Algorithmic Impact Assessment Results

Version: 0.9.1

Project Details

1. Name of Respondent
Various Stakeholders at IRCC

2. Department
Citizenship and Immigration (Department of)

3. Branch
 Various Branches at IRCC

4. Project Title
Advanced Analytics Triage of Overseas Temporary Resident Visa Applications

5. Project ID from IT Plan
N/A

6. Project Phase
Implementation   [Points: 0]

7. Please provide a project description:
This project seeks to streamline the eligibility assessment for all overseas temporary resident (visitor) visa applications in order to help IRCC decision makers process applications more efficiently. The advanced data analytics system identifies routine applications for streamlined processing and sorts applications into tiers based on their level of complexity. When an application is deemed routine for streamlined processing, advance data analytics are used to determine only that an applicant is eligible, whereas more complex applications are assigned to officers for regular manual processing and decision. The system only makes positive eligibility determinations on routine applications; it does not make any ineligibility determinations, and does not assess applications for admissibility. All applications are referred to an immigration officer for an admissibility assessment and officers are required to review all relevant fle information in processing applications, including the information provided in additional documents. Officers make the final decision on all applications.

Business Driver / Positive Impact

8. What is motivating your team to introduce automation into this decision-making process? (Check all that apply)
Existing backlog of work or cases
Use innovative approaches
Other (please specify)

9. Please describe
Facilitate more efficient use of IRCC resources in the processing of visa applications, assist in managing the growing volume of temporary resident visa applications, and improve processing times and identification of complex

cases.

About The System

10. Please check which of the following capabilities apply to your system.
Process optimization and workflow automation: Analyzing large data sets to identify and anomalies, cluster patterns, predict outcomes or ways to optimize; and automate specific workflows

Section 1: Impact Level : 2

Current Score: 34

Raw Impact Score: 40

Mitigation Score: 36

Section 2: Requirements Specific to Impact Level 2

Peer Review

At least one of:

- Qualified expert from a federal, provincial, territorial or municipal government institution.
- Qualified members of faculty of a post-secondary institution.
- Qualified researchers from a relevant non-governmental organization.
- Contracted third-party vendor with a related specialization.
- Publishing specifications of the Automated Decision System in a peer-reviewed journal.
- A data and automation advisory board specified by Treasury Board Secretariat.

Notice

Plain language notice posted through all service delivery channels in use (Internet, in person, mail or telephone).

Human-in-the-loop for decisions

Decisions may be rendered without direct human involvement.

Explanation Requirement

In addition to any applicable legal requirement, ensuring that a meaningful explanation is provided with any decision that resulted in the denial of a benefit, a service, or other regulatory action.

Training

Documentation on the design and functionality of the system.

Contingency Planning

None

Approval for the system to operate

None

Other Requirements

The Directive on Automated Decision-Making also includes other requirements that must be met for all impact levels.

[Link to the Directive on Automated Decision-Making](#)

Contact your institution's ATIP office to discuss the requirement for a Privacy Impact Assessment as per the Directive on Privacy Impact Assessment.

Section 3: Questions and Answers

Section 3.1: Impact Questions and Answers

Risk Profile

1. Is the project within an area of intense public scrutiny (e.g. because of privacy concerns) and/or frequent litigation?
Yes   [Points: +3]

2. Are clients in this line of business particularly vulnerable?
No   [Points: +0]

3. Are stakes of the decisions very high?
No   [Points: +0]

4. Will this project have major impacts on staff, either in terms of their numbers or their roles?
No   [Points: +0]

Project Authority

5. Will you require new policy authority for this project?
No   [Points: +0]

About the Algorithm

6. The algorithm used will be a (trade) secret
No   [Points: +0]

7. The algorithmic process will be difficult to interpret or to explain
No   [Points: +0]

About the Decision

8. Does the decision pertain to any of the categories below (check all that apply):
Other (please specify)   [Points: +1]

9. Please describe
 Immigration services

Impact Assessment

10. Will the system only be used to assist a decision-maker?
No   [Points: +0]

11. Will the system be replacing a decision that would otherwise be made by a human?
Yes   [Points: +3]

12. Will the system be replacing human decisions that require judgement or discretion?
Yes   [Points: +4]

13. Please describe the decision(s) that will be automated
The system will automate the approval of the eligibility of some applicants for temporary resident visas. For applications where the positive eligibility determination is automated by the system, the system determines only that an applicant is eligible, before the application is sent to an officer to screen for admissibility. Even in cases where the system approves the eligibility, officers continue to make the admissibility determination and the final decision on each application. As a result, there is officer review of all applications. If an officer encounters information in the course of their admissibility assessment that may affect the positive eligibility determination, they may revisit the eligibility determination of an application. For applications where there is no automated positive eligibility determination, the advanced data analytics system makes no determinations or recommendations vis-à-vis their ineligibility, and this must be determined by officers.

