



**UPU** | UNIVERSAL  
POSTAL  
UNION

**Universal Postal Union**

**EMS Cooperative**

**i-Care customer service system**

**Statement of work**

June 2022



<b>Table of contents</b>		<b>Page</b>
1	Introduction and Vendor's tasks	3
2	i-Care	5
3	Database	6
4	Interfaces and reference data	6
5	Integrated reporting tool	8
6	Technical information	8
	Annex 1 – Terminology	9
	Annex 2 – Workflow and notification concepts	10
	Annex 3 – EMS customer service performance	14
	Annex 4 – i-Care technical specifications	15

## 1 Introduction and Vendor's tasks

The Universal Postal Union (UPU) is an intergovernmental organization and specialized agency of the United Nations, based in Berne, Switzerland. It hereby invites tenders concerning the implementation of international customer service standards adopted for the provision of the Express Mail Service (EMS) by designated operators.

Each year, nearly 200 EMS Cooperative members handle approximately 300,000 workflows using i-Care, the UPU's customer service system for EMS. In total, 6,000 user agents from nearly 200 member countries require access to the system, which was developed with the option to incorporate other UPU products to address customer service inquiries in the future. i-Care is an Internet-based inquiry system that allows customer service call centres worldwide to exchange customer-specific queries based on an item identifier.

Bidders are invited to submit their tenders for the provision of services as set out below. The selected Vendor will provide services in accordance with a signed contract and in line with the UPU's general terms and conditions.

**N.B.** – A glossary of terms and abbreviations is provided in Annex 1.

*Task 1 – Provision of maintenance and support for the EMS Cooperative customer service system (i-Care), associated interfaces with EMS SMART and domestic customer relationship management (CRM) systems, and links with the EMS Operational Guide, single sign-on and track-and-trace function*

This task comprises maintenance and support for the existing i-Care system and associated links with other EMS systems, including the production, test and training environments. The Vendor should reuse the existing system components, and new developments should be performed on top of the existing code base.

The system is required to operate with an availability rate of 99.4%. System stability is therefore of great importance. In the event of a disaster, the systems must be recovered within four hours.

System maintenance should include regular software updates.

Maintenance of i-Care includes monitoring and ensuring the system's stability and ability to produce all expected results, as well as fixing bugs, implementing feature enhancements and making label adjustments. The Vendor is expected to monitor the connection of i-Care to other systems (e.g. EMS SMART, the Operational Guide, single sign-on, domestic CRM systems) and liaise with associated providers.

Maintenance of the track-and-trace feature includes monitoring to ensure sufficient capacity, troubleshooting, and implementing changes to data display restrictions (which may occur on an infrequent basis) to ensure that the feature remains operational at all times.

Any system downtime for maintenance or the implementation of changes must be agreed with the EMS Unit sufficiently far in advance so that appropriate notification can be provided to users. i-Care downtime should be kept to a minimum and only in very rare cases should it be visible to users. Scheduled maintenance may be performed subject to a minimum of two weeks' notice. When system downtime is scheduled, a courtesy message in multiple languages shall be published to inform users that the system is under maintenance and to indicate the duration of the maintenance period (times to be provided in GMT).

A service desk should be available to the EMS Unit during normal business hours (CET/CEST) from Monday to Friday via e-mail and telephone. The submission of incidents by e-mail is highly preferable to a ticketing system.

Expected incident resolution is as follows:

<i>Priority</i>	<i>Log/reply</i>	<i>Resolution (depending on complexity)</i>
1 (high)	1 hour	1–2 business days
2 (medium)	3 hours	Up to 4 business days
3 (low)	5 hours	Up to 8 business days

Incidents should be submitted to the service desk by the EMS Unit on behalf of users. Incident priority is to be defined by the EMS Unit. The escalation method should be defined with the Vendor and requests are to be escalated by the EMS Unit if an incident is not resolved within the expected time. The Vendor should provide support for the EMS Unit's report generation and/or regeneration activities in i-Care, and be available for urgent troubleshooting should any difficulties arise.

All necessary software licenses are the responsibility of the Vendor. No separate or additional charges may be made to the UPU in this regard.

Regular meetings should be held with the UPU to discuss system needs, plans and open issues.

#### *Task 2 – Hosting of i-Care and related components*

The Vendor should provide hosting for i-Care (www.icare.post) and for the production, test and training environments.

The system is expected to be accessible to end users 24/7 via the public Internet.

