



Concept case for digital projects

Proposed initiative:	CBSA Mobile Reporting Application
Department:	Canada Border Services Agency
Assistant Deputy Minister business owner:	Scott Harris
Date:	30 Mar 2021

Signature:

Immigration enforcement clients who do not depart Canada when required can present public safety and program integrity risks, as well as require significant CBSA resources to locate the client, and enforce the removal order.

Current state or context

The CBSA is responsible for monitoring approximately 125,000 people who are subject to immigration enforcement proceedings while in Canada, including those who have entered through a port of entry (POE), as well as individuals who have entered irregularly between POEs. Monitoring is necessary to ensure that those who are required to leave Canada ultimately do depart the country.

Approximately 10% (13,000) of clients are actively monitored, and individuals selected for monitoring meet specific criteria, including:

- how close they are to being “removal ready”;
- the risk of not appearing for removal, based on individual behaviours and risk factors.

Active monitoring includes regularly checking in with the CBSA by attending an office in person or calling an automated phone system that authenticates the client using voice biometrics, as well as recording the client’s GPS coordinates.

When a removal order comes into force, the client is effectively required to leave Canada. At that time, the CBSA will contact the client and they must appear at the time and place required to confirm their departure. In some situations, contacting the

client is a challenge as their contact information is outdated and an investigation must be opened to locate them. Once located, there is still the potential that the client may not appear for removal. Every year, about 2,000 clients who are required to depart Canada fail to appear resulting in the issuance of an arrest warrant. Consequently, the CBSA must spend considerable resources investigating, locating and in some cases detaining these clients.

Root cause

The lack of updated contact information, combined with the client's desire to remain in Canada, are two root causes behind immigration enforcement clients not leaving Canada when required.

There are two likely reasons for this non-compliance:

- the requirement was explained to the client months or years prior, upon their arrival to Canada, and the client may not recall their obligations;
- there is a deliberate attempt to evade the CBSA and to avoid removal.

The CBSA has determined that clients who fail to appear for removal primarily do so because they would prefer to remain in Canada, and they assess the likelihood of CBSA locating them as low.

Desired business outcome

The CBSA would like to encourage and enable compliance and by extension, reduce resource-intensive investigations to locate and remove clients, by improving capabilities to locate and inform clients throughout the process. More frequent and robust communication with clients, coupled with improved monitoring capabilities, will likely deter non-compliance with the obligations related to removal.

Through the analysis of the piloted voice reporting system (VRS) that was built as part of the National Immigration Detention Framework (NIDF), it was identified that a smartphone application that allows clients to use their mobile phone to report would be an ideal solution to address some of the current challenges.

The proposed smartphone application would allow:

- clients to use their biometrics to confirm their identity when reporting to the CBSA;
- client location to be recorded from their phone and sent to the CBSA at the time of reporting; and,
- the exchange of messages and documents between clients and the CBSA.

The reporting app is expected to improve removal outcomes in three main ways:

1. By enrolling clients in the app as soon as a removal order is issued, the CBSA has the opportunity to build and maintain a relationship with clients that will ensure they are fully aware of their obligations and have a process for getting timely answers to any questions about the status of their case. The average length of time between a removal order being issued and a person being removed is just over two years. Regular engagement with the CBSA will remind clients of their obligations to leave the country upon the removal order becoming enforceable.
2. Receiving regular updates from the client through the app on their residential address, employment, family status, among other things, will allow the CBSA to have relevant information that can be used to contact and monitor the client for any early indicators of non-compliance. Additionally, given the automation, it is more likely that the client will feel engaged and will recognize the level of visibility the CBSA has on their case.
3. If a client fails to appear for removal, the information gathered through the app will provide good investigative leads for locating the client.

Preliminary desired target metrics are:

1. A 10% increase in the number of clients who voluntarily comply with their removal order with minimal involvement from the CBSA.
2. A 25% decrease in the number of clients who fail to appear for removal and have a warrant issued.
3. A 50% decrease in the amount of time between the issuance of a warrant and the execution or cancellation of the warrant.

Future state

The end state goal for this project is to enroll in the app the majority of clients issued a removal order at the time the removal order is issued. Enrollment will be as close to 100% self-service as possible to minimize the resources required. If a client has their biographic and biometric information already in an IRCC or CBSA database, that information may be leveraged to enroll the client faster.

Once clients are enrolled, the app can be used to report and send messages to the CBSA. The existing Alternatives to Detention Monitoring Centre will monitor compliance with reporting conditions according to existing standard operating procedures (SOPs), respond to basic inquiries from clients and triage more complex questions.

CBSA staff will have access to a back-end portal that will allow them to review all the details related to a particular client and send the client messages and documents. The back-end portal will be accessible from officer's mobile phones.

The data collected will be stored in the CBSA case management system and will be available in the immigration enterprise data warehouse for analysis and reporting.

Additional functionality for the app has been identified as adding value to the concept. Some of the additional functionality includes:

1. Exchange messages and documents with the CBSA, including automatic translation of some messages.
2. Conduct voice and video chat sessions with the CBSA, with optional automatic translation of the voice component.
3. Schedule interviews with the client.

Next steps

The client mobile reporting app project will be executed in several phases. *(Timelines are notional and will be further refined upon approval of this concept case).*

Phase 1 – Feasibility and high level requirements

- Building on the on stakeholder consultation and ongoing engagement done as part of the development of the existing VRS pilot system, preliminary business requirements and design mockups have been created.

