Algorithmic Impact Assessment Results

Version: 0.10.0

Project Details

1. Name of Respondent
Sabrina Nandkissore, Dan Cooper

2. Job Title
Strategic Analyst, Director of the Client Centered Change Team

3. Department
Treasury Board Secretariat

4. Branch
Human Resources Division

5. Project Title
Using artificial intelligence (AI) to automate candidate evaluations in the staffing process's assessment phase

6. Project Phase
Implementation [Points: 0]

7. Please provide a project description:
Selection procedures are used to improve hiring decisions and enhance the fairness and objectiveness of the hiring process. Interviews are one of the most popular selection procedures used in the hiring process and are understood to be the most predictive of job performance when they are conducted with a high degree of structure when compared to other commonly used selection procedures. Interviews can be used to assess a range of candidate characteristics, including behavioural attributes. In the current process within the Treasury Board Secretariat (TBS), interviews for candidates applying to work are conducted in-person using a structured approach. However, the time and cost associated with conducting in-person interviews makes it difficult to interview all candidates within a reasonable amount of time and at a reasonable cost. In addition, rater bias is a concern when deploying a structured interview regardless of efforts to mitigate rater bias through rater training. These concerns have led to the exploration of solutions that can reduce the time and cost associated with conducting interviews, resolve potential issues with rater bias, and maintain a high degree of structure and rigor in the interview process. Knockri can measure behavioural attributes related to employee performance within the TBS through a structured behavioural interview that is administered and scored automatically.

As part of the proposed pilot project, Knockri will be used to measure behavioural attributes of job candidates. This assessment is not intended to replace the need for in-person interviews at a later stage in the recruitment process or additional job relevant candidate inputs generally used as part of a hiring decision.

The goal of the proposed pilot project is to reduce the time and cost associated with conducting interviews, resolve potential issues with rater bias, and maintain a high degree of structure and rigor in the interview process. Providing all candidates with equal opportunity for employment within the Canadian government.

Knockri's solution for talent acquisition and recruitment efforts emphasizes three key benefits. First, automation expedites the recruitment process, reducing the typical wait time from application to the assessment of behavioural attributes from months to days. For example, the behavioural assessment of 400 candidates done via in-person interviews would take more than 400 hours to complete. In many cases this would result in extremely long recruitment process times or the pre-selection of a subset of candidates for assessment, which would mean that not every candidate is given an equal opportunity to be assessed. With automation, all candidates can be given an opportunity to be assessed and the assessment process is completed much quicker. This can enhance the candidate experience and improve sourcing for external talent in a competitive job market.

The second benefit is the elimination of human errors, inconsistencies, and biases because human evaluators are removed from the assessment job relevant behavioural attributes. Finally, the platform offers a highly structured approach to scheduling assessments, administering assessments, and evaluating candidates.

The first step of the proposed pilot project involves the identification of behavioural attributes that will be measured by the interview, the development of behavioural rubrics (i.e., list of relevant attribute behaviours), and the creation of behaviourally based interview questions for each attribute being measured by the interview. This work will be completed by a Ph.D. in Industrial-Organizational Psychology that has extensive experience in the development and validation of psychometric assessments for selection and will be done in collaboration with the TBS HR team.

The next step of the proposed pilot project will involve the administration of the Knockri assessment. The TBS proposes to pilot Knockri to assess pools of AS-01/AS-02 and EX-01 candidates. The entire candidate pool will be invited to take the assessment. Candidates will receive a link to the Knockri assessment and will be able to complete the assessment at a time that is convenient for them, so long as it is before the assessment deadline set by the TBS. In addition, the candidates will be able to take the assessment in the official language of their choice (i.e., English or French). The Knockri platform has also been tested for accessibility in both official languages.

After the assessment of candidates is complete, results will be used as one of several inputs to inform decision-making in the hiring process. For the proposed pilot project, TBS intends to review all candidates regardless of their assessment results. Before hiring managers use the system to support their decision-making, Knockri will host a training session that covers the proper interpretation of scores and how they can be used effectively in the overall decision-making process.

