

RESPONSIBLE USE OF AI IN IMMIGRATION DECISION-MAKING

Automated Decision-Making and Algorithmic Impact Assessments: The IRCC Experience

Treasury Board Secretariat – Meeting with Japanese Delegation

February 14, 2023

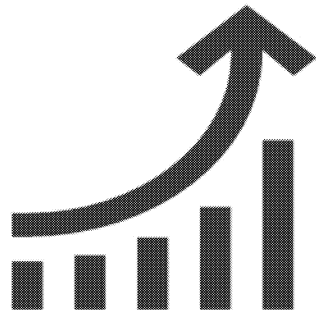
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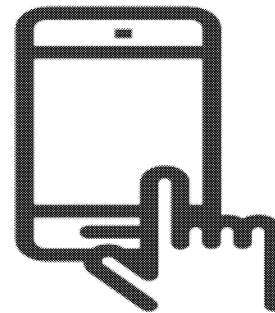
Immigration, Refugees and Citizenship Canada

Drivers of change

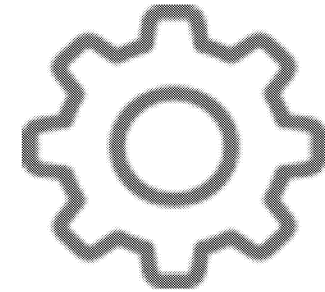
Several factors are pushing IRCC to explore increased use of data and digital solutions in our immigration programming



Growth in application
volumes



Rising client
expectations



Promise of innovative
technologies

What we are currently doing

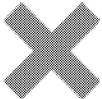
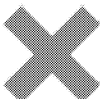
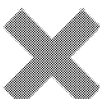
At a high level, IRCC is using automation and/or advanced analytics (AA) in the following ways:

- ✓ **Triaging** and distributing applications according to complexity and available expertise
- ✓ **Automating** some positive eligibility determinations and final decisions (approvals only)
- ✓ **Identifying** applications that require additional verifications
- ✓ Creating **case annotations** to summarize basic information
- ✓ Assisting with **responding to client emails and enquiries**
- ✓ Assessing **biometrics**

What we are NOT currently doing

IRCC has not put in place any absolute bars on how automation and AA can be used, but we have employed a cautious approach to these technologies.

The Department is not currently using AA or automation for the following:

-  **Refusals** - Our AA and automation tools only make positive determinations or decisions.
-  **Web Scraping** - We do not use AA or AI to collect and analyze online information about clients, for example through their social media profiles.
-  **Black Box Decision-Making** – We do use “black box” technology (AI systems that use unknowable or unexplainable internal logic) in some capacities, including email triage and facial recognition, but we do not use any black box technology to make determinations or decisions.

Choosing what to automate

In considering whether to develop an automated decision support system for a given line of business, the Department looks at several factors:

- **Need** (Size of volumes, inventories)
- **Stakes** (How consequential are the decisions?)
- **Public perception** (What clients and stakeholders are saying)
- **Complexity** of processing (Are applications largely routine or highly discretionary?)
- **Quality of the data**

POLICY APPROACH

What we considered

IRCC has invested considerable time and effort in orienting itself to make use of data and digital solutions, such as AA, in a responsible way

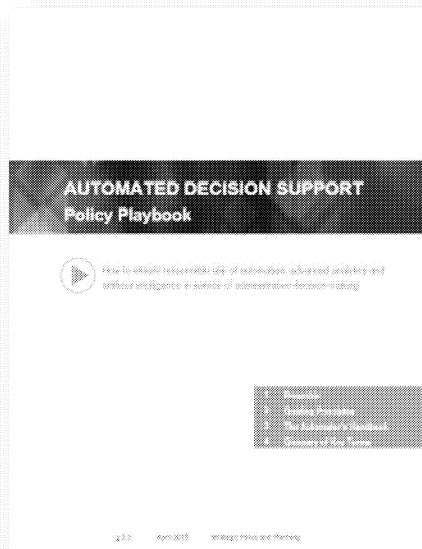
- » While AA and automation are relatively new, they are **not being introduced in a vacuum**
 - » There is an existing ecosystem of policy constraints and legal authorities to ensure responsible use of these tools (e.g. Charter of Rights and Freedoms, Privacy Act, etc.); however, there is an important role for policy guidance
- » As the Government of Canada direction is very broad by nature, **IRCC set out to establish our own principles**
 - » Aligned with government-wide guidance, while considering issues in our own context:



Policy Requirements and Guidance

TBS Directive on Automated Decision-Making

- A GoC-wide policy instrument, the Directive enumerates several requirements for tools within its scope, most notably the publishing of an Algorithmic Impact Assessment
- Aims to ensure that automated decision-making tools are developed and deployed in a manner that is compatible with core administrative law principles such as transparency, accountability, legality, and procedural fairness.



