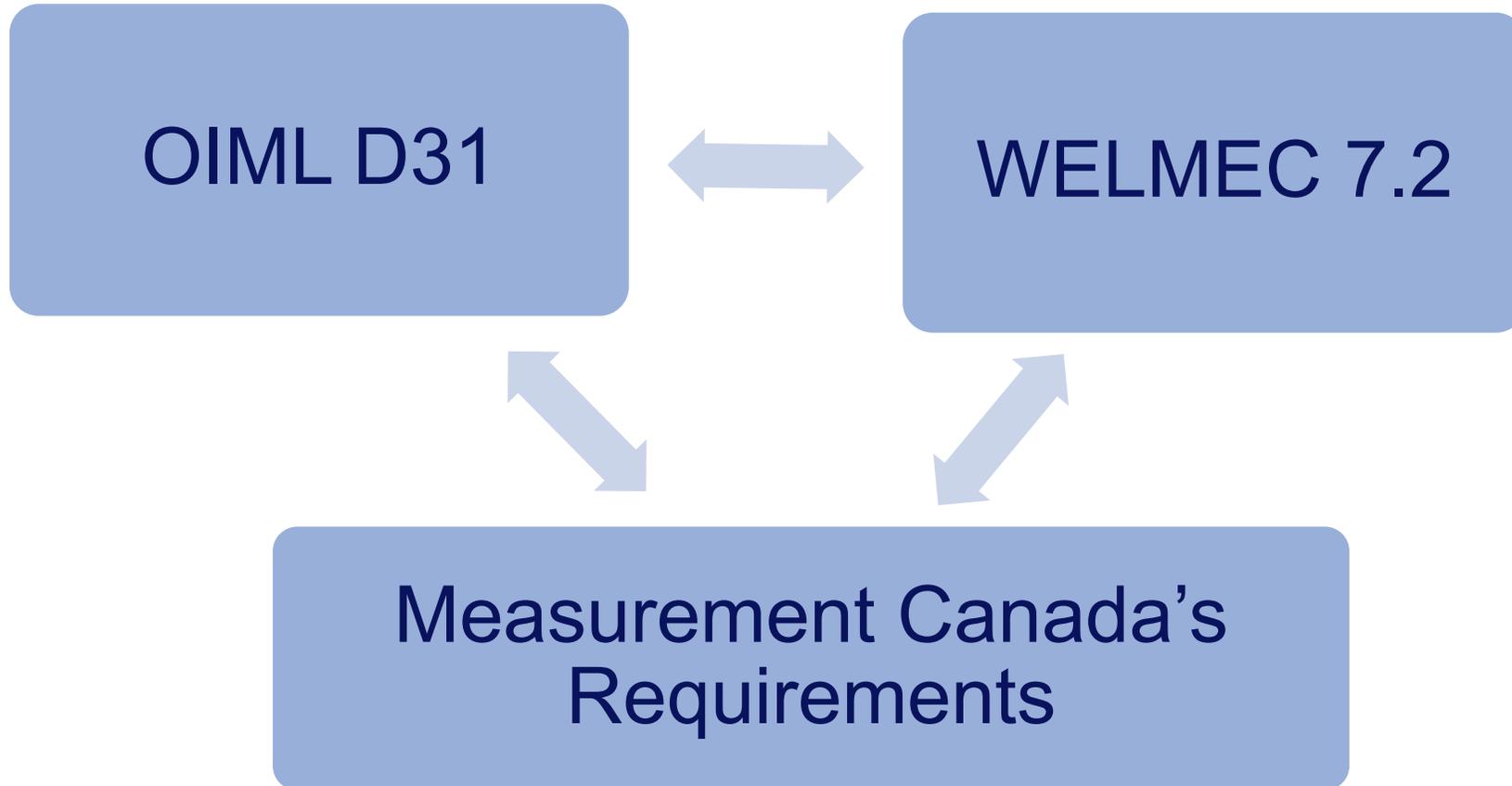
Align *Electricity and Gas Inspection Act* (EGIA) aligned with the latest OIML D31 requirements

Weights and Measures Act (WMA) must define its own software requirements

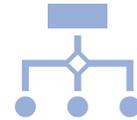
Harmonization across disciplines

The new requirements will ensure that software-controlled measuring devices that are approved and inspected under the *Weights and Measures Act* or the *Electricity and Gas Inspections Act* continue to meet applicable performance and sealing requirements.

