National Standard of Canada Proposal for the Adoption of CEN/CENELEC Standards for Artificial Intelligence

Digital Governance Standards Institute

Scope

Adoption, publication and periodic maintenance of a series CEN/CENELEC Standards for Artificial Intelligence (AI) as National Standards of Canada. These standards include European standards in development by CEN-CENELEC by request from the European Commission which aim to provide manufacturers the presumption of conformity with the upcoming European Union (EU) Artificial Intelligence Act. The series of CEN/CENELEC Standards include:

- Risk management system for AI systems
- Governance and quality of datasets used to build AI systems
- Record keeping through logging capabilities by AI systems
- Transparency and information provisions to the users of AI systems
- Human oversight of AI systems
- Accuracy specifications for AI systems
- Robustness specifications for AI systems
- Cybersecurity specifications for AI systems
- Quality management system for providers of AI systems, including post-market monitoring process
- Conformity assessment for AI systems

Strategic Need

Digital Governance Council Members have been actively engaged in discussions regarding the proposed AI Regulations by the European Union (EU). Members have weighed in on the need to safeguard Canadian interests and ensure alignment between Canadian regulations and those proposed by the European Union. These discussions have highlighted the importance of coordinating efforts to address the evolving landscape of AI governance.

More recently, the European Standardization Bodies, CEN and CENELEC, have accepted a standardization request on AI from the European Commission to develop European standards which aim to provide manufacturers the presumption of conformity with the upcoming EU Artificial Intelligence Act. Experts and stakeholders of DGSI standards committee on Ethical AI recently proposed and signaled its support to have DGSI adopt or adapt CEN/CENELEC AI standards into Canada.

DGSI and its standards committee on ethical AI have already made significant contributions to AI standardization, including with the publications of CAN/CIOSC 101, Ethical design and use of automated decision systems, and DGSI /WA 126, Baseline Requirements for Vendors Offering AI/ML Lifecycle Solutions to Financial Institutions, and with participation in OCEANIS, ISO/IEC, IEEE and NIST.

As we navigate the emergence of new international and regional standards in this domain, and respond to members needs, DGSI is collaborating with Standards Council of Canada (SCC) to enhance its engagement with CEN/CENELEC JTC 21 AI through proactive outreach and participation by the DGSI standards committee. By collaborating closely with SCC, we aim to help facilitate Canadian involvement in the development and adoption of international and regional AI standards, ensuring their relevance and applicability in the Canadian context.
Geographical Representation Considerations

The subject area of the series of standards is applicable across all sectors of the Canadian economy and geographies.

Trade Considerations

DGC Members have weighed in on the need to safeguard Canadian interests and ensure alignment between Canadian regulations and standards to those proposed by the EU. These discussions have highlighted the importance of coordinating efforts to address the evolving landscape of AI governance.

Relevant existing documents at the International, Regional and National Level

- CEN/CLC/TR 17894, Artificial Intelligence Conformity Assessment
- CEN/CLC/TR XXX, AI Risks - Check List for AI Risks Management
- ISO/IEC AWI TR 23281, Artificial Intelligence - Overview of AI tasks and functionalities related to natural language processing
- ISO/IEC DIS 12792, Information technology - Artificial intelligence - Transparency taxonomy of AI systems
- ISO/IEC AWI 23282, Artificial Intelligence - Evaluation methods for accurate natural language processing systems
- ISO/IEC 24029-2, Artificial intelligence - Assessment of the robustness of neural networks - Part 2: Methodology for the use of formal methods
- ISO/IEC 25059, Software engineering - Systems and software Quality Requirements and Evaluation (SQuaRE) - Quality model for AI systems
- ISO/IEC 42001, Information technology - Artificial intelligence - Management system
- ISO/IEC 8183, Information technology - Artificial intelligence - Data life cycle framework
- JT021019, Competence Requirements for AI ethicists professionals
- JT021021, AI system logging
- JT021023, Data terms measures and bias requirements
- CEN/CLC/JTC 21 N 148, AI-enhanced Nudging

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