

REQUEST FOR PROPOSALS (RFP)

**APPENDIX A: BIDDERS RESPONSE PACKAGE**

IIDD Institutions and Degrees Management System

January 31, 2020

RFP Title: International Institutions and Degrees Data Management System

Proposal Submission Deadline: All RFP responses must be received by:

  ***3:00 PM Eastern Time February 28, 2020.***

*(Amended)*

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# Project Requirements

## Business Requirements

In addition to any information that is publicly available on the Engineers Canada website, the following sets out background information related to Engineers Canada that is relevant to the Project:

* Approximately 50 personnel

Serves the engineering regulator admissions staff from the 12 engineering regulators in Canada.

Maintains count of institutions and degrees per country

Maintains count on verification requests.

In line with the above, the solution will support the following numbers of users:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User Type**  | **Year 1**  | **Year 2**  | **Year 3**  | **Year 5**  | **Year 10**  |
| Engineers Canada   | 2 | 2 | 2 | 2 | 2 |
| Engineering regulator admissions staff | 75 | 75 | 75 | 75 | 75 |
| Other   | 0  | 0  | 0  | 0  | 0  |

The solution will support the following numbers of activities per year.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Activity**  | **Year 1**  | **Year 2**  | **Year 3**  | **Year 5**  | **Year 10**  |
| Logins | 1200 | 1200 | 1200 | 1200 | 1200 |
| Verification Requests  | 50 | 50 | 50 | 50 | 50 |

## Business Objectives

The following table lists the primary business goals or objectives to be achieved by this Project.

| **ID** | **Business Objective** |
| --- | --- |
| BO-1 | The IIDD shall deliver information on country education systems, and international institutions and degrees. |
| BO-2 | The IIDD shall provide verified information in a consistent manner and avoid any application of judgement. |
| BO-3 | Information in the IIDD must be 90-95% dependable and current within 3 years. |
| BO-4 | Information must be reflective to what is needed by regulators in the academic admissions process. |
| BO-5 | Minimize the staff time required to create and edit information in the IIDD. |
| BO-6 | Minimize the amount of time required to research the information to be added to the database. |

## Technology Strategy Requirements (Mandatory)

Engineers Canada’s strategic technological direction is towards PaaS and SaaS services. To fit within Engineers Canada’s technological strategy, any proposed solution must be either a PaaS or a SaaS solution. Further, the solution must reside in a cloud infrastructure provider (e.g.
AWS or Azure) with sufficient means to guarantee stability, durability, and uptime of the solution.  Any 3rd party solution provider, running on a viable cloud infrastructure provider, that is integral to the proposed solution must demonstrate viability.

No solution will be considered that involves custom builds stood up on Engineers Canada’s onPrem infrastructure, or IaaS solutions that require Engineers Canada to maintain/upgrade/patch the solution’s elements (OS, database servers, etc.), as this stands outside of Engineers Canada’s technological direction.

## Solution Requirements

Appendix A: Bidders Response Package describes the Cloud Computing Solution requirements.

## Project Management

1. The Bidder will follow an acceptable project management methodology.
2. The Bidder will develop a Bidder-specific project plan and schedule that includes key milestones and sub-tasks broken down into one-week durations.
3. The Bidder will assign a resource to be the central point of contact accountable for any Bidder-specific deliverables and/or activities contained in the Bidder project plan.
4. At a minimum, bi-weekly written status reports shall be submitted to Engineers Canada’s Project Manager. These status reports will outline:
* Overall summarization of the project progress;
* Deliverables achieved;
* Deliverables remaining, progress, and expected delivery on each; and
* Issues and concerns affecting specific deliverables, the project schedule, or any other aspect of the project

## Engineers-Canada-Supplied Resources

1. It is expected the Bidder will not require any office space, hardware, software licenses, or other support during the project.

## Conversion/Transition

1. The Bidder will have an electronic means to accurately convert and migrate data into the cloud-based solution.

## Acceptance Testing

1. The Bidder will have testing approaches that ensure a quality product.
2. The Bidder will describe the verification and testing approaches that will be used for the project.

## User Training

1. The Bidder will be required to provide training on-site at Engineers Canada Offices and provision for the ongoing need for online training (via webinar as one example).
2. The training program(s) will align to the agreed deployment approach with a focus on the needs of each role
3. Training programs will be maintained and revised based on post-project releases (as part of Maintenance Support)
4. Training content will be required for the following groups:
* Engineers Canada Staff (including technical team as required)
1. Training will be role-based for:
* Regulators
* Engineers Canada Foreign Credential Team
* User administration

# Bidder Response – Mandatory Requirements

## Instructions

Mandatory requirements are essential to the selection of a partner:

* The Bidder must acknowledge each Mandatory Project Requirement by responding to the questions asked in Section 3.2 and providing any comments or explanatory notes, if applicable;
* Bidders must also provide the information reasonably necessary for Engineers Canada to determine whether they would be a viable partner, by completing a Due Diligence Questionnaire (Section 3.3). The due diligence review is performed to confirm to Engineers Canada’s satisfaction that the Bidder would, if selected, be financially stable, and legally and ethically sound.

Not meeting mandatory requirements eliminates Bidders from this RFP process.

## Mandatory Project Requirements

### Non-Functional Requirements

| **No.** | **Question** | **Bidder Response** | **Comments** |
| --- | --- | --- | --- |
| 1. **Bidders Response Package**
 |
| (a) | Is the Bidder’s Response Package complete? | Yes or No  |  |
| (b)  | Was it received by the Proposal Submission Deadline?  | Yes or No  |  |
| 1. **Security**
 |
| (a) | Does your organization have a corporate security policy?  | Yes or No |  |
| (b) | Does your organization have a communication protocol for security breaches? | Yes or No |  |
| (c) | Are vendors that access client data bonded? | Yes or No |  |
| (d) | Is access to virtualized infrastructure restricted to authorized staff or bonded vendors? | Yes or No |  |
| 1. **WCAG 2.0 AA Compliant**
 |
|  | Is your solution compliant to WCAG 2.0 AA? | Yes or No |  |

## Bidder Viability – Due Diligence Questionnaire (DDQ)

#### Bidder Profile

|  |  |
| --- | --- |
| **Description** | **Bidder Response** |
| 1. Type of business (select one):
* Corporation
* Partnership
* Sole Proprietorship
 |  |
| 1. Corporation number (if applicable)
 |  |
| 1. Legal name (and operating name if different)
 |  |
| 1. Operational address
 |  |
| 1. Registered address
 |  |
| 1. Phone number
 |  |
| 1. Website
 |  |
| 1. Number of years in business
 |  |
| 1. Number of people employed
 |  |
| 1. The Bidder will describe its strategic direction.
 |  |

#### Financial Information

|  |  |
| --- | --- |
| **Description** | **Bidder Response** |
| 1. Provide latest audited financial statements.
 |  |
| 1. Has the business ever filed for bankruptcy, been petitioned into bankruptcy, sought relief, or made a proposal under any bankruptcy or insolvency law in Canada or elsewhere?
 |  |
| 1. If the answer is “yes” to 12, attach the following details:
* type (filing, petition, relief or proposal);
* reason;
* date;
* name and address of court;
* court file number; and
* outcome or current status.
 |  |

#### Business Continuity

|  |  |
| --- | --- |
| **Description** | **Bidder Response** |
| 1. Does the business have a business continuity plan? If yes, please describe.
 |  |
| 1. Describe how your organization would ensure continued provision and support of the solution if bought by another company?
 |  |
| 1. Describe how your organization ensures stability of your product line, including probability of the product line being sustainable for the long term (at least 10 years)?
 |  |
| 1. Provide an outline of the relationship between your organization and any product manufacturers and/or suppliers, that ensures availability of product.
 |  |

