MEMORANDUM FOR ACTION

TO:	**The Minister of Foreign Affairs**
CC:	**The Digital Inclusion Lab, Office of Human Rights, Freedoms and Inclusion**
SUBJECT:	Recommendations for Canadian Artificial Intelligence Governance

SUMMARY:

This memorandum presents a series of recommendations that should be implemented by the government surrounding the use and development of artificial intelligence (AI) within Canada. These recommendations position Global Affairs Canada (GAC) to lead the international community in ethical technological development while also prioritizing the protection of Canadians' rights and freedoms.

RECOMMENDATION(S):
- That you collaborate with the Department of Justice and other departments to develop a clear method to establish legal fault when artificial intelligence systems cause harm
- That you create a Code of Ethics for artificial intelligence developers
- That you identify government services requiring special accountability and explainability and implement a policy to only contract with companies meeting ethical standards
- That you establish a set of international standards for responsible artificial intelligence development and application based on the Code of Ethics
- That you assemble an interdepartmental working group responsible for ethics, incentives, research and development, education, legal advice, and international cooperation

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- ○ I wish to discuss
- ○ I concur
- ○ I do not concur

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Minister

BACKGROUND:
1. Artificial intelligence (AI) is rapidly advancing. These new technologies are of growing importance to Canadian policy and governance since they benefit the daily lives of Canadian citizens in various ways; however, the nature of the technology now has ethical implications that impact users' human rights, especially with regards to discrimination, freedom of expression, and violence against women. This presents a challenge for the Government of Canada.

2. There is very little literature addressing the implications of AI since it is a new field with great asymmetries of information between producers and users. These systems are being developed and/or utilized in Canada within various risk assessment systems such as border control and immigration vetting, terror threat identification, loan allocation, and efficiency measures in numerous industries. Therefore, governments need to create policy that governs the use and development of AI technology in order to protect its citizens.

3. Many of the G20 members are key players in the field of AI. They are devoting resources towards research and development and creating strategies to address governance issues. Official policies and legislation are in early stages of development, but adoption rates are expected to rise. This nascent policy environment presents an opportunity for Canada to assume a global leadership role in international AI governance.

CONSIDERATIONS:
4. Canada has made a substantial investment in artificial intelligence. The Canadian Institute for Advanced Research is a leader in the Government of Canada's Pan-Canadian Artificial Intelligence Strategy. Three AI institutes have also been created to support the $125 million project: the Alberta Machine Intelligence Institute, Toronto's Vector Institute, and the Montreal Institute for Learning Algorithms. Moreover, the Montreal Declaration for Responsible Development of Artificial Intelligence has been consulting with professionals and the public to establish principles for socially responsible development and use of AI within Canada. Canadian AI labs have also seen large investments from private companies including Google, Facebook and Microsoft. One of the primary priorities of the Pan-Canadian AI Strategy is to develop global leadership in framing ethical, economic, policy, and legal implications of AI technological advances. As such, the following recommendations support the Government's strategy and will enable Canada to continue its momentum as an international leader.

5. Recommendation 1: Develop a clear method to establish legal fault when AI systems cause harm. The system cannot be excused for discriminatory practices and results, and priority should be given to establishing who ought to be held responsible when harm occurs. The Department of Justice should work horizontally across departments, including GAC, to formalize this method.

6. Recommendation 2: Create and publish a code of ethics for AI developers. This Code of Ethics should be based on the principles of transparency, accountability, human oversight, explainability, controllability, international cooperation, and security against manipulation. It will not be legally binding but should outline a series of conventions by which AI developers, in both the public and private sectors, should operate.

7. Recommendation 3: Protect human rights by limiting AI to an advisory capacity in certain areas. We recommend that the government identify services that require special accountability and explainability, such as the justice system, immigration vetting processes, and social service provision, among others. The services should include all areas where questions of ethics,

fairness, and justice are at play because AI is poorly equipped to handle nuance. For these reasons, Canada should implement a policy to only contract with companies that account for these provisions.

8. Recommendation 4: Establish a set of international standards for responsible AI development and application. Canada's Code of Ethics can serve as the basis to push for international standards and there is currently space for GAC to assume global leadership of this initiative. The United Nations and its Centre on Artificial Intelligence and Robotics provides an excellent venue for Canada to pursue this goal.

9. Recommendation 5: Develop a Canadian Artificial Intelligence Interdepartmental Working Group. The group will have multiple committees devoted to ethics and oversight, registration and incentives, research and development, education and compliance, legal and security advice, and international standards and cooperation. As a result, the group will be able to holistically tackle aspects of AI governance and regulation.

10. These recommendations follow Canada's momentum in balancing innovation and ethical technological development. With positive values such as transparency, accountability, explainability, and controllability, Canadians can feel comfortable with the direction of the country's technological progress. Developing a code of ethics that can serve as a template for international standards situates Canada in a unique leadership position in AI governance. This leadership role can lead to further investments from private companies in Canadian AI labs. It is important to note that the international standards suggested by Canada would have no regulatory agency or body to hold international actors accountable. The Code of Ethics should be crafted as soon as possible in order to establish Canadian leadership. The European Union, United States, and China have developed AI policies and are seeking to assert themselves as leaders in government oversight of AI. Finally, the success of the Registration and Incentives Committee within the Working Group depends on the interests of private companies and their willingness to engage with the government, which may limit the success of the group.

COMMUNICATIONS IMPLICATIONS/ACTIONS:
11. Approval of the recommendations is expected to generate positive media attention, because it demonstrates Canada's commitment to both human rights and technological innovation. Since numerous private firms have begun investing in different cities within the Toronto-Waterloo Innovation Corridor, support for development from the public sector will be a positive step forward.

12. There will be news releases regarding the ensuing policies and legislation and a focus on the goals of both the Code of Ethics and the Working Group. The Government of Canada should anticipate questions from private companies and their stakeholders on how they might be impacted by the new regulations.

13. The media may raise the following concerns: alternative allocation of funding, job displacement, and apprehension about other negative impacts of AI. It is advised that the Government develops a suitable communications plan that addresses these concerns.