

REQUEST FOR INFORMATION (RFI)

**Project : RFID Inventory Management Solution for missions
abroad**

For: Department of Global Affairs Canada

Date issued : October 27, 2019

Deadline for submission : November 25, 2019 at 23:59

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RFID Inventory Management Solution for missions abroad

1. PURPOSE AND NATURE OF REQUEST FOR INFORMATION

This is not a bid solicitation. The information provided by DFATD in this RFI is preliminary and may change. All potential respondents are encouraged to indicate their level of interest by responding to this RFI.

This RFI will not result in the award of any contract. Therefore, potential suppliers of any goods and/or services described in this RFI should not reserve stock or, allocate resources, as a result of any information contained in this RFI. Also, the procurement of any of the goods and/or services described in this RFI will not necessarily follow this RFI. This RFI is simply intended to solicit feedback from industry with respect to the matters described in this RFI.

Responding to this RFI is not a prerequisite to receiving any resulting bid solicitation for this requirement. Nor will this RFI result in the creation of any source list. Therefore, whether or not any potential supplier responds to this RFI will not preclude that supplier from participating in any future procurement.

The issuance of this RFI does not create an obligation for DFATD to issue any subsequent bid solicitation and does not bind DFATD, legally or otherwise, to enter into any agreement or to accept any suggestions from industry. DFATD reserves the right to accept or reject any or all comments received.

Potential respondents are advised that any information submitted to DFATD with regard to this RFI may be used by DFATD in the development of any subsequent bid solicitation.

This RFI must in no way be considered as authorization by DFATD for respondents to undertake any work which would result in costs to DFATD. DFATD will not be bound by anything stated herein. DFATD reserves the right to change, at any time, any or all parts of the requirement, as necessary.

2. BACKGROUND

In the Treasury Board Policy on Management of Materiel, Materiel is defined as "all movable assets, excluding money or records, acquired by Her Majesty in right of Canada." Movable assets are tangible and include a broad range of goods such as equipment (e.g., office, information technology, and telecommunications, scientific), furniture and furnishings, and larger goods (e.g., vehicles) deemed by the Department of Foreign Affairs, Trade and Development Canada (DFATD) to be essential for mission operations and for personal living requirements while abroad. The department owns physical assets, stored at 170+ Missions worldwide and over \$50 million in materiel is acquired by the Department annually. It is expected that once an asset is purchased it would be appropriately recorded, safeguarded, tracked and disposed using the existing barcode-based inventory system and according to the related policies and procedures.

Currently, the Department of Foreign Affairs, Trade and Development Canada (DFATD) is exploring to replace the existing inventory management system for tracking assets within the Missions abroad. The Department manages the following commodities: Small Appliances, Audio-Visual Equipment, Fine Art, Furniture and Furnishings, Heritage Items, Gift Bank, Medical and Protective Equipment, Occupational health and safety, Office Equipment and Supplies, Official Portraits, Security and Emergency Management, Materiel Handling Equipment, and Video-Conferencing Equipment.

3. OBJECTIVE

DFATD's intent is to implement an inventory management solution that is compatible with DFATD's IT infrastructure, and future changes to it, and is based on RFID technology that is user friendly, easily maintained, customizable that will lead to achieving a successful inventory management solution within the Missions abroad. The proposed solution would be standardized for all Missions, yet provide flexibility to reflect the unique differences in their organizational structures and local operations.

The purpose of this RFI is to obtain feedback from industry so that DFATD can better define its requirements for an eventual solicitation. This feedback will assist DFATD in ensuring that its requirements are in line with industry standards.

DFATD has a requirement for the purchase and delivery of the proposed solution to the National Capital by March 31, 2020.

DFATD may award multiple contracts for this requirement with the condition that suppliers build a partnership with others and propose a unique solution to GAC that answers all requirements described in the SOW.

4. RESPONSE COSTS

DFATD will not be liable for, nor will it reimburse respondents for any costs, fees or expenses incurred in the preparation or submission of responses to this RFI.

5. NATURE AND FORMAT OF RESPONSES REQUESTED

Respondents are requested to provide their comments, concerns and, where applicable, alternative recommendations regarding how the requirements or objectives described in this RFI could be satisfied.

Respondents are also invited to provide comments regarding the content, format and/or organization of any draft documents included in this RFI, in particular the SOW. Respondents should explain any assumptions they make in their responses.

6. TREATMENT OF RESPONSES

a) Use of Responses: Responses will not be formally evaluated. However, the responses received may be used by DFATD to develop or modify procurement strategies or any draft documents contained in this RFI. DFATD will review all responses received by the RFI closing date. DFATD may, in its discretion, review responses received after the RFI closing date.

b) Review Team: A review team composed of representatives from DFATD will review the responses. DFATD reserves the right to hire any independent consultant, or use any Government resources that it considers necessary to review any response. Not all members of the review team will necessarily review all responses.

c) Confidentiality: Respondents are requested to clearly identify any submitted information or mark any portion of their response that is to be considered as either company confidential or proprietary. The confidentiality of each respondent's response will be respected and maintained. Items that are identified as proprietary will be treated as such except where DFATD determines that the enquiry is not of a proprietary nature.

d) Follow-up Activity: DFATD may, in its discretion, contact any respondents to follow up with additional questions or for clarification of any aspect of a response. DFATD may invite one, some, or all of the Respondents to present their submissions and/or perform a product demonstration for DFATD. DFATD is not obligated to invite any Respondents for this further exploration nor are any Respondents obliged to participate.

7. FORMAT OF RESPONSE

Response Parameters: There is no page limit on the information to be provided. Respondents are reminded that this is a RFI and not a RFP and, in that regard, respondents should feel free to provide their comments and/or concerns in addition to their responses. DFATD reserves the right to seek clarifications from respondents for any information provided in response to this RFI, either by telephone or in writing.

Respondents are requested to read the Statement of work in **ANNEX A** and respond to all questions posted in **ANNEX B - List of Questions for the Industry** and **ANNEX C – LIST PF PRICES**

8. LANGUAGE OF RESPONSE

Responses may be provided in English or in French.

9. SUBMISSION OF RESPONSES

a) **Responsibility for Timely Delivery:** Each respondent is solely responsible for ensuring its response is delivered on time to the correct location.

b) **Identification of Response:** Respondents must ensure that the RFI number is clearly indicated in the subject line of their email when sending their response. In addition, each respondent should ensure that the following information appears in their response:

- i. The full legal name and address of the respondent;
- ii. Name, address, phone number and email address of the respondent's contact person;
- iii. The date;
- iv. The RFI number; and
- v. The title of the RFI.

10. ENQUIRIES

Because this is not a bid solicitation, DFATD will not necessarily respond to enquiries in writing nor circulate answers to all respondents. All respondent enquiries and other communications related to this RFI must be directed to the RFI Authority identified below.

11. SECURITY REQUIREMENTS

There are no security requirements in terms of submitting a response to this RFI.

12. RESPONSE DATE

RFI responses must be submitted by **November 24, 2019 at 23:59**.
to Gestion-Materiel.Materiel-Management.Missions@international.gc.ca

ANNEX “A”: STATEMENT OF WORK (SOW)

Web Based Inventory Management Software Application UHF RFID Mobile Reader Private Cloud Storage

1. BACKGROUND

In the Treasury Board Policy on Management of Materiel, Materiel is defined as "all movable assets, excluding money or records, acquired by Her Majesty in right of Canada." Movable assets are tangible and include a broad range of goods such as equipment (e.g., office, information technology, and telecommunications, scientific), furniture and furnishings, and larger goods (e.g., vehicles) deemed by the Department of Foreign Affairs, Trade and Development Canada (DFATD) to be essential for mission operations and for personal living requirements while abroad. The department owns physical assets, stored at 170+ Missions worldwide and over \$50 million in materiel is acquired by the Department annually. It is expected that once an asset is purchased it would be appropriately recorded, safeguarded, tracked and disposed using the existing barcode-based inventory system and according to the related policies and procedures.

Currently, the Department of Foreign Affairs, Trade and Development Canada (DFATD) is exploring to replace the existing inventory management system for tracking assets within the Missions abroad. The Department manages the following commodities: Small Appliances, Audio-Visual Equipment, Fine Art, Furniture and Furnishings, Heritage Items, Gift Bank, Medical and Protective Equipment, Occupational health and safety, Office Equipment and Supplies, Official Portraits, Security and Emergency Management, Materiel Handling Equipment, and Video-Conferencing Equipment.

2. OBJECTIVE

DFATD's intent is to implement an inventory management solution based on RFID technology integrated with a web based inventory management software application where the data is stored on Canadian soil through a Cloud Service Provider. The goal is for these 3 components of the solution to be user friendly, easily maintained and easily accessible with customizations that will lead to achieving a successful inventory management solution within the Missions abroad. The complete solution would be standardized for all Missions, yet provide flexibility to reflect the unique differences in their organizational structures and local operations.

3. SCOPE

DFATD Missions require an inventory management solution that supports inventory management activities abroad. The desired outcome is to deliver a web based inventory management application for the Missions that integrates with a RFID mobile reader, and that can

store inventory data on a cloud within Canada. This will enable tracked information to be created, collected, verified, updated and stored seamlessly.