#### Legal Proceedings

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Is the business currently subject to any lawsuits (civil action) or legal proceedings? If so, provide details.
 |  |
| 1. Has the business been subject to any lawsuits (civil action) or legal proceedings within the past three (3) years? If yes, provide details.
 |  |
| 1. Are any lawsuits or legal proceedings currently pending? If yes, provide details.
 |  |
| 1. Have any key employees or senior management members of the business ever been convicted of an offence or any other serious crime in Canada or in any other country (other than traffic violations)? Are there any legal proceedings of this nature pending? If yes, attach the following details: (1) name of individual; (2) description of the charges and/or proceedings; (3) dates when the charges were laid; and (4) outcome or current status.
 |  |

#### Outsourcing

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Do you plan to outsource any of the functions or activities related to the Project to a third-party service provider (“Third Party”)?
 |  |
| 1. If the answer to 22 is “yes,” identify the Third Party’s name and address, their relationship to you, and the activities they will perform.
 |  |
| 1. If the answer to 22 is “yes,” how do you conduct reviews of the quality of the outsourced services? Are the reviews ongoing?
 |  |
| 1. If the answer to 22 is “yes,” who is responsible for overseeing the services performed by the Third Party?
 |  |
| 1. If the answer to 22 is “yes,” in what way will you ensure the integrity of the Third Party’s work and ensure Engineers Canada has an adequate remedy against the non-performance or inadequate performance of any services they provide?
 |  |

#### Data Breaches

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Has the business been subject to any data breaches within the past five (5) years? If so, describe the breach and the steps the business took to mitigate the resulting damage.
 |  |
| 1. Describe what physical, technological, and operational safeguards the business has in place to insure against data breaches and the unauthorized access and use of data, including personal information?
 |  |
| 1. Describe what measures your business takes to specifically protect and preserve any personal information it handles in the course of providing its services?
 |  |
| 1. Is your organization [PIPEDA Compliant](https://www.google.ca/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=0ahUKEwiC3dOxi-fXAhVk1oMKHS21DfEQFgg5MAM&url=https%3A%2F%2Fwww.priv.gc.ca%2Fen%2Fprivacy-topics%2Fprivacy-laws-in-canada%2Fthe-personal-information-protection-and-electronic-documents-act-pipeda%2F&usg=AOvVaw38hQIvJPmcgy5MiZ82eq4g)? If yes, please describe how this compliance is achieved.
 |  |

#### Previous Customers

|  |  |
| --- | --- |
| **Description** | **Bidder Response** |
| 1. Provide the names, phone numbers, and email addresses of individuals at three organizations who have been clients within the last 5 years and who Engineers Canada can contact as references to confirm the stated qualifications and their level of satisfaction.

**NOTE: Reference checks will be completed before Engineers Canada issues its Notice of Award.**  |  |

#### Notice

The information on this form is being collected for the purpose of determining the financial, legal and organizational suitability of Bidders to provide Engineers Canada with the services and support related to the Project. The principal purpose for which the information will be used is to consider the Bidder’s suitability to provide the services. This information will be disclosed only to the members of the Review Team and any other individual that the Review Team considers necessary to assist in determining the Bidder’s suitability, and who has a need to know the information.

By signing below, you certify that you have authority to commit the Bidder to the answers provided herein and further, that you have performed such procedures and made such inquiries as necessary to ensure that the answers provided in this DDQ are accurate and complete to the best of your knowledge.

Prepared by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (print your name) on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(date)

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Bidder Response – Desirable Requirements

## Instructions

### Non-Functional Requirements

Non-Functional Requirements specify the qualities the automated solution must have and how well it does what it does. It refers specifically to the following aspects:

* Data size;
* Security and access;
* Architecture;
* Operational environment;
* Future development;
* Support;
* Usability;
* User interface;
* Reliability, maintainability, survivability and,
* Reporting

The Bidder will complete the Bidder response column with an explanation as to how the Bidder will meet the requirement.

###  Functional Requirements

Functional requirements describe the capabilities the automated solution shall fulfill to meet the business objectives. The approach used for functional requirements utilizes *Use Cases* methodology to identify, clarify, and organize system requirements. 17 use cases were identified.

Desirable functional requirements are important to the Cloud Computing Solution being acceptable to the Engineers Canada. The Bidder will complete the Bidder response column with an explanation as to how the Bidder will meet the requirement.

## Solution Requirements

### Desirable Non-functional Requirements

| **Desirable Non-Functional Requirements** |
| --- |
| **Serial No.** | **Description** | **Bidder Response** |
| DS1 | The solution will provide expandable storage capacity.  |  |
| SE1 | The solution will provide security control to minimize the impacts of hackers and viruses.  |  |
| SE2 | The solution will provide role-based access group and user permissions to control end user access to solution functionality and information.   The solution will manage end-user permissions to limit viewing data to those with permission  |  |
| SE3 | The solution will provide self-service password reset and recovery.  |  |
| SE4 | The solution will provide a web-based, secure interface working with data entry, workflow management, queries and reports, and information search. |  |
| SE5 | The solution will provide each user with a login ID, password, and a secure interface.  |  |
| SE6 | The solution will ensure version control related to changes to specified data fields  |  |
| SE7 | The solution will ensure that data change history cannot be deleted or modified.  |  |
| SE8 | The solution will ensure that data is encrypted while at rest.  |  |
| SE9 | The solution will ensure that data is encrypted while in transit. |  |
| AR1 | The solution will be provided via platform as a service (PaaS) – e.g. Aws dynamo db.  |  |
| AR2 | The solution will operate using any current web browsers  |  |
| AR3 | The solution will use an industry-standard approach to workflow management  |  |
| AR4 | The solution will use an industry-standard approach to business rules management  |  |
| AR5 | The solution will provide a reports tool with graphics, tables, and charts.  |  |
| AR6 | The system will provide a secure, self-service, web-based portal for end users to administer their login credentials and security access.  |  |
| AR7 | The solution will operate using industry best practices |  |
| OP1 | The solution shall not rely on server hardware hosted at Engineers Canada’s facility.  * This implies that some variant of a cloud-based solution should be adopted (i.e. Microsoft Azure or AWS or similar)
 |  |
| OP2 | The solution shall run on a platform that is managed and maintained by the solution provider.  Software upgrades are abstracted from the platform.  |  |
| OP3 | The solution shall comply with the overall Engineers Canada IT strategic direction.  |  |
| OP4 | The solution shall use standard software, setup techniques, methodologies and programming languages to ensure the long-term support ability of the solution.  |  |
| FD1 | The solution will enable Engineers Canada to incorporate new requirements in the future such that the solution ensures long-term sustainability and relevance. This may include the ability to incorporate enhancements over time. |  |
| SU1 | The solution will provide enhanced solution support during deployment and for a minimum of 90 days after deployment.  |  |
| SU2 | The solution will provide to Engineers Canada, ongoing end-user support throughout the project and lifespan of the solution.  |  |
| SU3 | The solution will provide ongoing technical maintenance and support throughout the project and lifespan of the solution.  |  |
| SU4 | The solution provider will maintain the supporting infrastructure.  |  |
| SU5 | The solution will provide a configuration specification that describes how the infrastructure was configured to support Engineers Canada’s solution.  |  |
| SU6 | The solution will be supported by the Vendor and fully operational for ten years. |  |
| US1 | The solution’s user interface will be in English. Manuals, and training packages will be in English. |  |
| US2 | The user interface will use Engineers Canada naming conventions. |  |
| US3 | The user interface will provide on-line help, instructions, and manuals to guide the users.    |  |
| US4 | The user interface will be user-friendly and follow generally accepted user interface guidelines.  |  |
| US5 | The solution will conform to the Accessibility for Ontarians with Disabilities Act, 2005; Ontario Regulation 191/11; Integrated Accessibility Standards.  Refer to [https://www.ontario.ca/laws/regulation/110191#BK9](https://www.ontario.ca/laws/regulation/110191)   |  |
| US6 | The solution will use Systems International standards for recording date and time.  |  |
| UI1 | When viewing a list, the user may sort through and re-order the information using any attribute  |  |
| UI2 | The user may sort through and search information in the solution using any attribute  |  |
| UI3 | When selecting items from a list, the user may select “all”  |  |
| UI4 | The solution will provide user-friendly capabilities for entering and finding information – e.g. auto-complete words, suggestions  |  |
| UI5 | The solution will provide templates to automate preparation of messages.  |  |
| UI6 | The solution will provide Engineers Canada with the ability to see how far each user has gone in completing their work – e.g. how far Researcher, IIDD has gone in completing the verification.  |  |
| UI7 | The user may do any part of inputting data, save the work done so far, and return later to do some more; information is saved as it is entered.  The user may press a “save” button.  |  |
| UI8 | The user, in the middle of a use case, may return to any step and modify or enter information   |  |
| UI9 | The solution will provide historic data in comparison with the new input values.  |  |
| UI10 | The solution will accept copy and paste to retrieve or enter data  |  |
| UI11 | For selected steps where information is being entered, which has previously been recorded, the solution will display the most current information. The user may modify the information.  |  |
| UI12 | When entering information, the solution will provide lists of possible entries; when entering a Degree, the solution will provide a list of Degrees already entered in the solution, which the user my select and modify.  |  |
| UI13 | The solution will control access privileges to determine who can do what modification and will identify who has done what modification.  |  |
| UI14 | The User Interface will use Engineers Canada brand standards.  |  |
| UI15 | The user, when viewing a list of records, may select which attributes will be displayed and the order in which the attributes are displayed.  |  |
| UI16 | The solution will have customized user interfaces and reports to display and use information from any class or attribute.  |  |
| UI17 | The solution shall display the information of one record on a minimum number of pages. |  |
| UI18 | The solution shall display the breadcrumb trail of the record search. |  |
| REL1 | The solution will provide 99.5% availability.  |  |
| REL2 | The solution will provide 99.999999999% durability of data access.  |  |
| REL3 | When infrastructure upgrades are made – e.g. new operating solutions, new software releases, firmware upgrades, and software patches – the solution will maintain its operations without significant development effort by Engineers Canada.  |  |
| REL4 | The solution will provide processes and tools to support change management.  |  |
| REL5 | Architecture must be documented and backed-up  |  |
| REL6 | Data must be backed-up at regular intervals  |  |
| REP1 | The solution will be able to export data into an Excel and CSV flat file format.  |  |
| REP2 | The solution will provide canned and ad hoc reporting with graphics, tables, and text  |  |
| REP3 | The solution must be able to prepare reports in an MS Word template with appropriate headings.  |  |
| REP4 | The solution must retain Engineers Canada’s login information. |  |
| REP5 | The solution must be able to record information as text, files (e.g. graphics, PDF and DOC), and web URL.    |  |