Phase 2 – Prototype and stakeholder engagement

- Starting in Spring 2021, a prototype will be developed that will be used for focused stakeholder engagement beginning in Fall 2021.

Phase 3 – Initial soft launch

- Beginning in Winter 2022, small groups of existing VRS clients will be enrolled to test the app and support iterative refinement.

Phase 4 – Full rollout begins

- Beginning in Spring 2022, full rollout will begin with a focus on existing voice reporting and in-person clients and then shifting to higher risk clients who are not reporting at all.

Phase 5 – All clients subject to removal orders enrolled

- Beginning in Spring 2023 all remaining clients subject to removal orders will be enrolled.

Algorithmic Impact Assessment Results

Version: 0.10.0

Project Details

1. Name of Respondent

Carl Desmarais

2. Job Title

Director General

3. Department

Canada Border Services Agency

4. Branch

Intelligence and Enforcement

5. Project Title

Client Reporting and Engagement System (CRES/ReportIn)

6. Project ID from IT Plan

PRJ-00005299

7. Departmental Program (from Department Results Framework)

Border Enforcement / Detentions

8. Project Phase

Implementation

[Points: 0]

9. Please provide a project description:

The Canada Border Services Agency (CBSA) is responsible for monitoring and enforcing conditions imposed on individuals in Canada who may be inadmissible, under the Immigration and Refugee Protection Act (IRPA) and the Immigration and Refugee Protection Regulations.

The National Immigration Detention Framework (NIDF) was approved by Parliament to create a better, fairer immigration detention system that supports the humane and dignified treatment of individuals while protecting public safety. The NIDF framework was announced in 2016 with an investment of \$138 million over 5 years. The framework continues to lay the foundation for ongoing improvement and options for Alternatives to Detention (ATD). When detention must take place, the Agency uses improved risk assessment processes, developed through the framework, to ensure that detainees are placed in the most appropriate facility at the time of detention. The placement decision is reviewed every 60 days.

A key pillar to the framework is the ATD program, which was implemented to meet the requirement within the Immigration and Refugee Protection Act (IRPA), which states, individuals are only detained when grounds for detention exist, and after all Alternatives to Detention have been considered. Several factors must be considered when deciding to detain, including the availability and potential use of Alternatives to Detention; allowing a person to be

released under specific terms and conditions, such as deposits and guarantees and, reporting requirements. The ATD program was implemented to provide a consistent risk-based, nationally available program for individuals deemed suitable for release from detention. CBSA staff have access to an expanded set of tools and programs that will enable them to more effectively manage individual needs while ensuring public safety and program integrity in addition to release on reporting conditions (cash deposit or the establishment of a bondsperson).

Depending on the type of ATD that is selected for each individual, conditions must be met consistently to remain compliant and for the individual to not face punitive actions. For example, individuals that are required to report to the CBSA as per IRPA, do so in person, as well as meeting other requirements that are monitored and enforced by CBSA. In-person reporting typically occurs during business hours at a CBSA Inland Enforcement Offices which may be inconvenient for individuals and resource-intensive for the CBSA.

To alleviate pressure on the individual related to in-person reporting, remote reporting via the Voice Reporting System (VRS) was piloted, with the primary intent to assess the implementation of a voice biometric reporting solution, and with the view to explore other potential options in the future. With VRS technology being phased out due to failing technology, the client facing mobile device/smartphone reporting app ReportIn, with the CBSA facing backend system, Client Reporting and Engagement System (CRES), have been developed. ReportIn is a public-facing mobile device/smartphone app where individuals subject to reporting conditions are able to remote report to CBSA by collecting facial biometrics as a form of authenticating the individual's identity.

When an individual reports using ReportIn, the data input during reporting is sent to CRES for data storage.

All submissions will undergo 100% human oversight. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

All individuals currently reporting using the VRS will be provided with an option to be transfer to the ReportIn app prior to VRS being decommissioned in March 2024. In the event that an individual does not agree to transfer, they will be assessed for eligibility on other available ATDs including in-person reporting to a CBSA office.

The experience gained from developing and operating the VRS pilot has led to the conclusion that a smartphone app that fulfills the same general functions as the VRS is better service to address the gaps in the pilot VRS.

- Enrollment requires significant CBSA resources, limiting the rate individuals can be on-boarded.
- Accuracy of voice biometrics has high variability which results in a lack of trust in the results and requires significant manual review.
- Location services provided by the contractor do not work with various mobile phone companies used by CBSA reporting individuals. Additionally, the accuracy of the location provided is often not sufficient to provide CBSA with the maximum value location information.

These shortcomings will be overcome with the use of a smartphone or mobile device app and 3rd party technology to better service CBSA and individuals subject to immigration enforcement.

Reporting conditions are imposed by the CBSA, Immigration, Refugees and Citizenship Canada (IRCC) or the Immigration and Refugee Board (IRB) on a case-by-case basis under Sections 44, 56 and 58 of the Immigration & Refugee Protection Act (IRPA). A common condition imposed is the requirement to report on a regular reporting schedule to the CBSA. The CBSA ReportIn app will allow individuals subject to reporting conditions to report to the CBSA without physically attending a CBSA office, allows CBSA to maintain contact with the individual during the time the individual is subject to reporting conditions and for the individual to effectively and accurately report to CBSA.