4. TERMINOLOGY

CSP – Cloud Service Provider

DPI – Dots per inch

EAM – Enterprise Asset Management

EEPROM - Electrically-Erasable Programmable Read-Only Memory

EIRP - Equivalent Isotropic Radiated Power

EPC UHF class 1 Gen 2 - air interface protocol that defines the physical and logical requirements for an RFID system of interrogators and passive tags, operating in the 860 MHz - 960

EPC – Electronic Product Code

ERP - Effective Radiated Power

ETSI - European Telecommunications Standards Institute

FHSS - Frequency Hopping Spread Spectrum

HANA S/4 - SAP Business Suite 4 SAP HANA,

It is the fourth version of SAP Business Suite, designed to run on SAP HANA

HEIC – File format name Apple has chosen for HEIF standard

HEIF – High Efficiency Image Format

IP54 - IP54 Grading marked on products that are to be used in Extreme Conditions (Outdoor)

ISO - International Organization for Standardization

JPEG - Joint Photographic Experts Group (photo file format)

LBT - Listen before talk - MHz *UHF* range

LCD – Liquid crystal display

MHZ – MegaHertz

NCR – National Capital Region including Ottawa, ON and Gatineau, QC

OS – Operating System

PNG – Portable Network Graphics

PPI – Pixels per inch

RF Interface – Radio Frequency interface

RFID – Radio Frequency Identification

RH – Relative Humidity

SAP - Systems Applications and Products in Data Processing

SOW – Statement of Work

TID – Transponder Identification

TIFF – Tagged Image File Format

UID – Unique permanent Identification number commonly known as Card Serial Number (CSN)

UHF – Ultra High Frequency

VIN – Vehicle Identification Number

5. TASKS

The following tasks must be performed by the contractor to meet the objectives listed above.

- Understand DFATD's desktop computing environment is comprised of desktop and notebook workstations, tablets and smartphones purchased from a multitude of vendors. There are also a multitude of manufacturers with many model types.

6. CURRENT DFATD IT STANDARDS AND SYSTEMS

Operating Systems: Microsoft Windows 2010 & 2016

Office Applications: Microsoft Office 2010 & 2016

7. FUTURE DFATD IT STANDARDS AND SYSTEMS

The solution must have the capability to integrate with SAP HANA/S4.

8. DELIVERABLES

8.1 DELIVERABLE 1 – WEB BASED INVENTORY MANAGEMENT SOFTWARE APPLICATION

Deliverable 1		Phase 1 - Pilot			Phase 2 – Roll out		
		Quantity	Deadline	Location	Quantity	Deadline	Location
Software	Web based Software Application	1 ¹	Max 1 month after contract award	Remote online	-	Max 2 months after being informed that phase 1 was a success in a specific region	Remote online
	Licenses & Subscriptions	Up to 11 locations ²	Max 1 month after contract award		Up to 167	Max 2 months after being informed that phase 1 was a success in a specific region	
	Software Training – Train the Trainer & Administrators	1 day	Max 1 month after contract award	125 Sussex Drive, Ottawa, Ontario, K1A 0G2.	1 day	When required through the life of the contract	125 Sussex Drive, Ottawa, Ontario, K1A 0G2.

¹ The web based software should be accessible by up to 11 locations with 2 usernames & passwords per location

² Up to 11 locations with 2 usernames & passwords per location

8.1.1 SPECIFICATIONS

The contractor must provide a web based inventory management software application that integrates with the following:

- The application must be accessible on iOS and android mobile devices, laptop and desktop computers through a WIFI internet connection;
- The application must have the ability to integrate with current DFATD IT infrastructure, and with SAP's HANA S/4 in the future.
- The application must be able to receive data downloads from a UHF RFID mobile reader;
- The application must be compatible with Microsoft Windows 2010 & 2016 Operating Systems (OS);
- The application must be able to integrate with and securely transfer saved data to a private cloud storage environment.

The contractor must provide a web based inventory management software application that includes the following mandatory specifications:

- The application must have the ability to attach photos to a transaction in the following formats, JPEG, GIF, TIFF, PNG, HEIC & HEIF;
- The application must have the ability to visualize asset photos on the screen;
- The application must have the ability to complete bulk adjustments and uploads;
- The application must have the ability to modify asset status, location, and condition;
- The application must have the ability to search the downloaded data by various parameters like tag number or VIN;
- The application must include the ability to download data from a UHF RFID reader onto a windows-based environment. The downloaded data must be stored in a windows standard format that will permit access by standard Windows applications like Word or Excel, without prior modification;
- The application must include the data collection/management required to read, verify, update and transfer data between an UHF RFID reader and its corresponding Windows 2010 or 2016 workstation;
- The application must be able to transfer data into the standard Microsoft Office 2010 & 2016 file formats like .XLS & .DOC;
- The application must allow for data to be transferred and stored in a private cloud storage environment,
- The application must include the following customizable data specifications:
 - Asset description
 - Tag number
 - Purchase order #
 - Purchase date
 - Purchase price
 - Replenishment date
 - Asset location

Disposal date
Quantity on hand
Unit of measure
Warranty
Lease dates
Make & Model
Serial number

- The application must be able to track cumulative history of all transactional activities related to an asset like transaction type, adjustments made, movement history;
- The application must be able to track user activities;
- The application must include multiple units of measure for inventory like each, set, etc;
- The application must include the ability to generate various reports based on data collected with the ability to print these reports;
- The application must include the ability to set a stocktaking schedule;
- The application must have a test environment/sandbox available;
- The application must be portable, to avoid a vendor-lockin scenario;
- The application must have a defined process for incident and change management with a clear plan on how DFATD would be notified;
- The application must have audit capabilities;
- The application must have a customizable to DFATD online training environment with tutorials.

The contractor must provide a web based inventory management software application that includes the following mandatory specifications for user access:

- The application must allow for up to 75 users to access the application simultaneously at any given time;
- The application must include the ability for DFATD to specify fields that are automatically assigned and entered into each record by the application and protected from the modification by unauthorized users based on the valid user-id used to activate the application;
- The application must have Administrator privileges in order to customize fields, and maintain the user base;
- The application must incorporate features that will enable DFATD to restrict access at multiple levels based on the individual's level of authorization. Authorization levels to include: "read" only, and the ability to capture and update data;
- The application must include the ability for DFATD users to modify data in fields to which they have authorization, and to add notes to each record;
- The application must include the ability to view the identity of the user who makes adjustments, and the user's activity history;

The contractor must provide a web based inventory management software application that includes the following mandatory maintenance and upgrade criteria:

- The contractor must provide a solution that includes maintenance, upgrades and support for the solution;
- The web based software application's updates must be made available to DFATD at no additional cost for the period of the contract; the word "updates" means all enhancements, extensions or other modifications to the software, including software fixes;
- The contractor must provide all software application releases must be made available to DFATD at no additional cost for the period of the Contract. The word "releases" means enhancements or modifications to the software, new modules or supplementary modules that function in conjunction with the software, that represent the next generation of software, and which the Contractor has decided to make available to its customers usually for an additional charge;
- The contractor must provide automatic provision of all bug fixes for all components of the web-based software solution;
- The contractor must provide assistance should any issues arise that affects the ability of the solution to satisfy the requirements.
- The contractor must inform DFATD Technical Authority within 3 working days of the availability of all enhancements, product upgrades and maintenance releases to the web-based software application during the period of service;
- The contractor must provide authorized DFATD representative/administrator information on a regular basis of all known software problems and available bug fixes, interim releases and upgrades applicable to all software and hardware solutions.

The contractor must provide a web based inventory management software application that includes the following mandatory support services:

- The software application solution must include access by telephone, and by email to a Service Desk immediately following the installation of phase 1 - Pilot. The Service Desk must be staffed by qualified personnel who are available to provide support in both official languages (English and French), based on the caller's language preference, via a toll-free telephone number, Monday through Friday during the hours of 8 am to 4 pm EST excluding statutory holidays.
- The contractor must provide a toll free telephone support service for up to 3 DFATD system administrators available during 8 am-4 pm working hours in the Eastern Time zone Monday to Friday, excluding statutory holidays.
- The contractor must provide toll free telephone support services for communication between a skilled technician and DFATD system administrator within a maximum response time of 3 hours.

8.1.2 DFATD CERTIFICATION AND SOFTWARE INTEGRATION

SIGNET certification process includes, but is not limited to, the following steps completed by DFAIT personnel:

The top ranked contractor must provide access to a test environment of the web based Inventory management software application to verify compliance of the solution with any of the requirements of this bid solicitation and to enable DFATD to certify use of the solution on the SIGNET server.

The test environment must be delivered, **at no cost** to DFATD, to a location within the National Capital Region (NCR) (including Gatineau, Quebec), within 5 working days of the Contracting Authority's request. If DFATD determines as a result of examining the software application that the contractors proposed product or solution does not meet the mandatory requirements of this bid solicitation, the bid will be declared non-responsive.

8.1.3 TESTING AND IMPLEMENTATION REQUIREMENTS

The Contractor must assist with the UHF RFID mobile reader's integration, with the necessary connection to the web based software application, completing all tasks necessary in order to permit a trained DFATD employee to download data and effectively utilize the solution for the purpose defined within this document. These services must be delivered at the DFATD Headquarters location in the National Capital Region (includes Gatineau, Quebec).

The Contractor must assist DFATD to complete such tests as deemed necessary by DFATD in order to satisfy that the solution is tested, configured, integrated and working correctly. These tests will constitute the solution acceptance tests, and as such must be successfully completed in order for the solution to be accepted and any invoices payable.

It is estimated that the total effort required to complete the installation/configuration/integration and testing will be less than thirty (30) business days.

DFATD requires the contractor to have the proposed solution available within 5 business days to be tested by DFATD in order to demonstrate that it meets or exceeds the technical requirements and can operate within current DFATD IT infrastructure. This testing plan will test key functionalities of the proposed solution based on DFATD's requirements. The test will be conducted by a DFATD representative.