### Desirable Functional Requirements

Functional requirements describe the capabilities the automated solution shall fulfill*.* Confirm how the solution will comply with the descriptions. Indicate your response in the Bidders Response column, for each Use Case.

|  |  |  |
| --- | --- | --- |
| Use Case Name | UC1: Access Account | Bidders Response |
| Description | A pre-authorized user needs to access the Engineers Canada non-CEAB academic information. |  |
| Primary Actor | Engineering regulator admissions staff |  |
| Trigger(s) | User needs information about a non-CEAB academic credential. |  |
| Pre-Condition | User has an account. See UC8. |  |
| Post Conditions | Access provided to the Engineers Canada’s information on country education and licensure/registration systems, and international institutions and degrees. |  |
| Basic Flow | 1. The user will provide a unique identifier (e.g. Username and Password).
2. The solution shall verify the identifier information and confirm user from an active users’ list.
3. The solution shall provide the user access to the solution.
4. The user can use the solution to the extent of the capabilities they were assigned. Refer to UC8 for user types.
 |  |
| Alternate Flow | 1. The user provides an incorrect identifier or forgets their unique identifier information:
	1. The solution shall notify user about the incorrect identifier.
	2. The solution shall provide user with the ability to request a reset of their identifier.
	3. The user submits a request using a specific piece of information associated with the account (e.g. E-mail address).
	4. The solution verifies the information and provides user with a temporary identifier to access their account.
	5. The user accesses the account with the temporary identifier and must reset their identifier immediately.
	6. The solution shall accept the new identifier and update the user’s record.
	7. The solution shall grant the user access to the account.
 |  |
| Remarks | * Users must be pre-authorized to gain access to the information.
* Users shall have continued access to the account until they exit.
* Solution shall verify that the identifier is unique.
 |  |
| Business Objective | BO-1 |  |

|  |  |  |
| --- | --- | --- |
| Use Case Name | UC2: Enter Academic Credential Search Parameters | Bidders Response |
| Description | The user provides information about an academic credential to determine if there is country-, institution-, and degree-level information about it. |  |
| Primary Actor | Engineering regulator admissions staff |  |
| Trigger(s) | User needs to search for information about a non-CEAB academic credential. |  |
| Pre-Condition | User has accessed their account (UC1). |  |
| Post Conditions | The academic credential is selected from the search results. |  |
| Basic Flow | 1. The user chooses the country name, degree type, engineering discipline and, the graduation year of the academic credential from predefined lists.
	1. The solution shall make entering a value for the country name, degree type, engineering discipline, and graduation year optional.
2. The user can also provide key words in the institution name. Entering a value for institution name is optional.
3. The solution shall search the content and return a list of institutions which match the search parameters.
4. The user selects the institution they wish to view.
 |  |
| Alternate Flow | 1. The solution returns zero results:
	1. The solution shall indicate which search value caused the return of zero results.
	2. The user can decide to widen search by adjusting search parameters.
	3. The user can also send a Verification Request (UC5).
	4. The solution shall accept the revised search values.
	5. Return to Step 3.
2. The user wants to perform a new search:
	1. The solution shall allow the user to perform a new search anytime during this function.
	2. The solution shall retain the original search parameters.
	3. The solution shall provide user with the opportunity to clear individual fields or all the search fields.
	4. The user enters new search values.
	5. Return to Step 3.

 1. The user selects the wrong result:
	1. The solution shall allow the user to return to the original list of institutions which match the search parameters.
	2. The user reviews the selection and chooses another institution to view.
2. The user only wants country level information:
	1. The user selects the country name from a pre-defined list and leaves all other search fields blank.
	2. The solution shall only return country level information for the selected country.
3. The user determines that the solution does not have information about the credential in question: See UC5
 |  |
| Remarks | All search field values are optional. If no search values are entered for a search, the solution shall return a prompt suggesting the user enter at least one value. |  |
| Business Objective | BO-1, BO-4 |  |

