Section I: Technical Bid

(a) The technical bid consists of the following:

(i) **Bid Submission Form**: Bidders are requested to include the Bid Submission Form – Attachment "3.1" with their bids. It provides a common form in which bidders can provide information required for evaluation and contract award, such as a contact name and the Bidder's Procurement Business Number, etc. Using the form to provide this information is not mandatory, but it is recommended. If Canada determines that the information required by the Bid Submission Form is incomplete or requires correction, Canada will provide the Bidder with an opportunity to do so.

(ii) **Security Clearance**: Bidders are requested to submit the following security information for **each of the proposed resources with their bids on or before the bid closing date:**

SECURITY INFORMATION	
Name of individual as it appears on security clearance application form	
Level of security clearance obtained	
Validity period of security clearance obtained	
Security Screening Certificate and Briefing Form file number	

If the Bidder has not included the security information in its bid, the Contracting Authority will provide an opportunity to the Bidder to submit the security information during the evaluation period. If the Bidder has not submitted the security information within the period set by the Contracting Authority, its bid will be declared non-responsive.

(iii)   **Substantiation of Technical Compliance**:

a.   **Mandatory Technical Criteria**: The technical bid must substantiate the compliance with the specific articles of Attachment "4.1", which is the requested format for providing the substantiation. The substantiation must not simply be a repetition of the requirement(s), but must explain and demonstrate how the Bidder will meet the requirements and carry out the required Work. Simply stating that the Bidder or its proposed solution or resources comply is not sufficient. Where Canada determines that the substantiation is not complete, the Bidder will be considered non-responsive and disqualified. The substantiation may refer to additional documentation submitted with the bid - this information can be referenced in the "Bidder's Response" column of Attachment "4.1", where Bidders are requested to indicate where in the bid the reference material can be found, including the title of the document, and the page and paragraph numbers; where the reference is not sufficiently precise, Canada may request that the Bidder direct Canada to the appropriate location in the documentation.

b.   **Point-Rated Technical Criteria** : The technical bid must substantiate the compliance with the specific articles of Attachment "4.2", which is the requested format for providing the substantiation. The substantiation must not simply be a repetition of the requirement(s), but must explain and demonstrate how the Bidder will meet the requirements and carry out the required Work. Simply stating that the Bidder or its proposed solution or resources comply is not sufficient. Where Canada determines that the substantiation is not complete, the Bidder will be rated accordingly. The substantiation may refer to additional documentation submitted with the bid - this information can be referenced in the "Bidder's Response" column of Attachment "4.2", where Bidders are requested to indicate where in the bid the reference material can be found, including the title of the document, and the page and paragraph numbers; where the reference is not sufficiently precise, Canada may request that the Bidder direct Canada to the appropriate location in the documentation.

(iv) **Previous Similar Projects**: Where the bid must include a description of previous similar projects: (i) a project must have been completed by the Bidder itself (and cannot include the experience of any proposed subcontractor or any affiliate of the Bidder); (ii) a project must have been completed by the bid closing date; (iii) each project description must include, at minimum, the name and either the telephone number or e-mail address of a customer reference; and (iv) if more similar projects are provided than requested, Canada will decide in its discretion which projects will be evaluated. A project will be considered "similar" to the Work to be performed under any resulting contract if the project was for the performance of work that closely matches the TBIPS descriptions of the Resource Categories identified in Part 1 or Annex A. Work will be considered to "closely match" if the work in the provided project is described in at least 50% of the points of responsibility listed in the description of the given Resource Category.

(v) **For Proposed Resources:** The technical bid must include the number of résumés, per Resource Category, as identified in Attachments 4.1 and 4.2. The same individual must not be proposed for more than one Resource Category. The Technical bid must demonstrate that each proposed individual meets the qualification requirements described (including any educational requirements, work experience requirements, and professional designation or membership requirements). With respect to the proposed resources:

    (A)   Proposed resources may be employees of the Bidder or employees of a subcontractor, or these individuals may be independent contractors to whom the Bidder would subcontract a portion of the Work (refer to Part 5, Certifications).

    (B)   For educational requirements for a particular degree, designation or certificate, PWGSC will only consider educational programs that were successfully completed by the resource by the time of bid closing. If the degree, designation or certification was issued by an educational institution outside of Canada, the Bidder is requested to provide a copy of the results of the academic credential assessment and qualification recognition service issued by one of the members of the Alliance of Credential Evaluation Services of Canada (ACESC). If the Bidder has not included the copy of the results in its bid, the Contracting Authority will provide an opportunity to the Bidder to submit it during the evaluation period. If the Bidder has not submitted the copy of the results within 2 working days of the request by the Contracting Authority, its bid will be rated accordingly. Bidders should note that in addition to providing a copy of the results of the academic credential assessment and qualification recognition service, Bidders are also required to provide a copy of the original degree, designation, certificate or any other document required as per the bid solicitation as proof of education.

    (C)   For requirements relating to professional designation or membership, the resource must have the required designation or membership by the time of bid closing and must continue, where applicable, to be a member in good standing of the profession or membership throughout the evaluation period and Contract Period. Where the designation or membership must be demonstrated through a certification, diploma or degree, such document must be current, valid and issued by the entity specified in this solicitation. If the entity is not specified, the issuer must have been an accredited or otherwise recognized body, institution or entity at the time the document was issued. If the degree, diploma or certification was issued by an educational institution outside of Canada, the Bidder is requested to provide a copy of the results of the academic credential assessment and qualification recognition service issued by one of the members of the Alliance of Credential Evaluation Services of Canada (ACESC). If the Bidder has not included the copy of the results in its bid, the Contracting Authority will provide an opportunity to the Bidder to submit it during the evaluation period. If the Bidder has not submitted the copy of the results within 2 working days of the request by the Contracting Authority, its bid will be rated accordingly. Bidders should note that in addition to providing a copy of the results of the academic credential assessment and qualification recognition service, Bidders are also required to provide a copy of the original degree, designation, certificate or any other document required as per the bid solicitation as proof of professional designation or membership.

    (D)   For work experience, PWGSC will not consider experience gained as part of an educational program, except for experience gained through a formal co-operative program at a post-secondary institution.

(E)   For any requirements that specify a particular time period (e.g., 2 years) of work experience, PWGSC will disregard any information about experience if the technical bid does not include the relevant dates (month and year) for the experience claimed (i.e., the start date and end date). Canada will evaluate only the duration that the resource actually worked on a project or projects (from his or her start date to end date), instead of the overall start and end date of a project or a combination of projects in which a resource has participated.

(F)   For work experience to be considered by Canada, the technical bid must not simply indicate the title of the individual's position, but must demonstrate that the resource has the required work experience by explaining the responsibilities and work performed by the individual while in that position. Only listing experience without providing any supporting data to describe responsibilities, duties and relevance to the requirement, or reusing the same wording as the qualification requirements, will not be considered "demonstrated" for the purposes of the assessment. The Contractor should provide complete details as to where, when, month and year, and how, through which activities/responsibilities, the stated qualifications / experience were obtained. In situations in which a proposed resource worked at the same time on more than one project, the duration of any overlapping time period will be counted only once toward any requirements that relate to the individual's length of experience.