The data contained in i-Care and the associated interfaces must be protected against unauthorized access. Data security is therefore of great importance.

i-Care is required to respond to requests from an end user within two seconds. Pages for operators and system reports requiring large volumes of data may take slightly longer. The maximum admitted page rendering latency shall be no more than 1,000 milliseconds (1 second) and shall be measured using a multi-site tool (e.g. GTmetrix, Uptrends). Data packets originate from various geographic locations (e.g. North America, Latin America, Asia, Africa, Europe, and the Caribbean and Arab regions) and it must be possible to compare latency from multiple world regions. This value is displayed in the system.

Database query execution: database queries shall be performed independently of the technology used and within approximately 500 milliseconds. The value of the query execution time is also displayed in the system.

The Vendor may use the same hosting solutions as those currently used, but under its own management, or may propose any other hosting solution that would ensure at least the same level of system performance, security and stability.

#### *Task 3 – Ad hoc developments*

Changes may need to be made to i-Care each year or periodically. For example, this may include changes to calculation rules, adjustments of the measurements in accordance with new targets and standards, the development of new reports, functionalities, alerts and notifications, or the addition of system languages. Changes made to EMS systems linked with i-Care should be implemented in i-Care as applicable.

All new developments should be documented in detail with regard to calculation rules and technical specifications. Updates to the existing documentation may be required. A new development is considered as delivered after final acceptance by the UPU and on condition that the relevant documentation has been provided.

The scope of ad hoc developments is not defined in advance. Such requirements may be triggered by changes to UPU regulations, members' requests or business needs. The scope of such development requirements is drawn up on a case-by-case basis and the necessary effort evaluated by the Vendor. The UPU then decides whether or not to proceed with the development. Approximately 10 days of ad hoc development are usually required each year. In the event of a special project or extensive set of measurements, this number may be greater. The Vendor should be able to accommodate the necessary development time if the UPU bodies require certain changes by a specific deadline.

The Vendor should have the necessary business understanding and expertise to advise the UPU on technical requirements based on business needs, and shall contribute to the process of drawing up the scope of requirements, in consultation with the UPU, with regard to the feasibility and technical efficiency of the required developments. The Vendor should be able to propose relevant solutions, offering a modern design with a user-friendly and efficient layout of new features in i-Care.

All developments should first be applied to the test and training platforms, which are copies of the production platform, on which new features can be tested by the UPU and test groups of EMS Cooperative members.

The development process is often iterative, especially in the case of new measurements or reports. Owing to the complexity of preparing initial requirements without a simulation, it is difficult to evaluate whether requirements are complete or entirely correct and do not interfere with existing calculations. The Vendor should be prepared to work using this method.

All developments should be documented in a timely manner, including the calculation rules.

#### *Task 4 – Transition from the current provider to the Vendor*

The UPU will provide the Vendor with training on EMS processes and related systems, over the course of several days.

The Vendor must:

- Ensure the smooth takeover of all existing i-Care platforms and components from the current provider, without performance interruptions. Tests should be performed to demonstrate the readiness of the new solution to the UPU;
- Guarantee that the set-up of the connection with other EMS and domestic CRM systems is secure and reliable;
- Obtain the necessary knowledge regarding EMS systems, installations and processes from the current provider, and make the necessary preparations to take over the system and set up a stable hosting solution;
- Maintain accurate and updated documentation regarding the installation of the system, and provide complete documentation and instructions for migration to a new system provider.

The transition should be complete by 15 March 2023.

Periodic meetings may be held as required either by the EMS Unit or the Vendor, in order to evaluate the operation and performance of the customer service system, to discuss technical issues and/or the need for new developments, or to consider annual or periodic EMS business plans.

## **2 i-Care**

i-Care is the UPU's customer service system for EMS-related inquiries. The use of this standardized system for international EMS inquiries is necessary in order to promote communication between EMS operators, so as to improve the quality of responses provided by EMS designated operators to customer complaints.

