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K1A 0S5

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**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**

Raison sociale et adresse du  
fournisseur/de l'entrepreneur

**Issuing Office - Bureau de distribution**

Systems Software Procurement Division / Division des  
achats des logiciels d'exploitation  
Terrasses de la Chaudière  
4th Floor, 10 Wellington Street  
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<b>Title - Sujet</b> AI - Regulatory Evaluation Platform	
<b>Solicitation No. - N° de l'invitation</b> 0X001-182587/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> 0X001-182587	<b>Date</b> 2019-03-01
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$EE-017-34665	
<b>File No. - N° de dossier</b> 017ee.0X001-182587	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2019-05-06</b>	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Lessard, Peter	<b>Buyer Id - Id de l'acheteur</b> 017ee
<b>Telephone No. - N° de téléphone</b> (613) 850-7602 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

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Instructions: Voir aux présentes

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

This amendment 001 is issued to replace document 000 of this NPP. Amendment 001 fixes all the web links in the document.

Public Works and Government Services Canada (PWGSC), also known as, Public Services and Procurement Canada (PSPC), is issuing a Notice of Plan Procurement on behalf of the Canadian School of Public Services (CSPS) for an upcoming Request for Proposal (RFP) for an Artificial Intelligence (AI) requirement using the newly established AI Source list under EN578-180001/B.

**The following NPP is directed only to the qualified suppliers of the AI source list.**

**Suppliers under Bands 2 and 3 are invited to provide feedback on this NPP.**

## **OBJECTIVE**

CSPS (or the School), in serving as Project Authority and technical owner on behalf of a number of federal regulatory departments and agencies, has a requirement for an interactive hosted cloud-based regulatory evaluation platform (REP) that enables users in federal departments and agencies to explore and analyze large amounts of structured and unstructured regulatory data, and identifies and presents key trends, patterns, and inconsistencies in regulations and regulatory requirements. The solution must have the ability to identify and present key trends, patterns, and inconsistencies in regulations and regulatory requirements. This cloud-based solution, once designed, tested and refined, will be accessible to up to 200 identified users in various federal departments and agencies.

As PSPC and CSPS tries to better understand the AI marketplace, PSPC and CSPS are seeking feedback on drafts documents associated with the solicitation and to better refine the CSPS requirements. PSPC and CSPS are providing a list of questions in Annex D for the industry's feedback on the following topic:

- a. Desired Business Objectives and Project Scope (Annex A to NPP);
- b. Statement of Work (Annex A to NPP);
- c. Evaluation Criteria (Annex B to NPP);
- d. Use Cases (Annex C to NPP);
- e. Solicitation documents (Annex D, To Be Posted on Buy and Sell March 6, 2019); and
- f. Questions to solicit feedback from industry (Annex E to NPP).

The information provided will aid in increasing PSPC's and CSPS's understanding of the capability, viability and commercial availability of an Artificial Intelligence REP solution. The industry perspective on the approach, business, cost of development, and draft solicitation documents in annex, are of particular interest.

We are requesting suppliers to provide feedback to PSPC no later than end of day March 11<sup>th</sup> 2019.

## **REQUIREMENTS**

The Contractor must deliver a hosted working cloud-based REP solution that must, based on input data on the stock of 2600 federal regulations, as well available provincial and territorial machine readable regulations, provide an interactive user-friendly interface to search, find, analyze, visualize and generate reports on trends, characteristics, patterns and relationships among an identified set of regulations, regulatory provisions or authorities.

More specifically, the Contractor must deliver a hosted REP solution that must:

- a. apply machine learning, natural language processing to search and find user-identified regulatory text or specific regulations according to user-defined themes and queries;
- b. provide the functionality to enable REP users to conduct supervised learning and insert their own comments, commentary or “tag” data elements identified in queries for future reference;
- c. conduct analysis on characteristics, trends and impacts of a regulation or group of regulations and information based on user-identified parameters;
- d. provide the functionality to combine information from other sources, including through input files and use of internet search techniques, to further augment or enhance the analysis of regulatory text;
- e. provide the functionality to enable REP users to compile analytical outputs such as data visualization and formatted reports on results;
- f. provide technical architecture, applied methodologies
- g. provide source code where feasible;
- h. have the capability to transfer to a Government of Canada cloud infrastructure;
- i. use publicly available data and data feeds; and
- j. enrich and restructure existing data sets to optimize results and meet user needs

## **KEY ESTIMATED RFP TIMELINES**

Publication of the NPP:	February 28, 2019
NPP Feedback submission deadline:	March 11, 2019
Publication of RFP Solicitation:	March 25, 2019
Bidders' Webinar:	April 1, 2019
Bidder self-identification deadline:	April 8, 2019
Bid Closure:	May 6, 2019

## **BIDDERS' WEBINAR**

The bidders' webinar will be held around the date of April 1st, 2019. More information will be made available based on the feedback received from the suppliers and the release of the Final Solicitation documents for the CSPA requirement.

The scope of the requirement outlined in this RFP solicitation will be reviewed during the webinar and questions will be answered. Bidders who intend to participate in this process must attend the Webinar. Bidders who do not attend will not be eligible to request to participate on the RFP process.

## **CSPA AGILE RFP EVALUATION APPROACH**

This RFP evaluation involves a three-stage procurement process.

1. Stage 1: Bidders Submission, Evaluation of Bidders Proposals and Contractor Selection for Stage II (using AI source list process)
2. Stage 2: Evaluation and Contracting Process for Stage 2 Deliverables
3. Stage 3: Selection and Contracting Process for Stages 2 and 3

### **Stage 1**

The objective of Stage 1 is to:

- solicit, evaluate and rank the responsive proposals based on their technical score
- recommend issuance of a contract to up to three of the top-ranked responsive proposals

### **Stage 2**

The objective of Stage 2 is to:

- complete Stage 2 work in 3 months, deliver prototype solution for evaluation
- evaluate the prototype solutions, conduct usability test and rank based on their technical score
- recommend issuance of a contract to the top-ranked responsive contractor for Stage 3 work

### **Stage 3**

The objective of Stage 3 is to:

- Finalize and deliver production ready solution in 3 months
- evaluate the production ready solution, conduct usability test for acceptance
- recommend issuance of contract for hosted production ready solution, including maintenance and support

The selection of proposal(s) for contracting does not constitute a guarantee on the part of Canada that a contract will be awarded.

## **ENQUIRIES**

All enquiries must be submitted in writing to the Contracting Authority no later than March 11, 2019.

## **Annex A Statement of Work**

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### **1. Title**

Demonstration Project to Develop and Pilot Interactive Regulatory Evaluation Platforms Using Artificial Intelligence Methods

### **2. Objective**

The Canada School of Public Service (CSPS or the School), in serving as Project Authority and technical owner on behalf of a number of federal regulatory departments and agencies, has a requirement for an interactive hosted cloud-based regulatory evaluation platform (REP) that enables users in federal departments and agencies to explore and analyze large amounts of structured and unstructured regulatory data, and identifies and presents key trends, patterns, and inconsistencies in regulations and regulatory requirements. The solution must have the ability to identify and present key trends, patterns, and inconsistencies in regulations and regulatory requirements. This cloud-based solution, once designed, tested and delivered, will be accessible to up to 200 users in various federal departments and agencies.

### **3. Background**

The Canada School of Public Service has a mandate to provide a broad range of learning opportunities and to establish a culture of learning within the Public Service. This includes supporting a public service-wide culture of learning that is relevant, responsive, accessible and supportive of broader government objectives with respect to a digital agenda, innovation, and experimentation.

The stock of federal regulations, and relevant foreign, and provincial/territorial regulations is vast and constantly evolving. As set out in the Cabinet Directive on Regulation (refer to Section 5 – Relevant Terms and Acronyms), federal regulators are required to adopt a regulatory life cycle approach where they must examine and analyze regulations through all stages of their life cycle (development, management, review and results). For many regulatory departments and agencies, this requires that they, among other activities, continually monitor, seek out and evaluate opportunities to reduce regulatory duplication, administrative burden and inefficiencies (including across jurisdictions) as well as to consider the cumulative impacts of regulations on stakeholders.

Reviewing the regulatory stock and informing development of new regulatory approaches can be a complex and time consuming manual task. However, the rising public sector use and capability of artificial intelligence, facilitated by the rise of open source data, big data analytics and the increasing availability of regulations in machine-readable formats suggests that an interactive cloud-based REP could support regulators in a number of areas:

- a. scanning the global regulatory environment to gather publicly available machine readable data and information on how other comparable regulators are adopting or implementing regulations and exercising authorities to develop agile regulatory interventions that meet regulatory objectives;
- b. identifying overlapping, obsolete or outdated regulations or requirements in the regulatory stock as well as opportunities to reduce regulatory burden on stakeholders;

## Annex A Statement of Work

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- c. combining multiple sources of information and data to support studies of the effectiveness of regulations in achieving their stated objectives; and
- d. assessing the impacts of regulations on specific sectors of the economy and small business at the federal level (across departments and agencies) or cumulatively across jurisdictions (e.g., foreign, federal, and provincial/territorial)

Exploring the potential advances of artificial intelligence through a demonstration project could provide a useful tool for regulatory departments and agencies in carrying out their responsibilities. For departments and agencies participating in this CSPS-led demonstration project, through an interdepartmental project Steering Committee and Project User Group (PUG), organizational learning on how to design and use these tools would be an important outcome. Key participating departments and agencies in this project include: Agriculture and Agri-Food Canada; Community of Federal Regulators (Health Canada); Innovation, Science and Economic Development Canada; Justice Canada, Transport Canada, and the Treasury Board of Canada Secretariat.

### 4. Scope

The Contractor must deliver a hosted working cloud-based REP solution that must, based on input data on the stock of 2600 federal regulations, as well available provincial and territorial machine readable regulations, provide an interactive user-friendly interface to search, find, analyze, visualize and generate reports on trends, characteristics, patterns and relationships among an identified set of regulations, regulatory provisions or authorities.