(vi)   **Customer Reference Contact Information**:

(A)   The Bidder must provide customer references. The customer reference must each confirm, if requested by PWGSC, the facts identified in the Bidder's bid, as required by Attachments 4.1 and 4.2.

(B)   The form of question to be used to request confirmation from customer references is as follows:

Has [the Bidder] provided your organization with [describe the services and, if applicable, describe any required time frame within which those services must have been provided]?"

___ Yes, the Bidder has provided my organization with the services described above.

___ No, the Bidder has not provided my organization with the services described above.

___ I am unwilling or unable to provide any information about the services described above.

(C)   For each customer reference, the Bidder must, at a minimum, provide the name and either the telephone number or e-mail address for a contact person. If only the telephone number is provided, it will be used to call to request the e-mail address and the reference check will be done by e-mail.

Bidders are also requested to include the title of the contact person. It is the sole responsibility of the Bidder to ensure that it provides a contact who is knowledgeable about the services the Bidder has provided to its customer and who is willing to act as a customer reference. Crown references will be accepted.

(vii)   **Corporate Profile**: The Bidder is requested to provide a corporate profile, which should include an overview of the Bidder and any subcontractors, and/or authorized agents of the Bidder that would be involved in the performance of the Work on the Bidder's behalf. The Bidder is requested to provide a brief description of its size, corporate structure, years in business, business activities, major customers, number of employees and their geographic presence. This information is requested for information purposes only and will not be evaluated.

BID SUBMISSION FORM

BID SUBMISSION FORM		
Bidder's full legal name		
Authorized Representative of Bidder for evaluation purposes (e.g., clarifications)	Name	
	Title	
	Address	
	Telephone #	
	Fax #	
	Email	
Company Security Officer (CSO) contact information:	Name:	
	Title:	
	Address:	
	Telephone #:	
	Fax #:	
	Email:	
Bidder's Procurement Business Number (PBN) [see the Standard Instructions 2003] **[Note to Bidders:** *Please ensure that the PBN you provide matches the legal name under which you have submitted your bid. If it does not, the Bidder will be determined based on the legal name provided, not based on the PBN, and the Bidder will be required to submit the PBN that matches the legal name of the Bidder*.**]**		
Jurisdiction of Contract: Province or territory in Canada the Bidder wishes to be the legal jurisdiction applicable to any resulting contract (if other than as specified in solicitation)		
Former Public Servants See the Article in Part 2 of the bid solicitation entitled Former Public Servant for a definition of "Former Public Servant".	Is the Bidder a FPS in receipt of a pension as defined in the bid solicitation? Yes _____ No _____ If yes, provide the information required by the Article in Part 2 entitled "Former Public Servant"	
	Is the Bidder a FPS who received a lump sum payment under the terms of the Work Force Adjustment Directive? Yes _____ No _____	

	If yes, provide the information required by the Article in Part 2 entitled "Former Public Servant"
Security Clearance Level of Bidder [include both the level and the date it was granted] **[Note to Bidders:** *Please ensure that the security clearance matches the legal name of the Bidder. If it does not, the security clearance is not valid for the Bidder***.]**	
On behalf of the Bidder, by signing below, I confirm that I have read the entire bid solicitation including the documents incorporated by reference into the bid solicitation and I certify that: 1. The Bidder considers itself and its proposed resources able to meet all the mandatory requirements described in the bid solicitation; 2. This bid is valid for the period requested in the bid solicitation; 3. All the information provided in the bid is complete, true and accurate; and 4. If the Bidder is awarded a contract, it will accept all the terms and conditions set out in the resulting contract clauses included in the bid solicitation.	
Signature of Authorized Representative of Bidder	

ATTACHMENT 4.1 - MANDATORY TECHNICAL CRITERIA

1.0 CORPORATE

Note 1 to Bidder: **Where a copy of Contract/Task Authorization documentation is required to provide verification of the details provided by the Bidder to demonstrate compliance with a criteria, the following is sufficient:**

1. Contract including Statement of Work, excluding Annexes, attachments, forms and other appendices that are not necessary to substantiate the information provide; or
2. Contract including Statement of Work as #1 above, with confidential details redacted, so long as adequate detail remains to substantiate the information required to demonstrate compliance with the criteria; or
3. Client signature, electronic or wet, (at Director level or above) including name, title and contact information on the associated Form validating all the information provided within the form. Details included must fully substantiate the criteria.

Note 2 to Bidder: When providing date ranges for reference contracts, Canada requests that bidders use the format YYYY to YYYY/MM/DD. For example: 2020/04/15 to 2021/04/14 is acceptable for a one year period. The example Apr 2020 to Apr 2021 would __NOT__ be acceptable for a one year period..

Criteria	Corporate Mandatory Requirement	Met/Not Met	Bidder's Response
CM1 (PB)	**Experience with Large Mobile Architecture Contracts** The Bidder must demonstrate that it has been awarded up to (3) three informatics professional services contracts, within the last 18 months prior to the solicitation issue date, that met the following criteria: 1. The contract was in support of Mobile Application Development leveraging public cloud (Azure/AWS) in support of Federal Government programs. A summary of the scope and key responsibilities must be provided; 2. Each contract value must total a minimum of $10,000,000.00. Value is defined as either the amount specified in the limitation of expenditure article of the contract, plus applicable taxes, or the total price in the contract, whichever is the highest. 3. Each reference contract must have been contracted directly with the Bidder and not with the Bidder's subcontractor or affiliate. The reference contract(s) must demonstrate combined billed days according to the requirement for the activities listed below.		

Activities	Level of Resources	Minimum Billable Days per Resource Category (1 billable day

Criteria	Corporate Mandatory Requirement			Met/Not Met	Bidder's Response
			= 7.5 hours)		
	Mobile Development	3	2000		

The reference contract must have been contracted with the Bidder submitting a bid for this requirement. "Bidder" means the person or entity (or, in the case of a joint venture, the persons or entities) submitting a bid to perform a contract for goods, services or both. It does not include the parent, subsidiaries or other affiliates of the Bidder, or its subcontractors. The Government of Canada is not considered a single client. An individual department, agency or Crown Corporation is considered a single client.

Form 1 is provided to assist Bidders in structuring the required information for the reference contract. The form must be signed by the client reference to attest the information provided is accurate and true. If Form 1 provided with the bid is not signed by the client reference, the Contracting Authority will inform the Bidder of a time frame within which to provide the signed Form 1. Failure to provide the signed Form 1 within the time frame will render the bid non-responsive.

Form 2 is provided to assist Bidders in structuring the required information for mapping tasks for resource categories.

CM2 — The Bidder must have one Government of Canada (GoC) department reference with a contract value greater than $2M where the contract required the following mobile development, cloud integration, microservice integration and biometric capabilities:

- Integration with AWS Services from iOS, Android: Cognito, S3, Kinesis Video Streams
- Mobile Push Notifications using Firebase Cloud Messaging
- Address Auto-Complete using Google Places API
- Analytics with Microsoft App Center Analytics and Firebase Analytics
- OCR and NFC Travel Document Scanning
- Integration with Grabba SDK
- Application Deployment through MDM solution
- Integration with Biometrics SDK
- Mobile Video Chat using AWS Kinesis Video Stream
- Location-Based Services - Geofences, and location tracking
- Voice Biometric Authentication

*Referenced Project must have been in the past 24 months and screen grabs or wireframes <u>must</u> be provided at bid closing as proof of delivery.