|  |  |  |
| --- | --- | --- |
| Use Case Name | UC3: Retrieve Non-CEAB Academic Information | Bidders Response |
| Description | The user retrieves the academic information about a non-CEAB academic credential. |  |
| Primary Actor | Engineering regulator admissions staff |  |
| Trigger(s) | The user selects the institution from the search results (refer to UC2). |  |
| Pre-Condition | Search has been performed. |  |
| Post Conditions | Information is available on the country, institution, and degree that is pertinent to the non-CEAB credential. |  |
| Basic Flow | 1. User selects the institution from the search results (UC2).
2. The solution shall return three categories of information: Country, Institution, and Degree. The solution shall also post a timestamp indicating the date the information was updated for each category of information.
	1. For the Country category, the solution shall provide the following information:
		1. Country name
		2. Degrees typically offered that are comparable to the Canadian Bachelor’s degree (eg., 3 year bachelors + 2 year Master’s, etc.)
		3. A list of the following questions with the associated response of Yes/No/No evidence found/Not Applicable:
			1. Is the length of the typical degree comparable to CEAB bachelors of engineering degree?
				1. Credit hours (160) or semesters (8) equivalent.
			2. Is the education equivalent of 16 years of education?
			3. Does that country have a government-designated or competent authority for educational system?
			4. Is there a quality assurance system in place for universities?
			5. Is the degree classified by ISCED at the same level as a bachelor degree in engineering in Canada as per <http://uis.unesco.org/en/isced-mappings>?
			6. Is there a form of professional engineering licensure in the country?
			7. Is there a form of engineering registration in the country?
			8. Is the licensure / registration system linked to the educational system?
	2. For the Institution category, the solution shall provide the following information:
		1. Institution name
		2. Alternative name(s)
		3. Former name(s)
		4. Parent institution name
		5. Year established
		6. Year closed (if applicable)
		7. Institution address (street name, city, country, and postal code)
		8. Website url
		9. A list of the following questions along with the associated response of Yes/Yes, before institution closure/No/No evidence found/Not Applicable:
			1. Does the institution exist?
			2. Is the institution authorized to grant degrees by a government-designated or competent authority?
				1. If there is a government-designated or competent authority in operation, is the school recognized by the government-designated or competent authority?
				2. If the government-designated or competent authority does not exist or is not in operation, do we know that it can grant degrees?
			3. Is the institution a degree mill?
	3. For the Degree category, the solution shall provide the following information:
		1. Degree Type
		2. Engineering discipline
		3. Inception year
		4. Last graduating year (if applicable)
		5. A list of the following questions along with the associated response of Yes/Yes, until last graduating year/No/No evidence found/Not Applicable:
			1. Does the degree program exist?
			2. Does the degree meet the requirements for professional licensure in this country or anywhere else?
				1. If No, is it because there is no professional licensure for engineering?
				2. If No, is it because the degree is not at the required level?
3. The user shall be able to save a copy of the information in a readable, printable, and portable format.
 |  |
| Alternate Flow | 1. The user only wants country level information:
	1. The solution shall return one category of information; Country.
		1. The solution shall provide the following information:
			1. Country name
			2. Degrees comparable to the Canadian Bachelor’s degree
			3. A list of the following questions with the associated response of Yes/No/No evidence found/Not Applicable:
				1. Is the length of the typical degree comparable to CEAB bachelors of engineering degree?

Credit hours (160) or semesters (8) equivalent.* + - * 1. Is the education equivalent of 16 years of education?
				2. Does that country have a government-designated or competent authority for educational system?
				3. Is there a QA system in place for universities)?
				4. Is the degree classified by ISCED at the same level as a bachelor degree in engineering in Canada as per <http://uis.unesco.org/en/isced-mappings>?
				5. Is there a form of professional engineering licensure in the country?
				6. Is there a form of engineering registration in the country?
				7. Is the licensure / registration system linked to the educational system?
		1. Return to Step 3.
1. The institution selected is a Diploma Mill institution (refer to UC13):
	1. The solution shall provide the following information:
		1. Institution name
		2. Year established
		3. Institution address (street name, city, country, and postal code)
		4. A warning indicating the following: THIS INSTITUTION IS A DIPLOMA MILL. It is considered a NON-RECOGNIZED/ILLEGAL/FAKE institution.
		5. Competent authority and its associated weblink where the information was found.
		6. Timestamp indicating the date the information was updated.
	2. Return to Step 3.
 |  |
| Remarks |  The solution shall post a timestamp indicating the date the information was updated for each category of information for all alternate flows. |  |
| Business Objective | BO-1, BO-4 |  |

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| --- | --- | --- |
| Use Case Name | UC4: Exit Account | Bidders Response |
| Description | The user is finished using the solution and wants to exit. |  |
| Primary Actor | Engineering regulator admissions staff |  |
| Trigger(s) | The user completes tasks with the solution. |  |
| Pre-Condition | The user has accessed their account. |  |
| Post Conditions | The user has exited the account. |  |
| Basic Flow | 1. The user chooses to exit the account.
2. The solution shall ask user to confirm action.
3. User confirms exit.
4. The solution ends the session.
 |  |
| Alternate Flow | n/a |  |
| Remarks | The solution will not end a session without an explicit action from the user to end the session. The assumption is that the data change log and logging history will be secured from this user case, and will be part of UC9a Run Login Report |  |
| Business Objective | BO-1 |  |

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| --- | --- | --- |
| Use Case Name | UC5: Send Verification Request | Bidders Response |
| Description | The user wants information about an academic credential that does not exist in the solution. |  |
| Primary Actor | Engineering regulator admissions staff |  |
| Trigger(s) | The information does not exist in the solution. |  |
| Pre-Condition | The user has performed a search and rendered no matching results. |  |
| Post Conditions | The Request for Verification has been submitted successfully. |  |
| Basic Flow | 1. The user determines that the solution does not have information about the credential in question (see UC2, Alternate flow A).
2. The solution shall provide the user the ability to request a verification.
3. The user starts a request and provides the following information:
	1. Country name
	2. Institution name
	3. Institution address (street name, city, and postal code)
	4. Parent institution name
	5. Degree type
	6. Engineering discipline
	7. Graduation year
4. The user submits the request.
5. The solution shall notify the user that the request has been submitted successfully, provide user with a reference number, and include information on the verification process.
 |  |
| Alternate Flow | 1. The user wants to revise information in their original request:
	1. The solution shall provide user the ability to edit their original request without the need to submit a new request.
	2. The user opens their original request, edits and saves the information.
	3. Return to Step 4.
2. The user wants to cancel the request:
	1. The solution shall provide user the ability to cancel the request.
	2. The user opens their original request and cancels the request.
	3. Return to Step 4.
 |  |
| Remarks | The solution shall allow user to access the verification request function at any time while the user is in their account. |  |
| Business Objective | BO-1, BO-4 |  |

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| --- | --- | --- |
| Use Case Name | UC6: Intake Verification Request  | Bidders Response |
| Description | Engineers Canada staff receives and processes a request for verification of an academic credential that does not exist in the solution. |  |
| Primary Actor | Researcher, International Institutions and Degrees |  |
| Trigger(s) | User receives a request for verification. |  |
| Pre-Condition | Request for verification is submitted (refer to UC5). |  |
| Post Conditions | The requestor is notified that the solution contains the information that was requested and is provided with instructions on where to locate the information. |  |
| Basic Flow | 1. The user reviews request and performs research.
2. The solution allows user to create a new entry or edit an existing record, and populate with researched information (refer to UC11).
3. The user saves the information and sets the status to “publish”.
4. The solution publishes the information.
5. The user returns to the request, adds specific instructions and closes the request.
6. The solution notifies the requestor that the information is available and includes the specific instructions.
 |  |
| Alternate Flow | 1. Information is not ready to be published:
	1. The user saves the researched information as a new entry and sets the status to “Item for internal review”.
	2. For entries set to “Item for internal review”, the solution shall allow user to view, edit, delete and save entry in a staging environment before being published.
	3. The user edits the entry and sets the status of the entry to “publish”.
	4. Return to Step 4.
 |  |
| Remarks | n/a |  |
| Business Objective | BO-1, BO-4, BO-6 |  |