IRCC Policy Playbook on Automated Support for Decision-making

- Complementing the TBS policy, a piece of internal policy guidance tailored to our unique operating context
- Contains comprehensive advice and recommendations to developers and users of automated decision (support) tools to ensure responsible development and deployment
- Much of the content is geared toward building and maintaining public trust in IRCC's use of technology

Looking inward

To successfully implement policy guidance, it is important to situate it within policy, operational and decision-making structures

- » **Governance** that drives innovation, while still exercising caution
 - » Need to be ready to adjust the balance between nimble approvals and more thorough oversight from project to project
- » **Multidisciplinary teams** that bring together diverse skills and considerations
 - » Cross-functional groups—data governance, privacy, legal, policy—all working **together from the outset**
- » **Strategic functions** that enhance an organization's use of Big Data and AA
 - ↔ **Horizontal** - to *facilitate* responsible use of AA across an organization
 - ↕ **Vertical** - to *define* the vision and goals of specific programs

Looking outward

» Automation and AA are relatively new for IRCC, and **we benefit from engaging outside of our organization...**

...to coordinate with international partners

Presentations and outreach have allowed us to connect with governments who are experimenting with similar use cases and facing similar challenges.

...to demonstrate transparency

We know from experience that IRCC benefits immensely from proactive communication about its use of new technologies.

...to identify challenges and opportunities

There are pockets of expertise in digital government and the responsible use of technologies within public, private and research sectors.

Connecting with the broader GoC community, academics, legal community, and international bodies allows IRCC to explore the issues and learn from others

USE CASE – TEMPORARY RESIDENT VISAS

Experience with the AIA

It takes a lot of effort for automation to make things easier

The TBS *Directive* established a formal requirement (compliance isn't optional)

- » Resources were developed to make it easier for the department to comply, but internal collaboration can present challenges
- » There is room for debate regarding whether some tools fall within scope

The AIA contains straightforward questions, but arriving at answers isn't always easy

- » It takes time and effort to gather evidence, prepare rationales, consult internally, and complete the analysis
- » Even with detailed guidance and templates, active support and assistance is often necessary
- » Related assessments can also lengthen approval and implementation timelines

Experience with the AIA

No single group has the expertise to answer all the questions and address all the considerations that are raised in the AIA

Data team	<ul style="list-style-type: none">• <i>Provide data for model training and use</i>
Advanced Analytics team	<ul style="list-style-type: none">• <i>Responsible for design, development and ongoing use of the model</i>
IT services	<ul style="list-style-type: none">• <i>Implement and integrate model alongside existing systems</i>
Program & Policy branches	<ul style="list-style-type: none">• <i>Provide subject matter expertise and complete supporting assessments such as the AIA</i>
Legal services	<ul style="list-style-type: none">• <i>Examine legal risks and compliance</i>
Privacy team	<ul style="list-style-type: none">• <i>Assess data protection and individual privacy risks</i>
GBA Plus and equity team	<ul style="list-style-type: none">• <i>Guidance on assessing differential impacts and bias</i>
Communications	<ul style="list-style-type: none">• <i>Ensure clear and consistent messaging to the public</i>
Risk management	<ul style="list-style-type: none">• <i>Develop an appropriate quality assurance plan</i>

An Example of Automation at IRCC

Temporary Resident Visas

Automating a portion of the **visitor visa decision-making process**

- » First piloted in China and India, then expanded to all overseas visitor visa applications
- » Model trained on past decisions to identify clients with a high likelihood of approval through manual processing
- » Automatically **triage** incoming applications according to complexity
- » Isolate the **most straightforward** applications and auto-approve for eligibility