Criteria	Corporate Mandatory Requirement	Met/Not Met	Bidder's Response
CM3	The Bidder must have one GoC department reference within the past 18 months and with a contract value greater than $2M where the contract <u>must</u> require the following capabilities: • Cloud-based data ingestion platform capable of processing more than 300 million records per year • Full workflow application to track packages through a detailed inspection lifecycle delivered as a Single Page Application in React and via a native iOS app • Real-time data sharing across both the web and the mobile applications • Real-time integration with an analytics platform that leverages custom machine learning models to return predictions • Full Infrastructure as Code implementation using AWS CDK • Parallelized State Machine to process, cleanse, transform, and enrich more than 300 million records per year • Leveraging Platform-as-a-Service and serverless technologies for the majority of the platform The following information must be provided for each contract: • The name and address of the client organization; • The Contract number or reference number(s), i.e. Task Authorization(s), Purchase Order(s), etc; • The start and completion dates of the Contract; • The Project description; • Total amount billed; • Contact information for a reference person at the client organization: Name, title, telephone number, and email address. The reference person must be, or have been at the time of the project, an employee of the client organization. • Copy of the Statement of Work identifying the deliverables OR a letter signed by the client affirming that the specified services were completed by the Bidder under the reference contract.		
CM4	The Bidder MUST have a minimum of two (2) mobile application projects for public sector clients within the last 18 months. To be considered, each reference contract must: • Have had a minimum contract duration of twelve (12) months occurring within the five (5)		

Criteria	Corporate Mandatory Requirement	Met/Not Met	Bidder's Response
	years preceding the solicitation. The following information must be provided for each contract: • The name and address of the client organization; • The Contract number or reference number(s), i.e. Task Authorization(s), Purchase Order(s), etc; • The start and completion dates of the Contract; • The Project description; • Total amount billed; • Contact information for a reference person at the client organization: Name, title, telephone number, and email address. The reference person must be, or have been at the time of the project, an employee of the client organization. • Copy of the Statement of Work identifying the deliverables OR a letter signed by the client affirming that the specified services were completed by the Bidder under the reference contract.		
CM5 (PB)	The Bidder must have one GoC department reference within the past 18 months and with a contract value greater than $4M where the contract <u>must</u> require the following mobile development, cloud and on premise integration and microservice integration capabilities: • Creation of platform that Synchronizes between on premise, Web application, mobile application and AWS backend securely up to Protected B level within the Government of Canada setting • Multi directional capabilities (allows interaction between GoC department and the public.) • Privacy considerations (Not using Geolocation etc.) • Encryption at local level (mobile device, Android <u>and</u> iOS) The following information must be provided for each contract: • The name and address of the client organization; • The Contract number or reference number(s), i.e. Task Authorization(s), Purchase Order(s), etc; • The start and completion dates of the Contract; • The Project description; • Total amount billed; • Contact information for a reference person at the client organization: Name, title, telephone number, and email address. The reference person must be, or have been at the time of the project, an employee of the client		

Criteria	Corporate Mandatory Requirement	Met/Not Met	Bidder's Response
	organization. • Copy of the Statement of Work identifying the deliverables OR a letter signed by the client affirming that the specified services were completed by the Bidder under the reference contract.		
CM6	The Bidder must have two GoC department references within the past 24 months where they built two cloud-based targeting platforms leveraging different cloud solution providers (AWS, Google & Azure) The following information must be provided for each contract: • The name and address of the client organization; • The Contract number or reference number(s), i.e. Task Authorization(s), Purchase Order(s), etc; • The start and completion dates of the Contract; • The Project description; • Total amount billed; • Contact information for a reference person at the client organization: Name, title, telephone number, and email address. The reference person must be, or have been at the time of the project, an employee of the client organization. • Copy of the Statement of Work identifying the deliverables OR a letter signed by the client affirming that the specified services were completed by the Bidder under the reference contract.		
CM7	The Bidder must have completed work on a GC mobile application that has a rating of **Web Content Accessibility Guidelines (**WCAG) 2.1 AA or higher within the past 12 months. **The Referenced Project must have been in the past 12 months and an Accessibility conformance report demonstrating WCAG 2.1 AA or higher must be provided at time of submission as proof or the solicitation response will be deemed non-compliant.** The following information must be provided for each contract: • The name and address of the client organization; • The Contract number or reference number(s), i.e. Task Authorization(s), Purchase Order(s), etc; • The start and completion dates of the Contract; • The Project description; • Total amount billed;		

Criteria	Corporate Mandatory Requirement	Met/Not Met	Bidder's Response
	• Contact information for a reference person at the client organization: Name, title, telephone number, and email address. The reference person must be, or have been at the time of the project, an employee of the client organization. • Copy of the Statement of Work identifying the deliverables OR a letter signed by the client affirming that the specified services were completed by the Bidder under the reference contract.		

1.0   RESOURCES

A.1–Application/Software Architect – Level 3

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
MT1.1	The Bidder MUST demonstrate that the proposed resource has a minimum of ten (10) years' experience* within the last fifteen (15) years performing **all** of the following tasks: • Developing technical architectures, frameworks and strategies, to meet the business and application requirements; • Analyzing and evaluating alternative technology solutions to meet business problems; • Ensuring the integration of all aspects of technology solutions; • Evaluating existing procedures and methods, identifying and documenting database content, structure, and application sub-systems, and developing data dictionary; • Defining and documenting interfaces of manual to automated operations within application sub-systems, to external systems and between new and existing systems; and • Defining input/output sources, including detailed plan for technical design phase, and obtaining approval of the system proposal. Note: To qualify, a project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT1.2	The Bidder MUST demonstrate that the proposed resource has a minimum of five (5) years' experience within the last ten (10) years performing **all** of the following tasks within a public cloud environment: • Creating the conceptual, logical and physical designs for application architectures and their interoperability; • Researching, analyzing, recommending and selecting technical approaches to address challenging development and integration problems with application architectures; and • Developing implementation plans for the deployment of application architectures. Note: To qualify, a project must have a minimum duration of six (6) months.			

	To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT1.3	The Bidder MUST demonstrate that the proposed resource has a minimum of five (5) years' experience within the last eight (8) years designing and implementing cloud solutions employing **ALL** of the following cloud technologies and services: • Elastic Computing • Cloud storage and backup • Automation • Network Virtual Appliances (Firewalls) • Application gateways and load balancing • Database-as-a-Service • Identity, Credential and Access Management Note: To qualify, a project must have a minimum duration of six (6) months To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT1.4	The Bidder MUST demonstrate that the proposed resource has a minimum of one (1) year experience designing and implementing cloud solutions for a *public sector organization. *Public sector is defined as a municipal/provincial/territorial or federal Government within Canada. Note: To qualify, a project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of			

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
	the reference, how did the reference manage the contract in order to confirm?			
MT1.5	The Bidder MUST demonstrate that the proposed resource has: One of the following certifications applicable to Infrastructure as a Service (IaaS) platforms from one or more Leaders in the Gartner 2019 Magic Quadrant for IaaS Cloud (i.e. AWS, Azure, or Google): • Azure Solutions Architect Expert • Amazon Solutions Architect Associate • Professional Cloud Architect (GCP) A copy of the certificate(s) must be provided.			