CBSA CRES/ReportIn solution consists of:

- A public-facing smartphone app, ReportIn, where individuals submit reports using a mobile device/smartphone and facial images as a form of authenticating the individuals' identity. The individuals' facial biometrics and location, provided by sensors and/or the GPS in the mobile device/smartphone, are recorded when they report through the ReportIn app and is sent to the cloud-based processing and monitoring system, CRES.
- A Cloud-based processing and monitoring backend system, CRES, allows CBSA immigration enforcement personnel to monitor, contact and assess an individual's reporting facial images, locations, reporting frequency, and compliance history without individuals having to physically attend a CBSA office.

The new remote reporting system provides two significant improvements over the current voice reporting solution. Facial comparison is used as a biometric identifier in place of voice, which has shown improvement in the accuracy of the individual's verification. Using the mobile app, the individual submits photos that are then compared to a reference photo and a similarity score is generated by a facial comparison algorithm. In addition to the automated similarity scoring, trained officers will review, for every report made by an individual, the submitted photos and a determination will be made whether the submitted photos are a match to the individual.

The individuals' location is also collected every time they report and if the individual fails to comply with their conditions.

Another enhancement with the introduction of the ReportIn solution is the implementation of the one-way CBSA direct messaging with individuals, which will make communication with the individual using the ReportIn application easier.

Other than facial biometric data, the supplemental types of personal information collected by ReportIn includes given and family name, Unique Client Identifier (UCI), personal email address, phone number, employment information (if applicable), facial photos, ad hoc report text, location, device ID, device model, device operating system version, error message, and trace information (where error happened).

As previously stated, an individuals' location will be collected and recorded when the

following events occur:

- When an individual submits their report on their scheduled reporting date, the location, sent by sensors and/or the GPS in the mobile device/ smartphone, is recorded when an individual reports through the ReportIn app and is sent to the cloud-based processing and monitoring system CRES. EnStream will also be used and connect only to the CRES backend system. The EnStream service operates externally from and is not connected to the ReportIn app therefore the EnStream location services is not in scope of this AIA.

The operational benefits of the project are:

- Improved management of the inventory of individuals the CBSA must monitor up until they are removed from Canada or their immigration status is regulated.
- Cost savings in response to fluctuating volumes of individuals who need to report to the CBSA.

The benefits to the individuals are:

- Improved communication, transparency and allowing more individuals an alternative to in-person reporting and improving the engagement with the CBSA.
- Facilitating a secure process for individuals to enroll and report to the CBSA.
- Improving support to individuals with accessibility needs where they do not need to attend a CBSA office and providing a more accessible means to report e.g. less time off work, reduced child care cost, reduced transportation cost and/or travel time etc.

During enrollment the CBSA staff verifies the individual during an in-person or virtual meeting.

All submissions will undergo 100% human oversight. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

There are three levels of review. If a facial comparison match is not confirmed, the Alternatives to Detention (ATD) Officer may contact the individual within a day or two for a follow up investigation. If the ATD Officer is still unable to confirm a facial comparison match, they will refer the case to the ATD Supervisor. If the ATD Supervisor has additional questions or they are unable to confirm a facial comparison match, they will refer the case to the Regional Inland Enforcement office for investigation by an Inland Enforcement Officer. If the follow up investigation results in the officer determining that the individual has not complied with their conditions, the individual could be detained as per the Immigration and Refugee Protection Act and Regulations

(IRPA/IRPR).

The benefits to the individual and CBSA includes process optimization and workflow automation.

Workflow automation allows CBSA to utilize resources in other capacities due to the remote reporting option by not requiring individuals to attend the CBSA office.

About The System

10. Please check which of the following capabilities apply to your system.

Image and object recognition: Analyzing very large data sets to automate the recognition, classification, and context associated with an image or object.

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: 63

Raw Impact Score: 63

Mitigation Score: 31

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

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 client needs the system will address are:

- Remote reporting instead of in-person reporting, will save the individual time and money by not having to travel or arrange transportation to attend a CBSA office in person to report
- Allow individuals who do not have access to a data plan, the use of Wi-Fi; although a data plan may also be used. The ability to use Wi-Fi does not restrict the individual's eligibility to use remote reporting.
- Improved accuracy as the VRS has ongoing failure rates, frequent outages and is being decommissioned.
- Increased compliance from individuals as remote reporting is easier to access than in-person reporting which will increase the compliance rates.
- Provide eligible individuals with a secure and convenient means of reporting.
- This system will also address the cost and time savings for those individuals that are currently reporting in-person to a CBSA office to be able to remote report if deemed eligible with potential savings on transportation costs, childcare costs, time away from employment cost and time in general costs.

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

The public benefits the Client Reporting and Engagement System (CRES)/ ReportIn system is expected to have:

- Improvements and modernization of interactions the Canada Border Services Agency (CBSA) has with individuals by replacing the current VRS with a modernized remote reporting smartphone or mobile device app alleviating the significant VRS downtime and outages which will provide equipment, staffing and infrastructure cost savings benefits to the public.
- Improve the CBSA monitoring of individuals on reporting conditions which will decrease the number of immigration warrants required for removing individuals from Canada and benefiting the public by meeting our public safety mandate.
- The CBSA will reuse information technology micro-service sub-systems across government services and departments rather than procuring new systems and technology which will provide cost savings benefits to the public.
- Improve the reporting access individuals will have to the CBSA by providing a remote reporting option. This will decrease the number of in-person reporting individuals which will reduce the time CBSA staff meet with individuals providing a significant public cost benefit.

