Text changes to the Algorithmic Impact Assessment tool

Fall 2024

Section 1: Project details

1.1 Name of respondent

1.2 Job title

1.3 Name of ADM responsible for the program using the automated decision system

1.4 Department (Choose...)

1.5 Branch

1.6 Project title

1.7 Project ID from IT plan

1.8 Service ID

1.9 Departmental program (from Departmental Results Framework)

1.10   Project phase (required)

      1.10.1 Design

      1.10.2 Implementation

1.11 Please provide a project description:

Section 2: Reasons for automation

2.1 What is motivating your team to introduce automation into this decision-making process? (Check all that apply)

      2.1.1   Existing backlog of work or cases

      2.1.2   Improve overall quality of decisions

      2.1.3   Lower transaction costs of an existing program

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

      2.1.5   Use innovative approaches

      2.1.6   Other (please specify)

2.2 What are the client needs will thethe system will address and how will this system meet them? If possible, dDescribe how client needs have been identified.

2.3 Please describe any positive impacts on clients and Canadian society public benefits that the system is expected to have.

2.4 How effective will the system likely be in meeting client needs? (Choose...)

      2.3.12.4.1   Please describe

2.42.5   Please describe any improvements, benefits, or advantages your department expects from using an automated system. This could include relevant program indicators, service standards and performance targets.

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

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

2.72.8   Have alternative non-automated processes been considered?

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

2.82.9   What would be the consequence of not deploying the system?

    2.8.12.9.1   Service cannot be delivered at all

    2.8.22.9.2   Service cannot be delivered in a timely or efficient manner

    2.8.32.9.3   Service costs are too high

    2.8.42.9.4   Service quality is not as high

    2.8.52.9.5   Service delivery cannot achieve performance targets

    2.8.62.9.6   Other (please specify)

        Please describe

Section 3: Risk profile

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

3.2 Does the line of business serve vulnerable populations? ~~Are clients in this line of business particularly vulnerable?~~

3.3 Describe your mitigation strategies to prevent creating or exacerbating barriers for vulnerable populations.

3.23.4   Are stakes of the decisions very high?

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

3.5 Has the system been assessed to understand whether it would create or exacerbate barriers for persons with disabilities?

3.43.6   If yes, wWill the use of the system create or exacerbate barriers for persons with disabilities?

        3.6.1   If yes, please describe the barriers and any planned or existing measures to identify, remove, and/or prevent them.

3.7 Could the automated decision-system be an exploitation target for malicious actors (e.g., fraud for financial gain)?

3.8 Will any of the following client groups be subject to use of the system?

        3.8.1   Indigenous Peoples

        3.8.2   Racialized people

        3.8.3   Persons with disabilities

        3.8.4   Women

        3.8.5   2SLGBTQI+ people

        3.8.6   Youth

        3.8.7   Seniors

3.9 Have potential issues or harms with the existing service delivery approach been raised by clients or their representatives, the media, audits or parliamentary committees?

3.10   Does the approach constitute a use of an automated decision-system that would pose undue risks to clients or client groups as identified in Appendix X of the Directive on Service and Digital? Check all that apply.

3.11   Will you be submitting a concept case to TBS and presenting the project to the Government of Canada Enterprise Architecture Review Board? / Have you submitted a concept case to TBS and presented the project to the Government of Canada Enterprise Architecture Review Board?

Section 4: Project authority

4.1 Will you require new policy or legal authority for this project?
4.1.1   Indicate why you have chosen the response above.

Section 5: About the system

5.1 Please check which of the following capabilities apply to your system.
    5.1.1   Image and object recognition: Analyzing ~~very~~ large data sets to automate the recognition, classification, and context associated with an image or object.
    5.1.2   Text and speech analysis: Analyzing large data sets to recognize, process, and ~~tag~~ categorize text, speech, voice, and make recommendations based on the ~~tagging~~categorization
    5.1.3   Risk assessment: Analyzing ~~very~~ large data sets to identify patterns and recommend courses of action and in some cases trigger specific actions
    5.1.4   Content generation: Analyzing large data sets to categorize, process, triage, personalize, and serve specific content for specific contexts
    5.1.5   Process optimization and workflow automation: Analyzing large data sets to identify an~~d~~y anomalies, cluster patterns, predict outcomes or ways to optimize; and automate specific workflows
    5.1.6   Other (please specify)

          Please describe

5.2 Does your system comply with standard CAN/ASC EN 301 549:2024, Accessibility requirements for Information and Communication Technology (ICT) products and services?
      5.2.1   If no, describe why the system does not comply.
5.3 Is a non-automated alternative planned and available in the event the automated decision system was unavailable for an extended period of time?
5.4 Will there be / Is there a process in place to grant, monitor, and revoke access permission to the system?
5.5 The impacts that the development, operation, and maintenance of the system could have on the ongoing sustainability of an environmental ecosystem, may be:
      5.5.1   Little to no impact
      5.5.2   Moderate impact
      5.5.3   High impact
      5.5.4   Very high impact
5.6 Please describe why the impacts resulting from the system's development, operations and maintenance are as per selected option above.