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| Use Case Name | UC7: Report Technical Issue  | Bidders Response |
| Description | The user has identified a technical issue with the solution and needs to have the issue resolved. |  |
| Primary Actor | Engineering regulator admissions staff (User)Manager, FCR and Researcher, IID (Engineers Canada operator)  |  |
| Trigger(s) | A technical issue with the solution has been identified. |  |
| Pre-Condition | 1. The user has accessed their account.
2. Technical support is available for the solution.
 |  |
| Post Conditions | The technical issue is resolved, and the solution is in proper functioning order. |  |
| Basic Flow | 1. The user initiates a request to Engineers Canada to resolve the technical issue.
2. The solution shall allow user to complete a standardized form that is prepopulated with the user’s name, contact information associated with their account, engineering association/ordre, and the date of request.
3. The user completes the following sections on the standardized form:
	1. Picks an Issue Type from a dropdown list (The choice of “Other” will always be an option in the dropdown)
	2. Issue description
	3. Attach a screenshot of the issue (if applicable)
	4. Other notes
4. The user completes the form, confirms their contact information, and submits the request.
5. The solution shall acknowledge receipt of the request to the user, provide user with some pre-defined troubleshooting guidelines and an approximate timeline for resolution.
6. Engineers Canada operator has full editing capability to the Issue Type dropdown list, troubleshooting guidelines and timeline note that the solution provides to the user.
7. The solution shall log the request and assign it a reference number.
8. The solution shall notify the Engineers Canada operator of the request.
9. The Engineers Canada operator reviews request and assigns an ‘In progress’ status to the request.
10. Once the issue is resolved, the Engineers Canada operator will update the status of the request to “Issue Resolved”.
11. The solution will close the request, notify the user that the issue has been resolved and include the external notes created by the Engineers Canada operator.
 |  |
| Alternate Flow | 1. User cannot access their account: Refer to UC8, Alternate flow B.
2. User wants to cancel the request after they submitted it:
	1. The solution shall allow user to cancel a request at any time before and after the request is submitted.
3. The Engineers Canada operator needs more information from the user:
	1. Refer to Steps 1 to 9.
	2. The solution shall enable the Engineers Canada operator to save internal notes, external notes, and dates associated with each note.
	3. The solution shall publish the external notes and notify the user.
	4. The user can view all external notes that have been published.
	5. The solution shall allow the user to respond to the external notes and provide additional information.
	6. The solution shall allow the Engineers Canada operator to view the user’s response and additional information.
	7. Return to Step 10.
 |  |
| Remarks | * The solution shall allow user to report a technical issue at any time while the user is in their account.
* The solution shall enable the Engineers Canada operator to pull statistics for all technical issues reported through the solution.
 |  |
| Business Objective | BO-3 |  |

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| Use Case Name | UC8: Manage Users  | Bidders Response |
| Description | Appropriate and secure access is provided to authorized users and maintained. |  |
| Primary Actor | Manager, Foreign Credential Recognition (Super User)Engineering regulator admissions staff (New User) |  |
| Trigger(s) | Request for access to the solution. |  |
| Pre-Condition | Authorization from an engineering regulator operator for Engineers Canada to provide a new user with appropriate and secure access to the solution. |  |
| Post Conditions | User has appropriate and secure access to the solution. |  |
| Basic Flow | Creating a new user:1. The new user completes a request for access to the solution by providing their full name, email address, engineering association/ordre (from a pre-defined dropdown list), and name of the engineering regulator staff authority.
2. The solution shall intake requests for access to the solution.
3. The Super User reviews request and confirms with staff authority that permission to the solution was granted.
4. The solution shall allow the Super User to create a new user account and the solution will prepopulate the new user’s profile with the information the new user provided in Step 1.
5. The Super User will create a username and assign the appropriate ‘Engineering Regulator’ permission level to the new account (see Remarks section of this use case).
6. The solution will generate a temporary password and issue it to the new user with specific instructions/guidelines to change their password.
7. The new user accesses the account using the assigned username and temporary password.
8. The solution will prompt the new user to update their password.
9. The new user inputs a new password, reconfirms the password, and saves the changes.
10. The solution shall accept the new password and provide the new user access to their account. (refer to UC1)
 |  |
| Alternate Flow | 1. Account no longer in use:
	1. The solution shall provide the Super User the authority to de-activate any account other than its own. The user will be de-activated, but the record remains.
	2. The solution shall provide the Super User the ability to delete any account, other than its own. The solution will prompt the Super User to confirm the deletion before the record is deleted from the solution.
2. Update information in an account:
	1. The solution shall allow the Super User to edit account information for any user other than itself.
3. Authorization is denied to the new user by the engineering regulator authority:
	1. Refer to Steps 1 to 3.
	2. The solution shall allow the Super User to decline the request from the new user.
	3. The solution will log this request and inform the new user that the request was denied.
	4. The new user will not have access to the solution.
 |  |
| Remarks | Roles and Levels of access to the solution**Super User –** has control over the entire user interface. The Super User has access permission to all the content and user functionality of the solution. There will only be one Engineers Canada staff member assigned to this role at one time.**Engineers Canada Operator** – can change, add or delete content, generate queries, create reports, run and download reports. Will have capability of uploading information (refer to non-functional requirement FD-2)**Engineers Canada User** – has read only access privileges to all content in the solution and shall be able to save a copy of the information in a readable, printable, and portable format. Can run and download predefined reports. **Engineering Regulator Operator** – has read only access privileges to all content in the solution and shall be able to save a copy of the information in a readable, printable, and portable format. Can run and download predefined reports. Will have capability of uploading information (refer to non-functional requirement FD-2)**Engineering Regulator User** – has read only access privileges to all content in the solution and shall be able to save a copy of the information in a readable, printable, and portable format. Can run and download predefined reports. **Engineers Canada IT Administrator** – has backend access to the solution for running scripts, backing up the solution and resolving technical issues. |  |
| Business Objective | BO-4 |  |

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| Use Case Name | UC9: Run Reports  | Bidders Response |
| Description | Engineers Canada staff need to understand the most frequented records and currency of the content in the solution to drive the workplan for research and content management. |  |
| Primary Actor | Manager, Foreign Credential Recognition |  |
| Trigger(s) | Time-based |  |
| Pre-Condition | All the content in the solution are associated with a unique identifier and each record is timestamped to the latest update. |  |
| Post Conditions | Targeted information about the content to help inform the research and content management workplan. |  |
| Basic Flow | 1. The solution shall enable the user to create their own queries by choosing the attributes of the records.
2. The solution shall allow user to narrow the search of records.
3. The solution shall allow user to assign a title to the query and save it for future use.
4. The solution shall allow user to edit saved queries.
5. The solution shall retrieve records in rows and list the defined attributes along columns. The query output should include the title of the query, date and the attribute names.
6. The solution shall extract records into a format that allows the user to filter and sort data.
7. The solution shall present records in a printable format.
 |  |
| Alternate Flow | 1. The user wants to know which records in the solution are the most accessed by its end users:
	1. The solution shall allow user to retrieve country, institution, and degree records that experienced the most access by its end users.
2. The user wants to understand the needs of its end users by comparing what end users are searching for versus what records they view in the solution:
	1. The solution shall capture the country and institution values entered by end users during UC2.
 |  |
| Remarks | The solution shall enable the Engineers Canada operator to pull individual records, as well as statistics and aggregate data from the solution. |  |
| Business Objective | BO-3, BO-6 |  |