The functionalities of the services to be tested are as follows:

- Test the functionality of the proposed Web Based Inventory Management Software application with existing iPhone and Android smartphone mobile devices, laptop and desktop computers;
- Test the overall compatibility and functionality as per the software requirement stated within Deliverable Web Based Inventory Management Software application;

- Test the software application's overall functionality and specifications as per the deliverables defined within this Statement of Work;

8.1.4 DELIVERABLE SUBSTITUTIONS

- (a) The Contractor may propose a substitution for an existing software application, as long as the proposed substitute meets or exceeds the specification(s) of the existing product being substituted and the price for the substitute product does not exceed:
- (i) The firm price per unit (or ceiling price, if applicable) for the product originally offered in the Contractor's bid that resulted in the award of the Contract;
 - (ii) The current published list price of the substitute product, minus any applicable Government discount; or
 - (iii) The price at which the substitute product is generally available for purchase, whichever is the lowest.
- (b) The proposed substitution may be subject to benchmark evaluation and the Contractor must pay for all costs associated with the benchmark evaluation (e.g., transportation, benchmark fee, etc.).
- (c) The substitute item must not be shipped until formally authorized by the Contracting Authority after the Technical Authority determines the substitution is acceptable. Whether or not to accept or reject a proposed substitution is entirely within the discretion of DFATD. If DFATD does not accept a proposed substitution, the Contractor must continue to deliver the original product when ordered. If accepted, the substitution will be documented for the administrative purposes of DFATD by a contract amendment, by removing the existing product and including the substitution instead.

8.1.5 WARRANTIES

The licensed software application must, under normal use and service, conform to product specifications and its media be free from defects in material and workmanship for three (3) years from the date of shipment.

The contractor must, under this warranty, repair or replace any defective software media and/or to remedy any non-conformance of the software to enable it to materially conform to the functional specifications set forth in its applicable documentation.

All costs related to warranty work must be included in the price. Non-warranty maintenance and after sales service are to be charged separately.

The contractor must provide support services for the complete solution for one (1) year warranty. In addition to the initial one (1) year warranty period, there will be an additional two (2) irrevocable option periods of twelve (12) months each to provide support services.

8.1.6 SECURITY REQUIREMENTS

The contractor must provide a web based software application solution that protects files from ransomware with version history and deleted file recovery, and real-time backups that makes it easy to recover and restore files.

The contractor must provide a software application solution that has the ability to control logon access with passwords for each user.

The software application must have the ability to time out after 15 minutes of inactivity;

The software application must have the ability to change user passwords every 90 days.

8.1.7 LANGUAGE REQUIREMENTS

The software application solution must include the capability to perform all functions using screens, forms, prompts, help files and documentation in both French and English.

All required training must be delivered in English. All written training materials must be provided in both English and French

8.1.8 REPORTING REQUIREMENTS

The Contractor must provide monthly reports of all known software application problems and available bug fixes, service packs, interim releases, and upgrades applicable to the whole of the software application. In addition, the costs associated with the above must be covered by the contractor.

Provide DFAIT with at least three (3) copies of the documentation for all hardware and software products in English and French

8.2 DELIVERABLE 2 – RFID MOBILE READER, AND PASSIVE UHF RFID TAGS

Deliverable 2		Phase 1 – Pilot			Phase 2 – Roll out			Total
		Quantity	Deadline	Location	Quantity	Deadline	Location	
RFID components	UHF RFID Mobile Reader	11	Max 1 month after contract award	125 Sussex Drive, Ottawa, Ontario KIA 0G2	167	Max 2 months after being informed that phase 1 was a success in a specific region	125 Sussex Drive, Ottawa, Ontario, KIA 0G2.	178
	charger-adapter	11			167			178
	UHF RFID Tags – Fabric, metal, general use	2000 – general use 100 – metal use 500 - fabric use			Minimum 50 rolls of 100 of each kind			7500

	RFID Course #1 "Train-the-trainer"	1 day			On site: When requested			1
Trainings	RFID Course #2 "System Administrator"	1 day	Max 1 month after contract award Mon – Fri between : 8am and 4pm excluding holidays	Onsite : 200 Place du Portage, Gatineau, Quebec	Onsite: When requested	Max 1 month after request Mon – Fri between: 8am and 4pm excluding holidays	Onsite : 200 Place du Portage, Gatineau, Quebec	1

8.2.1 UHF RFID MOBILE READER

a) UHF RFID Mobile Reader specifications

The contractor must provide a UHF RFID reader that includes the following mandatory specifications:

- The reader must be able to connect to an android and iOS smartphone;
- The reader must have one USB port;
- The reader must be capable of scanning UHF RFID tags and 1D & 2D barcodes;
- The reader must have an internal storage hard drive size of 128 GB or greater;
- The reader must have an integrated antenna;
- The reader must comply with a minimum Industry Standard IP54 rating;
- The reader-tag Communication Technique must include:
 - FHSS: Frequency Hopping Spread Spectrum
 - LBT: Listen Before Talk
 - ETSI: per ETSI 302 208
- The reader must have a micro SD card slot;
- The reader must be EPC UHF class 1 Gen 2 with a min open space read range of 20 feet ;
- The reader must not exceed a weight of 2 lbs with battery;
- The reader must be able to operate in a temperature range of -20 to +50 degrees Celsius;
- The reader must be able to operate in humid environments ranging from 5%RH – 95% non-condensing;
- The reader must withstand occasional drops of up to 1.2 meters onto concrete surfaces;
- The reader must display a low battery indicator;
- The reader must be the manufactures latest model as sold commercially;

- The reader must have industry acceptability by having been manufactured and sold commercially for at least one year;

The contractor must provide a UHF RFID Mobile reader with the following mandatory power specifications:

- The reader must have one battery charger/adaptor for each RFID reader;
- The reader’s battery charger/adaptor must be compatible with voltages and frequencies used abroad and within US/Canada as per Appendix “A”;
- The reader must have a lithium rechargeable battery that is able to last through 8 hours of use;
- The reader’s battery must be able to charge within 5 hours;
- The reader must have electrostatic discharges of:
 - +/- 15 kV air discharge
 - +/- 8 kV direct discharge
 - +/- 8 kVdc indirect discharge
- The reader must operate within the maximum wattage allowed for RFID in any given country, calculated as ERP (Effective Radiated Power) or EIRP (Equivalent Isotropic Radiated Power). Refer to Appendix “A” for country allowances.

The contractor must provide a UHF RFID Mobile reader with the following mandatory connectivity options:

- The reader must be capable of connecting wirelessly by Bluetooth and WIFI to an iOS/android smartphone device;
- The reader must have Bluetooth pairing of “Simple Secure Pairing”;
- The reader must have a Bluetooth Class of 2;
- The reader must have a Bluetooth range of 10 meters;
- The reader must be able to operate on frequency allocations authorized for RFID applications, specifically within the 860 to 960 MHz band of the UHF spectrum;
- The RF waves that radiate from the reader cannot output more power than the country it is operating in allows. Refer to Appendix “A” for country output details;

b) UHF RFID Mobile Reader - Training

In advance of the delivery of the training sessions, the contractor must provide for the approval of DFATD Project Authority a plan that outlines the topics to be covered and the manner of delivery for the training sessions.

Course 1 - Train the Trainer	Course 2 - Train the System Administrator
<ul style="list-style-type: none"> • Provide a training specialist, who has a minimum of two (2) years of training experience in “training the trainer”; 	<ul style="list-style-type: none"> • The contractor must provide a training specialist, who has a minimum of two (2) years of training experience in training System

<ul style="list-style-type: none"> • The Contractor must provide, at a minimum, a one (1) day on-site hands-on operator training course for DFATD personnel; • At a minimum, the training must provide personnel with the knowledge necessary to integrate with and download data to a web based software application, including basic troubleshooting; • At a minimum, the training must provide personnel with the knowledge necessary to operate the UHF RFID Reader, and understand its limitations, including basic troubleshooting; 	<p>Administrators.</p> <ul style="list-style-type: none"> • The Contractor must provide, at a minimum, one (1) day on-site hands-on technical training to DFATD System Administrators. Each session must include the following topics at a minimum: use, configuration, troubleshooting, basic maintenance, and preventative maintenance, operating instructions, quick fixes to common problems, and installation and removal of the components. • At the completion of the training session, System Administrator personnel must be comfortable diagnosing, troubleshooting, repairing, and operating the system.
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c) UHF RFID Mobile Reader - Support Services

- The UHF RFID Mobile reader solution must include access by telephone and by email to a Service Desk immediately following the installation of the first solution. The Service Desk must be staffed by qualified personnel who are available to provide support in both official languages (English and French), based on the caller’s language preference, via a toll-free telephone number, Monday through Friday during the hours of 8 am to 4 pm EST excluding statutory holidays.
- The contractor must provide a toll free telephone support service for up to 6 DFATD system administrators available during 8 am-4 pm working hours in the Eastern Time zone Monday to Friday, excluding statutory holidays.
- The contractor must provide toll free telephone support services for communication between a skilled technician and DFATD system administrator within a maximum response time of 3 hours.
- The contractor must provide authorized DFATD representative/administrator information on a regular basis of all known software problems and available bug fixes, interim releases and upgrades applicable to all software and hardware solutions.