Section 6: About the algorithm

6.1 Will your algorithm have any of the following characteristics:
    6.1.1   The algorithm used will be a (trade) secret.

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

6.2 Who developed the system?

    6.2.1   Your institution

    6.2.2   Another federal institution

    6.2.3   Another government

    6.2.4   A non-government third party

6.3 Please indicate the name of the developer and solution.

6.4 Is the solution a:

    6.4.1   Open-source solution

    6.4.2   Custom built solution

    6.4.3   Commercial off the shelf (COTS) solution

        6.4.3.1 (for open source and COTS solutions) Has the product been customized to add functionality beyond what is available off the shelf?

            6.4.3.1.1   (If yes) Please specify what has been customized and who performed the customization.

6.5 Who configured the system?

    6.5.1   Your institution

    6.5.2   Another federal institution

        6.5.2.1 Please specify

    6.5.3   Another government

        6.5.3.1 Please specify

    6.5.4   A non-government third-party

        6.5.4.1 Please specify

6.6 Is the algorithm (Check all that apply):

    6.6.1   Based on rules developed based on human expertise (e.g., if/then statements)

    6.6.2   Based on patterns in data identified by the AI model (e.g., neural network, deep learning)

6.7 Is the model inference (select all that apply):

    6.7.1   Deterministic (follow precise rules and generate single outcome)

    6.7.2   Probabilistic (infer several models to explain data)

    See OECD Framework for the Classification of AI systems) for more information.

6.8 Is the model:

    6.8.1   Discriminative (e.g., regression analyses, decision trees)

    6.8.2   Generative (e.g., linear discriminant analysis, naïve Bayes)

6.9 Describe the model being used.

6.10   Will the algorithm continue to learn and evolve as it is used?

    6.10.1   Yes

6.10.2   No

6.11   Does the algorithm consider protected characteristics to make its decisions or recommendations?

6.11.1   Yes

6.11.2   No

6.12   Have you evaluated whether variables on which the system bases its decisions or recommendations could be proxies for protected characteristics?

6.12.1   Yes

6.12.2   No

Section 7: About the decision

7.1 Please describe the administrative decision(s) that is being supported or made by the algorithm. will be automated.

7.2 Does the decision pertain to any of the categories below (check all that apply)

7.2.1   Health related services (environmental and workplace health, product and food safety, drug regulation)

7.2.2   Economic interests (grants and contributions, tax benefits, debt collection)

7.2.3   Social assistance (employment insurance, disability benefits)

7.2.4   Access and mobility (security clearances, border management, immigrationcrossings)

7.2.5   Licensing and issuance of permits (possession and acquisition license, export permits, commercial fishing license)

7.2.6   Employment (recruitment, hiring, promotion, performance evaluation, monitoring, security clearance)

7.2.67.2.7   Public safety and law enforcement (investigating criminal acts)

7.2.77.2.8   Other (please specify)

Please describe

Section 8: Impact assessment

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

8.1.1   Full automation (the system will make an administrative decision)

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

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

8.3 Will the system be making decisions or assessments that require judgement or discretion?

8.2.18.3.1   Please describe

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

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

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

8.58.7   Will the system perform an assessment or other operation that would not otherwiseis not currently be completed by a human?

~~8.5.1~~8.7.1 If yes, please describe the relevant function(s) of the system

~~8.6~~8.8 Is the system used by a different part of the organization than the ones who developed it?

~~8.7~~8.9 Are the impacts resulting from the decision reversible?

~~8.8~~8.10 How long ~~will~~ could impacts from the decision last?

 ~~8.8.1~~8.10.1 Please describe why the impacts resulting from the decision are as per selected option above.

~~8.9~~8.11 The impacts that the decision ~~will~~ could have on the rights or freedoms of individuals ~~will likely~~ may be:

 ~~8.9.1~~8.11.1 Please describe why the impacts resulting from the decision are as per selected option above.