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| Use Case Name | UC9a: Run Login Report | Bidders Response |
| Description | To know the level of usage of the solution in a certain period of time. |  |
| Primary Actor | Manager, Foreign Credential Recognition |  |
| Trigger(s) | The need to know the level of usage. |  |
| Pre-Condition | Historic login data is retained. |  |
| Post Conditions | Total number of users that accessed their accounts in a defined time period. |  |
| Basic Flow | 1. The user accesses the Usage query in the solution.
2. The solution shall provide the user the option to choose the query for:
	1. Number of logins per month
	2. Number of logins per month per engineering regulator, or
	3. Number of logins per month per engineering regulator per user, or
	4. Number of logins per month per engineering regulator for a year.
3. The user chooses Query ‘a’.
4. The solution shall allow user to define the start and end year for the query.
5. The user provides the date parameters.
6. The solution retrieves all the pertinent records, as defined, and lists them by year, month and number of logins, respectively.
7. The solution shall provide a total for the number of logins for the defined period.
8. The solution shall extract records into a format that allows the user to filter and sort data.
9. The solution shall present records in a printable format.
 |  |
| Alternate Flow | 1. The user wants to know the number of logins per month per engineering regulator:
	1. Refer to Steps 1 and 2.
	2. The user chooses Query ‘b’.
	3. The solution shall allow user to define the start and end year for the query.
	4. The user provides the date parameters.
	5. The solution retrieves all the pertinent records, as defined, and lists them by year, month, engineering regulator, and number of logins, respectively.
	6. Refer to Step 7.
2. The user wants to know the number of logins per month per engineering regulator per user:
	1. Refer to Steps 1 and 2.
	2. The user chooses Query ‘c’.
	3. The solution shall allow user to define the start and end year for the query.
	4. The user provides the date parameters.
	5. The solution retrieves all the pertinent records, as defined, and lists them by year, month, engineering regulator, username, full name, role name, and number of logins, respectively.
	6. Refer to Step 7.
3. The user wants the total number of logins per month per engineering regulator for a year:
	1. Refer to Steps 1 and 2.
	2. The user chooses Query ‘d’.
	3. The solution shall allow user to define the year for the query.
	4. The user provides the year parameter.
	5. The solution shall provide the number of logins per month and a total for the year for each engineering regulator.
	6. The solution shall show total logins per month and an overall total number of logins for the year of all the engineering regulators.
	7. Refer to Step 8.

  |  |
| Remarks | The solution shall have a standardized Usage query for the user to define parameters and run on an ongoing basis. |  |
| Business Objective | BO-4 |  |

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| Use Case Name | UC9b: Produce Updated Report for All Updates Since Last Reporting Period | Bidders Response |
| Description | Engineers Canada staff need to report on the number of records updated in the solution during a defined period of time. |  |
| Primary Actor | Manager, Foreign Credential Recognition |  |
| Trigger(s) | Time-based, biannual |  |
| Pre-Condition | Records are timestamped when they are updated. |  |
| Post Conditions | A report that details all the information about records updated during a specified period of time. |  |
| Basic Flow | 1. The solution shall allow the user to input the start month, start year, end month and end year.
2. The solution shall retrieve all records in the defined period and show the following attributes associated with each record in columns ordered by:
3. Country
4. Institution Name
5. Institution ID
6. Timestamp (for last update)
7. The solution shall provide a summary of the records indicating the specified time period, total number of institutions updated, and a breakdown of the number of institutions by country that were updated.
8. The solution shall extract records into a format that allows the user to filter and sort data.
9. The solution shall present records in a printable format.
 |  |
| Alternate Flow | n/a |  |
| Remarks | The solution shall have a standardized query for the user to define parameters and run on a continuous basis. |  |
| Business Objective | BO-4 |  |

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| --- | --- | --- |
| Use Case Name | UC10: Analyze Information & Produce Plan  | Bidders Response |
| Description | Data retrieved from queries is analyzed and records are flagged when there are discrepancies, inconsistencies and duplicates to prioritize research and content update efforts. |  |
| Primary Actor | Manager, Foreign Credential Recognition |  |
| Trigger(s) | Time-based |  |
| Pre-Condition | The user can create and run queries on their own. |  |
| Post Conditions | Records in need of immediate attention are flagged and prioritized. |  |
| Basic Flow | 1. The solution shall assign a ‘NULL’ value to attributes which have no value assigned to them.
2. The user will run queries (UC9) and analyze results for NULL values and other discrepancies in the records.
3. The solution shall allow the user to choose all suspect records and perform a batch status change to “Item for internal review”.
4. The solution shall order the suspect records from oldest to newest based on the dates the records were last updated.
5. The user will define a “Review by” date.
6. The solution will assign the “Review by” date to the batch of records.
7. Refer to UC11.
 |  |
| Alternate Flow | 1. The user wants to prioritize the research for records that the end users access the most:
2. The user will run a query (UC9) for the most accessed records in the solution.
3. The solution shall retrieve records that experienced the most access by its end users.
4. The solution shall order the records from oldest to newest based on the dates the records were last updated.
5. The solution shall allow the user to select individual records and perform a batch status change to “Item for internal review” for the selected records.
6. Refer to Step 5.
 |  |
| Remarks | n/a |  |
| Business Objective | BO-2, BO-6 |  |

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| Use Case Name | UC11: Update Information into Database  | Bidders Response |
| Description | To ensure that research is documented, and the records are up-to-date. |  |
| Primary Actor | Researcher, International Institutions and Degrees |  |
| Trigger(s) | Records in need of immediate attention are flagged and prioritized. (Refer to UC10) |  |
| Pre-Condition | Competent authority information must be up-to-date (see Remarks section below). |  |
| Post Conditions | Research findings are recorded, and records are up-to-date. |  |
| Basic Flow | 1. The user requests all records tagged as “Item for internal review” (UC10).
2. The solution retrieves the records in chronological order based on the “Review by” date.
3. The user selects an individual record.
4. The solution opens the record.
5. The user selects to edit the record.
6. The solution shall allow user to edit the basic, institution, and degree information pertaining to the record (Refer to UC12).
7. The solution shall provide read only capability on country level information in the individual record.
8. The solution shall allow user to save internal research notes.
9. The solution shall retain historic research data to be viewed by user. Historic research data shall be read-only and cannot be edited or deleted by user.
10. The solution shall present the information in a format that allows the user to view information on a minimum number of pages for an individual record.
11. The user updates the record, saves the information, and requests information to be published.
12. The solution publishes the information and timestamps the updated record.
13. Repeat Steps 3 to 12 until all records are updated.
 |  |
| Alternate Flow | 1. The user wants to delete a record:
	1. The solution shall prompt the user to confirm the action before deleting the record.
	2. The solution shall have a recycle bin to recover deleted files.
2. A record requires further review:
	1. Refer to Steps 1 to 10.
	2. The user updates the record, saves the information, and sets the status of the record to “Further review required”.
	3. The solution timestamps the updated record but does not publish the information.
	4. The solution shall allow the user to recall the individual record or a batch of records tagged as “Further review required” for editing later.
3. The user needs to search for an individual record to edit:
	1. The solution shall allow user to search for a record by providing values to one or more of the following attributes:
		1. Country name
		2. Institution name
		3. Institution ID number
 |  |
| Remarks | * Country-level information, which includes but is not limited to competent authority information, will be housed in a central location in the solution. Any modifications to the country-level information will be applied to all individual institution records that are associated with the country. (Refer to UC12)
* The solution will autosave at frequent intervals and allow user to save changes at any time.
* Users shall have continued access to the account until they exit, without compromising the security of the solution.
 |  |
| Business Objective | BO-3, BO-5 |  |

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| Use Case Name | UC12: Assess Information to Determine Indicator Responses | Bidders Response |
| Description | Research evidence to substantiate the responses for the country, institution, and degree category questions (Refer to UC3) are documented. |  |
| Primary Actor | Researcher, International Institutions and Degrees |  |
| Trigger(s) | Time-based |  |
| Pre-Condition | Record exists in the solution. |  |
| Post Conditions | Evidence supported responses for the country, institution, and degree category questions (UC3). |  |
| Basic Flow | 1. The user opens a country record.
2. The solution shall allow user to view and edit/add the following information about the country:
	1. Degrees comparable to the Canadian Bachelor’s degree: The solution shall allow user to list as many degrees as needed and to document the associated research date, reference sources, and research notes for each degree. The solution shall also allow user to add research dates, reference sources, and research notes for each degree without deleting earlier entries.
	2. Responses to the following questions (Yes/No/No evidence found/Not Applicable):
		1. Is the length of the typical degree comparable to CEAB bachelors of engineering degree?
			1. Credit hours (160) or semesters (8) equivalent.
		2. Is the education equivalent of 16 years of education?
		3. Does that country have a government-designated or competent authority for educational system?
		4. Is there a quality assurance system in place for universities)?
		5. Is the degree classified by ISCED at the same level as a bachelor degree in engineering in Canada as per <http://uis.unesco.org/en/isced-mappings>?
		6. Is there a form of professional engineering licensure in the country?
		7. Is there a form of engineering registration in the country?
		8. Is the licensure / registration system linked to the educational system?