# International harmonisation



# MC Requirements- Software Identification



Harmonization:  
New regulatory  
milestone



Software  
identification-  
an important  
part in S-EG-05  
(EGIA)



Software  
identification  
applied – Need  
to formalise  
requirements  
under WMA

# Advancing securing and protection measures



Securing and protection



Sealing provisions under EGIA: mechanical, electronic or cryptographic means



Sealing under WMA: physical sealing only



New requirements will address the emerging vulnerabilities



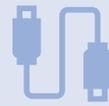
# Specific Requirements

MC software evaluation requirements follow OIML D31 for:

- software identification and access
- Protection of legally relevant software, parameters and measurement data
- requirements for interface
- requirements for securing and protection
- Software separation
- Separation of components
- Mixed indications
- Data storage and transmission
- Operating system



# Software separation



Electricity and gas metering devices evaluated for software separation



New device types have highlighted the need to introduce a similar option under the WMA



New requirements will enhance flexibility and regulatory efficiency

# Traced updates



Evaluated under EGIA through S-EG-05



Emerging categories of devices under WMA (Example: Thermal energy meters) require similar options



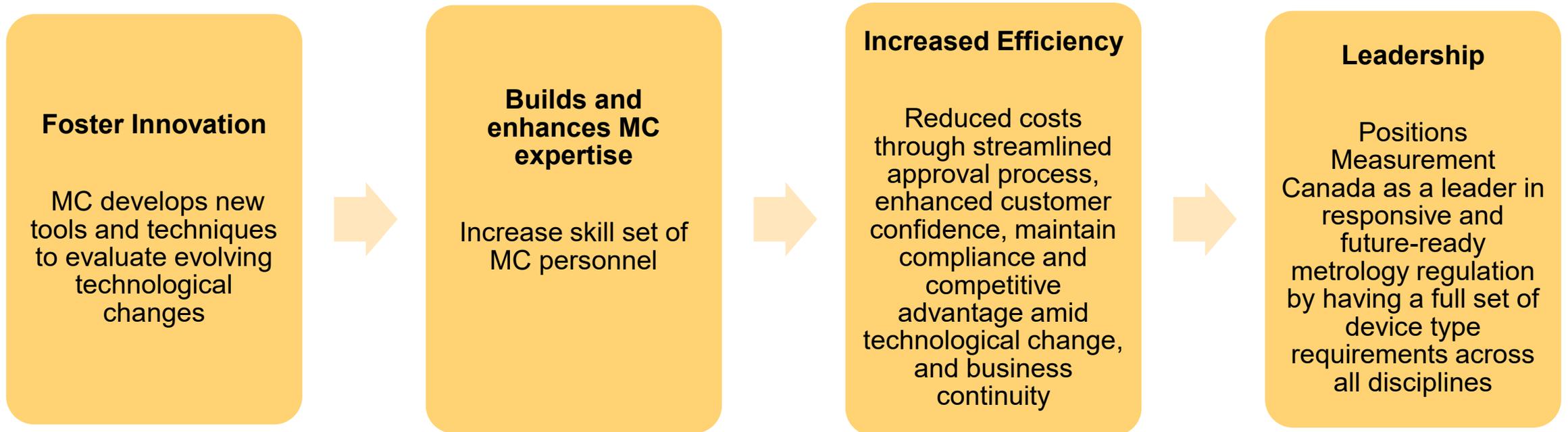
New requirements support innovation, adaptability and compliance

Closely Follows OIML D31 guidance on software updates:

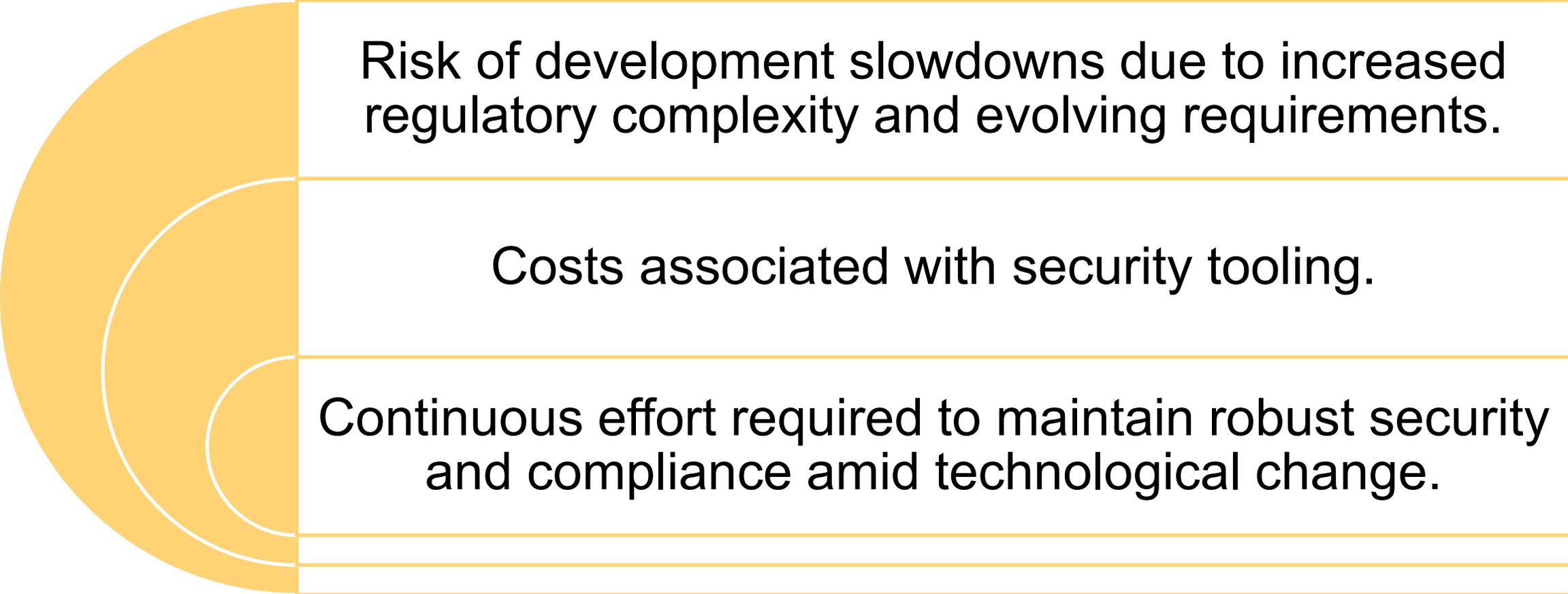
- Verified update
- Traced update

Evaluated through documentation review and functional testing.

# Opportunities for Measurement Canada



# Challenges for Measurement Canada



Risk of development slowdowns due to increased regulatory complexity and evolving requirements.

Costs associated with security tooling.

Continuous effort required to maintain robust security and compliance amid technological change.

# Benefits of the framework



Efficiency: Harmonized requirements across disciplines



Standardize with international community



Supports Measurement Canada's strategic vision



Modernize outdated assessment practices for software-controlled measuring devices

# Next steps



Harmonized requirements enabling future-ready, device compliant approvals



Ongoing adaptations to policy as technology advances



Invitation for external consultation and feedback  
– *Consultation opening next week.*

## Contact info:

Jeremy Mann

[Jeremy.Mann@ised-isde.gc.ca](mailto:Jeremy.Mann@ised-isde.gc.ca)

Director, Legal Metrology  
Measurement Canada

Sajiv Perera

[sajiv.perera@ised-isde.gc.ca](mailto:sajiv.perera@ised-isde.gc.ca)

Manager-Digital Metrology, Legal  
Metrology, Measurement Canada

## External consultation

<https://ised-isde.canada.ca/site/measurement-canada/en/stay-informed>

*Stay informed to keep up with the latest news and updates from Measurement Canada*