



World Organisation
for Animal Health
Founded as OIE

USER REQUIREMENTS SPECIFICATION

REFERENCE LABORATORY AND COLLABORATING CENTRE (RL&CC) REPORTING
SYSTEM EVOLUTION



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Approvals

This document requires the following approvals:

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2 nd and Final Approval	Project Board		
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1. General presentation of the project

1.1. Definitions, acronyms, and abbreviations

BSC:	Biological Scientific Commission
CRM:	Customer Relationship Management
GS:	General Session
EN:	English language
FR:	French language
SP:	Spanish language
RL and CC:	Reference Laboratories and Collaborating Centres
WOAH:	World Organisation for Animal Health

1.2. Context

The World Organisation for Animal Health (WOAH) is an international organisation working to improve animal health. The Organisation and its Members coordinate the global response to animal health emergencies, the prevention of zoonotic diseases, the promotion of animal health and welfare, and better access to animal health care. To support and advocate for safe and sustainable international animal trade, the organisation works in collaboration with multiple stakeholders, including **Collaborating Centres (CC)** and **Reference Laboratories (RL)**. The Collaborating Centres work on a main focus area with specific specialties ([here](#)), the Reference Laboratories work on a disease ([here](#)).

<u>Collaborating Centres</u>	<u>Reference Laboratories</u>
<ul style="list-style-type: none">- Provide services, in the designated specialty, in support of the implementation of policies.- Propose or develop methods and procedures that facilitate.- Harmonisation of international standards and guidelines.- Carry out and/or coordinate scientific and technical studies.- Collect, process, analyse, publish, and disseminate data and information relevant to the designated specialty.- Provide, within the designated specialty, scientific and technical training.- Organise and participate in scientific meetings and other activities on behalf of the WOAH.- Identify and maintain existing expertise, in particular within its region.- They follow a 5-years workplan	<ul style="list-style-type: none">- Promote and disseminate diagnostic methods.- Recommend the prescribed and alternative tests or vaccines.- Develop reference material.- Store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.- Develop, standardise, and validate new procedures for diagnosis and control of diseases.- Provide diagnostic testing facilities.- Carry out and/or coordinate scientific and technical studies.- Collect, process, analyse, publish, and disseminate epizootiology data.- Provide scientific and technical training.

Table 1: Terms of references of Collaborating Centres and Reference Laboratories

WOAH Reference Laboratories and Collaborating Centres are mandated to submit annual reports of their activities. There are two templates based on the Terms of Reference for WOA Reference Laboratories and Collaborating Centres, respectively. In December of each year, a call for an annual report is sent by email to each individual laboratory or centre. Initially, an MS word report template was attached to the email. In 2012, it was decided that the annual reports should be digitalised moving away from the MS word format. Web-based templates were developed to be filled in online. Once all the reports have been submitted (usually late April/early May), a pdf of each report is uploaded to the WOA website, e.g. https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/colcenterreports/2019/report_184_2019_Animal_Disease_Surveillance_Systems_Ris_UNITED_STATES_OF_AMERICA.pdf

In a bid to improve the RL&CC system further, it was redeveloped in-house in 2022. However, during the re-development of the system, we faced some challenges and missed some critical exceptions that has triggered this project.

1.3 Purpose and objective

The goal of this project is to enhance and develop extra functionalities of an already existing application: **WOAH Reference Laboratories and Collaborating Centres (RL&CC)** information system (please refer to [Section 1.7](#) of this document for more information on the existing application). This system is used by external experts at the WOA network of Collaborating Centres and Reference Laboratories to report their annual activities online.

Details of the needs are given in [Section 2 \(Need Description\)](#) of this document, which also references the [Annex B1 - Compliance grid-RL&CC document](#), which contains all user requirements and technical requirements required for this project. The RL&CC information system must be able to collect, store, process, and submit reports of the WOA Reference Laboratories' and Collaborating Centres' activities to support decision-making, coordination, control, analysis, and visualisation.

The RL&CC information system must automate and streamline business processes, designed to support day-to-day business operations, reduce manual effort, and mitigate potential risks during this operation, in order to improve operational efficiency for both WOA and network of Collaborating Centres and Reference Laboratories.

1.4. Scope

To update, simplify and improve the software system (tool) that is currently used to:

- A. Send a call electronically for annual reports to all WOA Reference Laboratories (RL) and Collaborating Centres (CC), allowing those users who are responsible for both RL and CC to use one email address for access to both Centre and Laboratory templates.
- B. Allow RL and CC users the possibility to access multiple reports without having to manually login and out when changing report.