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

Very effective

[Points: +0]

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 improvements, benefits and advantages the Canada Border Services Agency (CBSA) expect from using the Client Reporting and Engagement System (CRES)/ReportIn are:

- Enhance compliance by individuals with an easy to use app using facial biometrics comparison for identification purposes which is more accurate and reliable than the current Voice Reporting Service (VRS) which is experiencing significant downtime and outages.
- Reduce detention costs by providing a remote reporting automated Alternative to Detention (ATD)
- Enhance (CBSA) relations with individuals by facilitating a secure process for individuals to enroll and report without coming in person to a CBSA office.
- Allow CBSA to more effectively monitor individuals who report remotely with the automated system due to when report photos are submitted, the location of the individual is also submitted.
- Receive regular updates from the individual through the app on their residential address, employment, among other things, will allow the CBSA to have relevant information that can be used to contact and monitor the individual for any early indicators of non-compliance.
- Allow for, when appropriate, an accessible alternative to in-person reporting requirements, and include an enhanced verification and monitoring system.
- Build and maintain relationships with CBSA and individuals will ensure individuals are fully aware of their obligations and have a process for getting timely answers to any questions about the status of their case.
- Provide CBSA the ability to track trends and patterns of individuals (e.g. individuals that may attempt to hide or falsify their identity by submitting photos obscuring their face or providing photos of another individual, attempt to hide or falsify their location, etc.)
- Reduce non-compliance of individuals with the ongoing outages and downtime of the VRS by replacing VRS with ReportIn which will be more reliable and available to be used by more individuals (the VRS was only able to be used by individuals with one of 7 cell phone service providers) that will allow anyone with a smartphone or mobile device with access to Wi-Fi or cellular data to use the app.

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

The Canada Border Services Agency (CBSA) will ensure the system is confined to address individual needs by:

- The Client Reporting and Engagement System (CRES)/ReportIn will be rolled out as a tool that enables officers to more effectively release individuals into the community as a means to support the Alternatives to Detention (ATD) mandate. It will provide a safe and secure remote reporting option to submit 5 facial view photos and their point-in-time location information while ensuring that individuals are not constantly tracked.
- Individuals required to report to the Canada Border Services Agency (CBSA) will be assessed for eligibility for ReportIn by an officer. The assessment will include, but is not limited to, the individual having a smartphone or mobile device and be willing to comply with the reporting conditions. Positive eligibility will provide enhanced accessibility to remote reporting and will provide the individual financial cost savings (e.g. not having to in person report, take time off work, find childcare and/or reduce

transportation costs).

- CBSA has developed step-by-step instructions, including screenshots, for the ReportIn app and how to: download the app; create an account in the app; report and submit photos in the app; and get assistance with the app.
- The ReportIn app is available in 16 languages, including English and French, in order to allow individuals to have greater accessibility using the app and increase compliance with reporting conditions with the app.
- CBSA's ReportIn Privacy Impact Assessment and Privacy Policy provides individual's appropriate safeguards for their facial biometrics information which will not be used for any other purpose (including by the supplier) than stated.
- CBSA's contract with Amazon Web Service includes a nondisclosure agreement providing additional safeguards for individuals' information using remote reporting through ReportIn. AWS will not access, use or disclose personal information except as needed to provide services under contract and/or to provide notifications of personal data breaches.
- Using ReportIn, an app that works with Wi-Fi, will save individuals money by not requiring a data plan for connectivity and will allow a greater number of individuals to have access to an alternative to detention and an alternative to reporting in person to a CBSA office; although a data plan may also be used.
- CBSA staff will receive training on the use of the one-way messaging feature used to contact individuals. The training will provide staff instructions that all contact with individuals is to be in compliance with the Public Service Values and Ethics and CBSA Code of Conduct.

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

- Client Reporting Engagement System (CRES)/ReportIn is more accessible to a wide range of individuals rather than the current Voice Reporting System (VRS), which only supports 7 cell phone providers in Canada, providing a trade-off between voice biometrics and facial biometrics. The greater reliability of facial biometrics and allowing individuals to remote report is a balanced trade-off for the current voice biometrics option and the much higher cost to the individual of reporting in person to a CBSA office. ReportIn provides a more safe and secure means of reporting.
- Individuals are more likely to comply when there is an automated system available for remote reporting compared to in-person reporting where CBSA are more likely to see an increase in individual non-compliance due to several factors e.g. transportation costs, loss of employment time, child care issues and costs, etc.
- The app will collect facial biometrics instead of voice biometrics, and a more accurate location, which may be perceived as an impact on the privacy of individuals on reporting conditions, this collection was weighed against the objectives of the Alternatives to Detention program and the requirements of the Immigration and Refugee Protection Act/Regulations.

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?

Yes non-automated processes have been considered, specifically individual in-person reporting. In-person reporting has been reported by individuals to be a hardship for them based on employment needs, childcare needs, cost of

transportation, time for transportation (e.g. individuals residing in northern Saskatchewan or Manitoba may have to travel 6 to 8 hours by vehicle to attend a CBSA office in person). The remote reporting app will allow for more individuals to access an Alternatives to Detention (ATD) in a timely fashion.

