



2021-06-04

Ontario Digital Service
Treasury Board Secretariat

Subject: Comment on the Trustworthy Artificial Intelligence (AI) framework

Dear Ontario's Open Government Team:

Pursuant to your correspondence of May 13, 2021, the CIO Strategy Council is pleased to offer our comment on the Trustworthy AI framework.

Key Recommendations

The CIO Strategy Council stands ready to assist the Government in the development of “proper guardrails” to support the responsible use of AI and recommends that the Government:

1. Incorporate leading practices and approaches in Government of Ontario Information and Technology Standards (GO-ITS) to protect individual rights in the design and use of AI;
2. Adopt the National Standard of Canada, CAN/CIOSC 101:2019, Ethical design and use of automated decision systems, into its policy and regulatory changes for AI;
3. Develop a third-party certification program for “trustworthy AI” based on CAN/CIOSC 101:2019 to test, verify and inspect organizations developing and deploying AI systems; and
4. Invest and participate in the development of national and international standards for data governance and AI, including standards for big data and AI professionals (e.g., CIOSC 102).

Context for Recommendations

The draft AI commitments and actions recognize the importance of referring to standards when developing AI rules and requirements. Consistent with the Ontario's Regulatory Policy



and Legislation Act, incorporation of documents by reference¹ can be an effective tool in achieving regulatory outcomes while also serving as an effective means to avoid overlap and duplicative or conflicting requirements.

In October 2019, the CIO Strategy Council published a National Standard of Canada for automated decision systems — the world's first consensus-based standard helping organizations design and implement responsible artificial intelligence (AI) solutions.

The CIO Strategy Council engaged over 100 thought leaders and experts from governments, industry, academia and civil society groups from coast-to-coast-to-coast in developing the National Standard of Canada, CAN/CIOSC 101:2019, Ethical design and use of automated decision systems.

CAN/CIOSC 101:2019 specifies the minimum requirements in protecting human values and incorporating ethics in the design and use of artificial intelligence (AI) using machine learning for automated decisions.

This national standard goes beyond a common set of aspirational principles. It provides a framework and process that can be both measured and tested for conformity, providing consumers with confidence in the technologies that are providing information, recommendations, or making decisions using AI and machine learning.

The national standard applies to all organizations including public and private companies, government entities, and not-for-profit organizations, and helps organizations address AI ethics principles, such as those described by the OECD:

- AI should benefit people and the planet by driving inclusive growth, sustainable development and well-being.
- AI systems should be designed in a way that respects the rule of law, human rights, democratic values and diversity, and they should include appropriate safeguards – for example, enabling human intervention where necessary – to ensure a fair and just society.
- There should be transparency and responsible disclosure around AI systems to ensure that people understand AI-based outcomes and can challenge them.

¹ [SO 2006, c 21, Sch F, s. 62 \(1\) | Legislation Act, 2006](#)

- AI systems must function in a robust, secure and safe way throughout their life cycles and potential risks should be continually assessed and managed.
- Organizations and individuals developing, deploying or operating AI systems should be held accountable for their proper functioning in line with the above principles.

Recommendation 1: Implement and reference leading practices and approaches in Government of Ontario Information and Technology Standards (GO-ITS)

The potential actions in the draft AI framework propose that the government apply adequate safeguards and governance to the use of AI.

Below is a subset of the National Standards of Canada and Publicly Available Specifications developed by the CIO Strategy Council that can assist the government in adopting leading practices and approaches in the design and use of AI, including adequate safeguards for the data that fuels AI:

- **Published standards:**
 - Ethical design and use of automated decision systems (CAN/CIOSC 101:2019)
 - Data governance – Part 1: Data protection of digital assets (CAN/CIOSC: 100-1:2020)
 - Data governance – Part 2: Third party access to data (CAN/CIOSC: 100-2:2020)
 - Data governance – Part 4: Specification for Scalable Remote Access Infrastructure (CIOSC/PAS 100-4:2020)
 - Digital Trust and Identity – Part 1: Fundamentals (CAN/CIOSC 103-1:2020)
- **Standards in development:**
 - Data governance – Part 3: Privacy enhancing data de-identification framework (CAN/CIOSC 100-3)
 - Data governance – Part 6: Responsible collection and use of digital contact tracing and monitoring data in the workplace (CAN/CIOSC 100-6)
 - Data Governance – Part 7: Operating model for responsible data stewardship (CAN/CIOSC 100-7)
 - Data Governance – Part 8: Framework for Geo-Residency and Sovereignty (CAN/CIOSC 100-8)
 - Data Governance – Part 9: Zero Copy Integration (CAN/CIOSC 100-9)
 - Digital Trust and Identity – Part 3: Digital credentials (CAN/CIOSC 103-3)



All [CIO Strategy Council standards and specifications](#) are available at no cost, in both of Canada's official languages, and can readily referenced in applicable Government of Ontario Information and Technology Standards (GO-ITS).