I.10 – Technical Architect Mobile – Level 3

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
MT2.1	The Bidder MUST demonstrate that the proposed resource has a minimum of eight (8) years' experience developing mobile application working with MS Azure or AWS. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT2.2	The Bidder MUST demonstrate that the proposed resource has a minimum of ten(10) years' experience performing **all** of the following tasks within a public cloud environment from the date of bid closing: • Creating the conceptual, logical and physical designs for mobile application architectures and their interoperability; • Researching, analyzing, recommending and selecting technical approaches to address challenging development and integration problems with application architectures; and • Developing implementation plans for the deployment of mobile application architectures. To demonstrate compliance with all criteria, the Contractor must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the			

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
	contract in order to confirm?			
MT2.3	The Bidder MUST demonstrate that the proposed resource has a minimum of one (1) year o f experience designing and implementing a minimum of three (3) mobile solutions for a Government of Canada Client on either MS Azure or AWS and at least one at the Accessibility level of AA WCAG 2.1 from the date of bid closing. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT2.4	The Bidder MUST demonstrate that the proposed resource has a minimum of ten (10) years of experience developing mobile solutions integrated with location based services from the date of bid closing. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT2.5	The Bidder MUST demonstrate that the proposed resource has a minimum of ten (10) years of experience developing mobile applications meeting top security standards, such as OWASP from the date of bid closing. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			

I.5 – IM Architect – Data/AI – Level 3

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal

| MT3.1 | The Bidder MUST demonstrate that the proposed resource has a minimum of five (5) years' experience within the last ten (10) years performing **all** of the following tasks and responsibilities:

• Using methodologies from Machine Learning, Deep Learning and Artificial Intelligence;
• Applying Machine Learning using diverse types of data, diverse data sources and different types of learning models;
• Developing queries to isolate data with high value within a Data Warehouse, Data Mart or Data Lake;
• Performing exploratory data analysis, rapid prototyping and presenting creative ideas to exploit data to drive deeper insights and business value;
• Providing proactive data analysis of large structured and unstructured datasets involving a wide range of systems across multiple disparate data sets; and
• Developing data analytic and visualization plans to support high-quality, fact-based business decisions.

Note: To qualify, a project must have a minimum duration of six (6) months

To demonstrate compliance with all criteria, the Bidder must include the following information:

• Project name;
• Client organization;
• Project start /end dates and duration;
• Project description;
• Description of role and tasks performed by the resource
• Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm? | | | |
| MT3.2 | The Bidder MUST demonstrate that the proposed resource has a minimum of five (5) years' experience within the last ten (10) years performing a minimum of five (5) of the following tasks and activities:

• Working with scalable data platforms such as; Power BI, Hadoop, Spark, Redshift, NoSQL (dynamoDB / MongoDB);
• Building the tools and supporting data structures needed to analyze data and perform data cleaning activities;
• Determining problematic issues with data and proposing feasible resolutions;
• Organizing, mapping, analyzing numerous data sets to incorporate them into one centralized data repository;
• Performing exploration of data, including analysis, mining of correlations and result verification;
• Developing and deploying solutions that addressed data aggregation challenges, including data being distributed across numerous databases or sources; and
• Developing and implementing strategies | | | |

	for data enrichment. Note: To qualify, a project must have a minimum duration of six (6) months To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT3.3	The Bidder MUST demonstrate that the proposed resource has a minimum of three (3) years' experience within the last five (5) years from the date of bid closing performing a minimum of three (3) of the following tasks and activities: • Identifying opportunities for automation, knowledge discovery, decision-making, insights, optimization, and new capabilities; • Developing frameworks and best practices for analytic solutions at different maturity levels; • Preparing documentation, reports, and presentations that explain advanced analytics concepts, technology, and inner workings of solutions to broader teams, including non-technical audiences; and • Mentoring other data scientists in the design, implementation, testing, prototyping, and deploying of data analytic solutions. Note: To qualify, a project must have a minimum duration of six (6) months To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT3.4	The Bidder MUST demonstrate the proposed resource holds: A Masters' degree in a quantitative discipline such as applied mathematics, computer science, data science, statistics or econometrics, OR An equivalent *Canadian academic credential assessment*,			

	if obtained outside Canada.			
	The Bidder must include a copy of the degree(s).			

I.10 – Technical Architect – Level 3

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
MT4.1	The Bidder MUST demonstrate that the Proposed Resource has a minimum of ten (10) years' experience within the last fifteen (15) years working on **Enterprise-class** IT systems performing a minimum of six of the following tasks: • Gathering and documenting business requirements; • Developing Systems Architecture; • Developing Logical and Physical cloud models; • Developing and Implementing architectural strategies and plans; • Contributing to overall project plans, testing strategies, security and infrastructure design; • Developing processes to enable the migration of data or workloads from source to destination systems; • Contributing expertise and resolving Issues related to architectural challenges; and • Reporting on progress to management using standard approaches and visualization (charts, etc.). Note: To qualify, a project must have a minimum duration of six (6) months To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT4.2	The Bidder MUST demonstrate that the proposed resource has a minimum of five (5) years' experience within the last eight (8) years designing and architecting infrastructure services or applications leveraging a minimum of five of the following cloud technologies: • **Elastic Computing** • Cloud storage and backup • Networking (Firewalls, User Defined Routing) • Application gateways and load balancing			

	• Database or DataWarehouse-as-a-Service • Identity, Credential and Access Management Note: To qualify, a project must have a minimum duration of six (6) months To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			

MT4.3	The Bidder MUST demonstrate that the proposed resource has a minimum of eighteen (18) months' experience in the last five (5) years from the date of bid closing architecting and executing a solution to migrate an existing **Enterprise-class** secure* application or service to the cloud.
	