~~8.10~~8.12 The impacts that the decision ~~will~~ could have on the equality, dignity, privacy, and autonomy of individuals ~~will likely~~may be:

 ~~8.10.1~~8.12.1 Please describe why the impacts resulting from the decision are as per selected option above.

~~8.11~~8.13 The impacts that the decision ~~will~~ could have on the health and well-being of individuals ~~will likely~~may be:

 ~~8.11.1~~8.13.1 Please describe why the impacts resulting from the decision are as per selected option above.

~~8.12~~8.14 The impacts that the decision ~~will~~ could have on the economic interests of individuals ~~will likely~~may be:

 ~~8.12.1~~8.14.1 Please describe why the impacts resulting from the decision are as per selected option above.

8.15 The impacts that the decision ~~will~~ could have on the ongoing sustainability of an environmental ecosystem, ~~will likely~~may be:

 ~~8.12.2~~8.15.1 Please describe why the impacts resulting from the decision are as per selected option above.

8.16 Have you assessed / will you assess system performance for clients with a range of personal identity factors (for example, gender, age, race, disability, sexual orientation)?

 8.16.1 (If yes to 8.16) Were differences in system performance identified?

  8.16.1.1 (If yes to 8.16.1) Describe the difference in system performance and any mitigation measures that have been taken.

  8.16.1.2 (If yes to 8.16.1) Have the downstream impacts of the performance differences been considered and addressed?

 8.16.2 (If no in 8.16) Describe why system performance has not been /will not be assessed for clients with a range of personal identity factors.

8.17 Have you tested system performance across a diverse spectrum of disability?

8.18 Of the impacts described above, are there clients or groups of clients that will be most impacted by use of the system?

 8.18.1 Yes

  8.18.1.1 Please describe

 8.18.2 No

  8.18.2.1 Please describe

8.19 What proportion of clients will be subject to use of the tool?

 8.19.1 0 to 25%

8.19.2   26 to 50%

8.19.3   51 to 75%

8.19.4   76 to 99%

8.19.5   100%

8.20   (If 8.19.1 to 8.19.4 are chosen in 8.19) Will not being subject to the use of the tool have a negative impact on an individual or groups of individuals?

8.20.1   Yes/No

8.20.1.1 (If yes) Please describe

8.21   The impact of individuals being wrongfully included or overlooked by the system will be:

8.21.1   Little to no impact

8.21.2   Moderate impact

8.21.3   High impact

8.21.4   Very high impact

8.22   Does the system's effectiveness in meeting client needs exceed the potential impacts identified above?

Section 9: About the data

9.A Data source

9.1 Will the ~~Automated Decision S~~system use personal information as input data?

9.1.1   Have you verified that the ~~use~~ collection of personal information is limited to only what is directly related to ~~delivering~~ a program or ~~service~~activity of your institution?

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

9.1.3   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?

9.1.4   Please list relevant PIB Bank Numbers.

9.1.5   Will the personal information be shared (check all that apply)

9.1.5.1 Within your department

9.1.5.2 With another federal department

9.1.5.3 With a government from another jurisdiction

9.1.5.4 With a third party (private sector/NGO)

~~9.1.3.1~~9.1.5.5   Other (please specify)

9.2 Is the training and testing data for the system representative of the clients being served?

9.2.1   Yes

9.2.1.1 Describe how you have assessed that data was representative

9.2.2   No

9.2.2.1 Explain why the data is not representative

9.2.3   Unsure

9.2.3.1 Explain why you are unsure whether data is representative

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

     9.2.19.3.1_____None

     9.2.29.3.2_____Protected A

     9.3.3   Protected B

     9.3.4   Protected C

     9.2.39.3.5_____Confidential

     9.2.49.3.6_____Secret

     9.2.59.3.7_____Top Secret

9.39.4   Who controls the data?

     9.3.1   Open Source Data

     9.3.29.4.1_____Federal Government

     9.3.39.4.2_____Other Canadian Government (prov/municipal)

     9.3.49.4.3_____Private sector / NGO / Academia

9.49.5   Will the system use data from multiple different sources?

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

9.69.7   Will the system interface with other IT systems?

9.79.8   Who collected the data used for training the system?

     9.7.19.8.1_____Your institution

     9.7.29.8.2_____Another federal institution

     9.7.39.8.3_____Another level of government

     9.7.49.8.4_____A foreign government or non-government third party

9.89.9   Who collected the input data used by the system?

     9.8.19.9.1_____Your institution

     9.8.29.9.2_____Another federal institution

     9.8.39.9.3_____Another level of government

     9.8.49.9.4_____A foreign government or non-government third party

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

9.B Type of data

9.109.11_____Will the system require the analysis of unstructured data to render make an assessment, recommendation or a decision?

