A National Leader in Setting Standards for Disruptive Technologies
Frequently Asked Questions

What is the CIO Strategy Council?

The CIO Strategy Council (CIOSC) is a national not for profit corporation established July 2017 and provides a forum for public and private sector members to:

- Transform, shape and influence the Canadian information and technology ecosystem;
- Interact, receive mutual support and engage in learning from their peers;
- Conduct research and disseminate reports on strategic topics relating to the Canadian information and technology ecosystem; and
- Provide a strategic approach to information and communication technology procurement in Canada.

Why CIOSC standards?

The CIO Strategy Council was created in response to a dire need to kickstart a strategic, collective approach to addressing issues that transcend the ability of any one person or organization to tackle. The Council provides access to a trusted peer group for mutual support, interaction and learning in a manner that helps each member transform their organization, shape their vendor landscape and influence the Canadian IT ecosystem.

The CIO Strategy Council is like no other standards setting organization. The Council is dedicated to removing barriers to participate in standards setting activities. We value your time and your expertise, and are committed to ensure your participation is a positive one. The CIO Strategy Council standards setting is:

- **Free to play**
    - No fees to join CIOSC technical committees helping to shape the next generation of standards.
    - Open access to CIOSC standards in the public interest or referenced in Canadian regulations at no cost.
- **Open by default**
    - Flexible participation model tailored to your needs.
    - No committee size restrictions.
    - Every Canadian has a vote.
- **Fully transparent**
    - Working drafts, committee drafts, etc. are available 24/7 throughout the entire project lifecycle for public input and feedback.
    - Provide feedback on future work before any standards work starts
    - Comment on any standards project at any time, from anywhere.

Are CIOSC standards mandatory?

CIOSC standards are developed using a globally-recognized formal, consistent, reliable standards development process providing legitimacy and credibility to industry and governments choosing to use them.

CIOSC standards are typically "voluntary" in that they are not enforced by government. However, failure to meet relevant voluntary standards could result in lawsuits or in the unwillingness of consumers, governments and retailers to either distribute, buy, or sell a product or service.

A CIOSC standard in some cases may be mandatory because of:
- CIO Strategy Council members committing to adopt and implement the standard in their public and private sector organizations to lead by example;
- the connection to the technical environment (i.e., if the product must be interoperable with other products);
- the standard being so widely accepted in the market that a deviation would not be accepted in the market (for example QWERTY standard for keyboards);
- the buyer specifying certain standards (i.e., in procurement);
- the customer requiring a certificate based on meeting certain standards; or
- the law encouraging or requiring the use of a standard by having incorporated it by reference in a regulation.

Why the rush to set ethical AI standards?

The time is NOW! Canada is late to the standards game and risks losing the race to the likes of the EU, the U.S., and China. Canada will be left to adapt its technologies, platforms and practices to market place rules set by other countries to be in any position to export or drive productivity.

Canada has some of the brightest minds and technological capability to be a global leader in AI. New and emerging technologies in AI are opening doors to exciting opportunities. But they also introduce a myriad of risks to preserving public trust in the wake of growing privacy concerns over the potential for misusing personal data. We recognize the challenging market conditions and stress it is putting on our governments, businesses and private citizens, as well as the need to respond with leadership.

Relevant legal and regulatory privacy safeguards for collecting and using personal information in Canada are not adapting readily to the evolving technology landscape. In addition, data collection and use has proliferated at alarming speeds with the launch of online platforms, smart devices and everything IoT. The need to ensure the ethical use of data and AI has never been greater.

Why is "ethical use" even a standards issue? Why set standards when technical developments are advancing so quickly, and the business context has not yet stabilized?

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AI is consistently identified as one of three new game-changing technologies on the horizon – blockchain and the internet-of-things being the others. Its potential impacts on the labour market alone mark it as being of keen interest to both the public and private sectors.

Canada is a leader in AI technology with centres of excellence in talent, process and technology development. Experience suggests though that early leadership can be quickly eroded without interventions aimed at strengthening incipient markets and facilitating commercialization. To maintain effective leadership and fully leverage the benefits of this technology over time, it is essential set standards that can drive behaviours and markets within which technological expertise can thrive.

Industry standards for technology usually lag market development and are generally created for efficiency purposes, for example, to enable interoperability between products, and can be created to correct unintended or perverse market incentives. And on the other hand, Government standards are usually established to manage risks and come with significant administrative overhead cost for compliance and enforcement. A collaborative approach to standards setting facilitated by a not-for-profit, national organization sensitive to both public and private sector issues is well suited to create an optimal standards environment that enables value creation in Canada.

How can ethical AI standards help government and business?

Billionaire entrepreneur Elon Musk is quoted as calling AI "potentially more lethal than nukes". Physicist Stephen Hawking also warned that while success in creating AI would be the biggest event in human history, "[i]t might also be the last, unless we learn how to avoid the risks." These risks were, of course, popularized by James Cameron in his wildly successful Terminator movies, in which human beings are forced to fight for their lives against "self-aware" and malevolent machines. More recently, researchers at the Massachusetts Institute of Technology (MIT) claim to have trained the first psychopath AI.