As part of the proposed pilot project, the HR team will engage in research, where technically feasible, to evaluate the performance of the Knockri system.

Performance testing will encompass an assessment of the accuracy of interview scores in comparison to human evaluation, as well as an examination of differences in assessment scores across diverse demographic groups. Further analysis will be carried out to quantify the time and resources saved through the utilization of behavioural attribute assessment automation.

Candidates that are included in the proposed pilot project are not obligated to undergo the Knockri assessment and have the option to request accommodations or opt for an alternative assessment method. The alternative assessment will involve an in-person assessment of behavioural attributes that follows the same administration and scoring procedure used for the automated assessment. In addition to the option to request accommodations or an alternative selection procedure, candidates retain the right to challenge or appeal assessment results if they wish. After completing an assessment, candidates may also inquire about their score. This choice will be clearly communicated to candidates before they opt for the automated assessment.

The proposed pilot project is not designed to change the roles or responsibilities of the existing HR staff. The purpose of the proposed pilot is to examine the viability of implementing this system to achieve the stated goals.

About The System

8. Please check which of the following capabilities apply to your system.
Text and speech analysis: Analyzing large data sets to recognize, process, and tag text, speech, voice, and make recommendations based on the tagging

Section 1: Impact Level : 1

Current Score: 28

Raw Impact Score: 33

Mitigation Score: 37

Section 2: Requirements Specific to Impact Level 1

Peer review

None

Gender-based Analysis Plus

None

Notice

None

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 published for common decision results. The explanation must provide a general description of:

- the role of the system in the decision-making process;
- input data, its source and method of collection;
- the criteria used to evaluate input 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
- the principal factors behind a decision.

Explanations must also inform clients of relevant recourse options, where appropriate.

Descriptions must be made available in plain language through the Algorithmic Impact Assessment and discoverable via a departmental website.

Training

None

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)
Other (please specify)

Use innovative approaches

2. Please describe
Knockri supports TBS' implementation of the Call to Action on Anti-Racism, Equity, and Inclusion.

The Clerk's call to action explicitly mentions the Government of Canada's need to "recruit highly qualified candidates from Indigenous communities and Black and other racialized communities from across all regions of Canada". Knockri enables the TBS to assess a far larger number of candidates from these groups in a way that effectively identifies those who have the requisite behavioural attributes needed for success on the job.

In addition, the TBS's letter to the Clerk identifies one of the key challenges and barriers as "improve fairness and transparency in staffing, performance and talent management processes". The level of standardization and detail of results obtained when using the Knockri assessment provides improved fairness and transparency compared to in-person assessments of the same attributes when conducted by a human. Unlike human assessments where jotted notes may be retained, the Knockri assessment provides a clear audit trail for dissecting assessment performance that can be well understood both by HR professionals and candidates that take the assessment.

3. What client needs will the system address and how will this system meet them? If possible, describe how client needs have been identified.
Fairness in the Hiring Process:
When assessing candidates for hire, it is important to use standardized selection procedures for all candidates. This ensures procedural fairness in the hiring process. Knockri provides a solution that maximizes the standardization of a selection procedure (behavioural attribute assessment) that is a challenge to achieve using humans. Although mechanisms can be put in place to enhance the fairness of interviews, research has continuously shown that recruiter and candidate characteristics can bias human evaluations. In addition, when interviews lack structure, they can be influenced by interviewer bias (e.g., gut feeling) and may negatively impact the fairness of the interview process and promote the reliance on job irrelevant factors.

Transparency in the Assessment Process:
Following from the challenges with human evaluation in interviews, it can be a challenge to determine the exact decision rules used by a human evaluator in their assessment of candidates. Moreover, it is generally the case that note-taking can be limited to a few bullet points or overall assessments rather than a detailed account of the previous work experiences discussed by a candidate in their interview responses. The Knockri system provides a detailed breakdown of assessment performance that can help identify what was evaluated and its relationship to a candidate's overall assessment score. Having this level of transparency can assist candidates in both understanding why they performed the way they did, but also to be used in case of any appeal process candidates may feel inclined to pursue.