     9.10.19.11.1_____What types of unstructured data? (Check all that apply)

          9.10.1.19.11.1.1_____Audio and text files

          9.11.1.2_____Images and videos

9.12   Has there been a decision to exclude certain data?

     9.12.1   Yes

          9.12.1.1   If yes, describe why data has been excluded

     9.12.2   No

9.119.13_____

Section 10: Consultations

10.1 Will you be engaging with any of the following groups? / Have you engaged with any of the following groups?

      10.1.1   Internal stakeholders (federal institutions, including the federal public service).

      10.1.2   Which Internal stakeholders will you be engaging?

            10.1.2.1   Strategic policy and planning

            10.1.2.2   Data governance

            10.1.2.3   Program policy

            10.1.2.4   Legal services

            10.1.2.5   Access to information and privacy office

            10.1.2.6   Communications services

            10.1.2.7   Client experience / client relationship management

            10.1.2.8   Digital policy

            10.1.2.9   Human resources

            10.1.2.10   TBS Office of the Chief Human Resources Officer

            10.1.2.11   TBS Office of the Chief Information Officer

            10.1.2.12   Office of the Privacy Commissioner of Canada

            10.1.2.13   Networks for equity-seeking employees

            10.1.2.14   Accessibility working groups

            10.1.2.15   2SLGBTQI+ Secretariat

            10.1.2.16   Other (describe)

      10.1.3   External stakeholders (groups in other sectors or jurisdictions).

      10.1.4   Which external stakeholders will you be engaging?

            10.1.4.1   ~~Civil society~~

            10.1.4.1   General public

            10.1.4.2   Academia

            10.1.4.3   Industry

            10.1.4.4   Bargaining agents

            10.1.4.5   Governments in other jurisdictions

            10.1.4.6   International organizations

            10.1.4.7   Clients or their representatives

            10.1.4.8   Indigenous groups

            10.1.4.9   Non-governmental organizations

            ~~10.1.4.8~~10.1.4.10   Professional associations

            10.1.4.11   Other (describe)

10.2 Identify the stakeholders and indicate the project lifecycle stage (i.e., Concept, Design, Data collection and processing, Building or adapting the model, Testing, Deployment, Production, Monitoring, Decommission) in which engagement took place.

10.3 Have stakeholders raised any significant concerns about the system in the following areas:

      10.3.1   Fairness of outputs

      10.3.2   Transparency of the system

      10.3.3   Barriers to access

10.3.4   Surveillance

10.3.5   Protection of personal information

10.3.6   Other

10.3.7   (If boxes are selected above) Describe how the identified concerns have been assessed and managed.

Section 11: De-risking and mitigation measures – data quality

Data quality

11.1 Will you / 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.

11.1.1   Will ~~you be making this information~~the documented process be publicly available? / Is th~~e~~ documented process~~is information~~ publicly available?

11.1.2   Summarize the process or provide a link if publicly available.

11.2 Will you be developing / Have you developed a process to document how data quality issues were resolved during the design process?

11.2.1   Will you be making the ~~information~~ process publicly available? / Is the ~~information~~ process publicly available?

11.2.2   Summarize the process or provide a link if publicly available~~information is published~~.

11.3 Will / Have you undertaken a Gender-based Analysis Plus of the data?

11.3.1   Will you be making ~~this information~~the GBA Plus findings publicly available? / Are the GBA Plus findings ~~Is this information~~ publicly available?

11.3.2   ~~Provide a link to the GBA plus or a S~~summariz~~e~~y ~~of~~ the findings or provide a link if publicly available.

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

11.5 Is there a group in your organization responsible for identifying and implementing opportunities for improvement?

~~11.4~~11.6   If a third party or other team in your organization is implementing the system, is an agreement in place for ongoing maintenance?

~~11.5~~11.7   Will / Do you have a documented process to manage the risk that outdated or unreliable data is used to make an automated decision?

11.7.1   Will you be making th~~e process~~is information publicly available? / Is th~~e~~is process~~information~~ publicly available?

~~11.5.1~~11.7.2   ~~Please~~ S~~s~~ummarize the process or provide a link if publicly available.

11.8 Will / Is the training or third-party data used for this system be ~~posted~~ published on the Open Government Portal or otherwise available publicly?