Given the rapid escalation in cyber mischief and malicious practices from both public and private sector players globally, it is important to put some stakes in the ground to guide the well-intentioned, and potentially sanction those with other motives. In the health care community, there have been active efforts over a considerable span of time to ensure that ethical considerations place limitations around what researchers and practitioners do – thereby appropriately constraining the art of the possible. Similarly, there are important ethical questions around AI that must be thoughtfully addressed up front to ensure that the technology is developed and used within a socially acceptable frame. Standards are an effective mechanism for demonstrating compliance with processes (actions and behaviours) a community agrees are important. Broad adoption of standards reduces uncertainty and therefore can encourage entrepreneurship and investment.

Why not just participate in global standards setting initiatives (e.g., ISO/IEC JTC 1/SC 42 on artificial intelligence)?

To foster collaboration and unite all Canadian leaders participating across different standards setting initiatives in this space, the CIO Strategy Council struck two technical committees, providing a national forum to inform and drive the adoption of ethical AI standards in Canada. We aren't here to duplicate efforts of other organizations. We want to collaborate, to put the heads of our collective organizations, national and international, together and work alongside one another.

Most recently, the CIO Strategy Council announced its role as a Founding Member of a global cooperative network of standards bodies focused on ethical AI, the Open Community for Ethics in Autonomous and Intelligent Systems (OCEANIS), playing a critical role in facilitating ever-important coordination and collaboration among global stakeholders concerning the extraordinary challenges facing ICT standards development, fueled by the rapid rate of technology development and digitization.

Working under a common framework for the ethical use of AI and data will be critical not only for our future economy, but how we function as a society. The CIO Strategy Council is helping lead Canada's AI standards work and spearhead strategic partnerships and liaisons with other national, regional and international AI standards setting organizations to advance new work, lead and coordinate effective Canadian participation in an area that matters most to Canada's economy. By promoting Canadian expertise and Canada's interests, having them reflected in standards set around the world will work to meet the needs of our businesses and their innovations to have lasting effects on our future growth and leadership in this space as a country.

What is the Standards Policy Committee?

The Standards Policy Committee reports to the CIO Strategy Council's Executive Director, governs the Council's standardization policies, sets standardization priorities and is responsible for:
- Coordinating standards development activities by establishing, dissolving, and assigning responsibility to technical committees, approving new technical work, and handling complaints of a procedural nature, by meeting or through correspondence;

- Determining priorities, review cycles and the withdrawal of technical work; and
- Maintaining CIOSC standards policies, procedures and other rules for the technical work.

For non-members of the CIO Strategy Council, there is a fee to participate as a member of the CIOSC Standards Policy Committee.

How are CIOSC standards developed?
CIOSC standards development activities involve the formation of technical committees established by the Standards Policy Committee, led by a committee chair, supported by a secretariat, and comprised of subject matter experts.

Technical committees operate by consensus and provide an open forum offering:
- Equal access and participation by any interested party. Technical committees are not restricted in size and there is no fee to participate. See **Why CIOSC standards?**
- Respect for diverse interests and identification of those who should be provided access to provide the needed balance of interests.
- A mechanism for dispute resolution.

Technical committees are responsible for:
- Developing and approving a standard or standards assigned to it, including requests to revise or amend existing standards;
- Interpreting the standard; and
- Reviewing standard(s) to ensure they are kept current.

How do I participate in a technical committee?
CIOSC launched an online collaboration tool, the *Central Collab*, a #Slack application, available 24/7 and 365 days a year, providing an online platform for communication and collaboration. Through the Central Collab, each technical committee has a dedicated *channel*, providing an environment for technical committee participants to collaborate on setting standards through messaging, commenting, polling, document sharing, and more. Technical committees also meet using modern electronic means, e.g., screensharing, videoconferencing, teleconferencing) to carry out work. In-person meetings are convened only when it is necessary to discuss draft standards or other matters of substance which cannot be settled by other means. To participate on a technical committee, contact the CIO Strategy Council.

How is consensus achieved by technical committees?
The technical committee chair, appointed by the Standards Policy Committee, tests for consensus on draft standards by using any combination of the following:
- CIOSC's online collaboration tools (e.g., polling);
- Through technical committee meetings by recorded vote; and/or

–   By letter ballot.

Draft standards are considered approved when the technical committee achieves consensus. Consensus is achieved under the following conditions:
–   More than 50 % of the technical committee participants cast votes in favour;
–   A minimum of two-thirds majority of the votes cast by the technical committee are in favour;
–   Not more than one-quarter of the total number of votes cast are negative;
–   The technical committee has dispositioned a final call for comments, including comments received during a review by the public; and
–   The technical committee has addressed negative votes and if accepted, the required adjustment(s) are made to the technical aspects of the draft standard. If not accepted, rationale is provided by the technical committee and the voter is informed of the decision.

How are new CIOSC standards set, revised or withdrawn?
Any stakeholder may propose new technical work and participate in any CIOSC standards development activity.

A proposal to develop a new standard, revise or withdraw an existing standard is directed to the CIOSC Standards Policy Committee for approval. The CIOSC Standards Policy Committee considers the need and interests prior to approval including considerations for language requirements, other similar standards work by other standard setting organizations. Upon its approval, the CIOSC Standards Policy Committee establishes or directs the technical work to a CIOSC technical committee. See **How are CIOSC standards developed?**