	*Secure is defined as meeting one of the following security control profiles:
	
	  o the GovernmentofCanadaProtectedBMedium integrityMediumavailability(PBMM).
	
	  o FEDRAMP Moderate or High Level
	
	  o ISO27001, ISO27017 and ISO27018
	
	Note: To qualify, a project must have a minimum duration of six (6) months
	
	To demonstrate compliance with all criteria, the Bidder must include the following information:
	
	• Project name;
	• Client organization;
	• Project start /end dates and duration;
	• Project description;
	• Description of role and tasks performed by the resource
	• Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			

MT4.4	The Bidder MUST demonstrate that the proposed resource has a minimum of two (2) years' experience within the last ten (10) years from the date of bid closing, designing, developing (coding), testing, implementing and supporting application solutions. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource			

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
	• Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT4.5	The Bidder MUST demonstrate that the proposed resource has: One of the following certifications applicable to Infrastructure as a Service (IaaS) platforms from one or more Leaders in the Gartner 2019 Magic Quadrant for IaaS Cloud (i.e. AWS, Azure, or Google): • Azure Solutions Architect Expert • Amazon Solutions Architect Associate • Professional Cloud Architect (GCP) **A copy of the certificate(s) must be provided with the bid.**			

A.6- Programmer/Software Developer (iOS/Android) – Level 3

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
MT6.1	The Bidder MUST demonstrate that the Proposed Resource has a minimum of five (5) years' experience within the last ten (10) years from date of bid closing, designing, developing, testing and deploying code and software for a mobile application on the public cloud. Note: To qualify, a project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT6.2	The Bidder MUST demonstrate that the Proposed Resource has a minimum of seven (10) years' experience within the last ten (10) years designing, developing and implementing mobile-based applications for two of the platforms below • iOS • Android • Blackberry Note: To qualify, a project must have a minimum duration of six (6) months.			

	To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT6.3	The Bidder MUST demonstrate that the proposed resource has a minimum of two (2) years' experience within the last five (5) years' **refactoring** and deploying ***Enterprise-class*** solutions. Note: To qualify, a project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT6.4	The Bidder MUST demonstrate that the proposed resource has a minimum of twelve (12) months experience within the last five (5) years, coding, testing and implementing solutions involving: • Biometric security models and multi-factor authentication, secure enclave processing; • Mobile device-based multi factor authentication; and • Cloud-based identity access management. Note: To qualify, a project must have a minimum duration of six (6) months. The experience can be demonstrated in various combinations across different projects, however the minimum experience must be demonstrated for EACH one of the three bullets above. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
MT6.5	The Bidder MUST demonstrate that the proposed resource has a minimum 5 years+ experience of developing mobile applications working with AWS or Azure clouds. Note: To qualify, a project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT6.6	The Bidder MUST demonstrate that the proposed resource has a minimum of more than 1 year of experience developing 3 or more mobile applications for the Government of Canada. • More than 1 year experience developing Government mobile application integrated with public cloud services such as AWS or Azure • Led development of Government mobile application with more than 1 million users • Led development of Government mobile application with AA mobile accessibility Note: To qualify, a project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			

A.14 - Web Developer - Level 3

Item	Mandatory Requirement	Met	Not Met	Cross Reference to the Proposal
MT7.1	The Bidder must demonstrate that the proposed resource has ten plus (10+) years of demonstrated Web Developer experience tasked with the following responsibilities: a) Analysis, design b) Coding, testing c) Implementation d) Support of web applications. Note: A qualifying project will have a minimum duration of six			

	(6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT7.2	The Bidder must demonstrate that the proposed resource has a minimum of five (5) years' experience within the last ten (10) years developing web applications using the following development products: a) Angular JS b) GitHub c) JQuery d) Sass Note: A qualifying project will have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT7.3	The Bidder must demonstrate that the proposed resource has a minimum of five (5) years' experience (within the last 10 years) using the following client/server-side technologies; a) HTML b) CSS c) JavaScript libraries/frameworks d) AJAX Note: A qualifying project will have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			

MT7.4	The Bidder must demonstrate that the proposed resource has a minimum of five (5) years' experience (within the last 10 years) using either Microsoft SQL Server (2016 minimum) or IBM Db2 tasked with the following;			
	a) Developing and maintaining scripts/code including queries, stored procedures, triggers and user functions. b) Relational database design, normalization, data manipulation and control. Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
MT7.5	The Bidder must demonstrate that the proposed resource has worked on at least two (2) relevant Provincial or Federal Government* web application projects' consulting assignments within the last five (5) years. Each project must have a continuous (full time equivalent) work effort duration of six (6) months or greater and have a complimentary mobile application. *Government refers to federal or provincial level government within Canada Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm? .			

ATTACHMENT 4.2 –POINT-RATED TECHNICAL CRITERIA

1.0 - CORPORATE

ID	Corporate Name: **Point-Rated Criteria**	Demonstrated Experience	Max # Points
CR1	<u>Talent Management Plan</u> The Bidder should describe the Talent Management Plan it proposes to implement in the resulting Contract. The Plan must describe how the Bidder will: a) Minimize and manage resource turnover; b) Maintain knowledge and expertise related to Canada Border Services Agency's requirements over the life of the resulting Contract both during and in between Task Authorizations; c) Ensure that <u>Mobile, Biometric, AI and Data</u> resources will stay current with technology changes during the life of the Contract; and d) Ensure that the Bidder is able to propose qualified <u>Mobile, Biometric, AI and Data</u> resources to Canada Border Services Agency within five (5) days of receipt of a request; The Bidder's submission should be relevant to CBSA's requirement, and should not exceed 2500 words	10 points for each of the points described below: No demonstration = 0 points 1. Includes processes the Bidder uses to keep its inventory of active resources up-to-date and how intake and validation of new resources expertise is handled 2. Identifies individuals responsible for maintaining knowledge on CBSA's requirements, frequency of this maintenance, and how that knowledge is shared within the company 3. Describes how the Bidder maintains contact with the client regarding satisfaction with the outcomes or deliverables produced. 4. Describes how the Bidder maintains contact with the resources placed under the contract 5. Includes processes the Bidder uses to ensure they are able to provide alternative qualified individuals with specialized knowledge and expertise in a timely manner 6. Describes how the Bidder ensures resources' skills and knowledge relative to the deliverables of the contract will remain current	**60**

| CR2 | Points will be awarded for experience over and above that required for CM1

The Bidder should demonstrate that it has been awarded up to (3) three informatics professional services contracts, within the last 18 months prior to the solicitation issue date, that met the following criteria:

1. The contract was in support of Mobile Application Development (iOS and Android) leveraging public cloud (Azure/AWS) in support of Federal Government programs. A summary of the scope and key responsibilities must be provided; | The contract values must total a minimum of:

$10,000,000.00

= 0 points

$15,000,000.00 =10 points

$20,000.000.00

=20 points | **40** |

Activities	Level of Resources	Minimum Billable Days per Resource Category (1 billable day = 7.5 hours)
Mobile Developer (iOS /Android)	3	2000

Minimum Billable Days per Resource Category (1 billable day = 7.5 hours)

2000 – 2999 days = 0 points

3000 – 3999 days = 10 points

4000 + days = 20 points

		TOTAL (Minimum Pass Mark – 70%)	**100 (70)**
		Bidder Score	

2.0 RESOURCES

A.1 –Application/Software Architect – Level 3

Resource Category: A.1 –Application/Software Architect – Level 3 Name of Proposed Resource: _____				
#	**Point-Rated Requirement**	**Points Max**	**Points Grid**	**Demonstrated Experience** **Cross-reference to Proposal/Project# /Resume**
RT1.1	The Bidder should demonstrate that the proposed resource has: A university degree or post- secondary diploma in Computer Science or a related field in Information Technology, obtained through a recognized Canadian university or college; OR An equivalent *Canadian academic credential assessment*, if obtained outside Canada. A copy of the university degree, college diploma or academic credential assessment must be included with the Bidder's response to the TA. The copy provided by the supplier must be a readable copy in English or French.	10	No Degree/Diploma = 0 points Degree/Diploma = 10 points **Maximum 10 points**	
RT1.2	The Bidder should demonstrate that the proposed resource has experience in excess of the minimum five (5) years within the last ten (10) years mandatory requirement in MT1.4 performing the following tasks within a public cloud environment: • Creating the conceptual, logical and physical designs for application architectures and their interoperability; • Researching, analyzing, recommending and selecting technical approaches to address challenging development and integration problems with application architectures; and • Developing implementation plans for the deployment of application architectures Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization;	20	5+ years up to 6 years = 5 points 6+ years up to 7 years = 10 points 7+ years up to 8 years = 15 points More than 8 years = 20 points **Maximum 20 points**	