For questions i, ii, v, vi, vii and viii above, the solution shall allow user to document the associated research date, reference sources, and research notes for each question. The solution shall also allow user to add research dates, reference sources, and research notes for each question without deleting earlier entries.For question iii and iv above, the solution shall allow user to list as many competent authorities as needed and to document the associated research date, reference sources, website url, and research notes for each competent authority. The solution shall also allow user to add research dates, reference sources, website url, and research notes for each competent authority without deleting earlier entries.* 1. Agreements and Accords: The solution shall allow user to list as many agreements and accords as needed and to document the following information associated with each agreement or accord:
		1. Governing body of the agreement/accord
		2. Website url
		3. Year of inception
		4. Name of accreditation body
		5. Website url to the list of accredited programs
		6. Engineers Canada membership (Yes/No)
		7. Agreement/Accord notes
	2. Country notes: The solution shall allow user to list as many country notes as needed and to document the associated research date, description, reference sources, and research notes for each country note. The solution shall also allow user to add research dates, descriptions, reference sources, and research notes for each country note without deleting earlier entries. The solution shall allow user to build and assign categories to each country note (e.g. war, restrictions, conflicts, etc.)
1. The user saves the changes to the country record.
2. The solution will apply the changes to all institution records associated with the country.
3. The user opens an institution record.
4. The solution shall allow user to view and edit/add the following information about the institution:
	1. Basic institution information:
		1. Institution name
		2. Alternative name(s)
		3. Former name(s)
		4. Parent institution name
		5. Year established
		6. Year closed (if applicable)
		7. Institution address (street name, city, country, and postal code)
		8. Website url
	2. Responses to the following questions (Yes/No/No evidence found/Not Applicable):
		1. Does the institution exist?
5. Is the institution authorized to grant degrees by a government-designated or competent authority?
	* + - If there is a government-designated or competent authority in operation, is the school recognized by the government-designated or competent authority?
			- If the government-designated or competent authority does not exist or is not in operation, do we know that it can grant degrees?
6. Is the institution a degree mill?

For each of the above questions in (b), the solution shall allow user to document the associated research date, reference sources, and research notes for each question. The solution shall also allow user to add research dates, reference sources, and research notes for each question without deleting earlier entries.1. The user opens a degree record within the institution record.
2. The solution shall allow user to view and edit/add the following information about the degree:
	1. Basic degree information:
		1. Degree Type
		2. Engineering discipline
		3. Inception year
		4. Last graduating year (if applicable)
	2. Responses to the following questions (Yes/No/No evidence found/Not Applicable):
		1. Does the degree program exist?
		2. Does the degree meet the requirements for professional licensure in this country or anywhere else?
			* If No, is it because there is no professional licensure for engineering?
			* If No, is it because the degree is not at the required level?

For the above questions in (b), the solution shall allow user to document the associated research date, reference sources, and research notes for each question. The solution shall also allow user to add research dates, reference sources, and research notes for each question without deleting earlier entries.1. The user saves the changes to the institution record.
2. The solution will timestamp the updated record.
3. The user requests the information to be published.
4. The solution shall only publish the pieces of information made available to the end user (Refer to UC3).
 |  |
| Alternate Flow | 1. The user wants to create a new record:
	1. The solution shall prompt the user to choose the type of record; country, institution, or diploma mill.
	2. The solution shall provide user with a blank template containing all the attribute sections for the type of record.
		1. Country record: Information sections outlined in Step 2.
		2. Institution record: Institution and degree information sections outline in Steps 6 and 8, respectively.
		3. Diploma mill record: Information sections outlined in UC13, step 2.
	3. The user enters the information into the template, saves the information, and requests the record to be published.
	4. The solution timestamps the record, assigns a reference ID, and only publishes the pieces of information of the record that is made available to the end user (Refer to UC3).
 |  |
| Remarks | n/a |  |
| Business Objective | BO-2, BO-4 |  |

|  |  |  |
| --- | --- | --- |
| Use Case Name | UC13: Identify & Store Diploma Mill Information  | Bidders Response |
| Description | Research evidence to substantiate the identification of diploma mill institutions (refer to UC3, alternate flow B) are documented. |  |
| Primary Actor | Researcher, International Institutions and Degrees |  |
| Trigger(s) | Identification of a Diploma Mill during research activities. A new record needs to be created. |  |
| Pre-Condition | The record does not exist. |  |
| Post Conditions | Evidence supported diploma mill records are documented. |  |
| Basic Flow | 1. The user selects the new record type: Diploma mill (Refer to UC12, alternate flow A).
2. The solution shall provide user with a blank diploma mill record template for the following attributes:
	1. Institution name
	2. Year established
	3. Institution address (street name, city, country, and postal code)
	4. Competent authority name
	5. Competent authority website url

For each of the above attributes, the solution shall allow user to document the associated research date, reference sources, and research notes. The solution shall also allow user to add research dates, reference sources, and research notes for each attribute without deleting earlier entries.1. The user enters the information into the template, saves the information, and requests the record to be published.
2. The solution timestamps the record, assigns a reference ID, and only publishes the pieces of information of the record that is made available to the end user (Refer to UC3, alternate flow B).
 |  |
| Alternate Flow | n/a |  |
| Remarks | n/a |  |
| Business Objective | BO-1, BO-2, BO-4, BO-5, BO-6 |  |

|  |  |  |
| --- | --- | --- |
| Use Case Name | UC14: Review Findings  | Bidders Response |
| Description | Enable access to the research findings of a record and enable the addition of review decisions. |  |
| Primary Actor | Manager, Foreign Credential Recognition |  |
| Trigger(s) | Records tagged with the “Further review required” status. (Refer to UC11, alternate flow C) |  |
| Pre-Condition | Records have gone through an initial internal review. |  |
| Post Conditions | Updated records are published. |  |
| Basic Flow | 1. The user requests all records tagged as “Further review required”. (Refer to UC11, alternate flow C).
2. The solution retrieves the records in chronological order based on the timestamp date.
3. The user selects an individual record.
4. The solution opens the record.
5. The user reviews the research findings of the record.
6. The solution shall allow user to add notes, decision date, and author information to the internal research sections of the record.
7. The solution shall allow user to edit the country, institution, and degree information in the record (Refer to UC12).
8. The solution shall allow user to change the status of the record to “Reviewed”.
9. The user updates the record, saves the information, and requests information to be published.
10. The solution publishes the information and timestamps the updated record.
 |  |
| Alternate Flow | n/a |  |
| Remarks | The solution shall retain historic research data to be viewed by user. Historic research data shall be read-only and cannot be edited or deleted by user. |  |
| Business Objective | BO-2, BO-6 |  |

|  |  |  |
| --- | --- | --- |
| Use Case Name | UC15: Verify Updated Data  | Bidders Response |
| Description | Process for verifying that the information entered in the solution is correct. |  |
| Primary Actor | Manager, Foreign Credential Recognition |  |
| Trigger(s) | Time-based |  |
| Pre-Condition | User can create their own queries to retrieve data from the solution. |  |
| Post Conditions | Verified data. |  |
| Basic Flow | 1. The user will run queries (UC9) and analyze records.
2. The user identifies all records with no discrepancies.
3. The solution shall allow the user to select records and perform a batch status change to “Data verified”.
4. The solution shall timestamp the records.
 |  |
| Alternate Flow | n/a |  |
| Remarks | n/a |  |
| Business Objective | BO-2, BO-5, BO-6 |  |

