

# Algorithmic Impact Assessment Results

Version: 0.10.0

## Project Details

### 1. Name of Respondent

Various Stakeholders at IRCC

### 2. Job Title

N/A

### 3. Department

Citizenship and Immigration (Department of)

### 4. Branch

Operations Planning and Performance Branch

### 5. Project Title

Automated Triage and Positive Eligibility Determinations of In-Canada Work Permit Applications

### 6. Project ID from IT Plan

N/A

### 7. Departmental Program (from Department Results Framework)

Temporary Workers

### 8. Project Phase

Implementation

[ Points: 0 ]

### 9. Please provide a project description:

"This project seeks to streamline the eligibility assessment for post-graduate work permits (PGWP) and other in-Canada work permit applications in order to help IRCC decision makers process applications more efficiently. This will be achieved by implementing two tools, one for PGWP and one for other work permit extensions. Given the similarity between these tools, this AIA covers both. Each tool 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, the tools can determine only that an applicant is eligible. More complex applications are assigned to officers for regular manual processing and decision, as before. For routine applications, the tools can only make positive eligibility determinations; they cannot make any ineligibility determinations, nor recommend ineligibility. The tools do not assess applications for admissibility, although known admissibility concerns form part of the triage criteria to ensure that complex applications are triaged immediately to officers having the requisite expertise to conduct the assessment.

All admissibility assessments continue to be performed by officers, who are required to review all relevant file information in processing applications, including the information provided in additional documents. Officers make the final decision on all applications.

Each application continues to receive an individualized assessment.

No artificial intelligence or machine learning was used to build these tools. They rely entirely on rules created by IRCC staff based on program eligibility and admissibility criteria.

Officers are trained to not let the triage results influence their decisions. Additionally, the user manual explicitly states that the triage bins are administrative groupings to facilitate processing and that they provide no guidance whatsoever on client risk level. These measures mitigate the risk that officers could be unduly influenced by the tools' outputs (also known as "automation bias").

An ongoing quality assurance process has been implemented to monitor whether officers make the same positive eligibility determinations as the tools. This process ensures that biases have not been introduced by the tools.

As a further safeguard, the rules in both tools undergo an extensive review process. Before they are introduced, and at regular intervals afterward, rules are reviewed by experienced officers, legal, policy, and data science experts, as well as senior executives to ensure they are logical, understandable, non-discriminatory and aligned with established eligibility criteria. Regular monitoring and quality assurance measures also help make sure the tools perform as intended and that any unforeseen negative impacts such as bias or discrimination can be identified early and mitigated.

The rules may not be disclosed to the public to safeguard the integrity of the immigration system. "

## 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: 52*

*Raw Impact Score: 52*

*Mitigation Score: 35*

## Section 2: Requirements Specific to Impact Level 2

### Peer review

Consult at least one of the following experts and publish the complete review or a plain language summary of the findings on a Government of Canada website:

- 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 relevant specialization
- a data and automation advisory board specified by Treasury Board of Canada Secretariat.

OR

Publish specifications of the automated decision system in a peer-reviewed journal. Where access to the published review is restricted, ensure that a plain language summary of the findings is openly available.

## **Gender-based Analysis Plus**

Ensure that the Gender-based Analysis Plus addresses the following issues:

- impacts of the automation project (including the system, data and decision) on gender and/or other identity factors;
- planned or existing measures to address risks identified through the Gender-based Analysis Plus.

## **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**

In addition to any applicable legal requirement, ensure that a meaningful explanation is provided to the client with any decision that results in the denial of a benefit or service, or involves a regulatory action. The explanation must inform the client in plain language of:

- the role of the system in the decision-making process;
- the training and client data, their source, and method of collection, as applicable;
- the criteria used to evaluate client data and the operations applied to process it;
- the output produced by the system and any relevant information needed to interpret it in the context of the administrative decision; and
- a justification of the administrative decision, including the principal factors that led to it.

Explanations must also inform clients of relevant recourse options, where appropriate.

A general description of these elements must also be made available through the Algorithmic Impact Assessment and discoverable via a departmental website.

## **Training**

Documentation on the design and functionality of the system.

# IT and business continuity management

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

#### Reasons for Automation

1. 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)

2. Please describe

Facilitate more efficient use of IRCC resources in the processing of applications, assist in managing the growing volume of applications, and improve processing times.

3. What client needs will the system address and how will this system meet them? If possible, describe how client needs have been identified.

The primary benefit for clients will be faster decisions thanks to more efficient processing. During the pandemic, processing times grew beyond service standards. Clients have expressed dissatisfaction at the delays in obtaining a decision.

4. Please describe any public benefits the system is expected to have.

The primary benefit will be for foreign nationals who have applied for an in-Canada work permit, as their applications will be processed faster. Employers will benefit through a more rapid availability of foreign workers.

5. How effective will the system likely be in meeting client needs?

Very effective

[ Points: +0 ]

6. Please describe any improvements, benefits, or advantages you expect from using an automated system. This could include relevant program indicators and performance targets. IRCC will be able to allocate its resources more efficiently to achieve program

objectives. Through automated positive eligibility determinations of routine applications, officers will be freed up to focus on other cases, yielding more efficient processing for all applications. Program integrity will be maintained through safeguards in the system.

**7. Please describe how you will ensure that the system is confined to addressing the client needs identified above.**

The tools only apply to applications for in-Canada work permit applications. Their scope is limited to the functionality described above.

**8. Please describe any trade-offs between client interests and program objectives that you have considered during the design of the project.**

The desire for more efficient processing had to be reconciled with the preservation of the integrity of the immigration system by ensuring proper due diligence in adjudicating applications.

**9. Have alternative non-automated processes been considered?**

Yes

[ Points: +0 ]

**10. If non-automated processes were considered, why was automation identified as the preferred option?**

A Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis was undertaken to assess the merits of introducing an automation tool for the PGWP program. It found that automation will allow greater improvements in processing speed and a more efficient use of program resources.

**11. What would be the consequence of not deploying the system?**

Service cannot be delivered in a timely or efficient manner

[ Points: +2 ]

## **Risk Profile**

**12. Is the project within an area of intense public scrutiny (e.g. because of privacy concerns) and/or frequent litigation?**

Yes

[ Points: +3 ]

**13. Are clients in this line of business particularly vulnerable?**

No

[ Points: +0 ]

**14. Are stakes of the decisions very high?**

Yes

[ Points: +4 ]

**15. Will this project have major impacts on staff, either in terms of their numbers or their roles?**

No

[ Points: +0 ]

**16. Will the use of the system create or exacerbate barriers for persons with disabilities?**

No

[ Points: +0 ]

## **Project Authority**

**17. Will you require new policy authority for this project?**

No

[ Points: +0 ]

## About the Algorithm

18. The algorithm used will be a (trade) secret

No

[ Points: +0 ]

19. The algorithmic process will be difficult to interpret or to explain

No

[ Points: +0 ]

## About the Decision

20. Please describe the decision(s) that will be automated.

Routine applications receive an automated positive eligibility determination. The tools cannot refuse nor recommend refusals. Officers continue to review admissibility and make the final decision on all applications. Applications that do not receive an automated positive eligibility determination are triaged automatically to ensure timely processing by officers having the requisite expertise.

21. Does the decision pertain to any of the categories below (check all that apply):

Other (please specify)

[ Points: +1 ]

22. Please describe

Immigration services

## Impact Assessment

23. Which of the following best describes the type of automation you are planning?

Partial automation (the system will contribute to administrative decision-making by supporting an officer through assessments, recommendations, intermediate decisions, or other outputs)

[ Points: +2 ]

24. Please describe the role of the system in the decision-making process.

"The tools identify 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, the tools can determine only that an applicant is eligible. More complex applications are assigned to officers for regular manual processing and decision, as before. For routine applications, the tools can only make positive eligibility determinations; they cannot make any ineligibility determinations, nor recommend ineligibility. They do not assess applications for admissibility nor render final decisions, although known admissibility concerns form part of the triage criteria to ensure that complex applications are triaged immediately to officers having the requisite expertise to conduct the assessment.

All admissibility assessments continue to be performed by officers, who are required to review all relevant file information in processing applications, including the information provided in additional documents. Officers make the final decision on all applications.

Each application continues to receive an individualized assessment.

No artificial intelligence or machine learning was used to build these tools. They rely entirely on rules created by IRCC staff based on program eligibility

criteria.

The rules may not be disclosed to the public to safeguard the integrity of the immigration system. "

**25. Will the system be making decisions or assessments that require judgement or discretion?**

Yes

[ Points: +4 ]

**26. Please describe the criteria used to evaluate client data and the operations applied to process it.**

The quality of client data is assessed for missing values, incompleteness, outdatedness, inconsistencies, trustworthiness and other issues. Low quality data is not used. Rules used by the tools are carefully vetted for relevance, reasonableness and potential bias. The tools and their triage results will be vetted for GBA Plus considerations.

**27. Please describe the output produced by the system and any relevant information needed to interpret it in the context of the administrative decision.**

"For routine applications that receive an automated positive eligibility determination, data is sent directly to the Global Case Management System (GCMS) to record this approval. For all applications, an Excel spreadsheet is shared with processing officers showing the triage result for each application, as well as key information from the application that officers review while making a decision, to save them from having to search for this information in GCMS. Officers do not limit their review to the contents of the spreadsheet. They continue to review all relevant information in the application and its supporting documents to reach an informed decision. The triage result and other information in the spreadsheet are presented in a neutral way to avoid swaying officer decisions. Officers are carefully trained on how to use the output and to never let it substitute for their individualized assessment of each application.

To safeguard the integrity of the immigration system, these spreadsheets cannot be disclosed to the public."

**28. Will the system perform an assessment or other operation that would not otherwise be completed by a human?**

Yes

[ Points: +2 ]

**29. If yes, please describe the relevant function(s) of the system.**

The tools will perform a faster scan through available information and summarize the results for decision makers.

**30. Is the system used by a different part of the organization than the ones who developed it?**

Yes

[ Points: +4 ]

**31. Are the impacts resulting from the decision reversible?**

Reversible

[ Points: +1 ]

**32. 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 ]

**33. Please describe why the impacts resulting from the decision are as per selected option above.**

Clients whose application is refused have 90 days to re-apply. Additionally, the refused applicant has recourse through Judicial Review in the Federal Court. IRCC approves many clients with prior refusals. The impact of most refusals is not perpetual. However, it should be noted that the tools will only automate approvals of eligibility, they will not make nor recommend any decisions on ineligibility. Consequently, the tools themselves does not cause negative impacts.

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

**35. Please describe why the impacts resulting from the decision are as per selected option above.**

The tools assess data elements in incoming applications in order to triage (sort) applications based on complexity and automate positive eligibility determinations for applications with low complexity. The tools are expected to have a low impact on the rights and freedoms of individuals, as they will solely be used to sort applications and to facilitate approvals.

To ensure fairness and transparency, the rules in both tools are based only on data elements with a clear link to legislative and regulatory requirements, and the tools never refuse applications, nor do they recommend refusals. All refusals continue to be done by officers as per the current practice. All applications where eligibility cannot be approved automatically by the tools will receive a full assessment by officers in accordance with standard practice. For applications where the positive eligibility determination is automated, the tools determine only that an applicant is eligible, before the application is sent to an officer to screen for admissibility and render the final decision. Thus, even in cases where the tools approve the eligibility, officers continue to make all final decisions.

Officers are trained to not let the triage results influence their decisions. Additionally, the user manual explicitly states that the triage bins are administrative groupings to facilitate processing and that they provide no guidance whatsoever on client risk level. These measures mitigate the risk that officers could be unduly influenced by the tools' outputs (also known as "automation bias").

An ongoing quality assurance process has been implemented to monitor whether officers make the same positive eligibility determinations as the tools. This process ensures that biases have not been introduced by the tools.

As a further safeguard, the rules in both tools undergo an extensive review process. Before they are introduced, and at regular intervals afterward, rules are reviewed by experienced officers, legal, policy, and data science experts, as well as senior executives to ensure they are logical, understandable, non-discriminatory and aligned with established eligibility criteria. Regular monitoring and quality assurance measures also help make sure the tools perform as intended and that any unforeseen negative impacts such as bias or discrimination can be identified early and mitigated.

**36. The impacts that the decision will have on the equality, dignity, privacy, and autonomy of**



**individuals will likely be:**

Little to no impact

[ Points: +1 ]

**37. Please describe why the impacts resulting from the decision are as per selected option above.**

All of the tools' rules are carefully vetted for potential bias. The tools will also undergo a GBA Plus assessment. Privacy considerations are taken into account from the beginning of the design. The tools only consider information about the client that is relevant and reasonable in the context of the legislative and regulatory requirements of the program.

The tools are expected to have little to no negative impact as they will solely be used to triage applications and to automate certain positive eligibility determinations.

**38. The impacts that the decision will have on the health and well-being of individuals will likely be:**

Little to no impact

[ Points: +1 ]

**39. Please describe why the impacts resulting from the decision are as per selected option above.**

The tools are expected to have little to no negative impact on the health and well-being of individuals as they will solely be used to triage applications and to automate certain positive eligibility determinations.

**40. The impacts that the decision will have on the economic interests of individuals will likely be:**

Little to no impact

[ Points: +1 ]

**41. Please describe why the impacts resulting from the decision are as per selected option above.**

The tools are expected to have little to no negative impact on the economic interests of individuals as they will solely be used to triage applications and to automate certain positive eligibility determinations. The tools cannot refuse or recommend a refusal.

**42. The impacts that the decision will have on the ongoing sustainability of an environmental ecosystem, will likely be:**

Little to no impact

[ Points: +1 ]

**43. Please describe why the impacts resulting from the decision are as per selected option above.**

The tools are expected to have no negative impact on the environment as they will solely be used to triage applications and to automate certain positive eligibility determinations.

## **About the Data - A. Data Source**

**44. Will the Automated Decision System use personal information as input data?**

Yes

[ Points: +4 ]

**45. 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 ]

**46. Is the personal information of individuals being used in a decision-making process that directly affects those individuals?**

Yes [ Points: +2 ]

**47. 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 ]

**48. Please list relevant PIB Bank Numbers.**

PPU 068

**49. What is the highest security classification of the input data used by the system? (Select one)**

Protected B / Protected C [ Points: +3 ]

**50. Who controls the data?**

Federal government [ Points: +1 ]

**51. Will the system use data from multiple different sources?**

Yes [ Points: +4 ]

**52. Will the system require input data from an Internet- or telephony-connected device? (e.g. Internet of Things, sensor)**

No [ Points: +0 ]

**53. Will the system interface with other IT systems?**

Yes [ Points: +4 ]

**54. Who collected the data used for training the system?**

Your institution [ Points: +1 ]

**55. Who collected the input data used by the system?**

Your institution [ Points: +1 ]

**56. Please describe the input data collected and used by the system, its source, and method of collection.**

The data consists primarily of information provided directly by clients through their application and supporting documents. Medical information is obtained from the panel physician who conducts the immigration medical exam of the client. IRCC obtains enforcement records from the Canada Border Service Agency (CBSA) regarding persons who have come under examination at a port of entry or an investigation at an inland office. IRCC also obtains information gathered by Canadian or foreign law enforcement agencies or investigative bodies about persons whose entry to Canada would be dangerous to Canadian security. IRCC obtains additional information from other countries, primarily the United States, Australia and New Zealand, to better establish the identity of foreign nationals and to obtain otherwise unknown information about clients to aid in decision making.

## About the Data - B. Type of Data

57. Will the system require the analysis of unstructured data to render a recommendation or a decision?

Yes

[ Points: 0 ]

58. 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 (federal institutions, including the federal public service)

Yes

[ Points: +1 ]

2. Which Internal Stakeholders have you engaged?

Strategic Policy and Planning

Program Policy

Legal Services

Access to Information and Privacy Office

Communications services

Client Experience / Client Relationship Management

Other (describe)

Data Governance

Office of the Privacy Commissioner of Canada

3. Please describe

Integrity Risk Management

IT Security

Centralized Network

Change Management

4. External Stakeholders (groups in other sectors or jurisdictions)

Yes

[ Points: +1 ]

5. Which External Stakeholders have you engaged?

Academia

Other (describe)

Bargaining Agents

Governments in other Jurisdictions

6. Please describe

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 uses or creates personal information, have you undertaken a Privacy Impact Assessment, or updated an existing one?  
No [ Points: +0 ]

35. Have you undertaken other types of privacy assessments for your automation project?  
Please describe any relevant efforts.

Yes. A Privacy Needs Assessment was completed to evaluate the privacy needs for this initiative and determine what further steps were required. A Model Privacy Assessment was completed to describe the privacy protections implemented for these tools. The privacy notice on the application forms will be updated to inform clients that these tools would be used during the processing of their application. A web notice was published on the day that the tools were launched so that clients in the inventory could be aware of the use of these tools in processing their application. Personal Information

Banks were already up to date.

**36. Have you designed and built security and privacy into your systems from the concept stage of the project?**

Yes

[ Points: +1 ]

**37. Is the information used within a closed system (i.e. no connections to the Internet, Intranet or any other system)?**

No

[ Points: +0 ]

**38. If the sharing of personal information is involved, has an agreement or arrangement with appropriate safeguards been established?**

No

[ Points: +0 ]

**39. Will you de-identify any personal information used or created by the system at any point in the lifecycle?**

No

[ Points: +0 ]