	- Project start /end dates and duration; - Project description; - Description of role and tasks performed by the resource - Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT1.3	The Bidder should demonstrate that the proposed resource has experience within the last twelve (12) years as an Application/Software Architect performing the following three (3) activities: Developing deployment strategies for architectures in the cloud that included secure remote access such as VPN gateways (client to gateway, gateway to gateway); Developing deployment strategies for cloud architectures that included private (on-premise) networks for the storage and processing of more sensitive data; Developing deployment strategies for architectures of re-usable environments designed to test new data or application operations without affecting production usage. To demonstrate compliance with all criteria, the Bidder must include the following information: - Project name; - Client organization; - Project start /end dates and duration; - Project description; - Description of role and tasks performed by the resource - Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	15	<u>For each activity:</u> Less than 1 year = 0 points 1 year up to 3 years = 2 points 3+ years up to 5 years = 4 points More than 5 years = 5 points *Each activity will be allocated up to a maximum of 5 points. Therefore the total points available for this criteria is 15 points for the 3 activities combined.	

| RT1.4 | The Bidder should demonstrate that the proposed resource has experience within the last twelve (12) years as an Application / Software Architect performing the following four (4) activities:

• Incorporating serverless code in application architectures;
• Designing scaling sets of virtual machines to keep costs low while still providing acceptable response times during peak usage;
• Designing cloud-based authentication solutions allowing for single sign-on (SSO) among applications; and
• Designing cloud-based authentication solutions that implement multi- factor authentication.

Note: A qualifying project must have a minimum duration of six (6) months.

To demonstrate compliance with all criteria, the Bidder must include the following information:

• Project name;
• Client organization;
• Project start /end dates and duration;
• Project description;
• Description of role and tasks performed by the resource
• Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm? | 20 | For each activity:

Less than 1 year = 0 points

1 year up to 3 years = 2 points

3+ years up to 5 years = 4 points

More than 5 years = 5 points

*Each activity will be allocated up to a maximum of 5 points each. Therefore the total award of points for each activity is maximum 5 points . Total points available for this criteria is maximum 20 points for the 4 activities combined.

Maximum 20 points | |
| RT1.5 | The Bidder should demonstrate that the proposed resource has experience within the last twelve (12) years as an Application/Software Architect performing any of the following tasks:

a Developing deployment strategies for business intelligence tools within cloud architecture that address both structured and unstructured data;

b Designing data warehouse-as-a-service solutions;

c Designing data lakes that scale with ingested data but also discard data due to low value or if it contravenes policy to retain it | 5 | 0 projects = 0 points

1+ project = 5 points | |

	Note: A qualifying project must have a minimum duration of twelve (12) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
Maximum Available Points			70	
Minimum Points Required			45	
Bidder's Score				

I.10 – Technical Architect Mobile – Level 3

Resource Category: I.10 – Technical Architect Mobile – Level 3 **Name of Proposed Resource:** _____				
#	**Point-Rated Requirement**	**Points Max**	**Points Grid**	**Demonstrated Experience** **Cross-reference to Proposal/Project# /Resume**
RT2.1	The Bidder should demonstrate that the proposed resource has: A university degree or post-secondary diploma in Computer Science or a related field in Information Technology, obtained through a recognized Canadian university or college; OR An equivalent Canadian academic credential assessment, if obtained outside Canada. A copy of the university degree, college diploma or academic credential assessment must be included with the Bidder's response. The copy must be a readable copy in English or French	10	No Degree/Diploma = 0 points Degree/Diploma = 10 points	
RT2.2	The Bidder should demonstrate that the proposed resource has experience in developing applications for iOS, Android or BlackBerry developed using Swift, Objective C, Java, Kotlin	20	10 – 14 years = 5 points 14 -19 years = 10 points	

	To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?		19+ years = 20 points	
RT2.3	The Bidder should demonstrate that the proposed resource has experience within the last ten (10) years as a Technical Architect performing the following activities from the date of bid closing: • Incorporating serverless code in application architectures; • Designing scaling sets of virtual machines to keep costs low while still providing acceptable response times during peak usage; • Designing cloud-based authentication solutions allowing for single sign-on (SSO) among applications; and • Designing cloud-based authentication solutions that implement multi- factor authentication	**20**	For each activity: Less than 1 year = 0 points 1 year up to 3 years = 2 points 3+ years up to 5 years = 4 points More than 5 years = 5 points *To be very clear each Activity will be allocated up to a maximum of 5 points each for the 4 activities. Therefore the total award of points for each activity is maximum 5 points each. Total points available for this criteria is maximum 20 points for the 4 activities combined.	
Maximum Available Points			50	
Minimum Points Required			35	
Bidder's Score				

I.5 – IM Architect – Data/AI – Level 3

Resource Category: I.5 – IM Architect – Data/AI – Level 3

Name of Proposed Resource: _____

#	Point-Rated Requirement	Points Max	Points Grid	Demonstrated Experience Cross-reference to Proposal/Project# /Resume
RT 3.1	The Bidder should demonstrate that the proposed resource has experience in excess of the mandatory minimum 5 years requirement in MT3.1 performing all of the following activities: • Using methodologies from Machine Learning, Deep Learning and Artificial Intelligence; • Applying Machine Learning using diverse types of data, diverse data sources and different types of learning models. • Developing queries to isolate data with high value within a Data Warehouse, Data Mart or Data Lake; • Performing exploratory data analysis, rapid prototyping and presenting creative ideas to exploit data to drive deeper insights and business value; • Providing proactive data analysis of large structured and unstructured datasets involving a wide range of systems across multiple disparate data sets; and • Developing data analytic / visualization plans to support high-quality, fact- based business decisions. Note: A qualifying project must have a minimum duration of six (6) months To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number	20	5+ years up to 6 years = 5 points 6+ years up to 7 years = 10 points 7+ years up to 8 years = 15 points More than 8 years = 20 points	
RT 3.2	The Bidder should demonstrate that the proposed resource has experience in excess of the mandatory minimum 5 years requirement in MT3.2 performing five or more of the following activities: • Working with scalable data platforms such as; Power BI, Hadoop, Spark, Redshift, NoSQL (dynamoDB / MongoDB);	20	5+ years up to 6 years = 5 points 6+ years up to 7 years = 10 points 7+ years up to 8 years = 15 points	