The detailed workflows and notifications rules are described in Annex 2 to this document, and the general system functionalities are set out below:

- The system should be available to users worldwide, 24 hours per day, seven days per week. Local working hours must be preconfigured for workflow and measurement purposes, and local times displayed;
- The system is provided in English with the option of configuration in other languages (French, Spanish, Russian, Arabic and Portuguese);
- Access credentials (user names and passwords) are created by the EMS Unit (with an option for password recovery) on submission of a request by EMS operators' call centre managers via i-Care. The system is accessible to five types of user, namely administrators, data viewers, call centre managers, call centre users and operational users;
- The system must allow for rules, guidance, restrictions and prohibitions on sending inquiries, calculation rules, system alerts and notifications via system messages or e-mail as applicable;
- The main menu (or dashboard) comprises sections providing enhanced visibility to allow call centre agents to send and respond to EMS customer inquiries and to monitor current performance;
- i-Care comprises various tabs (dashboard, workflows, notifications, broadcasts, CRM interface, call centres, reporting and administration) and related subtabs. A multiple-level filter function is available in each tab/subtab;

- The system allows communication between different call centres in order to:
  - create inquiries to be exchanged with partner operators based on standardized requests and replies within specified time frames;
  - create notifications to be exchanged regarding undeliverable, missing or damaged items, or items that may be held by Customs, or other irregularities;
- Broadcast messages can be created and sent to one EMS operator, all EMS operators or a group of targeted EMS operators to inform them of a particular situation (e.g. national holidays, strikes, system and service disruption, force majeure) occurring in the country issuing the message. A broadcast message is not based on item identifiers. Broadcast messages are for information purposes only;
- Automatic e-mail notifications can be sent to members that receive inquiries below a specified threshold and inquiries of high importance or of relevance to important workflows, to users with the “call centre manager” profile only. These notifications do not alter the standards or procedures for dealing with inquiries, but are simply intended to send an alert to the e-mail address configured in i-Care when requests or replies appear in the system, so that members can open and/or respond to them in a timely manner;
- An integrated static and dynamic reporting tool is available for users, with associated dashboards and downloadable reports in Excel format. Data versions are stored and reports can be rerun if errors are discovered (e.g. missing reference data);
- Call centre managers have the autonomy to manage information relating to their own call centres and users, such as e-mail address and time zone configurations, deletion or creation of new users, creation of templates to optimize communications and changes to working hours and holidays, subject to approval by the EMS Unit;
- The EMS Unit is able to perform system administration tasks, such as creation/deletion of call centres, activation/deactivation of operators, activation/deactivation of automatic e-mail notifications and VIP request function, visualization of operators, and configuration of EMS standards and key performance indicators;
- The i-Care CRM interface allows domestic systems to exchange inquiries with i-Care and optimize their local customer service operations, including the creation of international workflows;
- Where users’ browsers are compatible with i-Care specifications, download and print functions are available for the dashboard and each of the tabs and subtabs.

### **3 Database**

The content of the inquiries database is stored for a duration agreed with the EMS Unit, in accordance with the applicable legal provisions and UPU requirements. This duration shall not be less than 13 months. After this time, data can be archived but must remain retrievable for a further three years.

i-Care also allows the management and storage of:

- Operators’ details, call centre hours and non-working days, operator and call centre contacts (e-mail addresses, telephone numbers, etc.). These details can either be entered manually or automatically downloaded from the EMS Operational Guide;
- Operators authorized to receive e-mail notifications.

For performance evaluation purposes, operators’ working days and hours (referred to as “system hours”) and time zone should be registered and displayed in the call centre configuration, along with local and regional events or holidays affecting call centres.

### **4 Interfaces and reference data**

i-Care is able to interface with:

- The track-and-trace system, i.e. EMS SMART;
- The EMS Operational Guide (operators’ details and service requirements);

- Single sign-on (optimized management of access to EMS Cooperative applications);
- Domestic CRM systems.

i-Care is fed with reference data from the EMS Operational Guide. It also accesses the user database, and pulls track-and-trace information. Therefore, a dedicated interface has been built between EMS SMART, the EMS Operational Guide and i-Care.

The EMS Operational Guide is an important online publication produced by the UPU, containing information on the EMS services offered by postal organizations. The entry of each EMS operator provides information on the scope of their service and all operational aspects of their incoming EMS service. The EMS Operational Guide database is designed to store and display this information on the web and to serve as a source to produce the necessary glossaries for each operator's needs. It allows online data entry by designated operators, which is then validated and published by the EMS Unit. There is also a function to extract various types of information.

A read-only i-Care interface to the EMS Operational Guide ([www.emsog.post](http://www.emsog.post)) gathers the following information:

- List of operators, countries and regions in the system (i.e. the corresponding master data lists);
- Each operator's details;
- National holidays per operator;
- List of all users that have i-Care roles, per operator.