More specifically, the Contractor must deliver a hosted REP solution that must:

- a. apply machine learning, natural language processing to search and find user-identified regulatory text or specific regulations according to user-defined themes and queries;
- b. provide the functionality to enable REP users to conduct supervised learning and insert their own comments, commentary or "tag" data elements identified in queries for future reference;
- c. conduct analysis on characteristics, trends and impacts of a regulation or group of regulations and information based on user-identified parameters;
- d. provide the functionality to combine information from other sources, including through input files and use of internet search techniques, to further augment or enhance the analysis of regulatory text;
- e. provide the functionality to enable REP users to compile analytical outputs such as data visualization and formatted reports on results;
- f. provide technical architecture, applied methodologies
- g. provide source code where feasible;
- h. have the capability to transfer to a Government of Canada cloud infrastructure;
- i. use publicly available data and data feeds; and
- j. enrich and restructure existing data sets to optimize results and meet user needs

### 5. Relevant Terms and Acronyms

**ADA:** Advanced Data Analytics

**AI:** Artificial Intelligence

## Annex A Statement of Work

**Cabinet Directive on Regulation:** The Cabinet Directive on Regulation (the directive) sets out the Government of Canada’s expectations and the requirements in the development, management and review of federal regulations. Link:

<https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/guidelines-tools/cabinet-directive-regulation.html>

**GoC:** Government of Canada

**ML:** Machine Learning

**NAICS:** North American Industry Classification System

**PUG:** Project User Group

**REP:** Regulatory Evaluation Platform

### 6. Applicable and Reference Documents

#### 6.1 Sample Use Cases:

There are a number of use cases for a REP that reflect the perspective and needs of potential users, which could be considered when thinking about data, capability and functionality that would form part of the solution. Sample use cases can be found in Annex C.

#### 6.2 Mandatory data sources to be ingested by the solution:

Data	Source	Format	Link
The present list of Acts and Regulations	Justice Canada	XML	<p>The Justice Canada FTP server (<a href="ftp://205.193.86.89/">ftp://205.193.86.89/</a>) contains a file that is updated on an ongoing basis called data.zip (<a href="ftp://205.193.86.89/data.zip">ftp://205.193.86.89/data.zip</a>) that contains the Acts and Regulations as of the date of archiving. This archive contains Regulations that are marked up in XML format.</p> <p>The data dictionary in English: (<a href="http://laws-lois.justice.gc.ca/eng/XML/index.html">http://laws-lois.justice.gc.ca/eng/XML/index.html</a>) and French (<a href="http://laws-lois.justice.gc.ca/fra/XML/index.html">http://laws-lois.justice.gc.ca/fra/XML/index.html</a>).</p> <p>It should be noted that the archive also includes Statutory Instruments (filenames that start with SI) are not considered in scope for this project. The archive also contains repealed regulations, which are outside of scope. The &lt;Repealed&gt;&lt;/Repealed&gt; tag may apply to only parts of the regulation, but may apply to the regulation as a whole.</p>
Point-in-time archive of Acts and Regulations	Justice Canada	XML	<p>On the same FTP, there is a directory for point-in-time archives: (<a href="ftp://205.193.86.89/PITXML/">ftp://205.193.86.89/PITXML/</a>). There are ZIP archives as well as an uncompressed file structure. The structure differs slightly from</p>

## Annex A Statement of Work

			the above in order to accommodate previous dates.
North American Industry Classification System	Statistics Canada	HTML, CSV and PDF	<a href="https://www.statcan.gc.ca/eng/subjects/standard/naics/2017/index">https://www.statcan.gc.ca/eng/subjects/standard/naics/2017/index</a>
Provincial/Territorial regulations	CanLII	API	<a href="http://developer.canlii.org/docs/Legislations">http://developer.canlii.org/docs/Legislations</a>
United States regulations	Mercatus Centre, George Mason University	XML	<a href="https://quantgov.org/regdata-us/">https://quantgov.org/regdata-us/</a>
United States regulations	Code of Federal Regulations US	XML	<a href="https://www.archives.gov/open/dataset-cfr.html">https://www.archives.gov/open/dataset-cfr.html</a>
EU legislation	EUR-Lex	API	<a href="http://api.epdb.eu/">http://api.epdb.eu/</a>
EU legislation – currently in force	Europa	HTML	<a href="https://data.europa.eu/euodp/data/dataset/eu-legislation-in-force">https://data.europa.eu/euodp/data/dataset/eu-legislation-in-force</a>
EU legislation – basic acts	Europa	HTML	<a href="https://data.europa.eu/euodp/data/dataset/eu-legislation-basic-acts">https://data.europa.eu/euodp/data/dataset/eu-legislation-basic-acts</a>

### 6.3 Other sources:

The following are the optional data sources and other sources of information that may support the development of the REP solution.

United States regulations	Mercatus Centre, George Mason University	XML	<a href="https://quantgov.org/regdata-us/">https://quantgov.org/regdata-us/</a>
United States regulations	Code of Federal Regulations US	XML	<a href="https://www.archives.gov/open/dataset-cfr.html">https://www.archives.gov/open/dataset-cfr.html</a>
EU legislation	EUR-Lex	API	<a href="http://api.epdb.eu/">http://api.epdb.eu/</a>
EU legislation – currently in force	Europa	HTML	<a href="https://data.europa.eu/euodp/data/dataset/eu-legislation-in-force">https://data.europa.eu/euodp/data/dataset/eu-legislation-in-force</a>
EU legislation – basic acts	Europa	HTML	<a href="https://data.europa.eu/euodp/data/dataset/eu-legislation-basic-acts">https://data.europa.eu/euodp/data/dataset/eu-legislation-basic-acts</a>
Canada Gazette I and II – including Regulatory Impact Analysis Statement	Public Services and Procurement Canada	XML – certain years only	<a href="http://gazette.gc.ca/xml/">http://gazette.gc.ca/xml/</a>
Canada Gazette I and II	Public Services and Procurement Canada	HTML	<a href="http://www.gazette.gc.ca/rp-pr/publications-eng.html#a1">http://www.gazette.gc.ca/rp-pr/publications-eng.html#a1</a>
Government of Canada Digital Standards: <a href="https://www.canada.ca/en/government/publicservice/modernizing/government-canada-digital-standards.html">https://www.canada.ca/en/government/publicservice/modernizing/government-canada-digital-standards.html</a>			

## Annex A Statement of Work

Example of outcome-based regulations (proposed Safe Foods for Canadians Regulations as published in *Canada Gazette I*) (<http://bit.ly/2II297x>)

Canadian Importers Database (2016): CSV format  
(<https://open.canada.ca/data/en/dataset/9d81bb46-de89-41be-b7a4-b76c08f96cff>)

Canadian International Merchandise Trade Database: CSV format  
(<https://open.canada.ca/data/en/dataset/b1126a07-fd85-4d56-8395-143aba1747a4>)

Canada Business Network information on regulation:  
(<https://canadabusiness.ca/government/regulations/>)

2013-14 <https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/background-2013-2014-scorecard-report.html>

2014-15 <https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/2014-2015-scorecard-report.html>

Tool and guidance: <https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/guidelines-tools.html>

Administrative Burden Baseline specific: <https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/administrative-burden-baseline/counting-regulatory-requirements.html>

Directive on Open Government: <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=28108>

Open as a Foundation for Digital Government:  
<https://open.canada.ca/en/blog/open-foundation-digital-government>

### 7. Tasks

An iterative approach with user testing must be undertaken for the design and development of the solution. The Project Authority, with the support of a Steering Committee comprised of a number of federal regulatory departments and agencies, will select users from the Steering Committee member departments to support all stages of the REP project (i.e., Project User Group (PUG)).

The Contractor must complete the following tasks which must be reflected in key deliverables for each stage of the project:

#### 7.1 Stage II: Develop and deliver a REP prototype solution

The Contractor must:

- a. Attend a kick-off meeting with the Project Authority (organized and coordinated by the Project Authority), by teleconference or in person, to officially launch the project.
- b. Engage the PUG to understand solution requirements, use cases or recent or emerging legislative, regulatory or policy requirements. The Contract Authority will coordinate and organize engagement sessions with PUG members.

## Annex A Statement of Work

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- c. Conduct a review of data architecture, data quality, sources of bias and any ethical considerations, based on available data and meta-data (i.e., enabling acts, regulations and other data sets available in machine readable files) as well as any other information provided by the Project Authority.
- d. Deliver a REP prototype solution in English that meets all the mandatory requirements. The hosted cloud-based REP prototype solution must have the following features and functionalities:
  - i) capability to build and extract information from a database of foreign, federal, and provincial/territorial regulations;
  - ii) ability to search and identify comparable regulations that apply to user-specified parameters at:
    - 1) federal level (across departments or agencies) and
    - 2) cumulatively across jurisdictions (e.g., foreign, federal, and provincial/territorial);
  - iii) ability to conduct supervised learning and insert comments, commentary or “tag” data elements by users which would also facilitate building of a solution and data architecture that better responds to the needs of the user over time;
  - iv) analytical module(s) that enable REP users to cluster, classify, pattern and apply semantic analysis based on user defined parameters in order to identify outdated regulations and assess the flexibility and degree of prescriptively of regulations;
  - v) analytical module(s) that enable REP users to extract, compile and visually map regulatory requirements and the level of regulatory burden for identified industry or sectors (e.g. by NAICS code), or groups of stakeholders;
  - vi) analytical module(s) that combine multiple sources of information and data that would, when combined with regulatory text, yield insight into the effectiveness of regulations in achieving their stated objectives (i.e., apply machine readable text and other inputs from a variety of sources that could provide context or indicators of the impact on regulated parties, stakeholders and the public);
  - vii) summary information on Acts and regulations content located at section 6 of this document, including the last amended date and registration date of the Act or regulations
  - viii) a mechanism for users to provide feedback to the contractor and administrator; and
  - ix) provide notifications to the REP user on changes to regulation(s) as defined by the user; and
  - x) user interface in English to apply user-defined parameters as defined through a review of user needs and requirements.
- e. Produce and deliver a user guide (in English) for users that includes detailed instructions and screen captures, etc., on how to use and test the tool. The user guide must be reviewed and accepted by the Project Authority. Canada will translate the user guide to French.
- f. Based on the design and functionality of the prototype solution developed, submit a draft Implementation, Release and Support Services (IRSS) Plan to the Project Authority. The IRSS Plan must detail:

## Annex A Statement of Work

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- i) findings from data architecture review
- ii) contractor's proposed refinements, proposed additional functionality, capability, user access levels
- iii) training syllabus
- iv) support and maintenance process that includes:
  - 1) mechanisms and processes for the users and the Project Authority to engage the Contractor on maintenance and service issues;
  - 2) plans to maintain and update the solution during the contract period;
  - 3) measures to resolve any technical performance or functionality issues arising from increased number of users and ongoing use

The Contractor must provide username/password access to the REP prototype solution, for testing and evaluation purposes for 20 users for the duration of Stage II and, if selected, Stage III. The Contractor's REP prototype solution will be evaluated by the PUG. Assessment of the prototype solutions usability will be conducted using test cases provided by the contractor to fulfill requirements of common use cases and scenarios that will be consistently applied by the users.

