MINISTER OF INNOVATION, SCIENCE AND INDUSTRY

The Artificial Intelligence and Data Act (AIDA)

As a part 3 of Canada BILL C-27

Introduction

Artificial intelligence (AI) systems are poised to have a significant impact on the lives of Canadians and the operations of Canadian businesses. In June 2022, the Government of Canada tabled the Artificial Intelligence and Data Act (AIDA) as part of Bill C-27, the Digital Charter Implementation Act, 2022. The AIDA represents an important milestone in implementing the Digital Charter and ensuring that Canadians can trust the digital technologies that they use every day. The design, development, and use of AI systems must be safe, and must respect the values of Canadians.

The framework proposed in the AIDA is the first step towards a new regulatory system designed to guide AI innovation in a positive direction, and to encourage the responsible adoption of AI technologies by Canadians and Canadian businesses. The Government intends to build on this framework through an open and transparent regulatory development process. Consultations would be organized to gather input from a variety of stakeholders across Canada to ensure that the regulations achieve outcomes aligned with Canadian values.

The global interconnectedness of the digital economy requires that the regulation of AI systems in the marketplace be coordinated internationally. Canada has drawn from and will work together with international partners – such as the European Union (EU), the United Kingdom, and the United States (US) – to align approaches, in order to ensure that Canadians are protected globally and that Canadian firms can be recognized internationally as meeting robust standards.

> AI is a powerful enabler, and Canada has a leadership role in this significant technology area. That is why the Government's proposed approach in this area has attracted a lot of attention. This document aims to reassure Canadians in two key ways. First, the Government recognizes that Canadians have concerns about the risks associated with this emerging technology and need to know that the Government has a plan to ensure that AI systems that impact their lives are safe. The recently published Report of the Public Awareness Working Group of the Advisory Council on AI reveals significant interest among Canadians in the opportunities offered by AI, but also concerns regarding potential harms. Nearly two-thirds of respondents believed that AI has the potential to cause harm to society, while 71% believed that it could be trusted if regulated by public authorities.

> Thus, we aim to reassure Canadians that we have a thoughtful plan to manage this emerging technology and maintain trust in a growing area of the economy.

At the same time, AI researchers and innovators are concerned by the uncertainty that exists regarding future regulation. Recognizing that the regulation of this powerful technology is now an emerging international norm, many in the field are worried that regulation will be inflexible or that it will unfairly stigmatize their field of work. Such an outcome would have significant impacts on opportunities for Canadians and the Canadian economy. This

document aims to reassure actors in the AI ecosystem in Canada that the aim of this Act is not to entrap good faith actors or to chill innovation, but to regulate the most powerful uses of this technology that pose the risk of harm. Specifically, this paper is intended to address both of these sets of concerns and provide assurance to Canadians that the risks posed by AI systems will not fall through the cracks of consumer protection and human rights legislation, while also making it clear that the Government intends to take an agile approach that will not stifle responsible innovation or needlessly single out AI developers, researchers, investors or entrepreneurs. What follows is a roadmap for the AIDA, explaining its intent and the Government's key considerations for operationalizing it through future regulations. It is intended to build understanding among stakeholders and Canadians on the proposed legislation, as well to support Parliamentary consideration of the Bill.

Artificial intelligence enables computers to learn to complete complex tasks, such as generating content or making decisions and recommendations, by recognizing and replicating patterns identified in data. Over the last 10 years, the capabilities of AI systems have advanced significantly to the point where they are able to perform tasks that previously required human intelligence, such as identifying and modifying images, performing translation, and generating creative content. AI systems are increasingly being used to make important predictions or decisions about people, such as with regard to credit, hiring, and digital services.

AI systems are being developed and used in Canada today for a variety of applications that add value to the Canadian economy and improve the lives of Canadians. Technology that seemed unthinkable just a short time ago is now a part of everyday life. AI offers a multitude of benefits for Canadians, among which are:

- Enabling advances in healthcare such as cancer screenings and improving at home healthcare services;
- Improving agriculture precision harvesting and improving energy supply chain efficiency;
- Introducing new smart products and personalized services;
- Increasing the capabilities of language processing technologies, including translation and text-to-speech; and
- Enhancing citizens' abilities to find and process information.
- Implementation of new technologies using in the banking sector, insurance and private investments

The AIDA proposes the following approach:

1. Building on existing **Canadian consumer protection and human rights law**, AIDA would ensure that **high-impact AI systems** meet the same expectations with respect to safety and human rights to which Canadians are accustomed. Regulations defining which systems would be considered high-impact, as well as specific requirements, would be developed in consultation with a broad range of stakeholders to ensure that they are effective at protecting the interests of the Canadian public, while avoiding imposing an undue burden on the Canadian AI ecosystem.
2. The Minister of Innovation, Science, and Industry would be empowered to administer and enforce the Act, **to ensure that policy and enforcement move together as the technology evolves**. An office headed by a new AI and Data Commissioner would be created as a centre of expertise in support of both regulatory development and administration of the Act. The role would undergo gradual evolution of the functions of the commissioner from solely education and assistance to also include compliance and enforcement, once the Act has come into force and ecosystem adjusted.
3. **Prohibit reckless and malicious uses of AI** that cause serious harm to Canadians and their interests through the creation of new criminal law provisions.
4. **Mandatory consultation with an expert providing AI** tools to inform, guide, assist and act in the interests of Canadian people, as part of the personal responsibility of an organization operating under Canadian law and registered with the relevant authorities

The AIDA would ensure accountability for risks associated with high-impact AI systems used in the course of international and interprovincial trade and commerce. It identifies activities involved in the lifecycle of a high-impact AI system and imposes obligations for businesses carrying out those activities in order to ensure accountability at each point where risk may be introduced.

Regulatory requirements

AIDA would require that appropriate measures be put in place to identify, assess, and mitigate risks of harm or biased output prior to a high-impact system being made available for use. This is intended to facilitate compliance by setting clear expectations regarding what is required at each stage of the lifecycle.

The obligations for high-impact AI systems would be guided by the following principles, which are intended to align with international norms on the governance of AI systems:

Human Oversight & Monitoring	Transparency	Fairness and Equity
Human Oversight means that high-impact AI systems must be designed and developed in such a way as to enable people managing the operations of the system to exercise meaningful oversight. This includes a level of interpretability appropriate to the context. **Monitoring**, through measurement and assessment of high-impact AI systems and their output, is critical in supporting effective human oversight.	**Transparency** means providing the public with appropriate information about how high-impact AI systems are being used. The information provided should be sufficient to allow the public to understand the capabilities, limitations, and potential impacts of the systems.	**Fairness and Equity** means building high-impact AI systems with an awareness of the potential for discriminatory outcomes. Appropriate actions must be taken to mitigate discriminatory outcomes for individuals and groups.

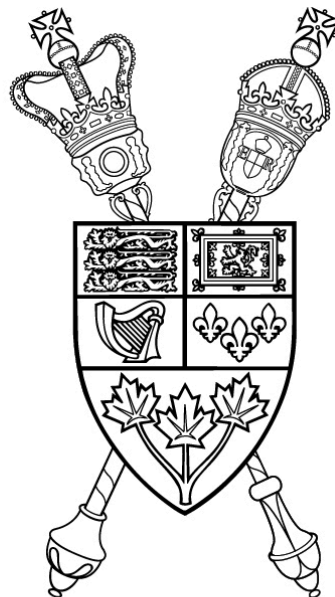| Safety	Accountability	Validity & Robustness
Safety means that high-impact AI systems must be proactively assessed to identify harms that could result from use of the system, including through reasonably foreseeable misuse. Measures must be taken to mitigate the risk of harm.	**Accountability** means that organizations must put in place governance mechanisms needed to ensure compliance with all legal obligations of high-impact AI systems in the context in which they will be used. This includes the proactive documentation of policies, processes, and measures implemented.	**Validity** means a high-impact AI system performs consistently with intended objectives. **Robustness** means a high-impact AI system is stable and resilient in a variety of circumstances.

Oversight and enforcement

In the initial years after it comes into force, the focus of AIDA would be on education, establishing guidelines, and helping businesses to come into compliance through voluntary means. The Government intends to allow ample time for the ecosystem to adjust to the new framework before enforcement actions are undertaken.

The Minister of Innovation, Science, and Industry would be responsible for administration and enforcement of all parts of the Act that do not involve prosecutable offences. In addition, the AIDA would create a new statutory role for an AI and Data Commissioner, who would support the Minister in carrying out these responsibilities. Codifying the role of the Commissioner would separate the functions from other activities within ISED and allow the Commissioner to build a centre of expertise in AI regulation. In addition to administration and enforcement of the Act, the Commissioner's work would include supporting and coordinating with other regulators to ensure consistent regulatory capacity across different contexts, as well as tracking and studying of potential systemic effects of AI systems in order to inform administrative and policy decisions.

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