The endpoints of the Operational Guide are accessible only to authenticated technical users. The track-and-trace service for EMS items is available and this data is already structured and transformed to the electronic data interchange (EDI) data platform format, so that it can be easily interpreted by i-Care. The track-and-trace data consists of the items and dispatch events, along with certain extra information, defined in the EDI standards. i-Care makes no further use of mapping for its queries.

The single sign-on system is implemented and configured for the EMS Operational Guide, EMS SMART, i-Care and the EMS Cooperative website. All roles and privileges are defined and integrated as part of the EMS Operational Guide database, and are managed as part of the EMS Operational Guide application (master data for roles and privileges, assigning roles to users, etc.). The passwords are encrypted. Currently, there are around 6,000 users registered in the database, most of whom have multiple roles. New users can be created directly in the database and also via requests submitted through online forms. New users receive a link in order to create their own password.

For i-Care, the single sign-on system:

- Provides and supports a two-tier inquiry management system that can accommodate approximately 6,000 user agents from nearly 200 member countries;
- Enables the management and storage of user access accounts, including automatic log-out after a few minutes as determined by the EMS Unit;
- Enables the creation of customer service agents and related access credentials, with associated rights and access to specific functionalities;
- Enables access management for all member operators, including those with several call centres;
- Ensures secure access management for the various i-Care user categories, i.e. administrators, data viewers, call centre managers, customer service agents and operational users.

The i-Care CRM interface is available in two versions (standard and premium). It takes the form of a centralized module that allows operators to integrate their domestic customer service systems with the i-Care system. This integration enables information already entered in the operator's domestic system to be transferred to i-Care, thus reducing manual data entry by users.

## 5 Integrated reporting tool

The quality of EMS customer service is reflected in the performance achieved by EMS operators in handling inquiries within i-Care, which generates reports setting out operators' achievements relative to a number of performance indicators, including timeliness and quality.

EMS Cooperative members agree to the measurement of the said performance indicators and service standards, which are configured in i-Care by the system administrators. Customer service workflows stored in a database are used to generate the following periodic reports on the performance of each operator and the global network as a whole:

- Monthly and quarterly static reports: automatically generated during the first week of the following month;
- Half-yearly reports: automatically generated during the first week of July of the year in question and the first week of January of the following year;
- Annual reports: generated during the first week of February of the following year, as these reports provide annual award results;
- Periodic downloadable static reports and related flat files should be generated and displayed in the system, and then regenerated if necessary or published directly in the system by the system administrators (i.e. the EMS Unit).

The i-Care dashboard provides daily monitoring data to call centre managers at each Post to ensure that customer service targets are met for each month. Dynamic reports are available in the system (for which the related flat files can be downloaded by clicking on each statistic) and are visible at the user, call centre and operator levels with daily, weekly and monthly views.

Call centre response times and the quality of call centre responses to inquiries shall be measured only for those EMS Cooperative members that have implemented the i-Care system. Response times and response quality shall be measured using the data in the system across all transactions, not by sampling. Compliance with standards shall be measured on the basis of i-Care data.

The duration of force majeure events, system disruption, downtime during maintenance or upgrades, and non-working days and hours are deducted from the performance time frames and calculations. Recalculations should be considered, as necessary.

In order to take into account non-working and abnormal periods as listed above, the system must be able to accept the entry of retroactive holidays per call centre. Such periods will be entered by the EMS Unit before the monthly reports are prepared. The system should use this information to recalculate performance (making a copy of the official reports), and then use these results as the official results going forward, taking into consideration and recalculating on the basis of these holidays and working periods.

Further information on EMS customer service performance can be found in Annex 3.

## 6 Technical information

Annex 4 provides a summary of the following technical information regarding i-Care:

- Features;
- Interfaces with other systems;
- Instances;
- Server requirements;
- Technologies used.

## Terminology

*Call centre:* a centralized office used for the purpose of receiving or transmitting a volume of requests by all means. A call centre is operated by a company to administer incoming product support or handle inquiries from consumers.

*Agent (user of the system):* a person who handles incoming or outgoing customer claims.

*Claim:* any complaint or query relating to the provision of the postal service, submitted within the deadlines provided by the Acts.

*Inquiry:* a process that has the aim of supplementing information, resolving doubt or solving a problem.

*Amount claimed:* the amount that the customer is claiming for refund regarding his/her loss. The amount claimed cannot exceed the declared value.