14. Is the system used by a different part of the organization than the ones who developed it?
Yes   [Points: +4]

15. Are the impacts resulting from the decision reversible?
Reversible   [Points: +1]

16. How long will impacts from the decision last?
Some impacts may last a matter of months, but some lingering impacts may
last longer   [Points: +2]

17. Please describe why the impacts resulting from the decision are as per selected option above.
 Visas are temporary and do not entitle the holder to work, study or immigrate to Canada. Impacts may affect travel plans and the ability of clients to personally attend meetings or events in Canada, but this impact is temporary as clients whose visa application is refused can re-apply at any time. IRCC approves many clients with prior refusals. The impact of most refusals is not perpetual. However, it should be noted that the system will only automate the approval of the eligibility of some clients for temporary resident visas. The system will not make nor recommend any decisions on ineligibility. All applications are subject to review by an IRCC officer for admissibility and final decision on the application. As the system only makes positive eligibility determinations, the positive impact on clients will be lasting as temporary resident visas are normally issued with a validity of up to 10 years.

18. The impacts that the decision will have on the rights or freedoms of individuals will likely be:
Little to no impact   [Points: +1]

19. Please describe why the impacts resulting from the decision are (as per selected option above).
 The system assesses data elements in applications submitted to IRCC to triage applications and to automate certain positive eligibility determinations. The system is expected to have a low impact on the rights and freedoms of individuals as it will solely be used to triage applications and to automate certain positive eligibility determinations. The system rules also only use data elements with a clear link to legislative and regulatory requirements. The system never refuses applications nor does it recommend refusals. All refusals continue to be done by officers as per the current practice. All applications for which eligibility cannot be approved by the system will receive a full individualized assessment by officers in accordance with standard practice, including an officer determining eligibility and screening for admissibility. Officers continue to make the final decision on each application. For applications where the positive eligibility determination is automated by the system, the system determines only that an applicant is eligible, before the application is sent to an officer to screen for admissibility. Even in cases where the system approves the eligibility, officers continue to make the final decision on each application. The impact of the triage performed by the system on decision-making officers is limited because officers will not be aware of the rules used by the system for its triage or automated positive eligibility determinations, nor will they receive any information about the analysis that was performed by the system. Further, the system does not produce a recommendation to officers. Each assessment by an officer of an application will be individualized. Model rules were reviewed by experienced officers, legal, policy, data science, and privacy experts, as well as senior decision-makers to ensure they were logical, understandable and aligned with established eligibility criteria. Regular monitoring and quality assurance measures will also help make sure the system continues to perform as intended and that any unforeseen negative impacts such as bias or discrimination can be identified early and mitigated.

20. The impacts that the decision will have on the health and well-being of individuals will likely be:
Little to no impact   [Points: +1]

21. Please describe why the impacts resulting from the decision are (as per selected option above)
The system is expected to have little to no negative impact on the health and well-being of individuals as it will solely be used to triage applications and to automate certain positive eligibility determinations.

22. The impacts that the decision will have on the economic interests of individuals will likely be:
Little to no impact   [Points: +1]

23. Please describe why the impacts resulting from the decision are (as per selected option above)
The system is expected to have little to no negative impact on the economic interests of individuals as it will solely be used to triage applications and to automate certain positive eligibility determinations.

24. The impacts that the decision will have on the ongoing sustainability of an environmental ecosystem, will likely be:
Little to no impact   [Points: +1]

25. Please describe why the impacts resulting from the decision are (as per selected option above)
The system is expected to have little to no negative impact on the
environment as it will solely be used to triage applications and to automate
certain positive eligibility determinations.

About the Data - A. Data Source

26. Will the Automated Decision System use personal information as input data?
Yes   [Points: +4]

27. Have you verified that the use of personal information is limited to only what is directly related to delivering a program or service?
Yes   [Points: +0]

28. Is the personal information of individuals being used in a decision-making process that directly affects those individuals?
Yes   [Points: +2]

29. Have you verified if the system is using personal information in a way that is consistent with: (a) the current Personal Information Banks (PIBs) and Privacy Impact Assessments (PIAs) of your programs or (b) planned or implemented modifications to the PIBs or PIAs that take new uses and processes into account?
Yes   [Points: +0]

30. What is the highest security classification of the input data used by the system? (Select one)
Protected B / Protected C   [Points: +3]