8.2.2 PASSIVE UHF RFID TAGS

The contractor must provide passive UHF RFID Tags that have the following mandatory specifications³:

Passive UHF Metal Mount Tags

- Metal mount tags must be magnetic for application purposes;
- Metal mount tags must withstand heavy vibrations;

³ Refer to Appendix “C” for details on some of the assets that will require UHF RFID tags

- Metal mount tags must have a minimum IP54 rating;
- Metal mount tags must include an air interface protocol of EPC global UHF Class 1 Gen 2 - ISO 18000-6C RF Interface;
- Metal mount tags must have a maximum dimension size of: 1.6 w x 0.5 h inches;
- Metal mount tags must be capable of retaining data for a minimum of 5 years;
- Metal tags must have a minimum read range of 2 meters;
- Metal tags must operate on global frequencies between: 860 – 960 MHz;
- Metal mount tags must have a minimum write endurance (cycles of): 10,000;
- Metal mount tags must be resistant to humidity temperatures up to 50 degrees Celsius;
- Metal mount tags must be able to operate in temperatures from -40 to +55 degrees Celsius;
- The Radio Frequency waves that radiate from the metal mount tag cannot output more power than the country it is operating in allows. Refer to Appendix “A” for country output details;
- Metal mount tags must have serial numbers that include numbers and letters and do not repeat throughout the life of the contract.

Passive UHF Fabric Mount Tags

- The Radio Frequency waves that radiate from the passive fabric mount tag cannot output more power than the country it is operating in allows. Refer to Appendix “A” for country output details;
- Fabric mount tags must operate on global frequencies between: 860 – 960 MHz as per Appendix A;
- Fabric mount tags must withstand a minimum of 50 washing or dry cleaning cycles;
- Fabric mount tags must be capable of retaining data for a minimum of 5 years;
- Fabric tags must have a minimum write endurance (cycles of): 10,000;
- Fabric mount tags must be waterproof;
- Fabric mount tags must be chemical resistant. Including resistance to detergents, softeners, bleach, chlorine, etc.
- Fabric mount tags must include an air interface protocol of EPC global UHF Class 1 Gen 2 - ISO 18000-6C RF Interface;
- Fabric mount tags must be heat resistant at a minimum up to 85 degrees Celsius for 60 minutes;
- Fabric mount tags must be resistant to humidity temperatures up to 50 degrees Celsius;
- Fabric mount tags must be capable to operate in temperatures from -40 to +55 degrees Celsius;
- Fabric mount tags must have a minimum read range of 2 meters.
- Fabric mount tags must have serial numbers that include numbers and letters and do not repeat throughout the life of the contract.

Passive UHF General Purpose tags

- RFID tags must operate on global frequency between 860-960MHz;
- The RF waves that radiate from the RFID tag cannot output more power than the country
- RFID tags must include an air interface protocol of EPC global UHF Class 1 Gen 2 - ISO 18000-6C RF Interface;
- RFID tags must be capable of retaining data for a minimum of 5 years;
- RFID tags must have a write endurance (cycles of): 10,000 minimum;
- RFID tags must remain applied and be readable in high/low temperatures between: -20 to +60 degrees Celsius;
- RFID tags must have a minimum read range of 5 meters;
- RFID tags must be waterproof;
- RFID tags must stay applied in humidity ranges of 5%RH - 95%RH non condensing
- The RFID tags must be 1”high x 3” long maximum.
- The RFID tags must have serial numbers that include numbers and letters and do not repeat throughout the life of the contract.

8.2.3 TESTING AND IMPLEMENTATION REQUIREMENTS

DFATD must be assisted with the UHF RFID mobile reader’s integration with the necessary connection to the web based application, completing all tasks necessary in order to permit a trained DFATD employee to download data and effectively utilize the solution for the purpose defined within this document. These services must be delivered at the DFATD Headquarters location in the National Capital Region (includes Gatineau, Quebec).

The Contractor must assist DFATD to complete such tests as deemed necessary by DFATD in order to satisfy that the solution is tested, configured, integrated and working correctly. These tests will constitute the solution acceptance tests, and as such must be successfully completed in order for the solution to be accepted and any invoices payable.

It is estimated that the total effort required to complete the installation/configuration/integration and testing will be less than sixty (60) business days.

DFATD requires the contractor to have the proposed solution available within 5 business days to be tested by DFATD in order to demonstrate that it meets or exceeds the technical requirements and can operate within current DFATD IT infrastructure. This testing plan will test key functionalities of the proposed solution based on DFATD’s requirements. The test will be conducted by a DFATD representative.

The functionalities of the service to be tested are the following:

- Test the functionality of the proposed UHF RFID mobile readers with existing smartphone mobile devices, laptop and desktop computers;

- Test the overall compatibility and functionality as per the UHF RFID mobile reader's requirements stated within Deliverable 2;
- Test the functionality of the proposed UHF RFID reader with existing DFATD RFID tags;

The Contractor must assist DFATD to complete such tests as deemed necessary by DFATD in order to satisfy that the solution is tested, configured, integrated and working correctly. These tests will constitute the solution acceptance tests, and as such must be successfully completed in order for the solution to be accepted and any invoices payable.

It is estimated that the total effort required to complete the installation/configuration/integration and testing will be less than sixty (60) business days.

DFATD requires the contractor to have the proposed UHF RFID Mobile reader solution available within 5 business days to be tested by DFATD in order to demonstrate that it meets or exceeds the technical requirements and can operate within current DFATD IT infrastructure. This testing plan will test key functionalities of the proposed solution based on DFATD's requirements. The test will be conducted by a DFATD representative.

8.2.4 DELIVERABLE SUBSTITUTIONS

The Contractor may propose a substitution for an existing Hardware product, as long as the proposed substitute meets or exceeds the specification(s) of the existing product being substituted and the price for the substitute product does not exceed:

- (i) The firm price per unit (or ceiling price, if applicable) for the product originally offered in the Contractor's bid that resulted in the award of the Contract;
- (ii) The current published list price of the substitute product, minus any applicable Government discount; or
- (iii) The price at which the substitute product is generally available for purchase, whichever is the lowest.

The proposed substitution may be subject to benchmark evaluation and the Contractor must pay for all costs associated with the benchmark evaluation (e.g., transportation, benchmark fee, etc.).

The substitute item must not be shipped until formally authorized by the Contracting Authority after the Technical Authority determines the substitution is acceptable. Whether or not to accept or reject a proposed substitution is entirely within the discretion of DFATD. If DFATD does not accept a proposed substitution, the Contractor must continue to deliver the original product when ordered. If accepted, the substitution will be documented for the administrative purposes of DFATD by a contract amendment, by removing the existing product and including the substitution instead.

8.2.5 WARRANTIES

The contractor must provide support services for the UHF RFID mobile reader for one (1) year warranty. In addition to the initial one (1) year warranty period, there will be an additional two (2) irrevocable option periods of twelve (12) months each to provide support services. The contractor must notify DFATD Project Authority identified in the Contract in writing of any proposed changes to the contractor-supplied hardware components.

The contractor must receive DFTD approval in writing before the proposed changes are finalized.

UHF RFID Reader:

The UHF RFID Reader must be approved for use in Canada, USA, Europe, Asia, Africa, and the Middle East;

The warranty period on the RFID reader must be three (3) years against defective material and workmanship;

Non-warranty maintenance and after sales service are to be charged separately.

All accessories/peripherals must have a warranty of ninety (90) days against defective material and workmanship; after delivery and acceptance of the unit(s).

8.2.6 LANGUAGE REQUIREMENTS

The mobile reader must allow performing all functions using screens, forms, prompts, help files and documentation in both French and English.

All required training must be delivered in English. All written training materials must be provided in both English and French

8.2.7 REPORTING REQUIREMENTS

The Contractor must notify DFATD with a report as soon as a problem is known, in addition to fixing the issues and covering their costs.

Provide DFAIT with at least three (3) copies of the documentation for all hardware and software products in English and French.

8.3 DELIVERABLE 3 – PRIVATE CLOUD DATA STORAGE

Deliverable 3		Phase 1 – Pilot			Phase 2 – Roll out		
		Quantity	Deadline	Location	Quantity	Deadline	Location
Cloud Hardware	Private Cloud Server	1	Max 1 month after contract award	Remote within Canada	On demand – pay per use	Max 1 month after contract award	Remote within Canada
	Support & Maintenance	On demand – pay per use (1 year)			2 additional option years		

8.3.1 SPECIFICATIONS

The contractor must provide a Private Cloud Storage Solution that includes the following mandatory specifications:

- 100% secured VPN connection;
- 100% secure Firewall;
- Multiple network to network interconnects;
- Failover backup operational mode with immediate redirects to standby server;
- Intrusion detection system (IDS) server
- Usage and data tracking tools;

The Cloud Storage solution must have a secure, web based management interface that enables end users to remotely administer the cloud service;

The Cloud Service Provider must provide the following industry certifications to demonstrate compliance:

- Cloud Security Alliance (CSA) Security, Trust and Assurance Registry (STAR) Level 2;
- ISO/IEC 27001:2013 Information technology -- Security techniques -- Information security management systems – Requirements;
- ISO/IEC 27017:2015 Information technology -- Security techniques -- Code of practice for information security controls based on ISO/IEC 27002 for cloud services; and
- AICPA Service Organization Control (SOC) 2 Type II for the trust principles of security, availability, processing integrity, and confidentiality.

Each certification report must:

- Identify the legal business name of the proposed cloud service provider;
- Identify the current certification date and/or status;
- The scope of the report must map to locations and services offered by the proposed private cloud service provider. If the carved out method is used to exclude subservice

organizations such as data centre hosting, the subservice organization's assessment report must be included;

- Be valid for the duration of the contract;
- Be issued from an independent third party qualified under AICPA or CPA Canada, and/or ISO certification regime and that conforms to ISO/IEC 17020 quality management system standard; and
- Have been issued within the 12 months prior to the bidding closing date.

The Cloud Service Provider must ensure that security measures are implemented for the protection of IT facilities and information system assets on which DFATD data is stored and processed against all forms of tampering, loss, damage, and seizure, and that is based on a prevent- detect-respond-recover approach to physical security.