*Workflow:* a sequence of connected inquiries (query and reply) to resolve claims in the system.

*Damage:* the reduction of the value or usefulness of an item, for which an EMS operator may be liable.

*Loss:* an item that cannot be found or delivered.

*Redirection/forwarding of an item:* transmission of an item from one location to another.

*Seized item:* a postal item seized by the competent authorities (EMS operator, Customs, etc.) as it contains prohibited articles.

*Performance indicator:* means by which the performance of a country or agent can be quantified and evaluated.

*Standard:* any UPU-defined set of specifications established for technological, operational and other processes where uniformity of practice is essential.

*Procedure:* a step-by-step sequence of activities or course of action (with defined start and end points) that must be followed in the same order to correctly perform a task.

*EMS operator:* any designated operator of a UPU member country that provides the EMS service as defined in article 37 of the Universal Postal Convention as approved by the Abidjan Congress.

*EMS SMART:* The Simple Monitoring and Reporting Tool was developed for EMS Cooperative members to follow up on all EMS performance indicators relating to the key aspects of the EMS service, including all stages from collection of shipments at origin (post office and country) through to their delivery to the final consignee in the country of destination.

## Workflow and notification concepts

i-Care provides support to call centre agents and supplements track-and-trace information with the aim of searching for an EMS item's delivery status. The investigation process starts with checking the latest available track-and-trace information for the item concerned or its last inquiry event.

Based on the information received, the original call centre agent (requesting partner) creates an inquiry based on the type of request and sends this to the partner country where an investigation should be carried out (replying partner). A reply should be sent back to the origin operator by the due date and time (standardized by request type). Escalations may follow depending on the quality of requests and/or conclusiveness of replies. Specific update messages may also be exchanged between the partners within the investigation process or independently, without this having an impact on the reply time standard.

Customer-related inquiries should be initiated only upon receipt of a customer inquiry or complaint to the origin Post and should be based on an item identifier. This process is usually initiated by the origin Post with regard to the destination Post. Customer service agents receive claims from customers and examine the tracking events available, the destination call centre status and, as necessary, the inquiry history. They select any of the reasons or types of inquiry from a drop-down list as per EMS customer service procedures and standards.

Once the tracking of the item identifier is completed, all available tracking events are displayed for the user with appropriate commands (e.g. create a request, create a notification, postpone).

### 1 Tracking

The tracking functionality is the very first action that any agent must access before initiating an inquiry. Only a valid UPU S10 barcode (item identifier) or other identifier for which tracking is available can be processed. If the item identifier does not meet UPU requirements, a warning message is displayed.

The track-and-trace information available from the data platform and according to the UPU technical standards *must be displayed* in chronological order and include:

- Date and time of each message;
- UPU messages at item level: EMSEVT code, description and respective reason and action codes, when available;
- UPU messages at receptacle, dispatch and consignment levels: PREDES, PRECON, CARDIT, RESCON, RESDES and RESDIT;
- Location of the item (for each message) and/or international mail processing centre (IMPC);
- Receptacle/dispatch information for the item;
- Mailboxes used for the exchange of messages;
- ITMATT information.

The tracking process should be able to provide the item product recognition and identifier authenticity status. The item inquiry history is also automatically generated and displayed, showing all item inquiry events and messages previously exchanged from the first request submitted to the latest reply sent, with related remarks and attachments.

Call centre parameters and activity status must be displayed. This includes whether the centre is currently open or closed, or in a period of normal activity or abnormal status (e.g. emergency, strike, system disruption, force majeure, weather-related or other event with start date and forecast end date).

### 2 Inquiry workflow

- The agent must always start the inquiry process by viewing the tracking information via the EMS item number. The inquiry menu automatically updates all tracking information available for the item, including

transportation events; tracking information is listed in chronological order to help the agent easily identify the item's location.