Auto-approve eligibility only
Officers review for admissibility



No automated refusals

An Example of Automation at IRCC

The AIA score for the Temporary Resident Visa automation model resulted in an Impact Level II

» **Key impact areas**

- » Model makes a decision that would normally require human discretion
- » Personal information from clients is used to train and operate the model

» **Some challenging questions and answers**

- » Does the model *assist* or *replace* the decision of a human officer?
- » Describing the impact on individuals
- » Releasing information about the data, model testing, and impact assessments to the public

» **AIA needs to be started early, but is one of the final pieces to be approved**

- » Many AIA questions could only be answered once other assessments were finalized, which delayed approvals and implementation

THANK YOU

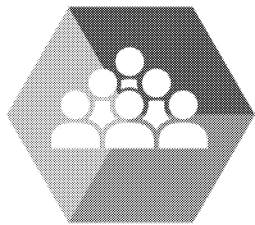
Questions or comments?

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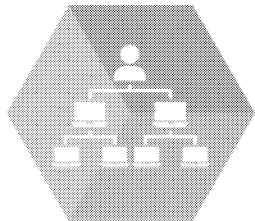
ANNEX

Annex: Guiding Principles

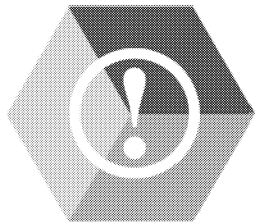
Guiding principles give IRCC a coherent basis for strategic choices about whether and how to make use of new tools and technologies.



1. The use of new tools should deliver a clear public benefit. IRCC should use automated decision support wherever it can do so responsibly, effectively and efficiently – in that order.

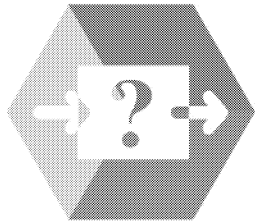


2. Administrative decisions are about people, and they are made by people, even when we use AI. Humans, not computer systems, are accountable for decisions.

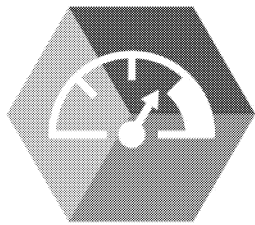


3. Because IRCC's decisions have significant impacts on the lives of clients and Canadians, the Department should prioritize approaches that carry the least risk.

ANNEX: Guiding Principles



4. “Black box” algorithms can be useful, but cannot be the sole determinant of final decisions on client applications.

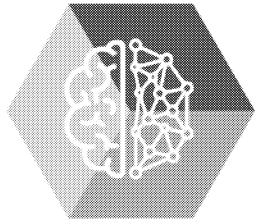


5. IRCC must recognize the limitations of data-driven technologies and take all reasonable steps to minimize unintended bias.



6. Officers should be informed, not led to conclusions.

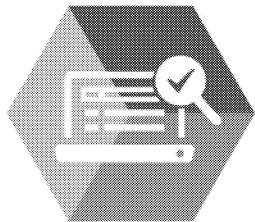
ANNEX: Guiding Principles



7. **Humans and algorithmic systems play complementary roles. IRCC should continually strive to optimize these roles and find the right balance, in order to get the best out of each.**

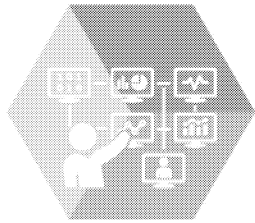


8. **On top of respecting Canada's current privacy protection framework, IRCC should continually adopt emerging privacy-related best practices in a rapidly evolving field.**



9. **IRCC should subject all systems to ongoing oversight, to ensure they are technically sound, consistent with legal and policy authorities, fair and functioning as intended.**

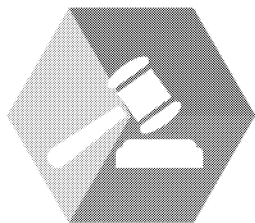
ANNEX: Guiding Principles



10. IRCC must always be able to provide a meaningful explanation of decisions made on client applications.



11. IRCC must balance transparency with the need to protect the safety and security of Canadians.



12. Clients will continue to have access to the same recourse mechanisms, and IRCC's use of automated systems should not diminish a person's ability to pursue these avenues.