Physical protection measures must be applied in accordance with, or use an adequate risk-based approach aligned with the physical and environmental protection, maintenance, and media protection security controls outlined in the GC Security Control Profile for Cloud-Based GC IT Services for PBMM and the practices in the Royal Canadian Mounted Police (RCMP) guidance and standards on physical security.

This includes, at a minimum:

- sufficient redundancy and recovery capabilities within and between its IT facilities including being geographically disparate such that the loss of one data center does not prohibit recovery of data within the prescribed Service Level Agreement;
- proper handling of IT media;
- controlled maintenance of information systems and their components to protect their integrity and ensure their ongoing availability;
- controlled access to information system output devices to prevent unauthorized access to Canada's data;
- limiting physical access to its information system assets to authorized employees and contractors based on position or role and the need-to-access principle, and validated by two forms of identification;
- escorting visitors and monitoring visitor activity;
- maintaining audit logs of physical access;
- controlling and managing physical access devices;
- enforcing safeguarding measures for DFATD data at alternate work sites; and
- Recording and monitoring all physical access to data center facilities and all logical access to information system components hosting DFATD's data using a combination of access logs and video surveillance in all sensitive areas and intrusion detection mechanisms.

The Cloud Service Provider must implement security measures that grant and maintain the required level of security screening for the Cloud Service Provider's and subcontractor personnel

pursuant to their access privileges to information system assets on which DFATD's data is stored and processed.

Screening measures must be applied in accordance with the definition and practices in the Treasury Board Standard on Security.

This includes, at a minimum:

- description of the employee and subcontractor positions that require access to DFATD's data or have the ability to affect the confidentiality, integrity or availability of the Services;
- process for ensuring that employees and contractors understand, are aware, and fulfil, their responsibilities for information security, and are suitable for the roles for which they are considered;
- process for security awareness and training as part of employment onboarding and when employee and subcontractor roles change;
- process that is enforced when an employee or subcontractor changes their role or when employment is terminated; and
- Approach for detecting potential malicious insiders and controls implemented to mitigate the risk of access to DFATD data and/or affect on the reliability of cloud services hosting DFATD assets and data.

The Cloud Service Provider must have the ability for the DFATD to store and protect its information at rest, including data in backups or maintained for redundancy purposes within the geographic boundaries of Canada.

This includes:

- identifying and providing the DFATD with an up-to-date list of the physical locations including city which may contain DFATD's data in Canada for each data centre that will be used to provide the Services included in this contract;
- ensuring the infeasibility of finding a specific customer's data on physical media; and
- Employing encryption to ensure that no data is written to disk in an unencrypted form.

8.3.2 SECURITY REQUIREMENTS

The Cloud Service Provider is responsible for demonstrating that they meet and will continue to meet, for the duration of the contract, all DFATD IT security requirements.

The Cloud Service Provider must implement safeguards to mitigate supply chain threats and vulnerabilities to IT services in order to maintain confidence in the security of the sources of information systems and the IT components used to provide services. This includes, but is not limited to designing and implementing controls to mitigate and contain data security risks through proper separation of duties, role-based access, and least-privilege access for all personnel within the supply chain.

The Cloud Service Provider must work with the DFATD IT Security for the coordination of security incident management activities that include:

- Integration of processes;
- Security incident handling and response;
- Auditing;
- Security incident containment and recovery;
- Implementing mitigation measures like firewall blocks, Intrusion Detection prevention;

The Cloud Service Provider must assign responsibility for security to a single senior technical resource, to be known as the Security Architect. The Security Architect will certify the security of the cloud environment.

The Cloud Service Provider must continuously monitor the cloud system and report all successful breaches of security to the DFATD Project Authority;

8.3.3 USER AUTHENTICATION

The Cloud Service Provider must demonstrate that the solution enables Multi-Factor Authentication (MFA) for application administrator access and for user access to a Web based application. The multi-factors must include, at a minimum, simple authentication (user ID/password) and with a software application residing on a device, ensures that the application is compatible with Android, Apple, and Microsoft devices and tablets; Passwords for all users must include a minimum of 8 characters, and a mix of uppercase & lowercase characters;

Password changes must be enforced at first login with a lifetime of six (6) months only;

End users must be able to reset a forgotten password at any time with a knowledge-based password recovery process including a minimum of two security questions.

8.3.4 DATA SECURITY AND RESIDENCY

All electronic data under government control, must be stored in a Government of Canada (GC) approved computing facility located within the geographic boundaries of Canada. This does not mean that the country of origin of IT service providers must be from Canada, but it is understood that these service providers can provide data storage in Canada only.

8.3.5 TESTING AND IMPLEMENTATION REQUIREMENTS

The Cloud Service Provider must allow DFATD IT Security access to the cloud test environment to test for security flaws within 60 days of delivery, and agrees to provide reasonable support to the review team;

At a minimum, the testing must cover all of the security requirements and should search for other common vulnerabilities. The testing may include a combination of vulnerability scanning, penetration testing, static analysis of the source code, and expert code review. The test may include destructive and non-destructive testing. The Cloud Service Provider will be notified in advance of potential destructive tests.

Security issues uncovered will be reported to the Contractor. All issues will be tracked and remediated as specified in SR13 (Security Issue Management).

8.3.6 LANGUAGE REQUIREMENTS

The Cloud environment and related documents must be available in both French and English.

8.3.7 REPORTING REQUIREMENTS

The Contractor must notify DFAIT with a report as soon as a known cloud problem is known, in addition to proposing fixes and covering their costs.

Provide DFAIT with at least three (3) copies of the documentation for all hardware and software products in English and French

9. REFERENCE DOCUMENTS

The Service Provider must comply directly with all relevant federal policies, directives and guidelines including:

- Policy Framework for Information and Technology
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12452§ion=text>
- Policy on Information Management
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12742>
- Policy on Management of Information Technology
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12755>
- Treasury Board Standard on Security Screening
<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=28115>
- Direction for Electronic Data Residency
<https://www.canada.ca/en/government/system/digital-government/modern-emerging-technologies/direction-electronic-data-residency.html>
- Government of Canada White Paper: Data Sovereignty and Public Cloud

<https://www.canada.ca/en/government/system/digital-government/modern-emerging-technologies/cloud-services/gc-white-paper-data-sovereignty-public-cloud.html>

- Government of Canada Security Control Profile for Cloud based GC Services
<https://www.canada.ca/en/government/system/digital-government/modern-emerging-technologies/cloud-services/government-canada-security-control-profile-cloud-based-it-services.html#toc4>

10. LOCATION OF PRODUCT USE

The proposed solution will be deployed globally as per **Appendix “A”** List of Missions. The solution will also be in use at DFATD HQ in the National Capital Region (NCR).

11. REPLACEMENT OF PERSONNEL (Training)

When specific persons have been named in the Contract as the persons who must perform the Work, the Contractor shall provide the services of the persons so named unless the Contractor is unable to do so for reasons beyond his control.

If at any time the Contractor is unable to provide the services of any specific person named in the Contract, he shall provide a replacement person with similar qualifications and experience. The Contractor shall, within 3 calendar days, give notice to the Project Authority of:

- the reason for the removal of the named person from the Work;
- the name, qualifications and experience of the proposed replacement person; and
- proof that the person has the required security clearance granted by Canada

The Project Authority may order the removal from the Work of any such replacement person and the Contractor shall immediately remove the person from the Work and shall, in accordance with subsection (2), secure a further replacement.

The fact that the Project Authority does not order the removal of a replacement person from the Work shall not relieve the Contractor from its responsibility to meet the requirements of the Contract.

12. SUPPORT PROVIDED BY DFATD

DFATD is responsible to provide the following in order to facilitate the testing of Deliverables 1, 2 & 3:

Technical support by means of a DFATD technical infrastructure representative;

DFATD’s evaluation team will consist of two (2) DFATD IT representatives and two (2) DFATD Project Authority representatives who will be on-site to observe the testing.

DFATD is responsible to provide guided access of DFATD's facilities for meeting, development, and testing purposes

DFATD IT Security will need to assess the software application and private cloud interface to ensure there are no risks for use on FATD computer devices. If there are risks which cannot be fixed the solution will be deemed a Technical Fault.

13. TRAVEL

The contractor must travel to the DFATD's facilities located in the National Capital Region to provide the necessary training.

All Contractor related costs associated with travel to perform training, maintenance, or upgrades (inclusive of the training manuals, reference materials, documentation, and Contractor's Trainer travel and living expenses) must be included in the firm unit price per session.

14. OPTIONS FOR PHASES

Phase 1: Trial of the complete solution – up to 11 missions; +/- 2 from each region

- 2 Americas
- 2 Asia Pacific
- 2 Middle East
- 2 Africa
- 2 Europe

Phase 2: Deployment to the remaining 168 missions.

15. ACCESS TO CLIENT'S PREMISES AND SYSTEMS / ACCESS RESTRICTIONS

DFATD's property, facilities, equipment, documentation, and personnel are not automatically available to the Contractor. If the Contractor would like access to any of these, it is responsible for making a request to the Technical Authority. Unless expressly stated in the Contract, DFATD has no obligation to provide any of these to the Contractor.

All contractor personnel must be escorted while on DFATD premises.

16. INTELLECTUAL PROPERTY OWNERSHIP

All contractors grants a perpetual, non-revocable license to use, reproduce, and translate the training and reference manuals, materials, and documentation.

17. INFORMATION OWNERSHIP

All information collected by the contractors during the term of each contract will be considered the property of the Government of Canada.

All contractors must establish and maintain the safeguards required to ensure the confidentiality of information while stored, processed, or transmitted.

At the request of DFATD, and at no additional cost, current and historical master files of all accounts collected must be transferred to any new service provider and/or DFATD, and following the acceptance of the transferred data the contractors must destroy the information upon written notification by DFATD.

18. SCOPE OF WORK CHANGE

No increase in the total liability of Her Majesty or in the price of the work resulting from any change, modification or interpretation of the documents will be authorized or paid to the Contractors unless such change, modification, or interpretation has received the prior approval in writing of the Departmental Contracting Authority. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

19. METHOD AND SOURCE OF ACCEPTANCE

All services rendered under any contracts is subject to inspection by the Project authority. The Project Authority shall have the right to reject any deliverables that are not considered satisfactory, or require their correction before payment will be authorized. All services are to be completed to the satisfaction of the Departmental Representative.

20. CONFIDENTIALITY

The Contractors are not to release to any party the data gathered or information gained in the process of completing this project, without the express written permission of the Project Authority.

21. METHOD OF PAYMENT

Payment will be made upon receipt and acceptance of invoices by the Project Authority.

Appendix A List of Missions⁴

AMERICAS						
Mission	UHF RFID frequency MHz	Power	Technique	Voltage	Adapter Frequency	Adapter plug type
Belo Horizonte, Brazil	902 - 907.5 915 – 928	4 W EIRP	FHSS	127 V	60 Hz	C / N
Brasilia, Brazil	902 - 907.5 915 – 928	4 W EIRP	FHSS	220 V	60 Hz	C / N
Bridgetown, Barbados	N/A	N/A	N/A	115 V	50 Hz	A / B
Georgetown, Guyana	N/A	N/A	N/A	120 V	60 Hz	A / B / D / G
Kingston, Jamaica	N/A	N/A	N/A	110 V	50 Hz	A / B
Port au Prince, Haiti	N/A	N/A	N/A	110 V	60 Hz	A / B
Port of Spain, Trinidad	N/A	N/A	N/A	115 V	60 Hz	A / B
Palo Grande, Panama	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Recife, Brazil	902 - 907.5 915 – 928	4 W EIRP	FHSS	220 V	60 Hz	C / N
Rio de Janeiro, Brazil	902 - 907.5 915 – 928	4 W EIRP	FHSS	127 V	60 Hz	C / N
Sao Paulo, Brazil	902 - 907.5 915 – 928	4 W EIRP	FHSS	127 V	60 Hz	C / N
Atlanta, Georgia	902 - 928	4 W EIRP	FHSS	220 V	50 Hz	C / F
Boston, Massachusetts	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Dallas, Texas	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Denver, Colorado	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Detroit, Michigan	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Houston, Texas	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Los Angeles, California	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
New York City, New York	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Miami, Florida	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B

⁴ https://www.gs1.org/docs/epc/uhf_regulations.pdf

Minneapolis, Minnesota	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
San Diego, California	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
San Francisco, California	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Seattle, Washington	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Washington, DC	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Acapulco, Mexico	902 - 928 865.6 - 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Bogato, Columbia	N/A	N/A	N/A	110 V	60 Hz	A / B
Buenos Aires, Argentina	N/A	N/A	N/A	220 V	50 Hz	C / I
Guadalajara, Mexico	902 - 928 865.6 - 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Guatemala City, Guatemala	N/A	N/A	N/A	120 V	60 Hz	A / B
Havana, Cuba	N/A	N/A	N/A	110 V	60 Hz	A / B / C / L
La Paz, Bolivia	N/A	N/A	N/A	230 V	50 Hz	A / C
Lima, Peru	915 - 928	4 W EIRP	FHSS	220 V	60 Hz	A / C
Managua, Nicaragua	N/A	N/A	N/A	120 V	60 Hz	A / B
Mexico City, Mexico	902 - 928 865.6 - 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Monterrey, Mexico	902 - 928 865.6 - 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Montevideo, Uruguay	N/A	N/A	N/A	220 V	50 Hz	C / F / L
Panama City, Panama	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
Punta Cana, Mexico	902 - 928 865.6 - 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Quito, Ecuador	N/A	N/A	N/A	120 V	60 Hz	A / B
San Jose, Costa Rica	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B
San Salvador, El Salvador	N/A	N/A	N/A	120 V	60 Hz	A / B
Santiago, Chile	N/A	N/A	N/A	220 V	50 Hz	C / L
Santo Domingo, Dominican Republic	902 - 928	4 W EIRP	FHSS	120 V	60 Hz	A / B / C

Tegucigalpa, Honduras	N/A	N/A	N/A	120 V	60 Hz	A / B
Los Cabos, Mexico	902 – 928 865.6 – 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Mazatlan, Mexico	902 – 928 865.6 – 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Playa del Carmen, Mexico	902 – 928 865.6 – 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B
Puerto Vallarta, Mexico	902 – 928 865.6 – 867.6	4 W EIRP 2 W EIRP	FHSS	120 V	60 Hz	A / B

ASIA						
Mission	UHF RFID frequency MHz	Power	Technique	Voltage	Adapter Frequency	Adapter plug type
Bangalore, India	865 - 867	4 W EIRP	N/A	230 V	50 Hz	C / D / M
Chandigarh, India	865 - 867	4 W EIRP	N/A	230 V	50 Hz	C / D / M
Colombo, Sri Lanka	N/A	N/A	N/A	230 V	50 Hz	D / G
Dhaka, Bangladesh	925 - 927	N/A	N/A	220 V	50 Hz	A / C / D / G / K
Islamabad, Pakistan	N/A	N/A	N/A	230 V	50 Hz	C / D
Kabul, Afghanistan	N/A	N/A	N/A	220 V	50 Hz	C / F
Mumbai, India	865 - 867	4 W EIRP	N/A	230 V	50 Hz	C / D / M
New Delhi, India	865 - 867	4 W EIRP	N/A	230 V	50 Hz	C / D / M
Bandar Seri Begawan, Brunei	866 - 869 923 - 925	0.5 W ERP 2 W EIRP	N/A	240 V	50 Hz	G
Bangkok, Thailand	920 - 925	4 W EIRP	FHSS	230 V	50 Hz	A / B / C / O
Beijing, China	920.5-924.5	2 W EIRP	FHSS	220 V	50 Hz	A / C / I
Canberra, Australia	N/A	N/A	N/A	230 V	50 Hz	I
Chongqing, China	920.5-924.5	2 W EIRP	FHSS	220 V	50 Hz	A / C / I
Guangzhou, China	920.5-924.5	2 W EIRP	FHSS	220 V	50 Hz	A / C / I
Hanoi, Vietnam	920-925	2 W EIRP	N/A	220 V	50 Hz	A / B / C
Ho Chi Ming, Vietnam	920-925	2 W EIRP	N/A	220 V	50 Hz	A / B / C

Hong Kong, China	920.5-924.5	2 W EIRP	FHSS	220 V	50 Hz	A / C / I
Jakarta, Indonesia	923 - 925	2 W EIRP	N/A	230 V	50 Hz	C / F
Kuala Lumpur, Malaysia	919 - 923	2 W EIRP	N/A	240 V	50 Hz	G
Manila, Philippines	N/A	N/A	N/A	220 V	60 Hz	A / B / C
Phnom Penh, Cambodia	N/A	N/A	N/A	230 V	50 Hz	A / C / G
Seoul, South Korea	917 - 920.8 917-923.5	4 W EIRP 200 MW EIRP	FHSS/LBT FHSS/LBT	220 V	60 Hz	F
Shanghai, China	920.5-924.5	2 W EIRP	FHSS	220 V	50 Hz	A / C / I
Singapore, Singapore	866 - 869 920 - 925	.05 W EIRP 2 W EIRP	N/A	230 V	50 Hz	G
Sydney, Australia	920 - 926	4 W EIRP	N/A	230 V	50 Hz	I
Taipei, Taiwan	922 – 928	1, .5 W ERP	FHSS	110 V	60 Hz	A / B
Tokyo, Japan	916.7- 920.9 916.7- 923.5	4 W EIRP 0.5 W EIRP	LBT	100 V	50 Hz / 60 Hz	A / B
Ulaanbaatar, Mongolia	N/A	N/A	N/A	230 V	50 Hz	C / E
Vientiane, Laos	N/A	N/A	N/A	230 V	50 Hz	A / B / C / E / F
Wellington, New Zealand	864 - 868 920 - 928	6 W EIRP	FHSS	230 V	50 Hz	I
Yangon, Myanmar	N/A	N/A	N/A	230 V	50 Hz	A / C / D / G / I
Auckland, New Zealand	864 - 868 920 - 928	N/A 6 W EIRP	N/A FHSS	230 V	50 Hz	I
Nagoya, Japan	916.7- 920.9 916.7- 923.5	4 W EIRP 0.5 W EIRP	LBT	100 V	50 Hz / 60 Hz	A / B
Sapporo, Japan	916.7- 920.9 916.7- 923.5	4 W EIRP 0.5 W EIRP	LBT	100 V	50 Hz / 60 Hz	A / B
Fukuoka, Japan	916.7- 920.9 916.7- 923.5	4 W EIRP 0.5 W EIRP	LBT	100 V	50 Hz / 60 Hz	A / B

MIDDLE EAST						
Mission	UHF RFID frequency MHz	Power	Technique	Voltage	Adapter Frequency	Adapter plug type
Ankara, Turkey	865.6 - 867.6	2 W EIRP	ETSI	230 V	50 Hz	C / F
Beirut, Lebanon	N/A	N/A	N/A	230 V	50 Hz	C / D / G
Ramallah, Israel	915 - 917	2 W EIRP	N/A	230 V	50 Hz	C / H
Abu Dhabi, UAE	865.6-867.6	2 W EIRP	ETSI	230 V	50 Hz	G
Damascus, Syria	N/A	N/A	N/A	220 V	50 Hz	C / E / L
Tel Aviv, Israel	915 - 917	2 W EIRP	N/A	230 V	50 Hz	C / H
Riyadh, Saudi Arabia	865.6-867.6	2 W EIRP	ETSI	220 V	60 Hz	G
Amman, Jordan	865 - 868	2 W EIRP	N/A	230 V	50 Hz	C / D / F / G / J
Baghdad, Iraq	N/A	N/A	N/A	230 V	50 Hz	C / D / G
Kuwait, Kuwait	N/A	N/A	N/A	240 V	50 Hz	G
Istanbul, Turkey	865.6 - 867.6	2 W EIRP	ETSI	230 V	50 Hz	C / F
Cairo, Egypt	N/A	N/A	N/A	220 V	50 Hz	C / F
Doha, Qatar	N/A	N/A	N/A	240 V	50 Hz	G
Dubai, UAE	865.6-867.6	2 W EIRP	ETSI	230 V	50 Hz	G
Erbil, Iraq	N/A	N/A	N/A	230 V	50 Hz	C / D / G

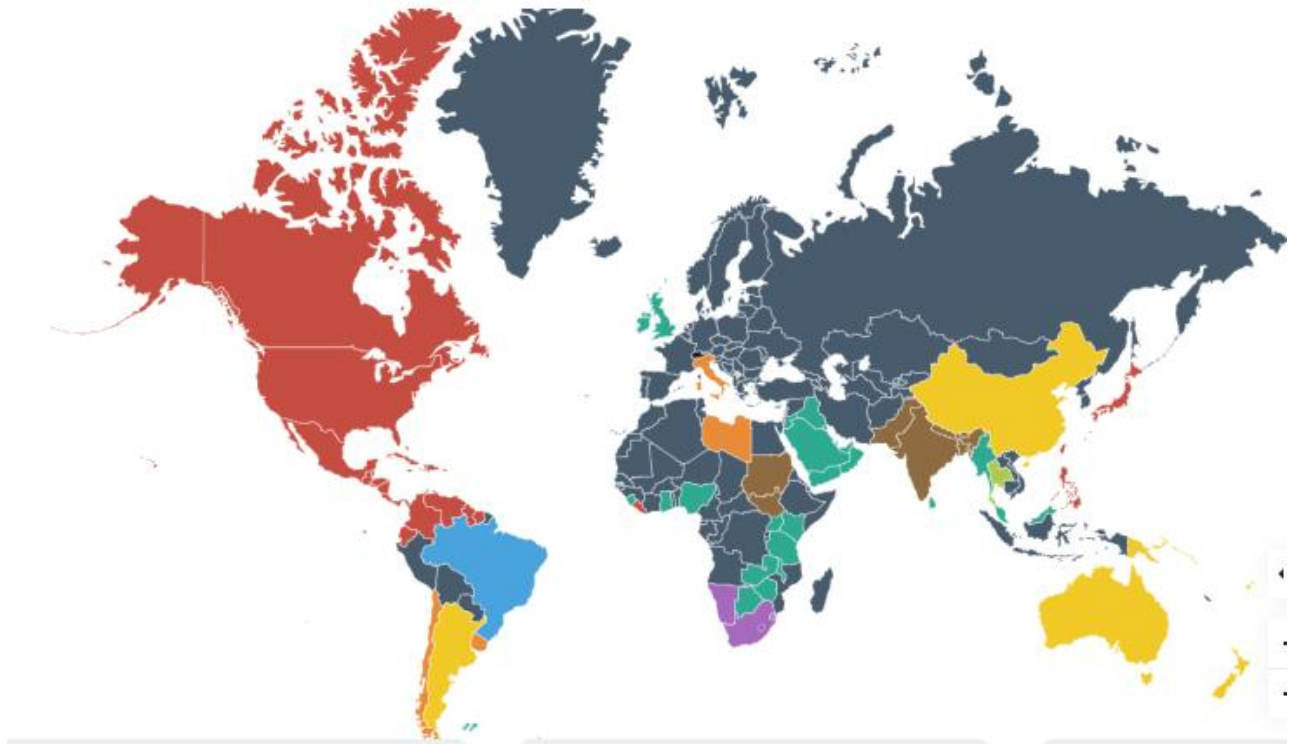
EUROPE						
Mission	UHF RFID frequency MHz	Power	Technique	Voltage	Adapter Frequency	Adapter plug type
The Hague, Netherlands	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Vatican city, Vatican	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F / L
Vilnius, Lithuania	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Zagreb, Croatia	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Brussels, Belgium	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / E
Geneva, Switzerland	865.6 -867.6 915-918	2 W ERP 4 W ERP	ETSI LTD ETSI	230 V	50 Hz	C / J
Paris, France	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / E
Bern, Switzerland	865.6 -867.6 915-918	2 W ERP 4 W ERP	ETSI LTD ETSI	230 V	50 Hz	C / J
Berlin, Germany	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Belgrade, Serbia	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Bucharest, Romania	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Budapest, Hungary	865.6 -867.6 915 - 921	2 W ERP 4 W ERP	ETSI ETSI	230 V	50 Hz	C / F
Lisbon, Portugal	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
London, England	865.6 -867.6 915 - 921	2 W ERP 4 W ERP	ETSI	230 V	50 Hz	G
Madrid, Spain	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Tallinn, Estonia	N/A	N/A	N/A	230 V	50 Hz	C / F
Dusseldorf, Germany	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Kiev, Ukraine	N/A	N/A	N/A	230 V	50 Hz	C / F
Munich, Bavaria	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Moscow, Russia	866-867.6 915-921	2 W ERP 1 W ERP	ETSI	220 V	50 Hz	C / F
Rome, Italy	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F / L
Stockholm, Sweden	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Oslo, Norway	865.6 -867.6 915 - 921	2 W ERP 4 W ERP	ETSI	230 V	50 Hz	C / F
Reykjavik, Iceland	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Riga, Latvia	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F

Prague, Czech Republic	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / E
Vienna, Austria	918 – 926 865.6 -867.6	1 W EIRP 2 W ERP	ETSI	230 V	50 Hz	C / F
Warsaw, Poland	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / E
Bratislava, Slovakia	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / E
Athens, Greece	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Barcelona, Spain	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Dublin, Ireland	865.6 -867.6 915 - 921	2 W ERP 4 W ERP	ETSI ETSI	230 V	50 Hz	G
Helsinki, Finland	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / F
Copenhagen, Denmark	865.6 -867.6 915 - 921	2 W ERP 4 W ERP	ETSI ETSI	230 V	50 Hz	C / E / F / K

AFRICA						
Mission	UHF RFID frequency MHz	Power	Technique	Voltage	Adapter Frequency	Adapter plug type
Addis Ababa, Ethiopia	N/A	N/A	N/A	220 V	50 Hz	C / F / G
Dar es Salaam, Tanzania	N/A	N/A	N/A	230 V	50 Hz	D / G
Harare, Zimbabwe	N/A	N/A	N/A	240 V	50 Hz	D / G
Juba, South Sudan	N/A	N/A	N/A	230 V	50 Hz	C / D
Khartoum, Sudan	N/A	N/A	N/A	230 V	50 Hz	C / D
Kigali, Rwanda	N/A	N/A	N/A	230 V	50 Hz	C / E / F / G
Lusaka, Zambia	N/A	N/A	N/A	230 V	50 Hz	C / D / G
Maputo, Mozambique	N/A	N/A	N/A	220 V	50 Hz	C / F / M
Nairobi, Kenya	N/A	N/A	N/A	240 V	50 Hz	G
Pretoria, South Africa	865.6 -867.6 915.4-919	2 W ERP 4 W EIRP	ETSI FHSS	230 V	50 Hz	C / M / N (still rare)
Abidjan, Ivory Coast	N/A	N/A	N/A	220 V	50 Hz	C / E
Abuja, Nigeria	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	D / G
Accra, Ghana	N/A	N/A	N/A			
Algiers, Algeria	870 - 876 915 – 921 925 – 926	100 mW EIRP	N/A	230 V	50 Hz	C / F
Bamako, Mali	N/A	N/A	N/A	220 V	50 Hz	C / E
Cotonou, Benin	N/A	N/A	N/A	220 V	50 Hz	C / E

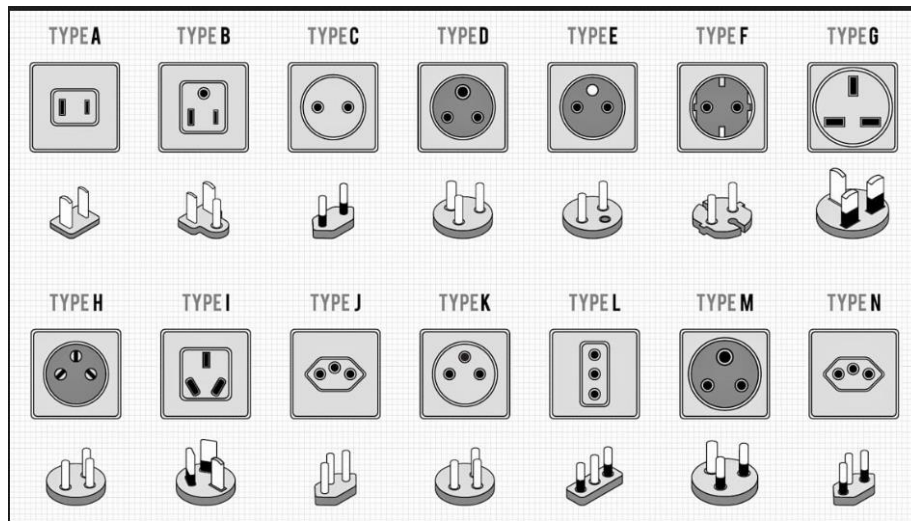
Dakar, Senegal	N/A	N/A	N/A	230 V	50 Hz	C / D / E / K
Kinshasa, DR Congo	N/A	N/A	N/A	220 V	50 Hz	C / D / E
Lagos, Nigeria	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	D / G
Ouagadougou, Burkina Faso	N/A	N/A	N/A	220 V	50 Hz	C / E
Rabat, Morocco	867.6 - 868	500 mW ERP	N/A	220 V	50 Hz	C / E
Tripoli, Lybia	N/A	N/A	N/A	230 V	50 Hz	C / L
Tunis, Tunisia	865.6 -867.6	2 W ERP	ETSI	230 V	50 Hz	C / E
Yaounde, Cameroon	N/A	N/A	N/A	220 V	50 Hz	C / E
Johannesburg, South Africa	865.6 -867.6 915.4-919	2 W ERP 4 W EIRP	ETSI FHSS	230 V	50 Hz	C / M / N (still rare)

APPENDIX B - Global Map of Different Plug Types Used Around the World



Red countries use type **A & B** plugs,
Brown countries use type **D**,
Pink Israel uses types **C & H**,
Black countries use **C & J**,
Purple South African type **M**,
Moss-Green Thailand uses types **C & Q**.