- After tracking the item, the agent should choose the appropriate type of request for the customer claim. The correct choice is important, as the menus are tailored to each type of request with specific information fields to optimize the process.
- Menus can be either drop-down boxes or free text (comments/remarks sections). Each menu has predefined categories from which the appropriate option can be selected. The purpose of these predefined answers is to reduce language barriers. "Remarks" sections are available. Mandatory fields must always be completed.
- The response standards are defined based on the time needed to provide a quality response. It is important for agents to focus on response quality, as the goal is to achieve a high resolution rate with the first response, thus increasing the percentage of customers satisfied on first reply.
- The workflow can allow more communication between workflow steps without an impact on the standard for reply time. Update messages may be used to request/provide updated information between the opening of an inquiry and the reply deadline. They may be used by the destination partner to inform the origin partner that more information should be provided on the request in order to investigate the claim thoroughly, or to report any premature inquiries or poor-quality/non-compliant requests, etc. The destination partner can also respond using intermediate messages simply to provide the origin partner with information that may help the investigation.
- Reactivation/reopening: a workflow can be reactivated or reopened by clicking on the "reactivate" command for the last reply received. A new window is displayed, allowing the customer service agent to create a new request that shows all previous details (with the possibility for each to be updated/modified) and offers the option to conduct a new investigation.
- Redirection: a workflow can be redirected by customer service agents to a different destination.
- Transfer: for operators with multiple call centres, agents who receive inquiries can transfer them to another call centre in their organization by clicking on the "transfer" command and selecting the appropriate call centre.
- Postponement: agents that have completed an inquiry form can decide to postpone sending it by clicking on the "postpone" button. The workflow should be saved with this status in order for the agent to be able to open it later on and make any amendments to the initial request fields, before finally submitting it in the system.
- Mark as unread: inquiries that have not yet been opened are shown in bold (which disappears automatically once opened). Customer service agents may decide to mark read inquiries as unread by clicking on the "Mark unread" command.
- Agent responsible for a message: an agent name is associated with each inquiry, but any customer service agent can decide to become the handler of a given inquiry by clicking on the appropriate command available in the received inquiry (request, reply). The change of responsible agent should be visible to other customer service agents.
- Closure of workflows: a workflow can be closed manually by clicking on the "close workflow" command after sending a reply. It can also be closed automatically after a period determined by the EMS Unit and configured by the system administrators. The defined period can be amended. All workflows can be reopened.
- Attachments: up to five different documents can be uploaded per message, in PDF, Excel, Word, JPG, or PNG format.
- Item tracking update: each inquiry listed (request or reply) displays the last/most recent tracking event on the corresponding folder list as part of the related inquiry details.
- Search inquiries/workflows: workflows can be searched by entering the related item identifier in the dedicated field on the workflows tab and subtabs or by tracking the item via the i-Care dashboard.
- Provision of authorization codes: liable EMS operators provide authorization codes (in case of theft, loss or damage of an item). The authorization date, amount payable, item identifier and origin call centre are available via appropriate commands. Lists of authorization codes provided each month are also reported.

### 3 Creating and submitting a request

When a decision is made to contact the destination country, an inquiry is created by entering an EMS item number to identify the available tracking events that are automatically generated. When the inquiry menu appears, the customer service agent confirms that all required information is displayed. The agent provides any missing information manually. Automated information should be displayed (i.e. data on the origin and destination Posts) and mandatory fields should be highlighted. It must be possible to upload documents as attachments. A “send” command is displayed and must be clicked on in order to forward the inquiry to destination partners, thus providing the option to cancel the inquiry before sending.

The system automatically calculates the response due date and time, which depends on the type of inquiry, time zone, working days and hours, and national holidays. The due date and time are displayed in the inquiry details of requests sent, expressed in local time.

Origin operators can open a sent request in order to:

- redirect it to a different partner;
- recall it if a reply has not yet been received from the destination/replying Post.

After receipt of a request/reply and when responding/escalating the inquiry to the next step, the call centre agent may rate the request/reply received. The agent can rate any unsatisfactory requests/replies by choosing from a drop-down menu. Furthermore, there is the option to add comments in order to explain the problem with the reply/request received. After opening a reply/new request, agents are able to view the ratings of their previous request/reply and any related remarks.

### 4 Replying to a request

A request that has been received but not yet opened (i.e. a new inquiry) is highlighted and visible as such, and is listed in the “requests received” dashboard/menu of the destination operator. For each request received, a due date should be automatically generated by the system in accordance with EMS standards.

Once the inquiry is opened, all available information is displayed (e.g. item and related dispatch details, inquirer or claimant, type of inquiry and corresponding call centres, sender and addressee details, tracking events, remarks and attachments, item inquiry history), and the required commands are made available (e.g. reply, create an update message, mark as unread).

The reply screen should have mandatory information fields according to type of request and corresponding reply, and a free text section for final remarks.