### **Stage III Option**

#### 7.2 Stage III:

Stage III - A: Finalization and delivery of the REP solution

Based on the draft IRSS plan, delivered in the Stage II, the Contractor will finalize and deliver a hosted production ready solution no later than March 31, 2020 to the Project Authority.

If selected to proceed with Stage III, the Contractor must:

- a. Attend a kick-off meeting with the Project Authority (organized and coordinated by the Project Authority), by teleconference or in person, to launch Stage III of the project.
- b. Consult the PUG to discuss and review requirements, use cases and/or recent or emerging legislative, regulatory or policy requirements that could impact the final REP solution. The Project Authority will coordinate and organize engagement sessions with PUG members.
- c. Submit an updated Implementation, Release and Support Services (IRSS) Plan to the Project Authority that also includes:
  - i) GoC digital and architectural standards (<https://www.canada.ca/en/government/publicservice/modernizing/government-canada-digital-standards.html>) integration in to the solution;
  - ii) Government of Canada accessibility and Official language standards integration in to the solution
- d. Upon acceptance of the updated IRSS Plan, contractor will make all necessary adjustments to the final REP solution

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- e. Deliver a hosted production ready REP solution, with updated user guide, to the Project Authority.

Stage III - B:

Delivery of Final REP Solution Hosting, Support and Training

The Contractor must make the hosted production ready REP solution available to users (200 users) and provide training, ongoing support, maintenance and resolution of any technical issues (e.g., solution freeze, crash or return of incorrect information).

The Contractor must:

The Contractor must provide:

- a. access to the hosted production ready REP solution for 200 end users and one administrator account with the following rights and access; create users, assign accounts, lock and unlock user accounts, link to new data sources, generate usage reports
- b. web based or in class training for the REP solution
- c. support and maintenance of the REP Solution
- d. Optional Task Authorized Professional Services

The Contractor must provide training to the users of the REP solution. Training and user guide must be provided in English.

**8. Contractor Deliverables**

All document deliverables must be in MS Word format.

8.1 Stage II:

The project launch is defined as the kick-off meeting with the Project Authority.

<b>Item</b>	<b>Description</b>	<b>Timelines</b>
1	Prototype REP solution with access for 200 users	40 business days from Project Launch
2	Draft Implementation, Release and Support Services (IRSS) Plan to Project Authority	40 business days from Project Launch
3	Draft User guide to Project Authority  The Contractor's User Guide must be appropriately based on target user's skills, knowledge and competencies, and must include practical examples and scenarios. The User Guide must be current, reflect the best practices and accurately reflect opportunities or limitation of use; and must also: <ul style="list-style-type: none"> <li>• address user needs;</li> <li>• have easy to follow instructions;</li> <li>• be well outlined; and</li> </ul>	40 business days from Project Launch

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	<ul style="list-style-type: none"> <li>include easy to follow set-up or access instructions.</li> </ul>	
4	<p>Test cases, using the use cases provided by Canada, will used to support end user testing for both usability and functionality.</p> <p>(A Test Case is a set of conditions or instructions under which the PUG will determine the prototype solution satisfies the requirements and works correctly)</p>	40 business days from Project Launch

Estimated timelines for the following activities:

<b>Description</b>	<b>Estimated Timelines</b>
PUG evaluation of prototype REP solution	Completed within 15 business days from receipt of REP prototype solution
Decision on prototype selection to proceed to Stage III work	Within 30 business days from receipt of prototype REP solution

8.2 Stage III: Refinement and finalization of the REP solution

<b>Item</b>	<b>Ref.</b>	<b>Description</b>	<b>Timelines</b>
1	7.2	Kick-off meeting to launch Stage III of the project (i.e. Stage II Launch)	Within 5 business days of contract award
2	7.2	Submit Final IRSS Plan and Project Management in MSWord format to the Project Authority for review and acceptance	20 business days from Stage III Launch
3	7.2	Deliver hosted production ready REP solution based on accepted IRSS plan for acceptance	60 business days from acceptance of updated IRSS Plan
4		<p>Test cases using the use cases provided by Canada, for end user testing.</p> <p>(A Test Case is a set of conditions or instructions under which the PUG will determine the production ready solution satisfies the requirements and works correctly)</p>	60 business days from acceptance of updated IRSS Plan
5	7.2	Deliver User guide to Project Authority	60 business days from acceptance of updated IRSS Plan
6		Provide Subscription based access to the cloud hosted production ready REP solution for 200 users, including maintenance and support services	10 business days from acceptance of final REP solution
7		Deliver training based IRSS Plan	As identified in the Contract

## **Annex A Statement of Work**

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### **8.4 Review and Acceptance of all deliverables provided by the Contractor**

Final acceptance of all deliverables, including the production ready REP solution, will occur when all discrepancies, errors or other deficiencies identified by the Project Authority have been addressed by the Contractor and approved by the Project Authority.

### **9. Reporting Requirements**

The Contractor must provide weekly status reports to the Project Authority in English in MSword outlining progress for the given period, any issues or considerations and upcoming milestones.

### **10. Client Support**

The Project Authority (i.e., Canada School of Public Service) will be responsible for supporting the coordination of the overall project, providing as-required direction and guidance to the Contractor, and accepting and approving deliverables on behalf of the project Steering Committee.

The Project Authority will ensure that appropriate subject matter experts from federal departments and agencies, via the PUG, are available to the Contractor as required, to provide input, answer questions, evaluate deliverables for acceptance and participate in meetings to enable the Contractor to proceed on schedule with the completion of all required deliverables.

As required, CSPS will provide ongoing timely support to the Contractor within the scope of the statement of work.

The CSPS will make facilities available for web based training purposes.

### **11. Meetings**

Kick-off meetings (in person or via teleconference) will be held for Stages II and III of the project, with 30 minute meetings every two weeks (calls or in-person) between the Project Authority and the Contractor. In addition to the bi-weekly meetings with the Project Authority, the Contractor must be available to meet during Stage III with the Steering Committee on a monthly basis via teleconference to provide brief updates on the project and discuss any issues (current or anticipated).

Meetings with members of the PUG will be held in person or via teleconference.

### **12. Location of Work**

Training and project review meetings may be conducted by teleconference.

### **13. Official Language Requirements and Language of Work**

The primary language of work will be in English and all reports, technical documents and project updates must be provided in English.

## **Annex A Statement of Work**

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The prototype REP solution and the interface for the prototype solution (i.e., interface used by users) must be in English. The final REP solution, including the interface, must comply with relevant policies of the Government of Canada Official Languages Act and the Directive on Official Languages for Communications and Services.

The solution must allow all users to work in both of Canada's official languages (English and French). Refer to the following websites for a description of the Directive on Official Languages for Communications and Services:

- a. <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=26164>
- b. <http://www.tbs-sct.gc.ca/pol/doc-fra.aspx?id=26164>

### **14. Travel and Living**

Travel is not mandatory for this Work. Therefore, travel and living expenses will not be reimbursed under any resulting Contract.

# ANNEX B

## REGULATORY EVALUATION PLATFORM (REP) EVALUATION PROCEDURES AND BASIS OF SELECTION (PART 4 IN RFP TEMPLATE)

### 4.1 Evaluation Procedures and Basis of Selection

- (a) Bids will be assessed in accordance with the Stages of Evaluation detailed below.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids for Stage 1 (Bidder's RFP Proposal) and Stage 2 (Contractor's REP Solution Prototype).

### 4.2 Stages of Evaluation

Title	Reference	Description	Evaluation
Stage 1 – Evaluation of Bidder's RFP Proposal	Section 1.1	Mandatory Technical Criteria	Pass / Fail
	Section 1.2	Point Rated Technical Criteria	Score/60
	Attachment 1 to Part 4 – Section 1.3 and Part 3 – Section II: Financial Bid	Mandatory Financial Criteria	Pass / Fail
Stage 2 – Evaluation of Contractor's REP Solution Prototype	Section 2.1	Mandatory Technical Solution Criteria	Met/Not Met
	Section 2.2 (i)	Point Rated Technical Solution Criteria	Score / 35
	Section 2.2 (ii)	End User Usability Assessment	Average Score / 15
Final Stage – Solution delivery	Section 2.3 and Part 3 – Section II: Financial Bid	Mandatory Financial Criteria and Maximum Budget	Met/Not Met
		Acceptance of Solution	

# ANNEX B

## 4.2.1 Stage 1: Evaluation of Bidder's Proposal

Bidder's proposals will be evaluated by Canada against the criteria detailed at section 1.0 of Attachment 4.1

### 4.2.1.1 Basis of Selection

To be declared responsive, a bid must:

- a) comply with all the requirements of the bid solicitation;
- b) meet all mandatory technical requirements stipulated in section 1.1 of Attachment 4.1;
- c) obtain the required minimum of 36 points overall for the technical evaluation criteria stipulated in section 1.2 of Attachment 4.1 which are subject to point rating. The rating is performed on a scale of 60 points;
- d) meet the mandatory financial criteria stipulated in section 1.3 of Attachment 4.1;

Bids not meeting a), b), c), or d) will be declared non-responsive.

Bids will be ranked by score from highest to lowest, provided that the total evaluated price does not exceed the budget available for this requirement. Canada may award up to three (3) contracts with a value of up to \$88,495.57 each, applicable taxes extra, to undertake Stage II of the work as defined in Annex A, Statement of Work, to the top three (3) ranked Bidders.

In the event a Bidder withdraws their bid, or the bid is set aside, Canada will offer the next highest ranked bidder a contract.

In the event of a tie score(s) that impacts the ranking, the Bidder with the lower bid price for Stage II work detailed in Attachment 1 to Part 3, Pricing Schedule, will be awarded the contract.

In the event that more than one responsive bid have the same number of points and have the same total evaluated price for Stage II work, the bid that received the highest score for point-rated technical criterion RT1 will be awarded the contract.

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### 4.2.2. Stage 2: Evaluation of Contractor's REP Solution Prototype

The Contractor's REP solution prototype will be evaluated by Canada against the criteria detailed in section 2.0 and assessed by the Project User Group (PUG).

#### 4.2.2.1 Basis of Selection

To be declared responsive, the Contractor's REP solution prototype must:

- a. meet all the mandatory technical solution criteria detailed at section 2.1 of Attachment 4.1; and
- b. obtain the required minimum of 21 points for the point-rated technical solution criteria detailed at section 2.2 (i) of Attachment 4.1. The rating is performed on a scale of 35 points

A Contractor's REP solution prototype not meeting (a) or (b) will be declared non-responsive and will be given no further consideration in the evaluation process.

The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60% for the technical merit and 40% for the price.

To establish the technical merit score, the total score for the technical solution criteria will be based on:

- (i) the average score for end user assessment; and
- (ii) the total score of assessment of IRSS plan for each responsive Contractor's REP solution prototype. The technical merit score will be multiplied by the ratio of 60%. (45% for the technical solution evaluation + 15% for the PUG assessment).

To establish the pricing score, each responsive Contractor's REP solution prototype will be prorated against the lowest evaluated price using a ratio of 40%.

For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

Neither the responsive Contractor's REP solution prototype obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted.

The responsive Contractor's REP solution prototype with the highest combined rating of technical merit and price will be recommended for award of a contract.

Here is an example of a Basis of Selection – Highest Combined Rating of Technical Merit (60%) and Price (40%) for demonstration purposes only.

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### Highest Combined Rating of Technical Merit (60%) and Price (40%)

	Prototype A	Prototype B	Prototype C
<b>(i) Total Score for Technical Solution Criteria</b>	30/35	23/35	25/35
<b>(ii) Average Score for End User Assessment (b)</b>	13/15	10/15	11/15
<b>Combined Technical Score (i) + (ii)</b>	43/50	33/50	36/50
<b>Bid Evaluated Price</b>	\$55,000.00	\$50,000.00	\$45,000.00 *
<b>Calculations</b>	<b>Technical Merit Score (i) + (ii)</b>	$33/50 \times 60 = 39.60$	$36/50 \times 60 = 43.20$
	<b>Pricing Score</b>	$45/50 \times 40 = 36.00$	$45/45 \times 40 = 40.00$
<b>Combined Rating</b>	84.32	75.60	83.20
<b>Overall Rating</b>	1st	3rd	2 <sup>nd</sup>

\* Lowest Evaluated Price

# ANNEX B

## Attachment 4.1 EVALUATION CRITERIA

### 1.0 STAGE 1: EVALUATION OF BIDDER'S PROPOSAL

#### 1.1 Mandatory Technical Criteria

The bid must meet all the mandatory technical criteria specified below.

Bids which fail to meet all the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

<b>Mandatory Technical Criteria (MT)</b>			
<b>Number</b>	<b>Mandatory Technical Criterion</b>	<b>Bid Submission Requirement</b>	<b>MET/NOT MET</b>
<b>MT1</b>	The Bidder must demonstrate its experience, as a prime or sub-contractor, in the application of artificial intelligence (AI) technology services – insights and predictive modeling including natural language processing, text analytics and synthesis of structured and unstructured data.	In order to demonstrate this experience, the Bidder must provide written summaries of two (2) similar projects (i.e., insights, predictive modelling, application of natural language processing, text analytics and syntheses of structured and unstructured data) they have delivered within the past five (5) years (60 months) from date of bid closing.  Within each project summary, the Bidder MUST provide the following information:	

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		<ol style="list-style-type: none"> <li>1. Name of client and brief description of project;</li> <li>2. Brief description of the type and scope of services provided, methodology used and results;</li> <li>3. Brief description of the role the Bidder played in providing these services (was the Bidder the Prime contractor or a sub-contractor on the project);</li> <li>4. Duration of the project, including the start and end dates (month/year to month/year);</li> <li>5. Extent to which these services were provided on-time, on-budget and in accordance with the established project objectives; and</li> <li>6. Name, telephone number and/or email address of the client reference to whom the Bidder reported. The contact information may be used to validate the information provided.</li> </ol>	
<p><b>MT2</b></p>	<p>The proposed solution must enable search and identification of comparable regulations that apply to user-specified parameters at the 1) federal level (across departments or</p>	<p>The Bidder must detail proposed methodologies for search and identification of comparable regulations that apply at the federal level and cumulatively across jurisdictions (i.e., foreign,</p>	

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	agencies) and 2) cumulatively across jurisdictions (i.e., foreign, federal, and provincial/territorial).	federal, and provincial/territorial).	
<b>MT3</b>	The proposed solution must enable users to extract, compile and visually map regulatory requirements, outdated regulations or requirements and the level of regulatory burden for identified industry or sectors (e.g. by NAICS code), or groups of stakeholders)	The Bidder must detail proposed methodologies to extract, compile and visually map regulatory requirements, outdated regulations or requirements and the level of regulatory burden for identified industry or sectors (e.g. by NAICS code), or groups of stakeholders)	
<b>MT4</b>	The proposed solution must enable users to import and combine multiple sources of information and data (i.e., beyond the text of the regulations) that would, when combined with regulatory text, yield insight into the effectiveness of regulations in achieving their stated objectives.	The Bidder must detail an approach or methodology to enable users to import and combine multiple sources of information and data (i.e., beyond the text of the regulations) that would, when combined with regulatory text, yield insight into the effectiveness of regulations in achieving their stated objectives.	
<b>MT5</b>	The solution must have the functionality to conduct supervised learning and the ability to insert comments, commentary or “tag” data elements as indicated by users.	The bidder must detail the mechanisms and/or approach that would provide the functionality to conduct supervised learning and the ability to insert comments, commentary or “tag” data elements as indicated by users;	

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<b>MT6</b>	The proposed solution must provide notifications to the REP users on changes to Acts and regulation(s) as defined by the user.	The Bidder must detail the approach and methodology to create the functionality in the solution that will provide notifications to the REP users, as defined by the user.	
<b>MT7</b>	The proposed solution must be a cloud-based solution, hosted by the bidder.	The Bidder must clearly demonstrate this by providing documentation.	

### 1.2 Point Rated Technical Criteria

Bids will be evaluated and scored as specified in the table inserted below. Each point rated technical criterion should be addressed separately.

Bids which fail to obtain the overall minimum required score specified below will be declared non-responsive, and will be given no further consideration in the evaluation process.

<b>Point Rated Technical Criteria (RT)</b>		<b>Maximum Points</b>
<b>Number</b>	<b>Rated Technical Criterion</b>	<b>Evaluation Criteria</b>
<b>RT1</b>	<p><b>Approach and Methodology</b></p> <p>The Bidder should provide details of the proposed technical approach and methodology that</p>	<p>Points will be allocated as follows:</p> <ol style="list-style-type: none"> <li>1. Bidder provided detailed description and rationale of algorithms to be applied in their</li> </ol>
	<b>Bid Submission Requirement</b>	<b>40</b>
	<p>The bidder should demonstrate this by providing:</p> <ol style="list-style-type: none"> <li>a. the technical approach and methodology</li> </ol>	

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	<p>identifies patterns, trends and insights for regulatory analysis.</p>	<ul style="list-style-type: none"> <li>b. sources and risks of potential bias and how they are mitigated</li> <li>c. mechanisms to minimize risk of errors or incorrect results</li> <li>d. use of open source software and provide explanation of integration into overall solution</li> <li>e. potential ethical considerations and risks, and how they would be addressed</li> </ul>	<p>methodology. 0, 5 or 10</p> <ul style="list-style-type: none"> <li>2. The bidder detailed sources and risk of potential bias in the methodology and how the risk(s) would be mitigated? (0, 5 or 10)</li> <li>3. The Bidders detailed sources and risk of potential error and how they could be mitigated (0, 5 or 10 points)</li> <li>4. The Bidder provided explanation of the use of Open source software that would be used and its integration in to overall solution? (0 or 5 points)</li> <li>5. The bidder described ethical considerations and identified measures to mitigate them. If no ethical risks or considerations are identified, a clear rationale or justification is provided. (0, 3 or 5 points)</li> </ul>	
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<p><b>RT2</b></p>	<p>The Bidder should demonstrate it has the capacity and experience to develop and deliver the proposed REP solution and carry out the work as described in the Statement of Work.</p>	<p>Bidders are requested to provide a Draft Project Plan which should include:</p> <p>A) Team member allocation that clearly defines roles and responsibilities assigned to each member of the Bidders project team AND is supported by detailed description of the proposed resources' qualifications and project experience.</p>	<p>Points will be allocated as follows:</p> <ul style="list-style-type: none"> <li>• Bidder's response explains the proposed resources roles and how they will be organized to meet deliverables and provide documentation to substantiate resource project experience in insights, predictive modelling, and application of natural language processing, text analytics and syntheses of structured and unstructured data? (0, 5, or 10 points)</li> <li>• Bidders response describes their approach to project management including liaising and reporting to client (Project Authority) (0-10 points)</li> </ul>	<p style="text-align: right;"><b>20</b></p>
<p>Total of all the Point Rated Technical Criteria:</p>	<p>60</p>			
<p>Overall Minimum required score to obtain is:60 % or 36 points</p>				

# ANNEX B

## 1.3 Mandatory Financial Criteria

Bids must meet the mandatory financial criteria specified in the table inserted below.