			More than 8 years = 20 points	
	• Building the tools and supporting data structures needed to analyze data and perform data cleansing activities; • Determining problematic issues with data and proposing feasible resolutions; • Organizing, mapping, analyzing numerous data sets to incorporate them into one centralized data repository; • Performing exploration of data, including analysis, mining of correlations and result verification; • Developing and deploying solutions that addressed data aggregation challenges, including data being distributed across numerous databases or sources; and • Developing and implementing strategies for data enrichment Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT 3.3	The Bidder should demonstrate that the proposed resource has experience within the last ten (10) years developing and testing custom algorithms and mathematical models as required to solve unique business challenges: Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the	20	Less than 2 years = 0 points 2 years up to 5 years = 5 points 5+ years up to 6 years = 10 points 6+ years up to 7 years = 15 points More than 7 years = 20 points	

	reference, how did the reference manage the contract in order to confirm?			
RT 3.4	The Bidder should demonstrate that the proposed resource has experience within the last ten (10) years from the date of bid closing: performing the following tasks: • Developing strategies to develop and filter data sets related to macroeconomic models within Data Lakes; and • Developing visualizations relating to macroeconomic models. Note: A qualifying project will have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	20	Less than 2 years = 0 points 2 years up to 5 years = 5 points 5+ years up to 6 years = 10 points 6+ years up to 7 years = 15 points More than 7 years = 20 points	
RT 3.5	The Bidder should demonstrate that the proposed resource has experience within the last ten (10) years from the date of bid closing: performing the following tasks: • Developing strategies to develop and filter large (greater than 250GB) data sets for reports and analysis; • Designing data transformation routines to be performed on data sources being ingested; and • Performing data extract and load operations as required Note: A qualifying project will have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource.	20	Less than 2 years = 0 points 2+ years up to 5 years = 5 points 5+ years up to 6 years = 10 points 6+ years up to 7 years = 15 points More than 7 years = 20 points	

#	Point-Rated Requirements	Points Max	Points Grid	Demonstrated Experience Cross-reference to Proposal/Project# /Resume
	• Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT 3.6	The Bidder should demonstrate that the proposed resource has completed or obtained: A post-graduate diploma, post-graduate certificate or industry certification related to any of the following: - Data Science; - Machine Learning - Artificial Intelligence - Natural Language Programming The Bidder must include a copy of the diploma(s) or certificate(s).	10	No diploma/certificate = 0 points 1+ post-graduate diploma/certificate = 10 points	
Maximum Available Points			110	
Minimum Points Required			71	
Bidder's Score				

I.10 – Technical Architect – Level 3

Resource Category: I.10 – Technical Architect – Level 3				
Name of Proposed Resource: _____				
#	Point-Rated Requirements	Points Max	Points Grid	Demonstrated Experience Cross-reference to Proposal/Project# /Resume
RT4.1	The Bidder should demonstrate that the proposed resource has: A university degree or post- secondary diploma in Computer Science or a related field in Information Technology, obtained through a recognized Canadian university or college; OR An equivalent *Canadian academic credential assessment*, if obtained outside Canada. A copy of the university degree, college diploma or academic credential assessment must be included with the Bidder response. The copy must be a readable copy in English or French.	10	No Degree/Diploma = 0 points Degree/Diploma = 10 points	
RT4.2	The Bidder should demonstrate that the proposed resource has experience performing the following tasks supporting Legacy-to-Cloud application migration projects: • Collecting relevant data on customers' existing applications including:	30	Note: There are 6 points per project up to maximum of 5 projects (30 points maximum). *1 point for each area of experience up to a maximum of 6 points for each project.	

	architecture, workloads, services, data volumes, users, support requirements, network and other infrastructure requirements; • Conducting cloud assessments and analysis of workloads and services to determine which workloads are good candidates for migration; • Mapping source environment resources/services to target resources/services; • Defining and designing appropriate to-be application, platforms, and hosting architectures in public/private clouds; • Designing cloud architecture that meets key non- functional requirements (security, compliance, performance, resiliency, and availability); • Overseeing the migration of workloads and capabilities (e.g. Disaster recovery, archiving/backup) to cloud; and • Leveraging cloud specific services (e.g. Web Application PaaS, Resource Manager, etc.) to **implement** desired cloud operating models and enable DevOps capabilities. Note: A qualifying project must have a minimum duration of twelve (12) months and contain completion of at least three of the listed tasks. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?		5 projects x up to 6 points for each project up to a maximum of 30 points available	
RT4.3	The Bidder should demonstrate that the proposed resource has experience with **large or complex*** data migrations including five or more of the following tasks: • Developing the strategy • Creating the plan • Analyzing data quality • Resolving data issues	20	**Up to 10 points for demonstration of tasks as follows:** 5 to 6 tasks = 5 points 7 to 8 tasks = 10 points **Up to 10 points for the**	

	- Validating accuracy, performance, accessibility, security and reliability - Loading - Switch-over - Optimization *** Large or complex** describes a database that contains a significant volume of data (more than 250 GB) or a broad data structure with many relationships defined to the point that queries and normal operations require specialized application and database optimization approaches. Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: - Project name; - Client organization; - Project start /end dates and duration; - Project description; - Description of role and tasks performed by the resource. - Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?		**number of years of experience as follows:** 1 year up to 3 years = 2 points 3+ years up to 4 years = 5 points 4+ years up to 5 years = 8 points More than 5 years = 10 points
RT4.4	The Bidder should demonstrate that the proposed resource has experience architecting and migrating on- premise **Enterprise-class** applications to an environment hosted on one of the Gartner 2019 Magic Quadrant for IaaS cloud platforms (AWS, Azure or Google) using a **Hybrid cloud** deployment model. Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder must include the following information: - Project name; - Client organization; - Project start /end dates and duration; - Project description; - Description of role and tasks performed by the resource. - Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	**15**	1 project = 3 points 2 projects = 6 points 3 projects = 10 points 4 or more projects = 15 points

RT4.5	The Bidder should demonstrate that the proposed resource has experience with one of the following activities and tasks in a Cloud environment: • Designing data warehousing as a service solutions • Designing data lakes that scale with ingested data but also discard data due to low value or if it contravenes policy to retain it. Note: A qualifying project must have a minimum duration of twelve (12) months. To demonstrate compliance with all criteria, the Bidder must include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	5	0 projects = 0 points 1 or more projects = 5 points	
Maximum Available Points			80	
Minimum Points Required			52	
Bidder's Score				

A.6- Programmer/Software Developer (iOS/Android) – Level 3

Resource Category: A.6- Programmer/Software Developer (iOS/Android) – Level 3 Name of Proposed Resource: _____				
#	**Point-Rated Requirement**	**Points Max**	**Points Grid**	**Demonstrated Experience** **Cross-reference to Proposal/Project #/Resume**
RT6.1	The Bidder should demonstrate that the proposed resource has experience, in excess of the minimum 5 years mandatory requirement in M8.1, designing, developing, testing and deploying code and software for a mobile application on the public cloud Note: A qualifying project must have a minimum duration of six (6) months	20	5+ years to 6 years = 8 points 6+ years to 7 years = 12 points 7+ years to 8 years = 16 points More than 8 years = 20 points	