Increased Person-Job Fit:
Person-Job Fit is one of several unique ways that employees can fit with their work environment. When employees have the behavioural attributes required to meet the demands of the job, they tend to have higher levels of overall

physical health and mental well-being. The Knockri system is designed to assess the congruence between a candidate's behavioural attributes and those required for performance on the job. This type of fit is associated with lower levels of job strain, increased job performance, job satisfaction, organizational commitment, and a reduction in voluntary or involuntary turnover.

Recruitment Speed:
The Knockri system expedites the hiring process, enabling a high volume of candidates to be assessed within a few weeks, compared to traditional in-person interviews that take months to complete for large candidate pools. This benefits the client by facilitating prompt decision-making and significantly reduces the extended wait times associated with the current requirement process.

4. Please describe any public benefits the system is expected to have.
Fairness and Equal Opportunity: Knockri's focus on evaluating behavioural attributes helps reduce bias and promote fairness in the recruitment process. In the interest of providing a fair and equal employment opportunities for the public, the same scoring method is applied to all candidates equally, and the Knockri system ensures that candidate assessment scores are based solely on job relevant information and not intentionally influenced by a candidate's physical characteristics or protected group status. Research conducted by Knockri and included in technical documentation provided to the TBS shows that the assessments ability to measure behavioural attributes is equal across demographic groups.

Merit-Based Assessment: Knockri's assessment of job-related behavioural attributes ensures that candidates are measured on their merit. This strengthens the integrity of the recruitment process and enhances public trust in the organization's hiring practices.

Innovation and Technological Advancement: By responsibly incorporating technologies like artificial intelligence and machine learning, Knockri highlights the TBS's commitment to innovation and leveraging technology for public benefit. It demonstrates a forward-thinking approach to modernizing recruitment practices and staying at the forefront of industry advancements. Moreover, the automation of assessment administration and scoring aligns with a principle-first approach to incorporating innovation and technological advancement. The emphasis is on the structural aspect, recognizing it as the driving force behind enhancing the quality of the assessment process and improving the lives of candidate's and public at large.

5. How effective will the system likely be in meeting client needs?
Very effective [Points: +0]

6. Please describe any improvements, benefits, or advantages you expect from using an automated system. This could include relevant program indicators and performance targets.
Assessment Standardization: Interviews are routinely used as part the hiring process to measure job-related behavioural attributes. The more standardization is applied to an interview, the more effective it is when identifying candidates that have the requisite behavioural attributes, and more predictive of job performance. Human evaluators can apply a high degree of structure in the interview process, but this structure can be reduced by

intraindividual rater biases. The Knockri system fully automates interview administration and scoring, maximizing interview structure and removing the potential for rater bias. All candidates receive the same interview experience, and the same scoring algorithm is used across all candidates. As part of the proposed pilot project, a sample of interviews will be independently rated by human evaluators. These ratings will be used to test interrater reliability. It is expected that interrater reliability between automated scoring and human evaluation will be higher than average interrater reliability estimates between human evaluators when independently rating a candidate.

Increased Diversity and Inclusion: Balancing the use of effective selection procedures that predict job performance with the simultaneous goal of fostering a diverse workforce is challenging. It requires the implementation of effective hiring practices that avoid unintentional disadvantages for certain groups based on their protected group status. Many traditional selection procedures have the benefit of one of these aims but not both. To tackle this challenge, the Knockri system is designed to strike a thoughtful balance between accurately predicting job performance (validity) and promoting diversity. The emphasis on structured interviews, identified as the most predictive of job performance, simultaneously ensures minimal to no differences in performance across protected groups. While similar results can be obtained through in-person interviews, it is not feasible to use in-person interviews at scale. Therefore, the use of automation here presents an opportunity to effectively screen candidates using a selection procedure that promotes both the fairness and effectiveness of the selection process. When technically feasible, studies will be conducted to assess the validity and observed demographic differences in assessment scores.

Efficient Hiring: Knockri's approach significantly accelerates the hiring process. It conducts and evaluates interviews in a matter of days, as opposed to the conventional method that can span several months. This speed not only helps in hiring top talent quickly but also reduces the uncertainty that often comes with long hiring processes. For the organization’s staffing needs, quick and efficient hiring is essential to respond to talent demands and maintain flexibility in their staffing strategies in a competitive job market. As part of the proposed pilot, the TBS team will quantify the time taken to assess candidates and arrive at a hiring decision when using Knockri and compare that to the average decision time for candidate groups that go through a human evaluation assessment process.

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

Knockri has been selected through a vetted process to ensure Government of Canada’s standards and policies are adhered to. In addition to completing an Algorithmic Impact Assessment, the team has consulted with TBS’s Access to Information and Privacy Office, Information Technology Division, and Legal Services to fulfill a thorough investigation of the pilot. Through the analysis and development with Knockri’s platform, the organization will take several steps and actions to analyze, plan and test the platform requirements, design and run the assessments while concurrently reviewing and calibrating the results against the objectives.

To ensure that the system remains focused on addressing the identified client needs, we will establish a clear set of key performance indicators (KPIs)

aligned with the proposed benefits for clients. Throughout the project we will maintain ongoing communication with both our team and Knockri to make necessary improvements and refinements. We will also conduct regular assessments to ensure the system is performing its intended functions. For HR staff using the Knockri solution, training will be used to promote proper use, which includes the interpretation of model output as well as its role in the decision-making process. In addition, we will examine the performance of candidates on the Knockri assessment across protected groups, when technically feasible. This will provide an indication of how the Knockri system may be influencing the diversity of candidate pools when used in TBS recruitment efforts.

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

Trade-off: Automated systems may lack the personal touch and human connection that can be established during in-person interviews.

Consideration: While it is possible that the use of automation may reduce human connection in the hiring process to a certain extent, the human touch can also be a source of bias in the hiring process. In addition, when resources preclude the use of in-person interviews for all candidates, the Knockri system provides more candidates with an opportunity to complete an interview which can increase perceptions of inclusion in the hiring process. Steps will also be taken to enhance the human element of the automated interview (i.e., human recordings of interview questions, intro and outro videos, and personalized email communications). In addition, as previously mentioned, candidates will have the option to opt out of the automated assessment process and be assessed in-person instead.

Trade-off: Automated systems might have limitations in grasping the full contextual understanding of responses, potentially leading to misinterpretations.

Consideration: Models are not perfect, and it is possible that the Knockri system may not fully understand the nuances in a candidate's interview response. However, the system is only expected to provide an indication of candidate attributes that are required for performance on the job. The information gleaned from the Knockri system will be used in combination with other information on the candidate to get a richer understanding. In addition, TBS HR has the ability to review the audio recording of any candidates response to ensure they are properly assessed.

Trade-off: While automated systems can be efficient, the initial setup costs and maintenance might be higher than traditional in-person interviews.

Consideration: The initial cost for setup is reasonable given the cost and time to conduct in-person interviews. Knockri is responsible for maintaining the system and this is at no additional cost to the organization.

Trade-off: Automated systems provide standardized evaluations, but they may lack the flexibility to adapt to unique situations or industries.

Consideration: Knockri has the ability to customize the automated assessment of candidates to achieve alignment with the unique behavioural

attributes that are deemed important for success within the TBS. In collaboration with the TBS, Knockri will identify the behavioural attributes to be measured, the behaviours that underly each behavioural attribute, and behavioural interview questions that will be used to assess each attribute. The Knockri system is capable of measuring the universe of work-related behaviour and is highly customizable. This flexibility will serve the purpose of aligning the assessment process with a high degree of contextual specificity.

Trade-off: The removal of human bias by using automation introduces the potential for algorithmic bias.

Consideration: Although algorithms deployed by Knockri are designed to be deterministic it is possible that bias can be introduced in the development of these algorithms. There are several reasons why issues of algorithmic bias are of minimal concern. First, the algorithmic training process used by Knockri does not involve human evaluations of interviews as a target for training. Instead, a more objective training process of behavioural annotation is used to minimize the impact of human bias in training data. This suggests that biases in human evaluation are not trained into the model. Second, Knockri has provided TBS with documentation that shows that behavioural predictions made by the Knockri algorithm perform equally across demographic groups. Third, the algorithms deployed by Knockri are static and do not change once they are in production and are not altered by new input data. This prevents against issues of data drift and the degradation of results that have already been shared with the TBS team.

9. Have alternative non-automated processes been considered?
Yes [Points: +0]

10. If non-automated processes were considered, why was automation identified as the preferred option?
Yes. Human evaluation of interviews has been considered as an alternative to automation. However, the cost and time of conducting interviews was the impetus for proposing this process. In addition, a benefit of automation is the removal of human bias in the assessment process which may not be possible when human evaluations are relied upon.

Interview administration and assessment are two components of an interview that can be automated. The VidCruiter platform was examined as an option for a non-automated approach. Drawing from prior implementations in the Government of Canada, the team deduced that VidCruiter could be utilized to schedule and carry out interviews in an asynchronous manner (Automated).

However, it is important to note that VidCruiter does not offer the automated assessment function that Knockri provides. Knockri automates both the interview administration and assessment evaluation components of an interview. This automation function is essential as it decreases administrative workload, enhances diversity efforts, and streamlines the entire process, resulting in improved cost and time management.

While several vendors in the market provide automated interview assessment products, such as HireVue, the Knockri system stands out with its incomparable levels of customization and transparency compared to other vendors in the marketplace. Moreover, the Knockri system enjoys patent

protection, making Knockri the sole company with the freedom to operate using their innovative systems and methods for behavioural attribute measurement. For additional information on the comparing Knockri to prior art please refer to the Knockri patent: (https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022251970&_cid=P12-LPGF1Q-96848-1).

11. What would be the consequence of not deploying the system?
Service costs are too high
Service quality is not as high
Service delivery cannot achieve performance targets
Other (please specify)

12. Please describe
Without automation, TBS is less likely to run as many external staffing processes, which could harm the department's efforts to increase diversity. Sourcing diverse applicants alone will not help achieve diversity outcomes. An important aspect of achieving diversity in the long run is to ensure that sourced candidates effectively screened and have a high likelihood of meeting expectations on the job. Without automation, efforts to identify highly qualified diverse candidates will be slow and may limit the total number of diverse candidates that can be considered by the TBS. In this way, efficiency in candidate assessment is paramount to achieving the long-range goals as outlined in the Clerk's call to action.

Risk Profile

13. Is the project within an area of intense public scrutiny (e.g. because of privacy concerns) and/or frequent litigation?
No [Points: +0]

14. Are clients in this line of business particularly vulnerable?
No [Points: +0]

15. Are stakes of the decisions very high?
No [Points: +0]

16. Will this project have major impacts on staff, either in terms of their numbers or their roles?
No [Points: +0]

17. Will the use of the system create or exacerbate barriers for persons with disabilities?
No [Points: +0]

Project Authority

18. Will you require new policy authority for this project?
No [Points: +0]

About the Algorithm

19. The algorithm used will be a (trade) secret
Yes [Points: +3]

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

No [Points: +0]

About the Decision

21. Please describe the decision(s) that will be automated.
The ultimate decision is to hire or not hire a candidate. For this decision, human judgment and discretion remain the key lever in the assessment of candidates. While the assessment tools provided by the Knockri system assist in providing data to inform decisions, critical decision points will be continually made by HR advisors to ensure quality assurance. The Knockri system will provide one of several candidate inputs that will be used to support a decision to include and exclude someone from a pre-screened pool of candidates. Therefore, the Knockri system will contribute to administrative decision-making by supporting an officer through assessments, recommendations, and intermediate decisions. As part of the proposed pilot project, ALL candidates assessed by Knockri will also be reviewed by an HR advisor.

22. Does the decision pertain to any of the categories below (check all that apply):
Employment (recruitment, hiring, promotion, performance evaluation, monitoring, security clearance) [Points: +1]

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.
Supporting Decision-Making in Hiring: The automated interview scores are used to aid in decision-making in the hiring process. Hiring managers and stakeholders may consider these scores as part of the overall evaluation of candidates.

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

26. Please describe the criteria used to evaluate client data and the operations applied to process it.
Audio Transcription and Analysis: The audio data obtained from candidates' responses to interview questions are automatically transcribed into text. This text is then analyzed using a specialized natural language model that has been finely tuned for the purpose of identifying work-related behaviour in text. The transcription method has been shown to have word error rates across demographic groups that are better than industry guidelines for use in production. In addition, technical documentation provided to the TBS shows that minor differences in transcription accuracy have no downstream consequences in terms of algorithmic performance.

Generation of Behavioral Output: Based on the textual analysis, the automated system generates a list of work-related behaviours that were included in a candidate's interview response.

Calculation of Assessment Scores: Each interview question on the assessment is used to measure one behavioural attribute. For each interview response, the work-related behaviours discussed by the candidate is compared to a set of work-related behaviours that outline the behavioural attribute being measured by the question (rubric). Candidates receive behavioural merit for each behaviour they discuss that matches the behaviour included on the rubric. The attribute (question level) score reflects the percentage of behaviours on the rubric that are included in the candidate's response. The overall assessment score is an average across the question level scores.

27. Please describe the output produced by the system and any relevant information needed to interpret it in the context of the administrative decision.
All system outputs are available to the TBS via a dashboard.
The output of the system includes:

1. Question level behavioural attribute scores.
2. Overall assessment score.
3. Visual breakdown of the behaviours demonstrated and not demonstrated at the question level (Behaviour Insight report).
4. Full question level audio recordings of each interview response.
5. Text summaries of candidate responses.
6. Shareable candidate feedback reports that capture candidate performance on the assessment.

In the context of any administrative decisions, assessment scores represent one of several different inputs that will be considered in a recommendation of decision to hire. The interpretation of assessment scores is such that the higher the percentage of behavioural merit included in candidate response the more likely the candidate demonstrated proficiency in a particular behavioural attribute.

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?
Impacts are most likely to be brief [Points: +1]

32. Please describe why the impacts resulting from the decision are as per selected option above.
All assessments made by the system will be reviewed, and if necessary, are reversible. In the proposed pilot project, HR advisors will be reviewing all assessment results. As the results will support HR decision-making, the ultimate decision is with the HR advisor and/or hiring manager.

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.
The decision to hire a candidate should be based on the qualifications of candidates. All individuals have the right and freedom to apply for employment, and to be assessed in a way that is free from discrimination based on protected group status. In addition, candidates applying to work for the government have the right to complete the hiring process in the official language of their choice (i.e., English or French). Both rights and freedoms are not infringed upon using automation in the present context.

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.
The choice to hire or not hire a candidate is expected to have little to no impact on the equality, dignity, privacy, and autonomy of individuals. Furthermore, as part of the selection process candidates have the autonomy to choose to complete, or not to complete, the automated assessment. Personal identifying information collected using automation will be protected, and used in a way that preserves the dignity of candidates in the hiring process.

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.
The proposed pilot project is unrelated to issues to health-related services and social assistance.

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.
The economic interests of individuals are primarily driven by labour market conditions and not by the selection procedures used to identify suitable candidates. Regardless of the selection procedures, the number of job openings remains static. In addition, it is assumed that many candidates are already employed and currently working at other organizations or in different government work roles.

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.
Hiring decisions are assumed to have little to no impact on the ongoing sustainability of an environmental ecosystem.

About the Data - A. Data Source

43. Will the Automated Decision System use personal information as input data?
No [Points: +0]

44. Please list relevant PIB Bank Numbers.
PSE 902

45. What is the highest security classification of the input data used by the system? (Select one)
Protected A [Points: +1]

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

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

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

49. Will the system interface with other IT systems?
Yes [Points: +4]

50. Who collected the data used for training the system?
A foreign government or non-government third party [Points: +4]

51. Who collected the input data used by the system?
A foreign government or non-government third party [Points: +4]

52. Please describe the input data collected and used by the system, its source, and method of collection.
Input data consist of audio recordings of candidate answers to a set of structured behavioural interview questions. The input data is collected via asynchronous audio interview recordings submitted by candidates.

About the Data - B. Type of Data

53. Will the system require the analysis of unstructured data to render a recommendation or a decision?
Yes [Points: 0]

54. What types of unstructured data? (Check all that apply)
Audio and text files [Points: +2]

Section 3.2: Mitigation Questions and Answers

Consultations

1. Internal Stakeholders (federal institutions, including the federal public service)
Yes [Points: +1]

2. Which Internal Stakeholders have you engaged?
Legal Services
Access to Information and Privacy Office
Human Resources
Client Experience / Client Relationship Management
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?
Academia
International Organizations

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?
Yes [Points: +2]

20. Does the system's audit trail indicate all of the decision points made by the system?
Yes [Points: +1]

21. Can the audit trail generated by the system be used to help generate a notification of the decision (including a statement of reasons or other notifications) where required?
Yes [Points: +1]

22. Does the audit trail identify precisely which version of the system was used for each decision it supports?
Yes [Points: +2]

23. Does the audit trail show who an authorized decision-maker is?
Yes [Points: +1]

24. Is the system able to produce reasons for its decisions or recommendations when required?
Yes [Points: +2]

25. Is there a process in place to grant, monitor, and revoke access permission to the system?
Yes [Points: +1]

26. Is there a mechanism to capture feedback by users of the system?
Yes [Points: +1]

27. Is there a recourse process established for clients that wish to challenge the decision?
Yes [Points: +2]

28. Does the system enable human override of system decisions?
Yes [Points: +2]

29. Is there a process in place to log the instances when overrides were performed?
Yes [Points: +1]

30. Does the system's audit trail include change control processes to record modifications to the system's operation or performance?
Yes [Points: +2]

31. Have you prepared a concept case to the Government of Canada Enterprise Architecture Review Board?
No [Points: +0]

De-Risking and Mitigation Measures - Privacy

32. If your system uses or creates personal information, have you undertaken a Privacy Impact Assessment, or updated an existing one?
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.
Using artificial intelligence (AI) to automate candidate evaluations in the staffing process's assessment phase

Knockri is a software company that specializes in AI-driven hiring assessments. They provide an AI-based skills assessment platform that aims to help employers make more informed hiring decisions by evaluating candidates' job-related skills and competencies. Knockri's software utilizes natural language processing (NLP) and machine learning algorithms to analyze candidates' responses to video or text-based interview questions. The platform assesses various factors, such as language proficiency, communication skills, cognitive abilities, and personality traits, to provide employers with insights into candidates' suitability for a particular role. By leveraging AI and automation, Knockri aims to reduce bias in the hiring process and improve overall efficiency, helping employers identify the most qualified candidates more effectively. It provides data-driven insights and analytics to help organizations make objective and informed decisions in their recruitment processes.

In this pilot project, HRD will be working with the Employment Equity Recruitment Team to leverage Knockri in the assessment stage of the hiring process for approximately a total of 350 Administrative Services (AS) and Executives (EX) candidates. Candidates can choose between taking the Knockri assessment or requesting an accommodation. If a candidate decides to proceed with the Knockri assessment, they will receive an email before the assessment explaining how the platform operates. In this email, candidates will be informed that Knockri will collect and retain their information, including email addresses, and audio recordings. This personal information will be used to communicate the screening results to the organization. Candidates will also be notified that they have the option to request the deletion of their information after the assessment.

To understand Knockri’s function in the staffing process, the Privacy Impact Assessment (PIA) will focus on examining the platform and conducting a

thorough assessment of the stages in the staffing process where Knockri will intervene. The PIA will assess the creation, collection, use, disclosure and retention of personal information collected in support of the use of the Knockri platform in the staffing process. To understand Knockri's function in the staffing process, the PIA will concentrate on the platform as well as a outline the role of the platform within the staffing process at TBS.

Estimated Completion Date: April 2024

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?
Yes [Points: +1]

38. Please describe your de-identification method(s).
Personal information collected during the staffing process will be retained for five years after the last administrative action and will then be deleted. Alternatively, it may be deleted at the request of the Human Resources Division or the individual involved.