ANNEX C- EVALUATION CRITERIA

ID	Mandatory Requirement Description	Contractors Substantiation of Requirement
M1	The RPA solution must provide a bilingual (Official languages– English and French) interface.	
M2.1	The Contractor must provide a Robotic Process Automation (RPA) solution that will operate on an enterprise-class infrastructure using physical and virtual machines (VMs).	
M2.2	The RPA solution must include a design suite that will allow ESDC to develop and deliver automated processes	
M2.3	The RPA solution must offer both attended and unattended bot functions.	
M2.4	The RPA solution must have a bot administration suite that allow ESDC to manage, schedule, and deploy automated processes (for both attended and unattended automations)	
M2.5	The RPA solution must include autonomous agents, meaning unattended bots that execute tasks and interact with applications or systems independent of human involvement.	
M3	The Contractor must provide a complete list of all components and version numbers included in their solution and must include: a) an Enterprise Optical character recognition (OCR) engine. b) all database components required to support the RPA solution c) all web browsers and versions it supports. d) All cloud base services it supports.	
M4	The solution must support hosting on a virtualized x86-64 architecture and must support hosting on a Windows 64-bit operating systems running Windows Server 2016 and later version.	
M5	The solution must support the input and output of data from the following file systems: • Network File System (NFS) • SAMBA	
M6	The solution must adhere to remote secure login through ESDC network and remote desktop protocols.	

M7	The software must not require the use of Adobe Flash or Shockwave for any functionality.	
M8	The solution must support Enterprise browser standards without degradation in functionality.	
M9	The solution must support the packaging and re-deployment of all required components within a given automation process in order to migrate a process from one RPA infrastructure environment to another such as from a Development environment to Production environment.	
M10	The solution must integrate with directory services using Lightweight Directory Access Protocol (LDAP) in order to: a) Enforce role-based access control (RBAC) policies defined by ESDC for both bots and authorized users; b) Enforce authentication and authorization for any logical access to information and solution resources; and c) Enforce authentication and authorization before performing any action that creates, views, updates, transmits or deletes data.	
M11	For authentication credentials: • the solution must obscure all authentication credentials when entered into the RPA solution. • the solution must obscure the display of all stored authentication credentials once entered into the RPA solution, including any logs.	
M12	The solution must define, collect, and store audit records and events associated with all user or bot operations listed below: a) successful and unsuccessful attempts to create, access, modify, or delete security objects including audit data, system configuration files and file or users' formal access permissions; b) successful and unsuccessful logon attempts; c) privileged activities; d) type of activity that occurred; e) date and time the activity occurred; f) where the activity occurred; g) the source of activity; h) success or failure outcome of activity; and i) identity associated with activity.	
M13	The solution must employ cryptographic mechanisms for end-to-end protection of data both when in motion or at rest that have been approved by Communication Security Establishment (CSE) and validated by the Cryptographic Algorithm Validation Program (CAVP), and are specified in the August 2016 ITSP.40.111 (https://www.cse-cst.gc.ca/en/system/files/pdf_documents/itsp.40.111-eng.pdf).	

M14	Web Interfaces provided by the solution must be secured using Communications Security Establishment (CSE) approved protocols (e.g. TLS 1.2) and cryptographic algorithms specified in the August 2016 ITSP 40.111 (https://www.cse-cst.gc.ca/en/system/files/pdf_documents/itsp.40.111-eng.pdf). Web Interfaces provided by the solution must provide mechanisms to protect the authenticity of communication sessions including: a) generating a unique, randomly system generated session identifier for each session; b) session identifier must be at least 128 bits; c) recognizes only session identifiers that are system generated; and d) Invalidates session identifiers upon user logout, session timeout or other session termination.	
M15	The solution must not interfere with the operation of any Anti-Virus, Anti-Malware, and Host Intrusion Detection systems on a host computer.	
M16	The solution must support vulnerability assessment scanning tools. The Contractor must provide a list of vulnerability assessment products supported by the proposed RPA solution.	
M17	Data provided for support services must reside and remain in Canada and must not be used or accessed from outside Canada, in accordance with Treasury Board Secretariat (TBS) Direction for Electronic Data Residency ITPIN (2017-11-07). If support is provided from outside of Canada, the Contractor must allow ESDC to provide sanitized data at its discretion.	
M18	The solution must support the manipulation of mouse and keyboard events.	
M19	The solution must be compatible with, interact with, and support the manipulation of data within: • Microsoft Office Suite • Windows-based applications with a Graphical User Interface (GUI) • Citrix applications displayed in a Windows environment • Mainframe or terminal screens • SAP	
M20	The solution must emulate end user input on: • Mainframe screens • Web interfaces • Microsoft Native thick-client screens • Java Swing thick-client screens	
M21	The solution must provide a GUI adapter layer between the native GUI and the RPA such that the native GUI and RPA Logic can vary independently. The solution must NOT reference or be dependent on pixel location for bot functionality.	