	To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT6.2	The Bidder should demonstrate that the proposed resource has: One (1) of the following certifications applicable to Infrastructure as a Service (IaaS) platforms from one or more Leaders in the Gartner 2019 Magic Quadrant for IaaS Cloud (i.e. AWS, Azure, or Google): • AWS Certified Developer • Azure Developer Associate • Google Professional Cloud Developer Note: A copy of the certification must be provided.	10	No Certifications = 0 points 1 or more Certifications = 10 points	
RT6.3	The Bidder should demonstrate that the proposed resource has experience designing, developing, testing and deploying code and software for one or more of the following types of solution projects: • Mobile computing • Artificial Intelligence or Machine Learning • Biometrics Note: A qualifying project must have a minimum duration of twelve (12) months Projects should be fully described including the platform, technology and specific features/functionalities (high-level) deployed. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration;	6	0 projects = 0 points 1 project = 2 points 2 projects = 4 points 3 or more projects = 6 points	

	• Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT6.4	The Bidder should demonstrate that the proposed resource has experience designing, developing, testing and deploying code and software for mobile application solutions including the following: • back-end and web-tier components for data collected externally (to the organization) and/or internally; • application code to process the data in some manner • security controls Note: A qualifying project must have a minimum duration of six (6) months. Projects should be described including the architecture, data collected (including source/method) and processing functionality (ies) deployed. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	10	Less than 3 years = 0 points 3 years up to 4 years = 6 points 4+ years up to 5 years = 8 points More than 5 years = 10 points	
RT6.5	The Bidder should demonstrate that the proposed resource has experience designing, developing and implementing mobile applications using the following languages: • Swift, • Objective C • Java,	20	Less than 5 years = 0 points 6 years up to 7 years = 5 points 8+ years up to 9 years = 10 points 10+ years up to 14 years = 15	

			points More than 15 years = 20 points	
	Kotlin Angular Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT6.6	The Bidder should demonstrate that the proposed resource has experience in **reverse engineering** legacy software applications created in one or more of the following: • COBOL (Mainframe) • C/C++ • J2EE Note: A qualifying project must have a minimum duration of six (6) months. •	5	Less than 1 year = 0 points More than 1 year = 5 points	
RT6.7	The Bidder should demonstrate that the proposed resource has experience developing and deploying mobile applications using AWS tools. Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	4	Less than 1 year = 0 points 1 year up to 3 years = 2 points More than 5 years = 4 points	

#	Point-Rated Requirement	Points Max	Points Grid	Demonstrated Experience Cross-reference to Proposal/Project# /Resume
RT6.8	The Bidder should demonstrate that the proposed resource has: A university degree or post-secondary diploma in Computer Science or a related field in Information Technology, obtained through a recognized Canadian university or college; OR An equivalent **Canadian academic credential assessment**, if obtained outside Canada. A copy of the university degree, college diploma or academic credential assessment must be included with the Bidder's response to the TA. The copy must be a readable copy in English or French.	5	No Degree/Diploma= 0 points Degree/Diploma = 5 points	
Maximum Available Points			80	
Minimum Points Required			56	
Bidder's Score				

A.14 - Web Developer - Level 3

Resource Category: A.14 - Web Developer - Level 3
Name of Proposed Resource: _____

#	Point-Rated Requirement	Points Max	Points Grid	Demonstrated Experience Cross-reference to Proposal/Project# /Resume
RT7.1	The Bidder should demonstrate the proposed resource's professional experience within the last ten (10) years developing web applications using the following client/server - side technologies (as per MT2.3) a) HTML b) CSS c) JavaScript d) AJAX Note: A qualifying project will have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name;	20	less than 5 years = 0 points more than 5 years up to 7years = 5 points more than 7 years up to 8 years = 10 points more than 8 years up to 9 years = 15 points more than 9 years = 20 points	

	• Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT7.2	The Bidder should demonstrate the resource's professional work experience as a web developer within the Federal Government of Canada designing, developing, modifying, enhancing and testing web projects/applications that complied with government web application standards and/or guidelines. Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	20	less than 1 year = 0 points more than 1 year up to 2 years = 5 points more than 2 years up to 3 years = 10 points more than 3 years up to 4 years = 15 points more than 4 years = 20 points	
RT7.3	The Bidder should demonstrate the resource's professional work experience within the last ten (10) years, participating in user interface design sessions, recommending and applying user interface principles, content organization, page flows, interaction design and navigation schemes Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource.	20	less than 2 years = 0 points more than 2 years up to 3 years = 5 points more than 3 years up to 4 years = 10 points more than 4 years up to 5 years = 15 points more than 5 years = 20 points	

	• Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?			
RT7.4	The Bidder should demonstrate the resource's professional work experience within the last ten (10) years, writing the following technical documents; - Design Specifications, - IT Functional Specifications, - System/Process flowcharts. - Note: A qualifying project must have a]['minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	20	less than 2 years = 0 points more than 2 years up to 3 years = 5 points more than 3 years up to 4 years = 10 points more than 4 years up to 5 years = 15 points more than 5 years = 20 points	
RT7.5	The Bidder should demonstrate the resource's professional work experience within the last ten (10) years,, researching and/or applying current trends, methodologies, standards, practices and/or products in a web development environment. Note: A qualifying project must have a minimum duration of six (6) months. To demonstrate compliance with all criteria, the Bidder should include the following information: • Project name; • Client organization; • Project start /end dates and duration; • Project description; • Description of role and tasks performed by the resource. • Client contact reference – email/phone number, role of the reference, how did the reference manage the contract in order to confirm?	20	Evaluation Breakdown: less than 2 years = 0 points more than 2 years up to 3 years = 5 points more than 3 years up to 4 years = 10 points more than 4 years up to 5 years = 15 points more than 5 years = 20 points	

Minimum Pass Mark	100
Minimum Points Required	70
Bidder's Score	

FORM 1

CUSTOMER REFERENCE CONTACT INFORMATION FORM

Customer Reference Contact Information:
Name of client organization: _____
Name of client: _____
Client's title: _____
Client telephone n°. _____ **Email address:**_____
Contract Information: The Bidder must provide with this Form a copy of the reference contract.
Contract n°: _____
Start date: _____ **End date:** _____
Total contract value (excluding Applicable Taxes and not including amendments): _____
Core categories provided: _____
By signing below, the Bidder certifies that the information provided in this Form is accurate.

Signature of authorized representative of the Bidder:	Name:_____ Title: _____ Signature: _____ Date: _____

FORM 2

RESOURCE CATEGORY FORM

Resource Information:
Name of resource:
Category (*as detailed in the Annex A - Statement of Work*) :

Client Information:
Name of client:
Client's title:
Name of client organization:
Client telephone n°. Email address:

Contract Information: *The Bidder should provide with this Form a copy of the Statement of Work of the Contract and/or Task Authorization Statement of Work.*

Contract n°:

Contract Start date: **End date:**

By signing below, the Bidder certifies that the information provided in this Form is accurate.

Signature of authorized representative of the Bidder:	Name: Title: Signature: Date: