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Algorithmic Impact Assessment

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Algorithmic Impact Assessment Results

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i Impact Level 2

Current Score 44

Raw Impact Score 44

Mitigation Score 32

Requirements Specific to Impact Level: 2

Peer Review

At least one of: 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 related

specialization Publishing specifications of the Automated Decision System in a peer - reviewed journal A data and automation advisory board specified by Treasury Board Secretariat

Notice

Plain language notice posted on the program or service website.

Human-in-the-loop for decisions

Decisions may be rendered without direct human involvement.

Explanation Requirement

In addition to any applicable legislative requirement, ensuring that a meaningful explanation is provided upon request for any decision that resulted in the denial of a benefit, a service, or other regulatory action.

Testing

Before going into production, develop the appropriate processes to ensure that training data is tested for unintended data biases and other factors that may unfairly impact the outcomes. Ensure that data being used by the Automated Decision System is routinely tested to ensure that it is still relevant, accurate, and up-to-date.

Monitoring

Monitor the outcomes of Automated Decision Systems on an ongoing basis to safeguard against unintentional outcomes and to ensure compliance with institutional and program legislation, as well as this Directive.

Training

Documentation on the design and functionality of the system.

Contingency Planning

None

Approval for the system to operate

None

[Link to the Directive on Automated Decision-Making Impact Level Requirements](#)

Mitigation Measures

The following internal stakeholders will be consulted:

The following external stakeholders will be consulted:

Documented processes will be in place to test datasets against biases and other unexpected outcomes.

This information will be made publicly available.

Documentation showing how data quality issues have been resolved during the design process will be developed.

This information will be made publicly available.

Accountability for the design, development, maintenance and improvement of the system will be assigned.

Documented processes will be in place to manage the risk that outdated or unreliable data will be used by the system.

This information will be made publicly available.

The audit trail will identify the authority or delegated authority identified in legislation.

The system will provide an audit trail that records all of the recommendations or decisions made by the system.

Key decision points will be identifiable in the audit trail.

A log will be kept detailing all of the changes made to the model and to the system.

An audit trail that clearly sets out all of the decision points made by the system will be developed.

The audit trail will identify which version of the system was used for each decision it supports.

The audit trail could be used to generate a notification or statement of reasons for each decision it supports.

The audit trail will show who the authorized decision maker is.

The system will be able to produce reasons for its decisions or recommendations when required.

The system will enable human override of system decisions.

The audit trail will include change control processes to record modifications to the system's operation or performance.

A Privacy Impact Assessment will be undertaken, or existing PIA will be revised.

The system will reflect Privacy by Design principles

Questions and Answers

Project Details

Name of Respondent

Matt Ross

Job Title

Manager, Analytics and Divisional Support

Department

Employment and Social Development (Department of)

Branch

ITS

Project Title

HIFIS AI

Project ID from IT Plan

N/A

Departmental Program (from Department Results Framework)

N/A

Project Phase

Design

Points: 0**Please provide a project description:**

Utilizing HIFIS Database to predict ClientID level probability of chronic homelessness

Impact Questions and Answers

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

Yes

Points: +3

Are clients in this line of business particularly vulnerable?

Yes

Points: +3

Are stakes of the decisions very high?

Yes

Points: +4

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

No

Points: +0

Will you require new policy authority for this project?

No

Points: +0

The algorithm used will be a (trade) secret

No

Points: +0

The algorithmic process will be difficult to interpret or to explain

No

Points: +0

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

- Social assistance (ei

Will the system only be used to assist a decision-maker?

Yes

Points: +1

Will the system be replacing a decision that would otherwise be made by a human?

No

Points: +0

Will the system be replacing human decisions that require judgement or discretion?

No

Points: +0

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

Yes

Points: +4

Are the impacts resulting from the decision reversible?

Irreversible

Points: +4

How long will impacts from the decision last?

Impacts can last years

Points: +3

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

Risk assesment from algorithm used to triage and prioritize housing to decrease chronic homelessness.

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

Little to no impact

Points: +1

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

Resource prioritization only, not effecting rights and freedoms of individuals.

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

High impact

Points: +3

Please describe why the impacts resulting from the decision are (as per selected option above)

Housing on the homeless population can have a high impact on the well-being of individuals.

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

High impact

Points: +3

Please describe why the impacts resulting from the decision are (as per selected option above)

Housing on the homeless population can have a high impact on the economic interests of individuals.

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

Little to no impact

Points: +1

Please describe why the impacts resulting from the decision are (as per selected option above)

Not impacted by algorithmic decision.

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

Yes

Points: +4

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

Protected A

Points: +1

Who controls the data?

Federal government

Points: +1

Will the system data use from multiple different sources?

No

Points: +0

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

No

Points: +0

Will the system interface with other IT systems?

Yes

Points: +4

Who collected the data used for training the system?

Your institution

Points: +1

Who collected the input data used by the system?

Another federal institution

Points: +2

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

No

Points: 0

Mitigation Questions and Answers

Internal Stakeholders (Strategic policy and planning, Data Governance, Program Policy, etc.)

Yes

Points: +1

External Stakeholders (Civil Society, Academia, Industry, etc.)

Yes

Points: +1

Will 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

Will you be making this information publicly available?

Yes

Points: +1

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

Yes

Points: +1

Will you be making this information publicly available?

Yes

Points: +1

Will you undertake a Gender Based Analysis Plus of the data?

No

Points: +0

Will you be making this information publicly available?

No

Points: +0

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

Yes

Points: +2

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

Yes

Points: +2

Will you be making this information publicly available?

Yes

Points: +1

Will the data used for this system be posted on the Open Government Portal?

No

Points: +0

Will the audit trail identify the authority or delegated authority identified in legislation?

Yes

Points: +1

Will the system provide an audit trail that records all the recommendations or decisions made by the system?

Yes

Points: +2

Will all the key decision points identifiable in audit trail?

Yes

Points: +2

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

No

Points: +0

Will you maintain a log detailing all of the changes made to the model and the system?

Yes

Points: +2

Will the audit trail clearly set out all decision points made by the system?

Yes

Points: +1

Could the audit trail generated by the system be used to help generate a notification of the decision (including a statement of reasons or other notification) where required?

Yes

Points: +1

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

Yes

Points: +2

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

Yes

Points: +1

Will the system be able to produce reasons for its decisions or recommendations when required?

Yes

Points: +2

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

No

Points: +0

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

No

Points: +0

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

No

Points: +0

Will the system enable human override of system decisions?

Yes

Points: +2

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

No

Points: +0

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

Yes

Points: +2

Will you prepared a concept case to the Government of Canada Enterprise Architecture Review Board?

No

Points: +0

Will you need to undertake a Privacy Impact Assessment, or revise an existing one?

Yes

Points: +1

Will your system reflect Privacy by Design principles?

Yes

Points: +1