M22	The solution must support Representational State Transfer (REST) Application Program Interface (API) and Simple Object Access Protocol (SOAP) API.	
M23	The solution must store information gathered through the target system for no longer than the duration of the bot interaction.	
M24	The solution must support a mechanism to isolate information from each bot tenancy.	

M25	The Contractor must provide ESDC a written RPA strategic enterprise implementation plan which includes recommendations on the following:
	
	a) ESDC infrastructure requirements;
	b) best practices for business and IT RPA centres of expertise (CoE);
	c) business process evaluation and creation of inventories of potential RPA candidates;
	d) development, testing, implementation, and maintenance of the RPA solution ;
	e) training;
	f) change management
	     • updates to RPA solution, ESDC applications, and business processes
	     • deployment between environments
	     • testing strategy
	g) bot credential management;
	h) bot governance;
	i) business continuity;
	j) contingency planning; and
	k) Strategy to ramp up from initial RPA pilot to organizational level implementation.	

M26	The Contractor must provide online training of the RPA solution to ESDC employees for the following: **a) Developer Role** Provide technical instruction for all features and components of the software solution including: • Bot development • Bot deployment • Bot maintenance **b) Administrator Role** Provide technical instruction for various administrative tasks that are included in the software solution including: • Administration Functions • Credential Management • Monitoring	
M27	The solution must support the development (scripting) in a modular structure to facilitate reusability. For example, if many processes uses the same series of actions (ex: login into a business application), this series of actions should be stored into a reusable component (modules or libraries).	

ID	Rated Requirement Description	Rating Criteria	Max Points
R1.1	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.1 E- SDC infrastructure requirements;	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.1 - ESDC infrastructure requirements evaluation criteria - includes relevant infrastructure diagrams (Max 10 points) - includes relevant infrastructure hardware and software requirements(Max 10 points) - includes relevant costings and firewall rule requirements(Max 10 points)	Max 30 points
R1.2	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.2 - best practices for business and IT RPA Centres of Expertise (CoE);	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.2 -best practices for business and IT RPA centres of expertise (CoE); - includes relevant best practices for business RPA center of excellence. (Max 10 points) - includes relevant best practices for IT RPA center of excellence. (Max 10 points)	Max 20 points
R1.3	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.3 - business process evaluation and creation of inventories of potential RPA candidates;	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet	Max 60 points

		1.3 - business process evaluation and creation of inventories of potential RPA candidates; (Max 25 points)) - includes relevant business process evaluation steps(Max 10 points) - includes relevant steps for the creation of inventories of candidates(Max 25 points)	
R1.4	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.4 - development, testing, implementation, and maintenance of the RPA solution ;	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.4 - development, testing, implementation, and maintenance of the RPA solution ; (Max 40 points) - includes relevant information on developing with the RPA solution (Max 10 points) - includes relevant information on testing the RPA solution (Max 10 points) - includes relevant information on implementing the RPA solution (Max 10 points) - includes relevant information on maintaining the RPA solution (Max 10 points)	Max 40 points
R1.5	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.5 - training;	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.5 - training; (Max 50 points) -includes the training for strategy for developers and administrators (Max 10 points)	Max 50 points

		- Online training available on vendor's website(Max 30 points) - certification associated to trainings (Max 10 points)	

R1.6	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme:
	
	1.6 - change management
	      • updates to RPA solution, ESDC applications, and business processes
	      • deployment between environments
	      • testing strategy
		• Information is well documented / clear and relevant to the subject – full points per bullet
		• Information is semi documented / unclear / contains unrelated information – half points per bullet
		
		1.6 - change management (Max 30 points)
		- includes relevant information on change management approaches that include:
		• updates to RPA solution, ESDC applications, and business processes (Max 10 points)
		• deployment between environments (Max 10 points)
		• testing strategy (Max 10 points)
			Max 30 points

R1.7	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.7 - bot credential management;	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.7 - bot credential management; • includes relevant information on credential management (Max 10 points)	Max 10 points
R1.8	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.8 - bot governance; i) business continuity; j) contingency planning; and	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet	Max 10 points

		k) Strategy to ramp up from initial RPA pilot to organizational level implementation.	1.8 - bot governance; • includes relevant information on credential management (Max 10 points) i) business continuity; • includes relevant information on business continuity (Max 20 points) j) contingency planning; and • includes relevant information on contingency planning (Max 20 points) k) Strategy to ramp up from initial RPA pilot to organizational level implementation. • includes relevant information on a viable approach in order go from initial pilot to organizational level (Max 50 points)implementation (Max 50 points)	
R1.9	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.9 - business continuity; j) contingency planning; and k) Strategy to ramp up from initial RPA pilot to organizational level implementation.	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.9 - business continuity; • includes relevant information on business continuity (Max 20 points)	Max 20 points
R1.10	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.10 - contingency planning; and	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.10 contingency planning; and	Max 20 points