Bids which fail to meet the mandatory financial criteria will be declared non-responsive. Each criterion should be addressed separately.

The maximum funding available for the Phase II work as identified in Annex A of the Contract resulting from the bid solicitation is \$88,495.57 (Canadian Funds, Applicable Taxes extra) Bids valued in excess of this amount will be declared non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

<b>Mandatory Financial Criteria (MF)</b>		
<b>Number</b>	<b>Mandatory Financial Criterion</b>	<b>Referenced Section/Page in Bidder's Proposal</b>
<b>MF1</b>	The total cost of the Bidder's financial proposal for Phase II work, must not exceed \$88,495.57 (Canadian funds, Applicable Taxes extra).	

## 2.0 Stage 2 – EVALUATION OF CONTRACTOR'S REP PROTOTYPE SOLUTION

### 2.1 Mandatory Technical Solution Criteria

The Contractor's REP prototype solution must meet all the mandatory technical criteria specified below. The Contractor must provide the necessary documentation to support compliance with this requirement.

A Contractor's REP prototype solution which fails to meet all the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

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<b>Mandatory Technical Solution Criteria (MTS)</b>	
<b>Number</b>	<b>Mandatory Technical Solution Criterion</b>
<b>MTS-1</b>	The REP prototype solution must have the functionality to build and derive outputs from a database of foreign, federal, and provincial/territorial regulations.
<b>MTS-2</b>	The REP prototype solution must provide REP users the functionality to search and identify comparable regulations that apply to user-specified parameters at: <ul style="list-style-type: none"> <li>1) federal level (across departments or agencies); and</li> <li>2) cumulatively across jurisdictions (i.e., foreign, federal, provincial/territorial).</li> </ul>
<b>MTS-3</b>	The REP prototype solution must provide the functionality to enable REP users to insert comments, commentary or “tag” data elements identified in queries.
<b>MTS-4</b>	The REP prototype solution must include all analytical module(s) required to enable REP users to cluster, classify, pattern and apply semantic analysis in order to identify outdated regulations or requirements, and in accordance with the sample use cases.
<b>MTS-5</b>	The REP prototype solution must include all analytical module(s) required to enable REP users to extract, compile and visually map regulatory requirements and the level of regulatory burden for identified industry sectors (e.g. by NAICS code), in accordance with the sample use cases.
<b>MTS-6</b>	The REP prototype solution must include all analytical module(s) required to import and combine multiple sources of information and data (i.e., beyond the text of the regulations) that, when combined with regulatory text, yield insight into the effectiveness of regulations in achieving their stated objectives (such as, applying machine readable text and other inputs from a variety of sources that could provide context or indicators of the impact on regulated parties, stakeholders and the public), and in accordance with the sample use cases.
<b>MTS-7</b>	The REP prototype solution must have the functionality to provide notifications to the REP user on changes to regulation(s) as defined by the user.
<b>MTS-8</b>	The REP prototype solution must include a GUI interface (in English) to apply user-defined parameters for the measures of flexibility, prescriptivity or outdated regulations.

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<b>MTS-9</b>	The Contractor's REP prototype solution must confirm objectives and minimize user impact, and must: based on the use cases, return accurate results and outputs using the data identified in section 6.2 and 6.3 of the Statement of Work
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# ANNEX B

## 2.2 Point Rated Technical Solution Criteria

Each bid will be rated by assigning a score to the rated requirements, which are identified in the bid solicitation by the word "rated" or by reference to a score. Bidders who fail to submit complete bids with all the information requested by this bid solicitation will be rated accordingly.

### (i) IRSS Plan Technical Assessment Criteria

<b>Point Rated Requirements</b>			
Additional Development Required to Meet Requirements			
RT1	<p>The <i>REP</i> solution prototype should require minimal additional development to meet the requirements and tasks identified in the Statement of Work.</p>	<p>The IRSS plan must identify whether <i>REP</i> solution prototype requires additional development in terms of methodologies or modules to conduct analysis and to meet the requirements and tasks identified in the Statement of Work</p> <p>All outstanding development to ensure that the solution not only meets requirements, but is integrated and fully useable must be detailed in the Implementation, Release and Support Service Plan</p>	<p>The IRSS plan must clearly outline any additional development to ensure a fully functional integrated solution that meets the requirements.</p>
			<p>10 pts – Excellent – prototype fully meets requirements -no additional development would be required to meet the requirements outlined in the Statement of Work, with the exception of refinements to the interface and user resources as part of scale up the project.</p> <p>5 pts – Good – prototype addresses requirements but additional development is need to ensure full functionality and effectiveness to meet the needs of users.</p> <p>0 pts – Poor – Although requirements are met, significant development time and resources</p>

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RT2	<p>The Contractors should identify any new methodologies or techniques that could be applied to the final solution that would enhance the user experience and effectiveness of the solution while remaining within the parameters and deliverables for the contract</p>	<p>The REP solution should detail any additional functions or innovative new features that could be undertaken to improve insights generated and the overall effectiveness of the solution within the remaining budget and parameters of the contract.</p>	<p>The IRSS plan must detail additional functionality or improvements that could be undertaken and how it would improve the effectiveness of the solution.</p>	<p>and resources are required to finalize the solution</p> <p>5 pts – Additional functionalities presented with a rationale for inclusions and how they would be integrated into Stage III process.</p> <p>0 pts – No additional functionality provided or lacked detail on integration into the Stage III process.</p>
RT3	<p>Stage III project management plans must clearly detail how users and the Project Authority will be engaged, including allocation of resources, to ensure that the final solution meets their needs.</p>	<p>The IRSS plan must detail the Stage III project management approach and allocation of resources, including detailed plans for engaging users (i.e. Project User Group representatives) to ensure that the final solution meets their needs.</p>	<p>The IRSS plan must clearly outline project management plans and how they will ensure that the final solution meets user needs.</p>	<p>20 pts – Excellent – Project management plan fully details processes, mechanisms and plans to engage users and coordination with the Project Authority</p> <p>10 pts – Adequate – Project management plan outlines a plan to engage users and coordination with the Project Authority, but lacks key details on processes, mechanisms.</p> <p>0 pts – Project management plan was not provided</p>

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A Contractor's REP prototype solution which fails to obtain the overall minimum required score specified below will be declared non-responsive, and will be given no further consideration in the evaluation process.

### (ii) End User Technical Assessment Criteria

The Contractor's REP prototype solution will be evaluated and scored by a team of users and based on the Contractor's test cases and Canada's use cases (Annex C).

The Contractor's REP prototype solution will be tested and scored as specified in the End User Assessment Scoring Sheet specified in Appendix 1 to Attachment 1 to Part 4. The rating is performed on a scale of 15 points.

Twenty (20) Project User Group members (users) will test the REP solution prototype, in a controlled environment, using common use cases and contractor test case scenarios that will be applied by the testers.

The Total Score Achieved by each tester on their Scoring Sheet will be added together, then divided by twenty (20) to achieve an Average Score for End User Assessment.

The Average Score for End User Assessment will be added to the Contractor's Total Score Achieved for the Point Rated Technical Solution Criteria to achieve the Overall Technical Score using the equation below.

45% of the Overall Technical Score will be allocated for the technical evaluation and 15% of the Overall Technical Score will be allocated for the End User Assessment.

### REP Prototype Solution Stage II End User Assessment Scoring Sheet

<b>End User Name (First and Last)</b>	
<b>Department and Branch</b>	
<b>Email Address</b>	

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<b>REP Solution Prototype Assessed (Bidder Name and Solution Name)</b>	
<b>Date</b>	

<b>Point Rated Requirements</b>			
Usability and Design of the User Interface			
<b>RT1</b>	<p>The REP solution interface should provide the functionality to be able to conduct analysis required for the use case's and generate insights with 'Ease of Use'.</p> <p>Examples of 'Ease of Use':</p> <ol style="list-style-type: none"> <li>a. Solution is intuitive in nature for users to find and manipulate data and information, insert tags or comments, generate reports, charts and tables and save results, having features such as Drag and Drop, and is Event driven.</li> </ol>	<p>The overall design and layout of the REP solution interface for analysis and generating insights should be clear, simple and use design features and symbols that are intuitive to USERS.</p> <p>The interface to conduct analysis and compile results based on the case should induce the viewer to think about the substance and analytical or reporting task at hand.</p> <p>The design of the interface and various layers or modules should:</p> <ol style="list-style-type: none"> <li>a. Have good contrast, repetition, alignment and proximity between elements</li> <li>b. Have elements that are well defined</li> </ol>	<p>The solution should demonstrate this in the Test Case and user guide documentation.</p> <p>The Bidder will also have the opportunity to describe their overall design in their Implementation, Release and Support Service Plan and explain their rationale for the prototype design and future improvements or enhancements that could be undertaken.</p>
			<p>60 pts – Excellent – Innovative, intuitive, clear display, easy to interpret, allows USERS to easily complete use cases</p> <p>45 pts – Very Good – intuitive, clear display, easy to navigate but requires effort to complete certain tasks required to complete the use case, <i>USERS</i> can generate insights, but not necessarily intuitive or innovative in all aspects</p> <p>30 pts – Good – Clear display, not intuitive, not innovative, import, analytical and visualization information are not easily accessible or navigable but <i>USERS</i> can answer questions but takes time and effort</p> <p>15 pts – Poor – Not intuitive, display is not clear, <i>USERS</i> cannot generate or derive insights easily and takes significant time and effort to complete use cases</p>