## Bidder Practices

### Technical

| **Description**  | **Bidder Response** |
| --- | --- |
| 1. How many team members will be dedicated to system security?
 |  |
| 1. Will penetration and vulnerability testing be performed by internal personnel or outsourced?
 |  |
| 1. Provide the date and time of the last penetration and vulnerability testing completed.
 |  |
| 1. Provide the results of the last one year of penetration and vulnerability testing completed.
 |  |
| 1. Provide any additional requirements that the Bidder anticipates would be required to complete the deliverables.
 |  |
| 1. Describe your Cloud Computing Solution, including the type of cloud solution.
 |  |
| 1. Who is the cloud provider (e.g. Amazon AWS, AZURE, IBM)?
 |  |

### Project Management

| **Description**  | **Bidder Response** |
| --- | --- |
| 1. Provide the names and resumes of your organization’s central point of contact and project team.
 |  |
| 1. Provide information demonstrating the qualifications of personnel who would be assigned to the Project including:
	1. Relevant education/experience including a summary of recent and relevant projects
	2. Description of team roles and responsibilities for the Project
	3. Contact information and qualifications of any subcontractors
	4. Resumes of all individuals who would be involved in the Project
 |  |
| 1. Provide a summary of the project management approach, including:
	1. Methodology overview
	2. Top-level work breakdown structure
	3. Proposed schedule of key milestones
	4. Assumptions summary
	5. Anticipated resource requirements of Engineers Canada
	6. Change control process
 |  |
| 1. Provide an overview of the planned approach that describes how the work will be completed, including defining stakeholder engagement philosophy and the corresponding tactics that will account for a diverse stakeholder group.
 |  |
| 1. Provide a summary of challenges experienced in past projects and how they were overcome.
 |  |
| 1. Provide a summary of expected challenges for this Project and proposed mitigation strategies.
 |  |
| 1. Describe the approach to Project initiation and planning.
 |  |
| 1. Describe how costs will be managed for the Project.
 |  |
| 1. Describe how quality will be managed for the Project.
 |  |
| 1. Describe how milestones, deliverables, activities, and tasks for the Project will be managed.
 |  |
| 1. Describe how releases will be aligned and integrated into the Project.
 |  |
| 1. Describe how the Project schedule will align and integrate with other project schedules (i.e. for the Bidder’s other customers).
 |  |
| 1. Describe how attendance and participation in bi-weekly status meetings will be handled.
 |  |
| 1. Describe the format of bi-weekly status reports to Engineers Canada. The Bidder may provide a template or sample of its status report.
 |  |

### Requirements Management Practices

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe your solution development life-cycle process and tools.
 |  |
| 1. Describe what techniques will be used to elicit and analyze requirements.
 |  |
| 1. Describe what techniques will be used to document requirements.
 |  |
| 1. Describe what techniques will be used to confirm that requirements are accurate.
 |  |
| 1. Describe how changes in requirements during the development life-cycle process will be handled.
 |  |
| 1. Describe how software bugs will be handled.
 |  |
| 1. Describe the Infrastructure setup and software platform for the solution.
 |  |
| 1. Describe how upgrades to application software will be handled, and how changes to the existing solution will be managed
 |  |

### Deployment and Implementations

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe a recommended deployment and implementation approach for this project.
 |  |

### Conversion / Transition

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe the proposed approach that will be used to accurately convert and migrate data into the cloud computing solution.
 |  |
| 1. Describe how software release management will be handled. Ensure to include a description of how releases are planned and delivered.
 |  |

### Testing and Verifications

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe the proposed approach to testing and verification.
 |  |
| 1. Describe the proposed approach to defect management.
 |  |

### Customer Support

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe the proposed approach to customer support.
 |  |

### User Training

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe the proposed User Training Program.
 |  |
| 1. Describe the proposed approach to delivery of the User Training Program.
 |  |
| 1. Describe the proposed Train the Trainer Program.
 |  |
| 1. Describe the proposed approach to delivery of the Train the Trainer Program.
 |  |

### Insurance

|  |  |
| --- | --- |
| **Description** | **Bidder Response** |
| 1. What type of insurance coverage does the business hold?
 |  |
| 1. Provide a list of all insurance coverage, limit amounts, and policy expiration dates.
 |  |

### Organizational Policies

| **Description** | **Bidder Response** |
| --- | --- |
| 1. Describe the approach to identification and development of organizational policies. Does the Bidder have a compliance manual setting out business rules and policies, which are applicable to employees and subcontractors? If yes, please provide copies or descriptions of the following applicable rules and/or policies:
* The Employee Code of Ethics
* Security policy
* Data protection and privacy policy
* Acceptable use of technology policy
* Record retention policy
* Anti-corruption compliance policies
* Compliance training activities
 |  |
| 1. Provide your formal procedure for reporting suspected security violations.
 |  |
| 1. Describe your system penetration testing process. Please include content that covers the following:
* What is the frequency of penetration testing?
* Are the results available to clients on your platform?
 |  |
| 1. Provide or describe the approval methods used to grant staff/vendors access to client data.
 |  |
| 1. Describe the encryption method used for securing data at rest and in transit.
 |  |

## Cost Information

Bidders must use the table below or a similar representation to submit their pricing estimates (in Canadian funds) for the Project. Please indicate separately one-time cost from ongoing operational costs.

|  |  |  |
| --- | --- | --- |
| **Pricing Component** | **Proposed Development and Implementation One-time Cost** | **Proposed Ongoing Operational Cost (if any)** |
| 1. **Planning Analysis and Preparation**

*Costs associated with planning and understanding Engineers Canada’s needs* | $ | $ |
| 1. **Development and Implementation**

*Costs not covered in items below that will be required for development and implementation* | $ | $ |
| 1. **License Fee and Other Compensation Perpetual/Annual/Monthly**

*Bidder to provide full description of pricing approach or approaches* | $ | $ |
| 1. **Additional Third-Party Products**

*Bidder to provide details, if required, as part of the Cloud Computing Solution – Engineers Canada reserves the right to acquire third-party products from a party other than vendor* | $ | $ |
| **Implementation Fees** *Including but not limited to all services described in RFP* | $ | $ |
| 1. **Solution Development Costs**

*Total of all costs associated with the development, testing and deployment of solution* | $ | $ |
| 1. **Training (Fixed Price)**

*Including but not limited to services described in RFP* | $ | $ |
| **Documentation (Fixed Price)***Including but not limited to all materials described in RFP* | $ | $ |
| 1. **Travel and Accommodation Expense Cost (Estimate**)
 | $ | $ |
| 1. **Infrastructure and Other Costs**
 | $ | $ |
| 1. **First and Subsequent Year Maintenance / Support**

*Proposal must include the maximum annual escalation rate for subsequent years* | $ Yr 1$ Yr 2$ Yr 3$ Yr N | $ Yr 1$ Yr 2$ Yr 3$ Yr N |
| 1. **Total Cost of Ownership**

*All costs for the proposed Solution and Services identified in the RFP.* | $ | $ |