31. Who controls the data?
Federal government   [Points: +1]

32. Will the system use data from multiple different sources?
Yes   [Points: +4]

33. Will the system require input data from an Internet- or telephony-connected device? (e.g. Internet of Things, sensor)
No   [Points: +0]

34. Will the system interface with other IT systems?
No   [Points: +0]

35. Who collected the data used for training the system?
Your institution   [Points: +1]

36. Who collected the input data used by the system?
Your institution   [Points: +1]

About the Data - B. Type of Data

37. Will the system require the analysis of unstructured data to render a recommendation or a decision?
Yes   [Points: 0]

38. What types of unstructured data? (Check all that apply)
Audio and text files   [Points: +2]

Section 3.2: Mitigation Questions and Answers

Consultations

1. Internal Stakeholders (Strategic policy and planning, Data Governance, Program Policy, etc.)
Yes   [Points: +1]

2. Which Internal Stakeholders have you engaged?
Strategic Policy and Planning
Data Governance
Program Policy
Legal Services
Access to Information and Privacy Office
Communications
Other (describe)

3. Please describe
 Integrity Risk Management, Centralized Network, International Network,
Change Management, GBA+.

4. External Stakeholders (Civil Society, Academia, Industry, etc.)
Yes   [Points: +1]

5. Which External Stakeholders have you engaged?
Academia
Office of the Privacy Commissioner
Other (describe)

6. Please describe
National Research Council, immigration lawyers.

De-Risking and Mitigation Measures - Data Quality

7. Do you have documented processes in place to test datasets against biases and other unexpected outcomes? This could include experience in applying frameworks, methods, guidelines or other assessment tools.
Yes   [Points: +2]

8. Is this information publicly available?
No   [Points: +0]

9. Have you developed a process to document how data quality issues were resolved during the design process?
Yes   [Points: +1]

10. Is this information publicly available?

No [Points: +0]

11. Have you undertaken a Gender Based Analysis Plus of the data?
Yes [Points: +1]

12. Is this information publicly available?
No [Points: +0]

13. Have you assigned accountability in your institution for the design, development, maintenance, and improvement of the system?
Yes [Points: +2]

14. Do you have a documented process to manage the risk that outdated or unreliable data is used to make an automated decision?
Yes [Points: +2]

15. Is this information publicly available?
No [Points: +0]

16. Is the data used for this system posted on the Open Government Portal?
No [Points: +0]

De-Risking and Mitigation Measures - Procedural Fairness

17. Does the audit trail identify the authority or delegated authority identified in legislation?
Yes [Points: +1]

18. Does the system provide an audit trail that records all the recommendations or decisions made by the system?
Yes [Points: +2]

19. Are all key decision points identifiable in the audit trail?
Yes [Points: +2]

20. Are all key decision points within the automated system's logic linked to the relevant legislation, policy or procedures?
Yes [Points: +1]

21. Do you maintain a current and up to date log detailing all of the changes made to the model and the system?
Yes [Points: +2]

22. Does the system's audit trail indicate all of the decision points made by the system?
Yes [Points: +1]

23. Can the audit trail generated by the system be used to help generate a notification of the decision (including a statement of reasons or other notifications) where required?
Yes [Points: +1]

24. Does the audit trail identify precisely which version of the system was used for each decision it supports?

Yes   [Points: +2]

25. Does the audit trail show who an authorized decision-maker is?
Yes   [Points: +1]

26. Is the system able to produce reasons for its decisions or recommendations when required?
Yes   [Points: +2]

27. Is there a process in place to grant, monitor, and revoke access permission to the system?
Yes   [Points: +1]

28. Is there a mechanism to capture feedback by users of the system?
Yes   [Points: +1]

29. Is there a recourse process established for clients that wish to challenge the decision?
Yes   [Points: +2]

30. Does the system enable human override of system decisions?
Yes   [Points: +2]

31. Is there a process in place to log the instances when overrides were performed?
Yes   [Points: +1]

32. Does the system's audit trail include change control processes to record modifications to the system's operation or performance?
Yes   [Points: +2]

33. Have you prepared a concept case to the Government of Canada Enterprise Architecture Review Board?
No   [Points: +0]

De-Risking and Mitigation Measures - Privacy

34. If your system involves the use of personal information, have you undertaken a Privacy Impact Assessment, or updated an existing one?
Yes   [Points: +1]

35. Have you designed and built security and privacy into your systems from the concept stage of the project?
Yes   [Points: +1]

36. Is the information used within a closed system (i.e. no connections to the Internet, Intranet or any other system)?
No   [Points: +0]

37. If the sharing of personal information is involved, has an agreement or arrangement with appropriate safeguards been established?
No   [Points: +0]