

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

Various Branches at IRCC

5. Project Title

International Experience Canada (IEC) Work Permit Eligibility Model

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 a subset of IEC WP applications in order to help IRCC decision-makers process applications more efficiently. The IEC WP model triages IEC WP applications by grouping files with similar characteristics based on the legislative, regulatory and contractual requirements for each subprogram and participating country. The model is designed to apply pre-defined triage criteria to triage and identify "light-touch" routine cases where the eligibility portion can receive an automated positive eligibility Assessment. For the Summer 2023 launch, automated eligibility assessments are based on pre-existing business rules for the IEC Working Holiday Program only. Advanced analytics (AA) was not used to generate the current model criteria. The criteria that inform the model are the same that currently exist and that decision makers would currently examine. Applications that have received an automated positive eligibility assessment will continue to be manually assessed for admissibility. Procedures for eligibility and admissibility review will remain unchanged for applications not triaged for automated positive eligibility assessments. This model never refuses or recommends refusing applications. IRCC officers make the final decision to approve or refuse on all applications.

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: 36

Raw Impact Score: 36

Mitigation Score: 34

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

Improve overall quality of decisions

The system is performing tasks that humans could not accomplish in a reasonable period of time

Use innovative approaches

2. 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 processing times 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.

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

IEC supports Canada's economic and cultural interests by administering bilateral, reciprocal agreements and arrangements with 36 countries and territories. The model is intended to improve processing times by streamlining the processing of finalization-ready applications, thus, allowing for more efficient resource allocation.

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

Moderately effective

[Points: +1]

5. Please describe any improvements, benefits, or advantages you expect from using an automated system. This could include relevant program indicators and performance targets.

The IEC WP model triages IEC WP applications by grouping files with similar characteristics based on the legislative, regulatory and contractual requirements for each subprogram and participating country. The model is designed to apply pre-defined triage criteria to triage and identify "light-touch" routine cases where the eligibility portion can receive an automated positive eligibility assessment. The criteria that inform the model are the same that currently exist and that officers would currently examine. In other words, the program is doing the same thing in a more efficient way – using the technology to automate something that is currently done manually.

The model is intended to:

- Identify applications for automated positive eligibility assessments
- Expedite processing of finalization-ready applications
- Allow for more efficient resource allocation.

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

The IEC WP model triages IEC WP applications by grouping files with similar characteristics based on the legislative, regulatory and contractual requirements for each subprogram and participating country. The model is designed to apply pre-defined triage criteria to triage and identify "light-touch" routine cases where the eligibility portion can receive an automated positive eligibility assessment. Applications that have received an automated positive eligibility assessment will continue to be manually assessed for admissibility. For the Summer 2023 launch, automated eligibility assessments are based on pre-existing business rules for the IEC Working Holiday Program only. Advanced analytics (AA) was not used to generate the current model criteria. The criteria that inform the model are the same that currently exist and that officers would currently examine. In other words, the program is doing the same thing in a more efficient way – using the technology to automate something that is currently done manually. For applications not triaged for automated positive eligibility assessments, the model makes no recommendation regarding whether these applications should be approved or refused. Each of these applications must be assessed individually by a decision maker for eligibility and admissibility. The scope of this model limited to the functionality described above.

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

There is a possible trade off between the program's objective to streamline processing with client interests to equal treatment/processing standards. Namely, there is a potential for assessment/processing times to become different among applications that are triaged to different streams, especially if decision makers rely too heavily on the model's output. However, this is significantly mitigated due to the limited nature of the output document. At this time the output spreadsheet is limited to basic client and application data. The project will also monitor for this specific risk. Further, clear messaging has also been included in the manual and will be included in all training sessions regarding the obligation to undertake an individualized assessment of admissibility for each application triaged for automated positive eligibility assessment as well as an individualized assessment of admissibility and eligibility for applications not triaged for an automated positive eligibility assessment. Decision makers will be instructed to include a review of relevant supporting documents, and to ensure that they provide robust and rational reasons to support their decision-making for all applications, regardless of the triage stream.

8. Have alternative non-automated processes been considered?

Yes

[Points: +0]

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

Automation will allow greater improvements in processing speed and a more efficient use of program resources.

10. What would be the consequence of not deploying the system?

Service cannot be delivered in a timely or efficient manner

[Points: +2]

Risk Profile

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

No

[Points: +0]

12. Are clients in this line of business particularly vulnerable?

No

[Points: +0]

13. Are stakes of the decisions very high?

No

[Points: +0]

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

No

[Points: +0]

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

No

[Points: +0]

Project Authority

16. Will you require new policy authority for this project?

No

[Points: +0]

About the Algorithm

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

No

[Points: +0]

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

No

[Points: +0]

About the Decision

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

The system will automate the assessment of the eligibility of a subset of applications submitted for the IEC Working Holiday Program. The IEC WP model triages IEC WP applications by grouping files with similar characteristics based on the legislative, regulatory and contractual requirements for each subprogram and participating country. The model is designed to apply pre-defined triage criteria to triage and identify "light-touch" routine cases where the eligibility portion can receive an automated positive eligibility assessment. For applications where the positive eligibility assessment is automated by the model, the model determines only that an applicant is eligible: these applications will continue to be manually assessed for admissibility. The system cannot refuse nor recommend refusals.

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

Other (please specify)

[Points: +1]

21. Please describe

Immigration Services

Impact Assessment

22. 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]

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

The system will automate the assessment of the eligibility of some applications submitted for the IEC Working Holiday Program. The model is designed to apply pre-defined triage criteria to triage and identify "light-touch" routine cases where the eligibility portion can receive an automated positive eligibility assessment. Specifically, the model undertakes an assessment of the non-discretionary eligibility requirements as prescribed by immigration legislation and by the IEC participating country bilateral agreements. These program requirements for the IEC subprogram and participating countries are generally based on very specific criteria for which officer discretion is not required, such as age, country of citizenship, passport validity and country residence. Applications meeting the requirements will be triaged to a bin for positive eligibility assessments. Due to data access limitations in the model, processing staff will undertake manual verification of one criterion before the automated eligibility assessment. Following this manual verification, applications that meet the eligibility criteria will retain the positive eligibility assessment made by the model. Applications that no longer meet the criteria

for automated positive eligibility assessments will be sent for a full manual review of eligibility.

24. Will the system be making decisions or assessments that require judgement or discretion?
No [Points: +0]

25. 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 in line with industry best practices. Low quality data is not used. Rules used by the system are carefully vetted for relevance, reasonableness and potential bias. The entire system and its triage results will be vetted for GBA Plus considerations.

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

The output is an Excel spreadsheet that shows the triage result for each application, as well as some key information from the application that processing staff review when assessing an application to save the from having to search for this information in the Global Case Management System (GCMS). Decision-makers do not limit their review to the contents of the spreadsheet. They continue to review all other 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 influencing the final decision. Decision-makers are carefully trained on how to use the output and to never let it substitute for their individualized assessment of each application.

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

No [Points: +0]

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

Yes [Points: +4]

29. Are the impacts resulting from the decision reversible?

Reversible [Points: +1]

30. 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]

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

A negative decision on an IEC application may impact a client's immediate ability to work in Canada. However, the impact of a refusal is likely to be temporary as clients whose application is refused will be able to re-apply for the next IEC season if they meet the requirements, and/or if they apply for another work permit program, unless the reasons for the refusal bar them from submitting subsequent applications. IRCC approves many clients with prior refusals. The impact of most refusals is not perpetual. Additionally, the model makes NO recommendations regarding refusals.

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

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

The system assesses data elements in incoming applications in order to triage (sort) applications based on pre-existing business rules. The IEC WP model triages IEC WP applications by grouping files with similar characteristics based on the legislative, regulatory and contractual requirements for each subprogram and participating country. The model is designed to apply pre-defined triage criteria to triage and identify "light-touch" routine cases where the eligibility portion can receive an automated positive eligibility assessment. For the first launch (Summer 2023) automated positive eligibility assessments are based on pre-existing business rules only. Procedures for eligibility and admissibility review will remain unchanged for applications not triaged for automated positive eligibility assessment. The system is expected to have a low impact on the rights and freedoms of individuals, as it will solely be used to sort applications and to facilitate approvals.

To ensure fairness and transparency, the system's rules are based only on data elements with a clear link to legislative, regulatory and contractual requirements, and 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 where eligibility cannot be approved automatically by the system will receive a full assessment by officers in accordance with standard practice. For applications where the positive eligibility assessment is automated by the system, the system determines only that an applicant is eligible, before the application is sent to a decision maker to screen for admissibility and render the final decision.

Measures are also in place to mitigate against the potential risk that the triage function could influence officer decision-making. Advanced analytics (AA) was not used to generate the current model criteria. The criteria that inform the model are the same that currently exist and that decision makers would currently examine. The model is using technology to automate something that is currently done manually. For applications not triaged for automated positive eligibility assessments, the model makes no recommendation regarding whether these applications should be approved or refused: each application must be assessed individually. Bias/discrimination are significantly mitigated by the design and scope of the model. Additionally, an ongoing quality assurance process will be implemented to monitor whether officers make the same positive eligibility assessments as the system. This process ensures that biases have not been introduced by the system.

As a further safeguard, system rules go through 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 system performs as intended and that any unforeseen negative impacts such as bias or discrimination can be identified early and mitigated.

34. 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]

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

The system is expected to have a low impact on the equality, dignity, privacy, and autonomy of individuals, as it will solely be used to sort applications and to facilitate approvals.

To ensure fairness and transparency, the system's rules are based only on data elements with a clear link to legislative, regulatory and contractual requirements, and the system never refuses applications, nor does it recommend refusals. All refusals continue to be done by decision makers as per the current practice. All applications where eligibility cannot be approved automatically by the system will receive a full assessment by decision makers in accordance with standard practice. For applications where the positive eligibility assessment is automated by the system, the system determines only that an applicant is eligible, before the application is sent to a decision maker to screen for admissibility and render the final decision.

Measures are also in place to mitigate against the potential risk that the triage function could influence decision-making. Advanced analytics (AA) was not used to generate the current model criteria. The criteria that inform the model are the same that currently exist and that decision makers would currently examine. The model is using technology to automate something that is currently done manually. For applications that were not triaged for an automated positive eligibility assessment, the model makes no recommendation regarding whether these applications should be approved or refused: each application must be assessed individually. Bias/discrimination are significantly mitigated by the design and scope of the model. Additionally, an ongoing quality assurance process will be implemented to monitor whether officers make the same positive eligibility assessments as the system.

As a further safeguard, system rules go through 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 system performs 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 health and well-being 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.

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 and group applications.

38. The impacts that the decision will have on the economic interests 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 model is expected to have little to no negative impact on the economic interests of individuals as it will solely be used to triage and group applications. The system cannot refuse or recommend a refusal.

40. The impacts that the decision will have on the ongoing sustainability of an environmental ecosystem, 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 system is expected to have no negative impact on the environment as it will solely be used to triage and group applications.

About the Data - A. Data Source

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

43. 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]

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

45. 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]

46. Please list relevant PIB Bank Numbers.
PPU 054

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

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

49. Will the system use data from multiple different sources?
No [Points: +0]

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

51. Will the system interface with other IT systems?

Yes

[Points: +4]

52. Who collected the data used for training the system?

Your institution

[Points: +1]

53. Who collected the input data used by the system?

Your institution

[Points: +1]

54. 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's (CBSA) regarding persons who have come under examination at a port of entry or an investigation at an inland office. It 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

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

Yes

[Points: 0]

56. 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

Office of the Privacy Commissioner of Canada

Other (describe)

Client Experience / Client Relationship Management

3. Please describe

Other (Integrity Risk Management)

Other (Centralized Network)

Other (Immigration Program Guidance Branch)
Other (IT Security)

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

No [Points: +0]

De-Risking and Mitigation Measures - Data Quality

5. 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]

6. Is this information publicly available?

No [Points: +0]

7. Have you developed a process to document how data quality issues were resolved during the design process?

Yes [Points: +1]

8. Is this information publicly available?

No [Points: +0]

9. Have you undertaken a Gender Based Analysis Plus of the data?

Yes [Points: +1]

10. Is this information publicly available?

No [Points: +0]

11. Have you assigned accountability in your institution for the design, development, maintenance, and improvement of the system?

Yes [Points: +2]

12. 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]

13. Is this information publicly available?

No [Points: +0]

14. Is the data used for this system posted on the Open Government Portal?

No [Points: +0]

De-Risking and Mitigation Measures - Procedural Fairness

15. Does the audit trail identify the authority or delegated authority identified in legislation?

Yes [Points: +1]

16. Does the system provide an audit trail that records all the recommendations or decisions made by the system?

Yes [Points: +2]

17. Are all key decision points identifiable in the audit trail?
Yes [Points: +2]
18. Are all key decision points within the automated system's logic linked to the relevant legislation, policy or procedures?
Yes [Points: +1]
19. 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]
20. Does the system's audit trail indicate all of the decision points made by the system?
Yes [Points: +1]
21. 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]
22. Does the audit trail identify precisely which version of the system was used for each decision it supports?
Yes [Points: +2]
23. Does the audit trail show who an authorized decision-maker is?
Yes [Points: +1]
24. Is the system able to produce reasons for its decisions or recommendations when required?
Yes [Points: +2]
25. Is there a process in place to grant, monitor, and revoke access permission to the system?
Yes [Points: +1]
26. Is there a mechanism to capture feedback by users of the system?
Yes [Points: +1]
27. Is there a recourse process established for clients that wish to challenge the decision?
Yes [Points: +2]
28. Does the system enable human override of system decisions?
Yes [Points: +2]
29. Is there a process in place to log the instances when overrides were performed?
Yes [Points: +1]
30. Does the system's audit trail include change control processes to record modifications to the system's operation or performance?
Yes [Points: +2]
31. Have you prepared a concept case to the Government of Canada Enterprise Architecture Review Board?
No [Points: +0]

De-Risking and Mitigation Measures - Privacy

32. If your system uses or creates personal information, have you undertaken a Privacy Impact Assessment, or updated an existing one?

No

[Points: +0]

33. 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. The PNA concluded that no additional privacy work is required at this time. The privacy notice on the application forms is being updated to inform clients that this system would be used during the processing of their application. A web notice will be published on the day that the system was launched so that clients in the inventory could be aware of the use of the system in processing their application. Personal Information Banks will be up to date.

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

Yes

[Points: +1]

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

No

[Points: +0]

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

No

[Points: +0]

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

No

[Points: +0]