		• includes relevant information on contingency planning (Max 20 points)		
R1.11	The solution should provide written a RPA strategic enterprise implementation plan which will be evaluated based on the following marking scheme: 1.11 - Strategy to ramp up from initial RPA pilot to organizational level implementation.	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet 1.11 - Strategy to ramp up from initial RPA pilot to organizational level implementation. • includes relevant information on a viable approach in order go from initial pilot to organizational level (Max 50 points)implementation (Max 50 points)	Max 50 points	
R2	The Contractor must provide training of the RPA solution to ESDC employees for the following: **a) Developer Role** Provide technical instruction for all features and components of the software solution including: • Bot development • Bot deployment • Bot maintenance **b) Administrator Role** Provide technical instruction for various administrative tasks that are included in the software solution including: • Administration Functions • Credential Management • Monitoring	• Information is well documented / clear and relevant to the subject – full points per bullet • Information is semi documented / unclear / contains unrelated information – half points per bullet **a) Developer Role (**Max 30 points) Provide technical instruction for all features and components of the software solution including: • Bot development (Max 10 points) • Bot deployment (Max 10 points) • Bot maintenance (Max 10 points) **b) Administrator Role (**Max 30 points) Provide technical instruction for various administrative tasks that are included in the software solution including: • Administration Functions (Max 10 points)	Total Max 60 pts Max 30 points) Max 30 points)	

		• Credential Management (Max 10 points) • Monitoring (Max 10 points)	
R3	The solution should provide monitoring functionality on the productivity of the deployed bots.	Dashboard = 100pts Monitoring views = 50pts Logs = 10pts	Max. 160 pts
R4	The solution should demonstrate OCR capabilities. The tools OCR can read all forms of Optical character recognition formats (Image recognition (IR), Barcode recognition (BR), Handwriting recognition (HTR) , a scene-photo recognitions (PR) (for example the text on signs and billboards in a landscape photo) or from subtitle text superimposed on an image, text-to-speech) a)	• Image recognition (IR) 20 pts • Barcode recognition (BR) 20pts • Handwriting recognition (HTR) 20pts a scene-photo recognitions (PR) (for example the text on signs and billboards in a landscape photo) or from subtitle text superimposed on an image 20ptstext-to-speech – 20pts	Max. 100 pts

R5	The database components for the RPA solution should be leveraging an ESDC certified database.
	     b) MS SQL Server
	            Oracle
		MS SQL SERVER = 50pts
		ORACLE = 50pts
			Max. 100 pts

R6	The solution should support Security Assertion Markup Language (SAML) 2.0 (https://www.oasis-open.org/standards#samlv2.0) or later.	Supports SAML = 100pts	Max. 100 pts
R7	The solution should support a notification mechanism.	Self identifies instinctively = 50pts Is configured with thresholds = 20pts Alerts on errors only = 10pts	Max. 80 pts
R8	The Contractor should demonstrate experience in successfully providing three (3) large** Robotic Process Automation (RPA) software automation implementations within the last five (5) years. The following must be cited for each: 1. The organization 2. Contract start and end dates (e.g. 01/01/2019 to 31/05/2019) 3. A brief description of the services provided 4. Client reference – provide employee name, title and telephone number and/or email address of the client's project and/or technical authority. ** large solution means over 1000 attended robots and more than 100 unattended robots.	Successful implementation up to 25 pts per RPA solution (up to 3 references)	Max. 75 pts

R9	When an error occurs, the solution should allow manual intervention to correct the error and resume the task.	Allow manual intervention and resume = 50pts	Max. 50 pts
R10	The solution should support a mechanism to deploy independent process automations without shutting down other process automation activities.	Deploy independently = 50pts	Max. 50 pts
R11	The solution should provide a provision for performance tuning, which may include database performance or system performance or both.	Database performance tuning = 10pts System performance tuning = 10pts	Max. 20 pts
R12	The solution should support the configuration of multiple bots depending on system load, either dynamically or manually.	Dynamically added = 25pts Manually added = 50pts	Max. 75 pts
R12	The solution should support the playback of activities that were previously recorded.	Playback recorder = 10pts	Max. 10 pts
R13	The solution should support an intuitive user interface for both automation development and robot management.	For both *automation development* and *robot management* Supports using a GUI = 25pts Supports drag and drop = 25pts	Max. 50 pts