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RT2	<p>b. Features are simple to access and operate.</p> <p>c. Solution provides a feature for users, to operate in an administrator or end user mode.</p>	<p>c. Have elements that are well populated</p> <p>d. Have user controls that are easy to understand, interpret and use</p> <p>e. Use a font that is well suited to the application</p> <p>f. Avoid distorting what the data has to say</p> <p>g. Maintain readability while presenting many numbers or text in a small space</p> <p>h. Encourage the eye to compare different pieces of data</p> <p>i. Reveal the data at several levels of detail, from a broad overview to the fine structure</p> <p>j. Provide <i>USERS</i> with Information that can be easily identified</p> <p>k. Provide <i>USERS</i> with help features that are simple to access</p>	<p>The solution should demonstrate this in the Test</p>	<p>based on the software scripts and guides provides</p> <p>0 pts – Not Met – Design does not meet minimum design requirements and cannot complete use cases.</p>
	Ease of Use Functionality for	The REP solution should provide the functionality to		10 pts – Fully meets – solution is fully intuitive and users can easily

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	visualization and report generation Requirement	<p>all users to produce summary graphs, charts and reports with 'Ease of Use'.</p> <p>Examples of 'Ease of Use':</p> <ol style="list-style-type: none"> <li>a. Solution is intuitive in nature for users, having features such as Drag and Drop, Highlight to select and results with one or two-clicks.</li> <li>b. Drop-down menus or navigation bars are simple to access and operate.</li> <li>c. Solution provides a feature for users to format and print charts, tables and any other elements and associated functionality as described in the Statement of Work</li> </ol>	Case and user documentation.	<p>generate charts, summary reports an output.</p> <p>5 pts – Partially meets – user was able to produce summary charts and reports but process was not intuitive and cannot be completed without use of script and guides.</p> <p>0 pts – Not met – solutions failed to generate summary graphs, outputs and charts.</p>
Importing and Tagging Data Sets and Provisions				
RT 3	Ease of use in importing data	The REP solution prototype should ingest a range of data sets from various federal departments and	The solution should demonstrate the functionality to enable the user to import use case data using the Test Case	10 pts – The solution is able to use ingest data provided in the use case when the instructions were followed without difficulty.

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		agencies easily with a low level of effort required	and user guide provided by the Contractor	<p>5 pts – The user was able to ingest data in the use case but required multiple steps for data transformation and import was required resulting in a moderate level of effort,</p> <p>0 pts – The solution was unable to import the use case data.</p>
RT4	Supervised learning, inserting of tags and comments	The <i>REP</i> solution must provide USERS with the ability to engage in supervised learning easily, including inserting of tags and comments to improve the efficiency and effectiveness of results over time. .	The solution should demonstrate this in the Test Case and user documentation	<p>10 pts – The solution is able to allow users to review and insert comments on regulations or acts when the instructions in the script for use case were followed, and without difficulty.</p> <p>5 pts – The user was able to insert comments but required multiple steps and a more involved procedure was required resulting in a moderate level of effort,</p> <p>0 pts – The solution was unable to allow supervised learning or insertion of comments.</p>

<b>Overall Minimum Required Score to Obtain is: 60 % or 54 points</b>	
<b>Total Score Achieved for the Point Rated Technical Solution Criteria</b>	

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### 2.3 Mandatory Financial Criteria

Bids must meet the mandatory financial criteria specified in the table inserted below.

Bids which fail to meet the mandatory financial criteria will be declared non-responsive. Each criterion should be addressed separately.

The maximum funding available for Stage II work (\$88,495.57) and III work (\$221,238.93) Optional Services) as identified in Annex A of the Contract resulting from the bid solicitation is \$221,238.93 (Canadian Funds, Applicable Taxes extra). Bids valued in excess of this amount will be declared non-responsive. This disclosure does not commit Canada to pay the maximum funding available.

<b>Mandatory Financial Criteria (MF)</b>		
<b>Number</b>	<b>Mandatory Financial Criterion</b>	<b>Referenced Section/Page in Bidder's Proposal</b>
<b>MF2</b>	The total cost of the Bidder's financial proposal for Phase III work (Optional), must not exceed \$221,238.93 (Canadian funds, Applicable Taxes extra).	

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### REGULATORY EVALUATION PLATFORM – USE CASES FOR REQUIRED SOLUTION

*The following use cases must be demonstrated in the Stage II usability assessment and will be scored based on the evaluation criteria.*

<u>Category</u>	<u>Use Case – Context/Challenge/Required Solution</u>
<p><b>1.Characteristics and prioritization based on key attributes</b></p> <p>The solution must: 1) Compile information on individual regulations 2) Prioritize regulations for modernization based on presence or predominance of attributes of interest to users.</p>	<p><u>Context:</u> Identifying overlapping, outdated or burdensome regulations is a key responsibility of all regulators. However, departments responsible for a large number of regulations that need to be modernized may not have the resources or time required to amend all of them at the same time. As such, revisions or updates must be prioritized.</p> <p><u>Challenge:</u> Regulators consider a number of criteria when determining whether and when a particular regulation will be revised and in what order, including mitigating health and safety risks, improving socio-economic outcomes, political priorities, legal risks, stakeholder support/opposition etc. While some of these factors may be more difficult to determine with AI, analytics and machine learning may be appropriate and effective in evaluating the complexity of the regulation, alignment with relevant international regulations, overlap with similar provincial regulations, level of prescriptively, and whether specific sections of regulations have been subject to court challenges.</p> <p>Some departments such as Innovation Science and Economic Development (ISED) have a large diverse portfolio (i.e., 16 organizations with responsibility for approximately. 57 Acts and 139 regulations) spanning bankruptcy, consumer affairs, copyright, investment, industrial design, national security, not-for-profit corporations, patents, telecommunication, internal trade, trademarks, and weights and measures, among others. ISED is also responsible for approximately 22 service standards for high-volume regulatory authorizations. A REP solution would help regulators within ISED take better stock of the department’s regulations and support priority setting, including from the perspective of: the prescriptiveness of ISED’s Acts and Regulations; their currency or outdatedness; their alignment with the regimes of Canada’s trading partners; and their complexity.</p> <p><b><u>TEST CASE SCENARIO</u></b></p> <p><i>1.0</i> Functionality Assessed</p> <p>Design and build analytical module(s) that enable users to:</p> <ol style="list-style-type: none"> <li>1. Cluster, classify, pattern and apply semantic analysis in order to identify outdated regulations or requirements</li> <li>2. Conduct analysis on characteristics, trends and impacts of a regulation or group of regulations and information based on user-identified parameters.</li> </ol>