In-person reporting is still an option for those individuals that are determined to not be eligible by Canada Border Services Agency (CBSA) for remote reporting, for those individuals that do not or cannot remote report and for those individuals that do not choose or do not agree to use remote reporting as an option.

Individuals are more likely to comply when there is an automated system available for remote reporting compared to in-person reporting, based on direct complaints from individuals, where CBSA are more likely to see an increase in individual non-compliance due to several factors e.g. transportation costs, loss of employment time, child care issues and costs, etc.

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

- Other (please specify) [Points: 0]
- Service cannot be delivered in a timely or efficient manner [Points: +2]
- Service costs are too high [Points: 0]
- Service cannot be delivered at all [Points: +3]
- Service quality is not as high [Points: 0]

11. Please describe

The other consequence of not deploying the Client Reporting and Engagement System (CRES)/ReportIn may lead to more individuals having to report in person or being detained or remaining in detention if an appropriate Alternatives to Detention (ATD) system is not implemented.

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?

Yes [Points: +3]

14. Are stakes of the decisions very high?

No [Points: +0]

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
Yes

[Points: +3]

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

[Points: +3]

About the Decision

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

The decision that will be automated is the facial comparison portion of the process.**

The process begins with CBSA staff determining eligibility of an individual for remote reporting. When an individual is eligible, CBSA staff provide an explanation of ReportIn to the client and obtains the client consent for remote reporting. Once consent is received, CBSA staff obtain the current client information of telephone number and email address.

During the enrollment process, the CBSA staff verifies the individual during an in-person or virtual meeting. The individual is given the option to download the ReportIn app onto their smartphone or mobile device. Once the app is downloaded the individual is instructed to create their account using their first name, last name, email address and telephone number. For authentication purposes, the individual is asked to input their Unique Client Identifier (UCI) as well as a Multi-Factor Authentication (MFA) code sent to their email address. After successfully creating their account in ReportIn, the individual is instructed to review their contact information pushed from CRES to ReportIn. If the information is correct, the client clicks yes and continues to the next step.

The individual is instructed to take 5 photo views of their face in a randomized order (looking up, looking down, looking left, looking right and looking straight ahead). The photos taken at this step are the individual's enrollment photos. CBSA staff choose this photo, looking straight ahead, as the reference photo and avatar photo for the individual in CRES. This reference photo can be changed in time due to facial changes such as, but not limited to, plastic surgery, accident, etc.

Once the 5 photo views are taken for enrollment the individual is instructed to complete their first report. The following steps are completed: log into ReportIn with their email address and password, verify their personal information and submit their 5 photo views to report.

All submissions will undergo 100% human oversight. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

The CBSA officer makes the decision on whether or not the report photo is a 'match' or 'no match'. The 'match' or 'no match' decision is based on the officer's determination of the photo match and, when a specified location to report from has been imposed, the individual's location when they reported. There are three levels of review. All cases and reports will be assigned to an Alternatives to Detention (ATD) Officer for review. If an individual fails a facial comparison match or location match and the ATD officer is not able to make a final decision that there is a match, the ATD officer will contact the individual within a day or two a follow up investigation. If the ATD Officer still has questions they will refer it to the ATD Supervisor, if the ATD Supervisor has additional questions they will refer it to the Regional Inland Enforcement office for investigation by an Inland Enforcement Officer. If the follow up investigation results in the officer deciding that the individual has not complied with their conditions, the individual could be detained as per the Immigration and Refugee Protection Act and Regulations (IRPA/IRPR).

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

22. Please describe

The Client Reporting and Engagement System (CRES)/ReportIn app is an Alternatives to Detention (ATD) system that may allow individuals, subject to reporting conditions under the Immigration and Refugee Protection Act (IRPA) or Regulations (IRPR), to report remotely rather than 1.) to be detained in a facility or 2.) as an option to be released from detention.

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 decision that will be automated is the facial comparison portion of the process.**

The process begins with CBSA staff determining eligibility of an individual for remote reporting. When an individual is eligible, CBSA staff provide an explanation of ReportIn to the client and obtains the client consent for remote reporting. Once consent is received, CBSA staff obtain the current client information of telephone number and email address.

During the enrollment process, the CBSA staff verifies the individual during an in-person or virtual meeting. The individual is advised to download the ReportIn app onto their smartphone or mobile device. Once the app is downloaded, the individual is instructed to create their account using their first name, last name, email address and telephone number. For authentication purposes, the individual is asked to input their Unique Client Identifier (UCI) as well as a Multi-Factor Authentication (MFA) code sent to their email address. After successfully creating their account in ReportIn, the individual is instructed to review their contact information pushed from CRES to ReportIn. If the information is correct, the client clicks yes and continues to the next step.

The individual is instructed to take 5 facial photo views in a randomized order (looking up, looking down, looking left, looking right and looking straight ahead). The facial photos taken at this step are the individual's enrollment photos. CBSA staff choose this facial photo, looking straight ahead, as the reference facial photo and avatar photo for the individual in CRES. This reference photo can be changed in time due to facial changes such as, but not limited to, plastic surgery, accident, etc.

Once the 5 photo views are taken for enrollment, the individual is instructed to complete their first report. The following steps are completed: log into ReportIn with their email address and password, verify their personal information and submit their 5 facial photo views to report.

All submissions will undergo 100% human oversight. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

The CBSA officer makes the decision on whether or not the report photo is a 'match' or 'no match'. The 'match' or 'no match' decision is based on the officer's determination of the photo match and, when a specified location to report from has been imposed, the individual's location when they reported.

There are three levels of review. All cases and reports will be assigned to an Alternatives to Detention (ATD) Officer for review. If an individual fails a facial comparison match or location match and the ATD officer is not able to make a final decision that there is a match, the ATD officer will contact the individual within a day or two a follow up investigation. If the ATD Officer still has questions they will refer it to the ATD Supervisor, if the ATD Supervisor has additional questions they will refer it to the Regional Inland Enforcement office for investigation by an Inland Enforcement Officer. If the follow up investigation results in the officer deciding that the individual has not complied with their conditions, the individual could be detained as per the Immigration and Refugee Protection Act and Regulations (IRPA/IRPR).

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.

After the individual downloads the ReportIn app and creates their account in ReportIn, at the enrollment stage, with the Canada Border Services Agency (CBSA) staff present, 5 facial photos views of an individual's face are taken through the ReportIn app of the individual at various angles in randomized order and then uploaded to CRES.

Looking straight ahead

Looking up

Looking down

Left side of the face

Right side of the face

As per set reporting conditions, at each report the individual will provide 5 new

photos. These photos will be requested in a random order each time in the ReportIn app.

Looking straight ahead

Looking up

Looking down

Left side of the face

Right side of the face

Once the 5 photo views are taken for enrollment, the individual is instructed to complete their first report. The following steps are completed: log into ReportIn with their email address and password, verify their personal information and submit their 5 photo views to report.

The CBSA officer makes the decision on whether or not the report photo is a 'match' or 'no match'. The 'match' or 'no match' decision is based on the officer's determination of the photo match and, when a specified location to report from has been imposed, the individual's location when they reported.

All CBSA staff using CRES are required to take the CBSA Facial Comparison Course prior to access being granted access to CRES as part of their job duties.

To further mitigate the risk of false results, all submissions will have 100% human oversight. CBSA staff will review the individual's reference photo and the current report photo against 1

The CBSA officer makes the decision on whether or not the

report photo is a 'match' or 'no match'. The 'match' or 'no match' decision is based on the officer's determination of the photo match and, when a specified location to report from has been imposed, the individual's location when they reported.

There are three levels of review. All cases and reports will be assigned to an Alternatives to Detention (ATD) Officer for review. If an individual fails a facial comparison match or location match and the ATD officer is not able to make a final decision that there is a match, the ATD officer will contact the individual within a day or two a follow up investigation. If the ATD Officer still has questions they will refer it to the ATD Supervisor, if the ATD Supervisor has additional questions they will refer it to the Regional Inland Enforcement office for investigation by an Inland Enforcement Officer. If the follow up investigation results in the officer deciding that the individual has not complied with their conditions, the individual could be detained as per the Immigration and Refugee Protection Act and Regulations (IRPA/IRPR).

The backend system CRES will store the images including the enrollment photo, reference photo and report photos.

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

The CBSA officer makes the decision on whether or not the report photo is a 'match' or 'no match'. The 'match' or 'no match' decision is based on the officer's determination of the photo match.

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

No

[Points: +0]

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

Yes

[Points: +4]

30. Are the impacts resulting from the decision reversible?

Reversible

[Points: +1]

31. 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]

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

The impacts are reversible based on the three levels of review. If an individual fails the facial photo comparison, their file is assigned to an officer for review. The officer of the Alternatives to Detention Monitoring Center (ATDMC) reviews the file, if they suspect the facial comparison is not a match, the file is then reviewed by the ATDMC supervisor. If they are also in agreement, the file is transferred to the Regional Inland Enforcement office for investigation. During the investigation process, the individual will be provided an opportunity to provide information/evidence in person in regards to the investigation. Example: individual had facial surgery, etc. Depending on the conclusion of the investigation, the individual may be transferred to other alternative to detention options. Example: if an individual is awaiting an admissibility hearing, hearings timelines can be between approximately 2 to 12 months or if an individual is awaiting a Refugee Protection Division decision, this process can take approximately 2 years or longer. An individual awaiting removal, may be removed anytime between 2 months or longer, depending if they have a travel document or not, how long it will take to get them a travel document etc., if they have to be escorted or non-escorted, the country they are being removed to or if they have a stay from the Federal Court of Canada.

All submissions will undergo 100% human oversight, and officer results versus software results will be analyzed to assess potential accuracy, bias and other performance issues. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation. The officer will be making the final decision, not the system.

The CBSA officer makes the final decision on whether or not the report photo is a 'match' or 'no match'.

33. The impacts that the decision will have on the rights or freedoms of individuals will likely be:

Little to no impact

[Points: +1]

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

To further mitigate the risk of false results, all submissions will have 100% human oversight, and a comparison of officer results versus software results will be conducted to assess and address potential accuracy, bias and other performance issues associated with the technology. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation. Additionally, CBSA Communications has been consulted to develop comprehensive and informative materials, which will be posted publicly, that address potential concerns surrounding the use of the technology and other performance issues.

The CBSA officer makes the final decision on whether or not the report photo is a 'match' or 'no match'.

35. 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]

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

It is also important to note that this software is facial comparison based off of a photo provided by CBSA. All individuals enrolled in ReportIn are voluntarily enrolled and provide consent to the use of their likeness to verify their identity. The app uses technology akin to the facial unlocking mechanism found in smartphones.

To further mitigate the risk of false results, all submissions will have 100% human oversight, and a comparison of officer results versus software results will be conducted to assess and address potential accuracy, bias and other performance issues associated with the technology. Additionally, CBSA Communications has been consulted to develop comprehensive and informative materials that address potential concerns surrounding the use of the technology and other performance issues. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

There are three levels of review. If an individual fails a facial comparison match, the Alternatives to Detention (ATD) Officer will contact the individual within a day or two for a follow up investigation. If the ATD Officer still has questions they will refer it to the ATD Supervisor, if the ATD Supervisor has additional questions they will refer it to the Regional Inland Enforcement office for investigation by an Inland Enforcement Officer.

The CBSA officer makes the final decision on whether or not the report photo is a 'match' or 'no match'.

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

Little to no impact

[Points: +1]

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

If an individual fails the facial photo comparison, their file is assigned to an officer for review. Once the officer of the ATDMC reviews the file, and they suspect the facial comparison is not a match, the file is then reviewed by the ATDMC supervisor. If they are also in agreement, the file is transferred to the Regional Inland Enforcement office for investigation. During the investigation process, the individual will be provided an opportunity to provide information/evidence in person in regards to the investigation. Example: individual had facial surgery, etc. Depending on the conclusion of the investigation, the individual may be transferred to other alternative to detention options.

To further mitigate the risk of false results, all submissions will have 100% human oversight, and a comparison of officer results versus software results will be conducted to assess and address potential accuracy, bias and other performance issues associated. Additionally, CBSA Communications has been consulted to develop comprehensive and informative materials that address potential concerns surrounding the use of the technology and other performance issues. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

The individual is unaware of the decision unless or until they are contacted by the Regional Inland Enforcement office during their investigation therefore the likelihood of the individual's health being at risk is low.

The CBSA officer makes the final decision on whether or not the report photo is a 'match' or 'no match'.

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

Little to no impact

[Points: +1]

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

If an individual fails the facial photo comparison, their file is assigned to an officer for review. Once the officer of the ATDMC reviews the file, and they suspect the facial comparison is not a match, the file is then reviewed by the ATDMC supervisor. If they are also in agreement, the file is transferred to the Regional Inland Enforcement office for investigation. During the investigation process, the individual will be provided an opportunity to provide information/evidence in person in regards to the investigation. Example: individual had facial surgery, etc. Depending on the conclusion of the investigation, the individual may be transferred to other alternative to detention options.

To further mitigate the risk of false results, all submissions will have 100% human oversight, and a comparison of officer results versus software results will be conducted to assess and address potential accuracy, bias and other performance issues associated. Additionally, CBSA Communications has been consulted to develop comprehensive and informative materials that address potential concerns surrounding the use of the technology and other performance issues. This approach ensures that human judgment and discretion are applied to the results, promoting accountability and accuracy in the system's operation.

The individual is unaware of the decision unless or until they are contacted by the Regional Inland Enforcement office during their investigation therefore the likelihood of the individual's economic interests being at risk is low. The investigation may be dealt with at a lower level by the ATDMC officer or supervisor or by desk investigation which would have a lower financial impact on the individual. The officer will try to facilitate any interviews around the individuals schedule and pose minimal financial impact to the individual thus improving supports to individuals with accessibility needs where they do not need to attend a CBSA office by reducing: child care cost, reduced transportation cost and/or travel time etc.

The CBSA officer makes the final decision on whether or not the report photo is a 'match' or 'no match'. If one of the photo views fails the biometric match by

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

Little to no impact

[Points: +1]

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

There will be positive impacts to an environmental ecosystem due to less travel and transportation effects. CBSA currently has approximately 8,000 individuals on in-person reporting, the ability to put the individuals on remote reporting will reduce reporting in person to a CBSA office therefore reducing their carbon footprint.

About the Data - A. Data Source

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

Yes

[Points: +4]

44. 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]

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

Yes

[Points: +2]

46. 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]

47. Please list relevant PIB Bank Numbers.

CBSA PPU1801

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

Protected B / Protected C [Points: +3]

49. Who controls the data?

Federal government [Points: +1]

50. Will the system use data from multiple different sources?

No [Points: +0]

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

Yes [Points: +4]

52. Will the system interface with other IT systems?

Yes [Points: +4]

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

A foreign government or non-government third party [Points: +4]

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

Your institution [Points: +1]

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

Input data collected and used:

Source: Direct input by Individual

Method: via ReportIn app

- First name and family name
- Unique Client Identifier (UCI)
- Personal email address
- Phone number
- Employment information (if applicable)
 - o Job title
 - o Company name
 - o Supervisor name
 - o Email address
 - o Phone number
 - o Address
 - o Start date
 - o End date
- Date of report
- Ad hoc report text
- Facial photos views (5)

At the enrollment stage, the individual provides 5 photos taken in randomized order:

- o Looking straight ahead
- o Looking up
- o Looking down
- o Left side of the face
- o Right side of the face

At each report the individual provides 5 photos taken in randomize order:

- o Looking straight ahead
- o Looking up
- o Looking down
- o Left side of the face
- o Right side of the face

Source: Smartphone/mobile device

Method: via ReportIn app

- Smartphone/mobile device GPS/sensor location of report
- Smartphone/mobile device ID
- Smartphone/mobile device model
- Smartphone/mobile device operating system version
- Error message and trace information
(if applicable, where error happened)

Source: AWS Rekognition

Method: Network application program interface

- Amazon Rekognition similarity score

Storage of information: Client Reporting and Engagement System (CRES) on CBSA cloud servers in accordance with CBSA PPU1801.

CBSA has a contract with AWS that outlines all privacy parameters including storage.

About the Data - B. Type of Data

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

Yes

[Points: 0]

57. What types of unstructured data? (Check all that apply)

Images and videos

[Points: +4]

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?

Access to Information and Privacy Office

Legal Services

Program Policy

Communications services

Office of the Privacy Commissioner of Canada

Accessibility Working Groups
2SLGBTQI+ Secretariat
Digital Policy
Data Governance
TBS Office of the Chief Information Officer

3. External Stakeholders (groups in other sectors or jurisdictions)
Yes [Points: +1]

4. Which External Stakeholders have you engaged?
Clients or their Representatives
International Organizations
Civil Society
Governments in other Jurisdictions

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?
No [Points: +0]

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?
No [Points: +0]

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?
No [Points: +0]

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?

No

[Points: +0]

31. Have you prepared a concept case to the Government of Canada Enterprise Architecture Review Board?

Yes

[Points: +1]

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?

Yes

[Points: +1]

33. Please indicate the following in your answer: Title and scope of the Privacy Impact Assessment; How the automation project fits into the program; and Date of Privacy Impact Assessment completion or modification.

Canada Border Services Agency (CBSA)

Remote Reporting Program

Client Reporting and Engagement System (CRES)/ReportIn Privacy Impact Assessment (PIA) is in the approvals process.

The scope of this PIA is to provide an overview of the CRES/ReportIn solution that has been established for the ATD Program, and assess the privacy risks associated with the introduction of the CRES/ReportIn solution that will replace the pilot offering of the Voice Reporting System (VRS).

Specifically, the scope of this PIA will include the following:

- An overview of the upcoming use of the CRES/ReportIn solution
- Facial comparison is used as a biometric identifier in place of voice, which has shown improvement in the accuracy of the individual's verification.

This description includes the following:

- The systems used to support the CRES/ReportIn solution;
- CRES/ReportIn events and subsequent activities related to evaluation and assignment of an investigation event in the National Case Management System;
- The storage, retention and accessibility of CRES/ReportIn data.

This PIA has been authored to address a change from the VRS to the CRES/ReportIn solution within the existing Alternatives to Detention (ATD) Program.

In support of efforts to expand and improve ATDs, the CBSA has developed a smartphone application called ReportIn that allows individuals subject to immigration enforcement conditions to report to the CBSA remotely. Only those individuals expressly required to report to the CBSA as a condition of their release and choose ReportIn as the means of reporting will have access to create an account.

The current solution, VRS, will be decommissioned as of March 2024 due to its frequent outages, its ongoing failure rates and the inability to extend the

current contract. Without an approved alternative, existing VRS users would need to transition to in-person reporting to a CBSA office.

The CRES/ReportIn solution was developed to address the shortcomings of the VRS while providing a remote reporting option. In comparison to the VRS system, CRES/ReportIn will provide a more effective ATD option through improved reporting and enhanced GPS technology. When enrolled in ReportIn, individuals will have the ability to meet CBSA's reporting condition, with increased accuracy over the current VRS. There will also be a reduced need for in-person reporting or detention in situations where no appropriate ATD exists. The CBSA also has an opportunity to build a more nationally consistent ATD that will be secure and more widely available.

The CBSA will be launching CRES/ReportIn in Winter 2024 on a phased-in basis to provide enough time for the orderly transition of individuals before the contract for the current VRS solution expires.

The CRES/ReportIn solution is made up by the following major components:
Smartphone Application: Prior to initializing the sign up process, the individual must download the CBSA ReportIn mobile application from either the Apple App store or the Google Play store, based upon the individuals' device they are using. In order to protect the individuals' Personal Identifiable Information (PII), a Secure Remote Password (SRP) is used between the individuals' device and the CRES Amazon Web Services (AWS) environment. AWS Cognito is used as an authentication provider that supports OAuth 2.0, Security Assertion Markup Language (SAML) and SRP. The mobile application utilizes AWS Amplify to interface with AWS Cognito using SRP. Through the Cognito SRP protocol, the mobile application is utilized to implement user sign-up, user sign-in, multi factor authentication and forgot password functionality, minimizing snooping or "Man in the Middle" attack risks.

CRES Web App & Database: The main processing and storage hub for the ReportIn solution is the CRES database, used to store ReportIn individual authentication data, and the web application. The web application is used by the CBSA staff to review and manage the active cases of individuals, as well as providing ongoing as well as historical reporting capabilities. The CRES console is the main interface used by CBSA staff and provides the staff the ability to manage multiple individuals and cases in a centralized location.

Facial comparison software: To validate the individual's biometric facial data, the application requires the individual to provide multiple biometric facial photos that are used to identify the individual for the duration of their ATD enrollment.

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?

Yes

[Points: +1]

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

No

[Points: +0]