LARGE LANGUAGE MODELS AND THEIR IMPACT ON THE MENTAL HEALTH OF YOUTH

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Objective

- **Seek approval to implement a measured approach to addressing potential risks with Large Language Models (LLM)**

  - LLMs have seen rapid creation and development.
  - The use of these models has been linked to mental health issues, particularly in youth.

Background

- Budget committed to enhancing capacity of Artificial Intelligence (AI) competitiveness.
- Approach supports the Budget, protects Canadians, and allows the Government of Canada to adapt its AI and LLM policies as more information becomes available.
- Generative AI models have been made available to consumers at an unprecedented speed.
- A growing number of cases linking the impact of LLM use to mental illness, suicide, and violence, as well as notable instances of industry failing to address risks.
- More data gathering on these risks is needed.
- Governments around the world have taken varied approaches to regulating this technology.
- Addressing LLM risks presents challenges due to novelty, rapid technological advancement, limited data, concerns around industry competitiveness, and enforcement challenges.

Innovation, Science and Economic Development Canada

Health Canada Santé Canada

Considerations

- Evidence shows both potential benefits and risks associated with youth interaction with LLMs.

- ISED is also considering the following (but not limited to):
  - Limitations of available data
  - Protecting innovation, competitiveness
  - Enforcement realities
  - Opportunities to leverage existing regulations
  - International regulatory approaches
  - Stakeholder reaction and engagement

Pro	Con
Opportunities for cognitive and socio-emotional growth when designed with developmental safeguards	Provide access to detrimental information, in mental health contexts
Judgment-free environment for children to practice communication without typical social-anxiety issues	Youth susceptible to potential mental and physical harms associated with chatbots
AI-driven tutors offer personalized learning (individual pace, providing instant feedback and testing in low-stakes environments)	Heightened risk for youth who experience challenges with social cues, emotional regulation, or impulse control

Recommended Approach (Non-regulatory Option)

Leverage voluntary standards

- Promote the use of voluntary industry standards through Codes of Practice.
  - ➢ ANSI/CAN/UL 3115, *Standard for Safety for AI-Based Products*
- Leverage existing industry commitments to report potentially dangerous behaviour to law enforcement.

Implement public outreach and education campaigns

- Help alert the public to the potential harms of LLMs and provide tips on their safe use.
- Focus of outreach would be on vulnerable populations (i.e., children and youth).

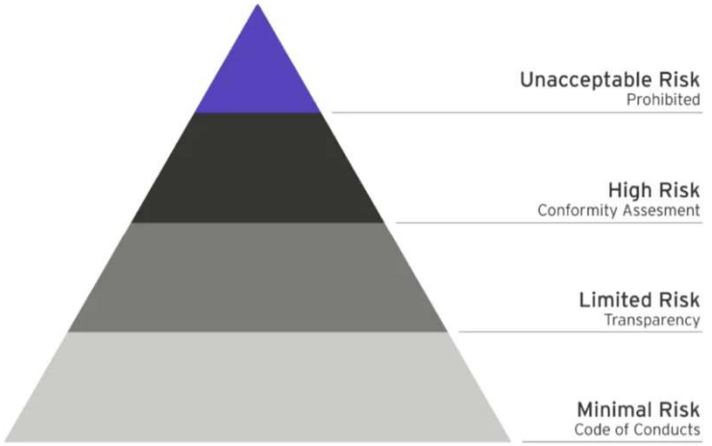
Increase monitoring

- Leverage existing mandatory reporting requirements under various Acts.
  - ➢ Mandatory incident reporting under the *Canada Consumer Product Safety Act.*
- Undergo data gathering exercises and activity monitoring.

Alternative Approaches

Regulatory Approach (Option 2)

- Develop comprehensive regulations aligned with the European Union.
  - LLMs would be classified according to risk categories, to which different degrees of obligations would apply.
  - Require industry to ensure their products do not cause harm to consumers.
  - Mandate incident reporting to the Government (e.g., cases of AI related suicide).
- Design a public education campaign, as well as increase research and monitoring capacity.



Status Quo Approach (Option 3)

- No regulatory action or awareness campaign would be pursued. ISED would continue to monitor AI risks and regulatory approaches in other jurisdictions.
- Allows industry to develop without formal regulation, but leaves Canadians unprotected from risks, existing or potential.
- Provides an opportunity to develop a more informed regulatory approach in the future.