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	<p>The user must be able to complete the following tasks:</p> <ol style="list-style-type: none"><li>3. Identify and compile information on the age, prescriptivity, use of conflicting, overlapping or outdated terminology, links to other regulations; and</li><li>4. Prioritize regulations for modernization based on user defined filters and settings for the prevalence of the above required characteristics based on a recommended methodology provided by the bidder.</li><li>5. Engage in supervised learning and data labelling in accordance with use case #6.</li></ol> <p>2.0 Test case requirements (mandatory) to be assessed</p> <p>Part A – ISED Case</p> <ol style="list-style-type: none"><li>6. Find all 139 regulations under the purview of ISED (as provided in the data sources 3.0) among the federal stock (2600 regulations)</li><li>7. Compile metrics on the ISED regulations compared to the broader federal regulatory stock in terms of number of regulations that have been updated within the last 5 years, 10, 25, or more than 25 years since update.</li><li>8. Generate a rank order list of the 139 regulations in terms of priority for potential modernization that considers age, prescriptivity, use of conflicting, overlapping or outdated terminology based upon the bidders suggested methodology</li><li>9. Provide user ability to alter the list of priority regulations for modernization by manipulating user defined filters or settings for the methodology provided by the bidder.</li><li>10. Provide user the ability to label a data set with given text or information to demonstrate data labelling and supervised learning capability as required in use case #6.</li><li>11. Save the “queries” for future use</li><li>12. Generate tables summarizing results of the above analysis</li><li>13. Generate a network graph visualizing linkages between the 139 ISED regulations and the overall stock of 2600 federal regulations</li><li>14. Generate an output file for above analysis for import into MS Excel</li></ol> <p>Part B – ECCC Case</p> <ol style="list-style-type: none"><li>15. Find all 78 regulations under the purview of ECCC (as provided in the data sources 4.0) among the federal stock (2600 regulations)</li><li>16. Compile metrics on the ECCC regulations alone as well as compared to the broader federal regulatory stock in terms of the number and name of the regulations that have been updated within the last 5 years, 6-10, 11-25, or more than 25 years since last update</li><li>17. Generate a rank order list of ECCC regulations in terms of priority for potential modernization that considers age, prescriptivity, use of conflicting, overlapping or outdated terminology based upon the bidders suggested methodology.</li><li>18. Provide user ability to alter the list of priority regulations for modernization by manipulating user defined filters or settings for the methodology provided by the bidder</li><li>19. Provide user ability to search across ECCC regulations and categorize them by a number of different features and characteristics to be defined by the user [e.g. chemical/substance/species name, age of regulation, type of regulation,</li></ol>
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	<p>reporting/permitting requirements, type of environmental and risk management objective (e.g. air emissions, water effluent, land-based releases), geographic location, target dates, sector impacted, etc.]</p> <ol style="list-style-type: none"> <li>20. Provide user ability to search ECCC’s stock of regulations to find user-identified regulatory text and in the results display the actual paragraph of the regulation in which the words were found</li> <li>21. Provide user the ability to label a data set with given text or information to demonstrate data labelling and supervised learning capability as required in use case #6.</li> <li>22. Save the “queries” for future use</li> <li>23. Generate separate tables summarizing the results of the above analysis (items 3, 4, and 5)</li> <li>24. Generate network graphs visualizing linkages between the stock of ECCC regulations alone and as well as with the overall stock of 2600 federal regulations</li> <li>25. Generate output files for the above analysis for export into MS Excel</li> </ol> <p>3.0 Data Sources and Information</p> <ol style="list-style-type: none"> <li>26. See statement of work 6.2 and 6.</li> <li>27. <a href="http://www.ic.gc.ca/eic/site/017.nsf/eng/h_07615.html">Departmental Results Report 2017-18</a> (<a href="http://www.ic.gc.ca/eic/site/017.nsf/eng/h_07615.html">http://www.ic.gc.ca/eic/site/017.nsf/eng/h_07615.html</a>)</li> <li>28. <a href="https://www.ic.gc.ca/eic/site/020.nsf/eng/home">ISED Acts and Regulations</a> (<a href="https://www.ic.gc.ca/eic/site/020.nsf/eng/home">https://www.ic.gc.ca/eic/site/020.nsf/eng/home</a>) (including forward regulatory plan, service standards, interpretation policy an administrative burden baseline)</li> <li>29. <a href="https://www.ic.gc.ca/eic/site/icgc.nsf/eng/home">ISED website and links to regulatory portfolio partners etc.</a> (<a href="https://www.ic.gc.ca/eic/site/icgc.nsf/eng/home">https://www.ic.gc.ca/eic/site/icgc.nsf/eng/home</a>)</li> <li>30. Final report: Economic Strategy Tables <a href="https://www.ic.gc.ca/eic/site/098.nsf/eng/h_00020.html">Seizing Opportunities for Growth</a> (<a href="https://www.ic.gc.ca/eic/site/098.nsf/eng/h_00020.html">https://www.ic.gc.ca/eic/site/098.nsf/eng/h_00020.html</a>)</li> <li>31. <a href="https://www.canada.ca/content/dam/tbs-sct/images/reports/frmi-ifgr/frmi-ifgr-eng.pdf">TBS annual report to Parliament</a> (<a href="https://www.canada.ca/content/dam/tbs-sct/images/reports/frmi-ifgr/frmi-ifgr-eng.pdf">https://www.canada.ca/content/dam/tbs-sct/images/reports/frmi-ifgr/frmi-ifgr-eng.pdf</a>) (start on page 29, administrative burden counts)</li> <li>32. <a href="https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/guidelines-tools.html">Cabinet Directive on Regulations: Policies, guidance and tools</a> (<a href="https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/guidelines-tools.html">https://www.canada.ca/en/treasury-board-secretariat/services/federal-regulatory-management/guidelines-tools.html</a>)</li> <li>33. Summary Fall Economic Statement - Government of Canada Regulatory Modernization Commitments (attached)</li> </ol>
<p><b>2. Consequential impacts</b></p> <p>Consequential impacts of proposed amendments and linkages among regulations</p>	<p><u>Context:</u> Proposed amendments to existing legislation or regulation often result in consequential amendments. These are amendments that have to be made to another part of the regulation or to a completely different regulation as a result of the original intended amendment.</p> <p><u>Challenge:</u> Determining the impact of a particular regulatory change on other regulations can be tedious and time consuming task, subject to human error, and requires that individuals have some knowledge or expertise on how different regulations are interrelated. Prior to making a change to the definition of a word, analysts must assess all the instances of where that word is used, including the context within which it was used, as well as whether other regulations reference sections of the regulation that use that word. This</p>

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process may have to be repeated to ensure that this consequential change does not trigger further changes in other areas. This process would have to be repeated until all impacted regulations have been identified.

For example, many regulations and statutes rely on terms defined in other regimes (e.g. “environment” as defined in CEPA, 1999, “airport” as defined in the Aeronautics Act, etc.). Many other regimes rely on broader concepts established in other regulations or Acts (e.g. Regulation/Act X applies to an operator or facility that is subject to the regime in Regulation/Act Y)

### **TEST CASE SCENARIO**

#### *1.0* Functionality Assessed

Apply machine learning, natural language processing to search and find user-identified regulatory text or specific regulations and related or relevant regulations according to user-defined themes and queries.

The solution must allow user to conduct analysis on use of specific words and terms (as identified by the user), to identify whether other regulations use that same term and if it has been defined differently or used differently in other areas, etc. Moreover, the solution would allow the user, when considering removing or modifying a section of a regulation, to figure out what other provisions in the statute book (i.e. the various acts and regulations taken together) apply to the same activity or subject to which the provision being amended applies.

- Test case requirements (mandatory) to be assessed
- Find all references to words “environment” and “airport” (i.g. test case words) among the federal stock (2600 regulations)
- Provide user the ability to label a data set with given text or information to demonstration data labelling and supervised learning capability as required in use case #6
- Save the “queries” for future use
- Compile a tabular report listing all references to the test case words by regulation and the actual paragraph within which the words were used.
- Generate a network graph visualizing linkages between regulations that used the test case words.
- Generate an output file for above analysis for import into MS Excel.

#### *3.0* Data Sources and Information

- See statement of work 6.2 and 6.

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<p><b>3. Cumulative Impacts</b></p> <p>Cumulative burden and impacts</p>	<p><u>Context:</u></p> <p>Mapping cumulative burden (i.e. cost and administrative impact) across jurisdictions has been a long-standing challenge for regulators. Canada-wide, many businesses operate multiple business lines, spanning many sectors (NAICs codes), various regions and jurisdiction (foreign, federal, provincial-territorial (FFPT)).</p> <p><u>Challenge:</u></p> <p>Gaining a greater understanding of the cumulative impact of regulations and impacts on innovation and growth is time and labour intensive, requiring significant engagement of federal departments, other jurisdictions, and research and analysis of disparate sources (e.g., Department of Justice website, Treasury Board of Canada Secretariat (TBS) and departmental websites).</p> <p>In the Agrifood-Agriculture space, for example, approximately 28 Acts and 246 regulations fall under the purview of Agriculture and Agri-Food Canada and the Canadian Food Inspection Agency, although some experts estimate that there are upwards of 130,000 federal requirements that potentially impose an administrative and cost burden on business. Moreover, Statistics Canada estimates that Ontario alone oversees more than 380,000 regulations. Improving understanding cumulative interjurisdictional cost and administrative burden would provide valuable input to policy proposals and advice.</p> <p><b><u>TEST CASE SCENARIO</u></b></p> <p><b>1.0 Functionality Assessed</b></p> <p>Design/build analytical module(s) that enable REP users to extract, compile and visually map regulatory requirements and the level of regulatory burden for identified industry or sectors (e.g. by NAICS code) or groups of stakeholders as defined by users.</p> <p>The solution must allow end users to compile information and visually map both the number and characteristics of FPT regulations, for a given NAICs (3-digit or more) that would yield insight on cumulative interjurisdictional regulatory burden, and the corresponding impacts on business. Bidders will be assessed on the ability of the solution to map federal regulations along a specific segment of the agriculture sector (i.e., beef and canola) based on the given data and information provided.</p> <p><b>2.0 Test case requirements (mandatory) to be assessed</b></p> <p>Part A – AAFC Case</p> <ol style="list-style-type: none"> <li>1. Find all federal, provincial and territorial regulations and related burden data that apply to beef and canola-oilseeds (NAICS 112110 &amp; 111120) directly and indirectly</li> <li>2. Import data files produced by external tools on the characteristics of documents (e.g., cost to purchase) incorporated by reference into relevant regulations.</li> <li>3. Provide user the ability to label a data set with given text or information to demonstration data labelling and supervised learning capability as required in use case #6</li> </ol>
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	<ol style="list-style-type: none"> <li>4. Compile a report summarizing the total number of federal and provincial regulations that apply to the sector and requirements that apply.</li> <li>5. Generate a charts o graph visualizing the quantity and degree of regulatory burden.</li> <li>6. Generate an output file for above analysis for import into MS Excel.</li> </ol> <p>NAICS code overview for context and background information:  <a href="https://www.statcan.gc.ca/eng/subjects/standard/naics/2017/index">https://www.statcan.gc.ca/eng/subjects/standard/naics/2017/index</a></p> <p>Part B – ECCC Case</p> <ol style="list-style-type: none"> <li>7. Find all federal, provincial and territorial regulations and related burden data that apply to chemical manufacturing (NAICS 325), petroleum manufacturing (NAICS 324) and transportation equipment manufacturing (NAICS 336). Provide the ability to filter the results by jurisdiction (e.g. just ECCC regulations; just Ontario; ECCC and Ontario, BC and Alberta; etc.).</li> <li>8. Import data files produced by external tools on the characteristics of documents (e.g., cost to purchase) incorporated by reference into relevant regulations.</li> <li>9. Provide user the ability to label a data set with given text or information to demonstrate data labelling and supervised learning capability as required in use case #6</li> <li>10. Compile a report summarizing the total number of federal and provincial regulations and the requirements that apply to each sector.</li> <li>11. Generate charts or graphs visualizing the quantity and degree of regulatory burden.</li> <li>12. Generate an output file for above analysis for import into MS Excel.</li> </ol> <p>3.0 Data Sources and Information</p> <ol style="list-style-type: none"> <li>13. See statement of work 6.1 and 6.2</li> <li>14. Cattle (beef) NAICS 112110 6 digit code:  <a href="http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&amp;TVD=1181553&amp;CVD=1182006&amp;CPV=11211&amp;CST=01012017&amp;CLV=4&amp;MLV=5">http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&amp;TVD=1181553&amp;CVD=1182006&amp;CPV=11211&amp;CST=01012017&amp;CLV=4&amp;MLV=5</a></li> <li>15. Canola and other oilseed NAICS 111120 6 digit code:  <a href="http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&amp;TVD=1181553&amp;CVD=1182718&amp;CPV=111120&amp;CST=01012017&amp;CLV=5&amp;MLV=5">http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&amp;TVD=1181553&amp;CVD=1182718&amp;CPV=111120&amp;CST=01012017&amp;CLV=5&amp;MLV=5</a></li> </ol>
<p><b>4. Compiling multiple sources of data related to a regulation(s)</b></p> <p>Compiling multiple sources of data and finding patterns in unstructured data</p>	<p><u>Context:</u>  Advanced analytics and machine learning have an important role to play in enabling regulators to combine multiple sources of info and data to assess the effectiveness of regulations in achieving their stated objectives. Regulators currently rely on a number of websites, on-line forums, and open data forums to scan the regulatory environment and gain access to regulatory data and information both within and outside of Canada.</p> <p><u>Challenge:</u>  No comprehensive platform currently exists for federal departments and agencies to house results of scans of the global regulatory environment for publicly available machine readable data and online information relevant to a Canadian regulation or regulatory</p>