Deep blue uses types **C & E/F**,
Sea-green countries use the British type **G** plug,
Yellow countries use the Australian type **I** system,
Orange countries use types **C & L**,
Pale blue countries use the international type **N**



APPENDIX C – ASSET LIST EXAMPLES (non-exhaustive)

BLENDER	CURTAIN/BLIND
COFFEE MAKER	BUFFET /HUTCH
FLAT IRON	ENTERTAINMENT UNIT
KETTLE	OTTOMAN
MIXER	PLANTER
TOASTER	WALL UNIT
TELEVISION	CLEANER (VACUUM)
STEREO	DRYER
MEDIA PLAYER (e.g. DVD, Blu-Ray, etc.)	WASHING MACHINE
WATER DISPENSER	MICROWAVE
CHAIR	RANGE/OVEN
DESK	FREEZER
CABINET	REFRIGERATOR
RUG	DISHWASHER
LIGHT FIXTURE	AIR CONDITIONER
MIRROR	BLENDER
SOFA	COFFEE MAKER
MATRESS/BOX SPRING	FLAT IRON
ARTWORK	KETTLE
AIR PURIFIER	MIXER
TABLE	TOASTER
BED	TELEVISION
DRESSER	STEREO
WARDROBE	MEDIA PLAYER (e.g. DVD, Blu-Ray)
BOOKCASE	WATER DISPENSER
FIRE EXTINGUISHER	GARDEN/PATIO FURNITURE
HUMIDIFIER	GARDEN/PATIO APPLIANCES
HEATER	GARDEN/PATIO EQUIPMENT/TOOLS
DEHUMIDIFIER	PIANO
GENERATOR	FAN
SCALE	SEWING MACHINE
ICE MAKER	HOME SECURITY EQUIPMENT

APPENDIX D – RFID TAGS

These RFID tags and barcodes are currently being used at the missions abroad. Various makes such as Alien, Silverline, Steelwave and Pino are used.



ANNEX B – QUESTIONS FOR INDUSTRY

1) Describe how you would meet requirement for each section of the SOW and provide comments on how each section could be modified to enhance competition, to increase beneficial operational benefits and/or reduce costs.

SOW SECTION	COMMENTS
7. FUTURE DFATD IT STANDARDS AND SYSTEMS	
8.1 DELIVERABLE 1 – WEB BASED INVENTORY MANAGEMENT SOFTWARE APPLICATION	
8.1.1 SPECIFICATIONS	
8.1.2 DFATD CERTIFICATION AND SOFTWARE INTEGRATION	
8.1.3 TESTING AND IMPLEMENTATION REQUIREMENTS	
8.1.4 DELIVERABLE SUBSTITUTIONS	
8.1.5 WARRANTIES	
8.1.6 SECURITY REQUIREMENTS	
8.1.7 LANGUAGE REQUIREMENTS	
8.1.8 REPORTING REQUIREMENTS	
8.2 DELIVERABLE 2 – RFID MOBILE READER, AND PASSIVE UHF RFID TAGS	
8.2.1 UHF RFID MOBILE READER	
8.2.2 PASSIVE UHF RFID TAGS	
8.2.3 TESTING AND IMPLEMENTATION REQUIREMENTS	
8.2.4 DELIVERABLE SUBSTITUTIONS	
8.2.5 WARRANTIES	
8.2.6 LANGUAGE REQUIREMENTS	
8.2.7 REPORTING REQUIREMENTS	
8.3 DELIVERABLE 3 – PRIVATE CLOUD DATA STORAGE	
8.3.1 SPECIFICATIONS	
8.3.2 SECURITY REQUIREMENTS	
8.3.3 USER AUTHENTICATION	
8.3.4 DATA SECURITY AND RESIDENCY	
8.3.5 TESTING AND IMPLEMENTATION REQUIREMENTS	
8.3.6 LANGUAGE REQUIREMENTS	
8.3.7 REPORTING REQUIREMENTS	
10. LOCATION OF PRODUCT USE	

2) Describe the technology your solution would use to capture, read and interpret RFID tag information. Indicate where proprietary solutions or components are used, and where industry, or common standards are leveraged.

3) Describe the architecture and design of your solution and its components. Does your solution operate as a peripheral, and independent computing platform, or both?

4) Describe the implementation of your solution, protocols supported, and its components.

5) Provide detailed performance specifications for your solution.

6) Describe any alternative solution you feel would better serve DFATD's RFID Inventory Management needs within our missions abroad?

7) Describe what kind of pre-programmed reports can be generated from your solution and explain how ad hoc reports are generated.

8) Is there any customization required to make the solution operational for DFATD's needs? Can this work be done by the DFATD or does it require initial vendor set-up? If so, provide details.

9) How long has your solution been in the marketplace and what is its technological longevity? Provide information on the software, hardware, and platform. What sets your solution apart from competitors?

10) How would your solutions adapt to future technological changes? Would these changes be at the cost of the Vendor or DFATD's cost? Please explain.

11) In a situation where data would be lost, explain how the data would be recovered. Provide details on your backup contingency plan. How much of the data is available online? Is the old data being archived? Are there costs associated with archiving data or retrieving archived data?

12) Are there any elements missing from this RFID Inventory Management solution, or are there any important considerations that you feel need to be added to our understanding of an UHF RFID Materiel Management solution that should be included?

13) Please provide any additional information or ideas that you feel should be considered as a benefit to this project.

ANNEX “C” PRICE LIST

Price List – Phases 1 & 2

Please complete the tables below:

Deliverable 1 – Web Based Inventory Management Software Application

Item No.	PHASE 1 – Description ⁵	Brand Name & Part No.	Quantity	Price	Unit of Measure	Total Cost
1.	Web based Software Applications			\$	Each	\$
2.	Licenses & Subscriptions ⁶			\$	Each	\$
3.	Software Training – Train the Trainer & Administrators			\$	day	\$
Item No.	PHASE 2 – Description ⁷	Brand Name & Part No.	Quantity	Price	Unit of Measure	Total Cost
1.	Web based Software Applications			\$	Each	\$
2.	Licenses & Subscriptions			\$	Each	\$
3.	Software Training – Train the Trainer & Administrators			\$	day	\$

Comments:

⁵ The department has 178 missions abroad. For phase 1, we would like to run a pilot test with up to 11 missions.

⁶ Up to 11 locations with 2 usernames & passwords per location

⁷ For phase 2, the roll-up is for up to 167 missions

Deliverable 2 – UHF RFID Mobile Reader and UHF RFID Tags

Item No.	PHASE 1 – Description	Brand Name & Part No.	Quantity	Unit of Measure	Price	Total Cost
1.	UHF RFID Mobile Reader		11	Each	\$	\$
2.	UHF RFID Mobile Reader power cable or docking station		11	Each	\$	\$
3.	General Purpose UHF RFID tags		2000		\$	\$
4.	UHF RFID Metal mount tags		100		\$	\$
5.	UHF RFID Fabric tags		500		\$	\$
6.	RFID Course #1 "Train-the-trainer"		1	days	\$	\$
7.	RFID Course #2 "System Administrator"		1	day	\$	\$
Item No.	PHASE 2 – Description	Brand Name & Part No.	Quantity	Unit of Measure	Price	Total Cost
1.	UHF RFID Mobile Reader		167	Each	\$	\$
2.	UHF RFID Mobile Reader power cable or docking station		167	Each	\$	\$
3.	General Purpose UHF RFID tags		5000		\$	\$
4.	UHF RFID Metal mount tags		5000		\$	\$
5.	UHF RFID Fabric tags		5000		\$	\$
6.	RFID Course #1 "Train-the-trainer"		1	days	\$	\$
7.	RFID Course #2 "System Administrator"		1	day	\$	\$

Comments:

Deliverable 3 – Private Cloud Service Provider

Item No.	PHASE 1 – Description	Brand Name & Part No.	Quantity	Unit of Measure	Price	Total Cost
1.	Private Cloud Server				\$	\$
2.	Support & Maintenance		1	year	\$	\$
Item No.	PHASE 2 – Description	Brand Name & Part No.	Quantity	Unit of Measure	Price	Total Cost
1.	Private Cloud Server				\$	\$
2.	Support & Maintenance		2	years	\$	\$

Comments:
