

# PEER REVIEW OF THE INTERNATIONAL EXPERIENCE CANADA WORK PERMIT ELIGIBILITY MODEL EXECUTIVE SUMMARY



## Background

Automated tools are part of Immigration, Refugees and Citizenship Canada (IRCC)'s commitment to using technology responsibly to build a stronger immigration system for all of our clients. Recently, IRCC developed a technical system that streamlines eligibility assessments for a subset of International Experience Canada Work Permit applications (herein referred to as the "IEC WP model"). As required by the Treasury Board Secretariat's (TBS) [Directive on Automated Decision-Making](#), a peer review of this model was conducted by the Data Science Team at Global Affairs Canada (GAC).

The goal of the peer review was to provide an informed assessment of whether the technology is being used responsibly by validating IRCC's [Algorithmic Impact Assessment](#), the quality of the system, the appropriateness of the quality assurance and risk mitigation measures, as well as to identify the residual risk of operating the system.

## The IEC WP Model

The International Experience Canada Work Permit (IEC WP) model triages 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.

By triaging applications based on their complexity and approving eligibility for routine applications, this tool will optimize processing of applications and support the overall growth of IEC.

The criteria that inform the model are the same that currently exist and that decision makers would currently examine. **Neither advanced analytics (AA) nor artificial intelligence (AI) was used to generate the current model criteria. IRCC officers make the final decision to approve or refuse on all applications.** Applications that have received an automated positive eligibility assessment will continue to be manually assessed for admissibility. Furthermore, procedures for eligibility and admissibility review will remain unchanged for applications not triaged for automated positive eligibility assessments.

## Peer Review by GAC

The review was carried out by referring to documents supplied by IRCC to GAC that describe the design and implementation of the IEC WP model, along with any assessments that were conducted to ensure that the model abides by all relevant government guidelines and regulations. For example, GAC's data science team reviewed *Algorithmic Impact Assessment* performed for the IEC WP model, along with a GBA Plus analysis and a proposed quality assurance plan for monitoring the model post-deployment. GAC's data science team also evaluated documents outlining the purpose of the IEC WP model, the business requirements it is meant to satisfy, and the algorithms governing its operation. These documents provided a detailed understanding of the data the IEC WP model takes as input, the logical rules the model applies to this data, and the resulting outputs the model produces. As such, the peer reviewers feel confident that their conclusions and recommendations are based on an accurate understanding of the IEC WP model and related assessments concerning its use.

The core findings of the peer review are that (a) the IEC WP model automatically applies filtering criteria used to "triage" or "bin" applications, (b) the model does *not* directly make decisions regarding the acceptance or rejection of individual applications, (c) the model's performance is highly accurate and interpretable, and (d) the model has been thoroughly vetted from a legal, regulatory, and ethical perspective. The authors of this peer review accordingly have no significant concerns regarding the deployment and use of the IEC WP model.

### **Key recommendations:**

The core recommendations of the peer review are twofold. First, IRCC should more clearly describe their quality assurance plan and their auditing efforts to monitor the IEC WP model post-deployment; in particular, the position or team responsible for auditing the model and responding to any concerns regarding its use should be clearly indicated. Second, IRCC should more clearly describe how officers will be trained or educated to ensure that their decisions regarding individual applications are not excessively influenced by IEC WP model's outputs (automation bias). There is a risk that applications given an automated positive eligibility assessment by the model are evaluated in a less strict manner during the admissibility assessment and final decision if officers know that the model has produced this positive assessment.

## IRCC Response

### **Key recommendation 1:**

In response to the recommendation regarding the need for further clarity about how the model will be monitored post-implementation, IRCC updated its Quality Assurance (QA) strategy to more clearly define the roles and responsibilities of QA reporting, data monitoring and analysis. As part of the IEC WP model's triage system, a random sample of applications will be selected for QA twice per week and undergo full manual assessment by processing staff. This is one of the steps IRCC is taking to safeguard against the possibility that officers could become overly reliant on the automated system.

IRCC's Advanced Analytics Solutions Centre (A2SC) will also produce weekly high-level QA statistics for reporting partners to ensure that applicants have equitable access to IEC. After three months, if the key performance metrics are meeting expectations, the frequency of this QA report may be reduced to a bi-weekly or monthly basis, if deemed appropriate.

Lastly, the QA strategy also includes targeted program integrity reviews in the event that the QA reporting identifies data irregularities that could be indicative of program abuse. The QA plan also identifies a responsible team (Integrity Risk Management Branch) for proposing risk mitigation measures to program owners and stakeholders.

### **Key recommendation 2:**

With respect to recommendation 2, in addition to updating the QA strategy described above, IRCC has detailed the two-fold approach to user training that is currently in place. First, IRCC's A2SC has developed a comprehensive user manual on the IEC WP model and disseminated it to processing staff. To mitigate the risk of automation bias, the user manual does not include the rules used by the model to triage applications. The QA strategy described above also includes a random sample QA exercise to mitigate the risk of automation bias on decision-makers.

Secondly, IRCC has delivered user training on the new tool. Initial training sessions were provided to a small number of IEC WP processing staff nominated to conduct User Acceptance Testing (UAT), allowing IEC processing staff to interact with the output of the model and perform QA, while identifying issues and areas for improvement. A2SC then provided a recorded virtual training session to the entire IEC WP processing team prior to the launch of the model on November 7, 2023, with additional sessions to be provided as required.

IRCC believes these measures will mitigate the risk identified by GAC, namely that applications given an automated positive eligibility assessment by the model could be evaluated in a less strict manner during the admissibility assessment and final decision if officers know that the model has produced this positive assessment. Furthermore, it will also mitigate the potential risk that applications not triaged for automated positive eligibility assessments could be refused at a higher rate following the implementation of the model.