Recommendation 2: Adopt the National Standard of Canada, CAN/CIOSC 101:2019, Ethical design and use of automated decision systems.

The draft AI framework proposes several measures “to guide the safe, equitable, and secure use of AI by government”². In carrying out its activities, government ministries, programs and services “tested and evaluated”³ against National Standards of Canada can demonstrate accountability to the public. National Standards of Canada include CAN/CIOSC 101:2019, Ethical design and use of automated decision systems. We applaud the Government reference and use to the national standard in its [Transparency Guidelines for Data-Driven Technology in Government](#).

Also, in addition to incorporating the national standard, CAN/CIOSC 101:2019, Ethical design and use of automated decision systems, by reference in policy and regulation, the Government should consider other actions to influence vendor behaviors in the design of AI, such as insurance, public recognition, tax breaks and subsidies, grants, procurement, and research:

- **Grants:**
 - Using weighted criteria or eligibility criteria for provincial grants administered through MEDJCT programs (i.e., those implementing the national standard, CAN/CIOSC 101:2019, having higher scoring to those that do not)
- **Procurement:**
 - Putting companies voluntarily complying with the national standard (CAN/CIOSC 101:2019) on a priority list to deliver services to Government; and making this priority list publicly available to differentiate companies in the marketplace for the private sector to consider these companies for delivering products and services to them (see also **Recommendation 3**).
 - Including the national standard (CAN/CIOSC 101:2019) as a requirement in requests for proposals and purchasing contracts.

² [Consultation: Ontario's Trustworthy Artificial Intelligence \(AI\) Framework](#).

³ Ibid.



- **Research:**
 - Identifying areas where commercial AI products and services are available to help companies implement the national standard (CAN/CIOSC 101:2019) and where the gaps exists; emphasize new research and development opportunities (e.g., Ontario Research Fund).
- **Insurance:**
 - Working with the Canadian insurance industry to build underwriting practices that promote the adoption of responsible risk-reducing measures and risk-based pricing, while fostering a competitive insurance market. For example, reduced premiums for organizations complying with the national standard (CAN/CIOSC 101:2019).
- **Tax breaks or subsidies:**
 - Providing tax breaks or subsidies for investments made to comply with the national standard (CAN/CIOSC 101:2019).

Recommendation 3: Develop a third-party certification program for “trustworthy AI”

The draft AI commitments and actions recognize the importance of referring to standards when developing AI rules and requirements, and a process to certify to instill confidence in the results. Specifically, the framework includes a potential action to “engage with sector leaders and civil society to develop a standard for ‘trustworthy AI’ and a process to certify that vendors are meeting the government’s standard.”

The national standard, CAN/CIOSC 101:2019 is readily available and can serve to eliminate costs to the Government in developing its own standards for “trustworthy AI”. The national standard has garnered international attention, referenced in other nations AI strategies and roadmaps, such as Australian Law Reform Commission’s Suggested Program of Work for 2020-2025 and the EU CEN-CENELEC Road Map on Artificial Intelligence. The national standard is also part of new assurance programs that are helping organizations to provide their customers confidence that they are using AI responsibly.

The European Union, encouraged by its ability to make its General Data Protection Regulation the de facto global privacy benchmark, is now aiming to repeat the feat with new proposed regulations requiring artificial intelligence systems to be tested, certified and inspected. Ontario is in a position to leapfrog Europe and lead globally in the deployment of



responsible AI by scaling a mandatory certification program based on the criteria of CAN/CIOSC 101:2019.

Recommendation 4: Invest and participate in the development of national and international standards for data governance and AI

The CIO Strategy Council continues to foster new partnerships to collaborate on the development of new standards and certifications for the governance of AI. It stands ready to support the Province of Ontario in developing and implement new standards to support Ontario's implementation of the AI framework, and for Ontario to demonstrate its domestic and international leadership as chair the CIO Strategy Council's technical committees on responsible AI and data governance. The Committees are responsible for the development of standards for the acceptable and ethical use of data, machine learning, and AI.

About CIO Strategy Council

The CIO Strategy Council is Canada's national forum that brings together the country's most forward-thinking chief information officers and executive technology leaders to collectively mobilize on common digital priorities. Cutting across major sectors of the Canadian economy – public, private and not for profit – the Council harnesses the collective expertise and action of Canada's CIOs to propel Canada as a digital-first nation. The CIO Strategy Council is accredited by the Standards Council of Canada and develops standards that support the data-driven economy.

Sincerely,

Keith Jansa
Executive Director