A section to rate the request received is also provided, with a message indicating the rating scale; the agent selects the corresponding reasons from a drop-down list. This rating is measured for reporting purposes.

The replies sent counter must be highlighted and visible to the replying partner, indicating the number of replies sent but not yet opened by the origin partner.

All requests must receive a reply within a set period, as defined in the EMS standards.

### 5 Operational notification

Notifications are messages designed to proactively convey information and are therefore mainly used by the destination operator to report problems to the origin Post. They are always based on the EMS item identifier and can be created by origin and destination operators.

A notification is a message that can be sent in order to:

- Request instructions about undeliverable items (e.g. to be abandoned, return to origin, forward to a third person or third country); a drop-down list of instructions is available;

- Report an irregularity at item or dispatch level, selected from a drop-down menu (e.g. missing dispatch, missing content, missing item, damage, retained by Customs) and based either on an item identifier or dispatch identifier. The notification comprises automated types and causes of irregularities to be reported, as well as remarks and attachments.

It is not mandatory to reply to a notification and, upon receipt thereof, the operator can:

- Create a reply; or
- Use an ignore function.

The system should have specific sections for notifications, separate from the inquiry menus. The unread notification counter is highlighted and visible to the respective partner.

## **6 Alert messages for non-compliant and/or premature inquiries**

It is possible to prevent the sending of irregular (i.e. premature or non-compliant) inquiries; the system shows the restriction, stops the process and suggests subsequent submission once certain conditions have been met (e.g. item event available, standardized duration exceeded). The agent should be able to decide whether or not to continue the process anyway.

The system has functionalities that:

- Generate and display alert messages for general information as per the reference data, e.g. “premature inquiry: standardized transport time has not yet been exceeded” and “broadcast information from partner: disruption of the service”;
- Can prevent/block the user from using certain types of request according to available track-and-trace information, e.g. if the last tracking event is EDB/EME, the only possible request type is “Customs”.

### EMS customer service performance

Customer service performance shall be measured only for EMS Cooperative members that have implemented i-Care. Response times and response quality shall be measured using the data in the system across all transactions, not by sampling. Compliance with standards shall be measured on the basis of i-Care data.

Data selection criteria must be based on closed workflows: only workflows closed within the reporting month are considered. Most time frames are calculated as from the moment that inquiries are received in the system.

Quality measurements include, but are not limited to, the following performance indicators (as requesting operator/replying operator):

- customer service response quality;
- number of inquiries (sent/received);
- number of workflows (sent/received);
- time to open requests and replies received;
- average percentage of on-time replies according to defined standards;
- percentage of workflows closed with one reply;
- percentage of workflows with more than two escalations;
- percentage of requests and replies opened on time;
- percentage of workflows resolved within 15, 10, 7 and 5 working days;
- percentage of workflows reactivated;
- total duration of workflow;
- outstanding inquiries (inquiries not replied to after 30 calendar days).

Customer service key performance indicators and related changeable targets include but are not limited to:

- On-time reply: at least 98% of inquiries – this performance indicator measures, for both requesting and replying partners, the percentage of total replies sent within the agreed response time. “Late” and “no response” incidences are also listed;
- Inquiry resolution rate after the first-level response: at least 70% of inquiries – this performance indicator measures, for both partners, the percentage of inquiries with only one interaction (i.e. one request and one reply) within the workflow, whereby the final reply is considered satisfactory (i.e. not escalated);
- Workflow resolution within 15 working days: at least 90% of workflows – this performance indicator measures, for both partners, the percentage of cases closed within 15 working days, i.e. the percentage of inquiries with a total duration of 15 working days or less. To this end, the time elapsed between the first request and last reply within the workflow is 15 working days or less, and the final reply is considered satisfactory;
- Customer service response quality: at least 95% – this is a combination of three performance indicators, with the result of each weighted to provide a total value as follows: on-time reply (50%) + inquiry resolution rate after the first level of investigation (25%) + workflow resolution within 15 working days (25%);
- It should be possible to aggregate results by agent, call centre, origin operator, destination operator, region, global, day, week, month and year.

Major calculation rules include, but are not limited to, the following:

- Only inquiries and workflows closed within the month are taken into consideration in the monthly reports;
- Closed cases can be reopened;
- Half-yearly and annual scores are based on the semi-annual and annual averages respectively;
- Inquiries wrongly sent to a partner are excluded;
- Inquiries treated in a third country and redirected are measured separately for each country;
- Customer care award results are based on prerequisites and/or eligibility criteria defined by the EMS Unit.