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	<p>issue. The absence of an analytics platform to gather and analyze information on how other comparable regulators are adopting or implementing regulations, including the characteristics and attributes of those regulations, would support the ability of regulators to pursue new interventions that meet regulatory objectives.</p> <p>Transport Canada, for example, follows regulatory developments in the US, and participates at the UN’s World Forum for Harmonization of Vehicle Regulations. The Forum’s website is the main tool for TC to scan the global regulatory environment for vehicle regulation information in addition to other tools (e.g. Interregs). Moreover, within the domain of road vehicle data, a number of open data sets and public information exists on autonomous vehicles or vehicle recalls. However, no analytical platform exists to combine and relate these sources of data with the characteristics and attributions of the acts or regulations to which they apply.</p> <p><b><u>TEST CASE</u></b></p> <p><b>1.0 Functionality Assessed</b></p> <p>Design/build analytical module(s) that combine multiple sources of information and data that would, when combined with regulatory text, yield insight into the effectiveness of regulations in achieving their stated objectives (i.e., apply machine readable text and other inputs from a variety of sources that could provide context or indicators of the impact on regulated parties, stakeholders and the public);</p> <p>The solution must have the capability to: 1) import foreign, provincial and territorial regulations that are available in machine readable format and 2) import datasets that are related or relevant to a regulation(s) or results in order to allow users identify patterns in unstructured data to inform regulatory or policy interventions.</p> <p><b>2.0 Test case requirements (mandatory) to be assessed</b></p> <ol style="list-style-type: none"> <li>1. Find all federal and provincial vehicle regulations as provided in 3.0</li> <li>2. Import foreign vehicle regulations as provided in 3.0</li> <li>3. Import vehicle trend data as provided in 3.0.</li> <li>4. Analyze trends in regulatory change and trends in vehicle recalls etc..</li> <li>5. Analyze how and where regulations may differ across jurisdictions (among provinces and territories, and between the U.S. Federal Motor Vehicle Standards and the Canadian Motor Vehicle Safety Standards).</li> <li>6. Generate an output file for above analysis for import into MS Excel.</li> </ol> <p><b>3.0 Data Sources and Information</b></p> <ul style="list-style-type: none"> <li>- See statement of work 6.2 and 6.</li> <li>- Vehicle recall databases on the Open Government portal (<a href="https://open.canada.ca/data/en/dataset/1ec92326-47ef-4110-b7ca-959fab03f96d">https://open.canada.ca/data/en/dataset/1ec92326-47ef-4110-b7ca-959fab03f96d</a>)</li> </ul>
<p><b>5.Comparative Analysis across jurisdictions</b></p>	<p><b><u>Context:</u></b></p> <p>The ability to compare the characteristics and attributes of individual regulations and groups of regulations from one jurisdiction to another (e.g. federal versus provincial or</p>

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foreign against federal and provincial (i.e. Canada)) is a key task and ongoing concern of regulators. Under the Cabinet Directive on Regulations, departments and agencies must examine regulations from the perspective of, among others, alignment of regulatory approaches and outcomes with key trading partners in order to reduce the regulatory burden on Canadian business, while maintaining or improving the health, safety, security, social and economic well-being of Canadians, and protecting the environment.

### Challenge:

The stock of regulations that could be compared between federal, provincial and U.S. regulations is very large and constantly evolving. Assessing opportunities for inter-jurisdictional alignment of regulations, particularly through the lens of impacts on specific sectors of the economy and small business, could be accelerated through advanced analytics and machine learning. A summer 2018 study by Mercatus (George Washington University) created a comprehensive listing for example, of federal-provincial-territorial and U.S regulations and the number of “restrictions” in machine readable format (see data sources), although the definitions of what constitutes a “restriction” is an area that requires further study and analysis by researchers, legal and regulatory experts. However, without a platform for research and comparative analysis of this data, it will be difficult for Canadian regulators to extract deeper and practical insights to inform regulatory alignment and coordination activities.

### **TEST CASE SCENARIO**

#### 1.0 Functionality Assessed

Design and build solution with the functionality to search and identify comparable regulations that apply to user-specified parameters at: 1) federal level (across departments or agencies) and 2) cumulatively across jurisdictions (e.g., foreign, federal, and provincial/territorial);

The REP solution must, based upon an identified methodology, allow for assessment and reporting on the degree of similarity or differences between regulations through calculated of scores or measure.

#### 2.0 Test case requirements (mandatory) to be assessed (overall met/not met)

1. Find all regulations in Canada and the U.S
2. Generate a rank order list of regulations for the Canada and U.S. that are the highest in terms of similarity of content and number of restrictions
3. Estimate cumulative number of regulations that require a licence to operate in in Canada and the U.S.
4. Generate tables and charts or graphs summarizing results of the above analysis
5. Generate an output file for above analysis for import into MS Excel.
6. Provide instruction to the users on how change the parameters for similarity and restrictions and redo steps 1 through 5

#### 3.0 Data Sources and Information

- See statement of work 6.2 and 6.

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	<p style="text-align: center;">- Mercatus – quantgov data.</p>
<p><b>6.Data Labelling and Connecting Legislation and Regulation to Other Regulatory Activities</b></p> <p>Inserting Tags and comments to acts and regulations to improve analysis and support broader regulatory design and management objectives over time.</p>	<p><b>Context:</b>            Datasets and underlying structures for acts and regulations must be designed for AI based analytics platforms so that they can be sufficiently flexible to leverage and receive human input and expert knowledge and to improve efficiency and accuracy over time while also enable connectivity to the broader suite of regulatory design, oversight, regulatory management and service delivery activities.</p> <p><b>Challenge/Issue:</b>            Research and understanding on the application of computational linguistics and semantic analysis to legislation and regulatory text is relatively new, and understanding of practical application for regulators, legislative drafters and stakeholders will continue to evolve. Algorithms, tools and platforms for analysis or acts and regulations will need to be very flexible and designed to:</p> <ol style="list-style-type: none"> <li>1) receive expert input from users and labelling of training data;</li> <li>2) adjust or calibrate results based on verification of input or outputs by users; and</li> <li>3) adjust key input parameters for methodologies to support research and evolving research findings.</li> </ol> <p>Moreover, beyond design, coming into force and monitoring of acts and regulations, it is important that a solution support regulatory management and service delivery objectives. Studies by the New Zealand government, for example, found that machine consumable legislation that is co-developed with a variety of uses (policy analysts, legislative drafters, service designers and software developers) enables legislation, business rules, and service delivery software to be developed in parallel, ensuring consistency of application, and significantly speeding up the service delivery to people, increases the opportunities to automate and integrate service delivery (including through the use of artificial intelligence).</p> <p>A REP solution, that ingests or imports foreign, federal, provincial-territorial in machine readable process, that would be subject to an review of data architecture (meta data, labelling and constraints) could be complemented by the ability of users to engage in data labelling or various forms of supervised learning to improve the efficiency of algorithms for regulatory analysis (clustering/network analysis, semantic analysis) and support downstream service delivery and regulatory management objectives.</p> <p><b><u>TEST CASE SCENARIO</u></b></p> <p><b>1.0 Functionality Assessed</b></p> <p>Ability to label data, insert comments, commentary or “tag” data elements which would also facilitate building of a solution and data architecture that better responds to the needs of the user over time;</p> <p><b>2.0 Test case requirements (mandatory) to be assessed</b></p> <ol style="list-style-type: none"> <li>1. For use cases #1, #2, and #3, provide a mechanism for users to label or inserts comments on the Justice XML data set(s) involved in the use case</li> </ol>

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	<ol style="list-style-type: none"><li>2. Generate a tabular report summarizing above labelling and insertion of comments into the dataset(s)</li><li>3. Generate an output file for the above Act(s) and regulation(s) that were labelled in the use case in XML format.</li></ol> <p>3.0 Data Sources and Information</p> <ul style="list-style-type: none"><li>- See statement of work 6.2 and 6.3</li><li>- New Zealand Better Rules for Government Discovery Document</li></ul>
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## Annex E

### Industry Questions

- 1) Is the two month period for design/build of prototypes based on the tasks and deliverables sufficient?
- 2) Are there any additional data sets, sources of information or reference material required to support Stage 1 or Stage 2?
- 3) Are the use cases sufficiently clear or is additional detail or clarification required in some areas?
- 4) Is the proposed Stage II plan for two information and engagement sessions with the project user group sufficient?
- 5) Is the budget and time allocated for Stage III finalization by March 2020 sufficient to deliver on the tasks and requirements?
- 6) Are there elements of the Implementation, Release and Support Services plan that require clarification?