~~11.5.2~~11.8.1   Provide a link to the data if publicly available.

Section 12: De-risking and mitigation measures – procedural fairness

Procedural fairness

12.1 Will / Does the audit trail provide information to trace the chain of legislative identify the authority or delegated authority identified in legislationfor the decision and key decision points?

      12.1.1 Will all key decision points within the automated system's logic be linked to the relevant legislation, policy or procedure? / Are all key decision points within the automated system's logic linked to the relevant legislation, policy or procedures?

12.2 Will / Does the system provide an audit trail capturethat records all the recommendations or decisions made by the system?

12.3 Will all key decision points be identifiable in the audit trail? / Are all key decision points identifiable in the audit trail?

      12.2.112.3.1 Will there be / Is there a process in place to log the instances when overrides were performed?

12.3 Will all key decision points within the automated system's logic be linked to the relevant legislation, policy or procedure? / Are all key decision points within the automated system's logic linked to the relevant legislation, policy or procedures?

12.4 Will there be / Is there you maintain an up-to-date log detailing all of the changes made to the model and the system? / Do you maintain a current and up to date log detailing all of the changes made to the model and the system?

12.5 Will the audit trail clearly set out all decision points made by the system? / Does the system's audit trail indicate all of the decision points made by the system?

12.612.5 Could / CanWill/ Does the audit trail generated by the system capture information that can be used to help generate an explanation notification of the decision (including a statement of reasons or other notification) where required?

12.6 Will / Is the system able to produce reasons for its decisions or recommendations when required?

12.7 Will / Does the audit trail identify precisely which version of the system was used for each decision it supports?

12.8 Will / Does the audit trail show who the authorized decision-maker is?

12.9 Will there be / Is there a process in place to grant, monitor, and revoke access permission to the system?

12.1012.9 Will there be / Is there a mechanism to capture feedback by users of the system?

12.1112.10 Will there be a recourse process planned or established for clients that wish to challenge the decision? / Is there a recourse process established for clients that wish to challenge the decision?

12.12 Will / Does the system enable human override of system decisions?

12.1312.11 Will the audit trail include change control processes to record modifications to the system's operation or performance? / Does the system's audit trail include change control processes to record modifications to the system's operation or performance?

12.14 Will you be preparing a concept case to the Government of Canada Enterprise Architecture Review Board? / Have you prepared a concept case to the Government of Canada Enterprise Architecture Review Board?

12.12   Does the system base its decision or recommendation on all of the information provided by the client?

12.13   Will you undertake / Have you undertaken bias mitigations in algorithm development and model testing?

> 12.13.1 Please describe

12.14   Does the system only consider input data and information relevant to the decision?

12.15   Are the system rules directly relevant to the administrative decision?

12.16   Indicate additional procedural fairness protections in place (check all that apply):

> 12.16.1 Clear time frame or service standards for timeliness
>
> 12.16.2 Clients are provided with adequate information about the decision-making process and have the opportunity to meaningfully participate
>
> 12.16.3 Clients are provided with all documents and information in which the administrative decision was based
>
> 12.16.4 Mechanism for assessing and responding to client feedback
>
> 12.16.5 Other (describe)

12.17   Are there processes in place to ensure impartiality and ethical conduct by the decision-maker in the use of the system and its outputs?

12.18   Will your team be regularly retraining the model or reviewing the rules?

Section 13: De-risking and mitigation measures – privacy

Privacy

13.1 If your system uses or creates personal information, will you undertake ~~or have you undertaken~~ a Privacy Impact Assessment, or update~~d~~ an existing one prior to system launch? / If your system uses or creates personal information, have you undertaken a Privacy Impact Assessment, or updated an existing one?

> 13.1.1   (If yes is selected) 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.
>
> 13.1.2   (If no is selected) Have you undertaken other types of privacy assessments for your automation project? Please describe any relevant efforts.

13.2 Will you design and build / Have you designed and built security and privacy into your systems from the concept stage of the project?

> ~~13.1.3~~13.2.1   Please describe

~~13.2~~13.3   Will information be / Is the information used within a closed system (i.e. no connections to the Internet, Intranet or any other system)?

~~13.3~~13.4   If the sharing of personal information is involved, has an agreement or arrangement with appropriate safeguards been established?

~~13.4~~13.5   Will you de-identify any personal information used or created by the system at any point in the lifecycle?

> ~~13.4.1~~13.5.1   Please describe your de-identification method(s).