## **i-Care technical specifications**

The i-Care technical specifications are summarized below.

### *Features*

- Web-application, accessible worldwide
- Full support in multiple languages, including right-to-left languages
- Preparation in place for additional products
- Single sign-on via third-party system
- Administrator login directly via i-Care user database with 2FA (YubiKey) and IP control
- Track-and-trace with custom adjustments to output formatting
- Track and trace of multiple items simultaneously
- Print view for relevant pages
- Display of items from same receptacle for track-and-trace purposes
- Dashboard with statistics and performance indicators – calculated in real time
- Regular statistics updates
- Track-and-trace updates at regular intervals and on demand
- Direct connection to EMS resources on dashboard
- Overview of workflow with filters across all data
- Premature workflow warning
- Implementation of workflow process in full compliance with EMS standards
- Escalation of workflows
- Message functionality (update messages) with no impact on workflow process
- Redirect/recall/transfer functionality
- Quick filters and setting of multiple filters simultaneously
- Archive for all workflows
- Bulk actions for multiple workflows
- Cached track-and-trace data on workflow
- Single workflow view with live track-and-trace update
- VIP workflow functionality
- Workflow authorization code functionality
- Manual and automatic closing of workflows
- Calculation of call centre opening hours
- Time zone management
- Auto-fill data from track-and-trace system
- Custom-definable fields for different workflow and reply types, some of which are set or calculated automatically
- File attachments
- Export of all data tables to Excel
- Notification functionality with overview table and details

- Ignore/reply options for notifications
- Escalation of a notification to a workflow
- Notification archive
- Broadcast overview table and detail
- Colour-coded map view of current broadcasts and public holidays
- Multiple broadcast approvals: general approval, approval for force majeure
- Force majeure recalculation of reports based on broadcasts
- Broadcast visibility control
- CRM interface tab to create workflows from the “standard” interface type
- Call centre management with change approval process
- New user request
- User deletion request
- Role-based access model
- Call centre assignable by a user manager
- User-definable text templates
- Comprehensive real-time reporting of all data:
  - All data filterable for global results and per operator
  - Filtering of data per user to assess performance
  - Multiple key performance indicators for each data category
  - Data display with daily/monthly/yearly granularity
  - Real-time graphs for key performance values
- Periodic static report generation (Excel):
  - Multiple report categories generated monthly/quarterly/half-yearly/annually
  - Approval process for reports
  - Regeneration of reports on demand
- Award reports:
  - Real-time award ranking calculation based on several key indicators
  - Possibility of publishing awards on an annual basis
- Administration area
- Blocking (with impact on reports)/hiding of operators
- Enabling/disabling of e-mail notifications per operator
- “Login as” feature for administrators to view operator
- User-adjustable standards and key performance indicators (annually) for report calculation
- User-adjustable chart colours
- Several non-functional features such as high-performance requirements, regular cleaning of track-and-trace caches, system health checks

#### *Interfaces with other systems*

- API to third-party provider’s single sign-on system. i-Care receives authentication tokens for login from the single sign-on system. Central authentication service with library and custom adjustments
- API to the EMS Operational Guide to regularly pull and synchronize information on operators, call centres, users and other postal information

- API to domestic systems offered in two versions (standard and premium), and creation of workflows from domestic CRM systems directly in i-Care

#### *Instances*

- Multi-phase testing and deployment process
- Development instance
- Internal testing instance (automated testing)
- Integration/testing instance for new features shared with the EMS Unit
- Training instance to train new operators on i-Care (this may differ slightly from the live version but must largely correspond)
- Live instance

#### *Server requirements*

- Development, staging and live environment
- SSD storage
- Daily backup of system, including database
- Health monitoring
- Database snapshots
- Security updates at least twice per week
- Jump server to access server
- 2FA authentication for administrative users
- Backup in two locations

#### *Technical/implementation details: technologies used for the i-Care platform*

- Debian Linux OS
- PHP
- Composer
- Proprietary framework (interfaces can be provided)
- Doctrine
- PHPUnit
- Several other PHP libraries
- Postfix MTA
- Highcharts Maps (licence must be provided by service provider)
- Webpack
- Yarn
- jQuery
- Several other JavaScript libraries
- MariaDB
- Apache Web Server
- Docker
- Cypress