- C. Allow RL and CC to add multiple users to fill out and edit reports simultaneously, but just one designated expert to submit when the report is final.
- D. Improve the User Experience (UX) design for the existing application, especially allowing the formatting of blocks of paragraphs and allowing the free text boxes to automatically expand (vertically and horizontally) according to the text length.
- E. Modify the existing form templates for both Reference Laboratories and Collaborating Centres as follows:
 - i. Remove in the review and validated report all the empty tables when the selected answer is “No” and does not require free text input
 - ii. Add controls of the mandatory fields with error notification to force users to fill in what is required.
 - iii. Modify field labels and response options (e.g., remove regional names and use countries names).
 - iv. When the report is submitted, move the “report submitted” notice from the top (beginning) of the report to the end so the user can see the confirmation
- F. Fix existing bugs within the system:
 - i. Fix the problem of emails not being sent (probably linked to SMTP and mass sending)
 - ii. Bug fixes for functions not translated into the correct language (trilingual site)
 - iii. Correction of bugs in the process of importing and inviting experts
 - iv. Review and correct all RL and CC forms templates by removing “OIE” and replace by “WOAH”

1.5. Target users

Existing Profiles

The following user profiles already have access to the current RL&CC information System

Profile	Use case description (brief)	Number of users
External experts at the WOAHA Reference Laboratories	<ul style="list-style-type: none"> • Use the system to fill in their annual reports • 270 Reference Laboratories : (NB: Number could increase as new ones are adopted each year at the GS) 	270
External experts at the WOAHA Collaborating Centres	<ul style="list-style-type: none"> • Use the system to fill in their annual reports • (NB: 72 Collaborating Centres) • (NB: Number could increase as new ones are adopted each year at the GS) 	72 (+ more as there are consortia)
Business Administrators: Sara Linnane and Gounalan Pavade	<ul style="list-style-type: none"> • Use the system to complete reports that were submitted too soon 	2

	<ul style="list-style-type: none"> • Validate reports from experts 	
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New Profiles

The following user profiles do not exist and will need to be created within the RL&CC information system by the experts.

Profile	Use case description (brief)	Number of users
Support experts at the WOAH Reference Laboratories	<ul style="list-style-type: none"> • Support the external experts at the WOAH Reference Laboratories 	2
Support experts at the WOAH Collaboration Centers	<ul style="list-style-type: none"> • Support the external experts at the WOAH Collaboration Centers 	2

1.6. Related applications/interconnections

Application/Tool	Details
Azure AD	For the management of users (SSO authentication)
CRM (Bitrix 24)	An internal Customer Relationship Management (CRM) application with the designated experts' names and contact details (experts' email and phone number), disease for which the LR is designated, address of LR. For CC Contact Points' contact details and the WOAH title of the Centre
WOAH Website (WordPress)	The current system generate a CSV file containing the list of RL & CC with the link of their report. And this file is imported in the WOAH website and the data in displayed on the WordPress related web pages containing all the information about the author of the report with a link of the pdf.
Email	The system allow to send the email invitation to the RL & CC users when the round of reports collection starts.
Excel generated file	Excel files generates so that the data can be analysed quantitatively for both LR & CC

1.7. Current situation/existing system description

Each December WOAH's BSC Secretariat prepare letters requesting annual reports from the network of WOAH Reference Laboratories and Collaborating Centres. The four different letters:

- Reference Laboratories managed by WOAH Biological Standards Commission, each letter is translated into Spanish and French (so total of three letters);
- Collaborating Centres managed by WOAH Biological Standards Commission, each letter is translated into Spanish and French (so total of three letters);
- Reference Laboratories managed by WOAH Aquatic Animal Health Standards Commission, only the Reference Lab letter is translated (so total of three letters).

- Collaborating Centres managed by WOAHA Aquatic Animal Health Standards Commission (as there are only four Centres, translated into Spanish only, [written in English]).

Each Laboratory or Centre receives an individual email and if he/she is not registered in the WOAHA Azure AD receives an MS invitation to create his/her WOAHA account to use the SSO authentication to connect to the system, and with the correct attachment (one of the 11 letters). The software generates the email and chooses the correct attachment. The email has standard text and is also prepared in English, French and Spanish and the expert should receive one in the correct language.

There are a number of cases that need to be handled differently.

To respond to this need, an internal application for Reference Laboratories and Collaboration Centres (RL&CC) has been developed using Angular, Nodejs and MySQL. This application allows WOAHA laboratories and Collaboration Centres to fill out their annual report(s) online and allows the administrator to publish the annual reports in the WOAHA website.

Below we describe the key processes and modules:

ACCESS AND LOGIN

WOAHA Reference Laboratories and Collaboration Centres (RL&CC) connect to the platform via their WOAHA Microsoft account, which will identify them. RL&CC have access to the application only if they are present in the CRM. The CRM synchronises the groups of users of laboratories and centres on WOAHA Azure AD to allow the users to connect through their Microsoft Account.

ADMINISTRATION MODULE

When you log in, if your account is associated with the Admin group, you will be taken to the Administration home page shown below:

Centre

Here you can manage all templates and data concerning the centres

Launch data collection Import center data with their associated reports from WOAHR CRM	Template management Template management	Launch data collection Import center data with their associated reports from WOAHR CRM	Manage Reference Reagents Create, edit and delete reagents
Email invitation center Create a generic template for email invitations	Template management Manage questions for Laboratories's reports	Email invitation Create a generic template for email invitations	
	Diseases management Manage or create disease groups		

Laboratory

Here you can manage all templates and data concerning the laboratories

General

Manage reports Checking reports who is already registered	Publish PDF Retrieve .pdf reports for the laboratories and centers.
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On this page, you can:

- **Launch data collection**: Imports users data and related data from WOAHR CRM (Bitrix 24) to prepare the sending of the invitation to the users to fill in their annual reports
- **Email invitation**: Update email templates for Reference Laboratories and Collaboration Centres that will be sent automatically to the RL & CC users when the administrator clicks on send email invitations. The system is able to send the invitations to the RL&CC in order to fill in their annual reports in their official language and domain of expertise imported from the WOAHR CRM
- **Template management**: Create/delete/update questions for the report forms
- **Manage reports**: Manage submitted and ongoing reports filled in by the RL & CC users
- **Manage reference reagents**: Manage Reagents for laboratories related question in the laboratory report form
- **Disease management**: Manage disease groups to allow some RL experts to send one report for a group of diseases.
- **Publish PDF**: Retrieve .pdf reports for Reference Laboratories and Collaboration Centres and generate a CSV file containing all the needed data to publish the annual reports in the WOAHR website.

For more information, please refer to **Annex B2 – RL & CC User Guide** document in the annex section.

DATA INPUT – Reference Laboratories And Collaboration Centres

Both Reference Laboratories and Collaboration Centres are required to report their activities through a series of question categories using the left navigation panel. The questions vary from multiple choice, single choice, and free text questions. Once all the information has been captured, the user can then review and submit to WOAH.

Equine infectious anaemia

LABORATORY INFORMATION

Laboratory Information

TOR1: DIAGNOSTIC METHODS

TOR2: REFERENCE MATERIAL

TOR3: NEW PROCEDURES

TOR4: DIAGNOSTIC TESTING FACILITIES

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

TOR6: EPIZOOLOGICAL DATA

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

TOR8: QUALITY ASSURANCE

TOR9: SCIENTIFIC MEETINGS

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

TOR12: EXPERT CONSULTANTS

REVIEW AND SUBMIT

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Equine infectious anaemia
*Address of laboratory	Equine infectious anaemia
*Tel:	Equine infectious anaemia
*E-mail address:	Equine infectious anaemia
Website:	Equine infectious anaemia
*Name (including Title) of Head of Laboratory (Responsible Official):	Equine infectious anaemia
*Name (including Title and Position) of WOAH Reference Expert:	Equine infectious anaemia
*Which of the following defines your laboratory? Check: all that apply:	<input checked="" type="checkbox"/> Governmental <input checked="" type="checkbox"/> Research agency <input checked="" type="checkbox"/> Academic institution
* These questions are mandatory	Equine infectious anaemia

save and continue

2. Need description

This section describes the list of the expected features: Front Office and Back Office with the order of priority for implementation.

2.1. Functional requirements and Requirements prioritisation

In the document, the categories are typically understood as follow:

MoSCoW	Definition
Must have	These requirements are critical to the initial delivery (version) of the SYSTEM in order for it to ²⁺⁺ be a success. If even one Must have requirement is not included, the SYSTEM delivery should be considered a failure (note: requirements can be downgraded from Must have, by agreement with all relevant stakeholders; for example, when new requirements are deemed more important). MUST can also be considered an acronym for the Minimum Usable SubseT .
Should have	These requirements are important but not necessary for delivery of the SYSTEM. While Should have requirements can be as important as Must have, they are often not as time-critical or there may be another way to satisfy the requirement, so that it can be held back until a future delivery (version) of the SYSTEM.
Could have	These requirements are desirable but not necessary and could improve user experience or customer satisfaction for little development cost. These will typically be included if time and resources permit.
Won't have (this time)	These requirements have been agreed by stakeholders as the least-critical, lowest-payback items, or not appropriate at that time. As a result, Won't have requirements are not planned into the schedule for the next delivery (version) of the SYSTEM. Won't have requirements are either dropped or reconsidered for inclusion in a later version.

See the [Annex B1 - Compliance grid-RL&CC](#) (spreadsheet “User requirements”).

2.2. Technical requirements

See the [Annex B1 – Compliance grid-RL&CC](#) (spreadsheet “Technical requirements”).

2.3. Graphic and ergonomic description

The objective is to have a coherent visual user interface amongst all WOAHA applications to give the users similar experiences when using them. The main goal is to create branding of this system and build its identity according to WOAHA standards. These must be easy and simple to change in future when required.

The graphic and ergonomic design shall follow best practices especially taking into consideration the following elements:

- Keyboard entry and control, mouse behaviour, visual presentation of functionality and different options to control elements.
- Consistent element behaviour, functionality and rendering is crucial for the usability of user interfaces.
- The system must be designed with the WOAHA visual identity in mind i.e., logo, colors.
- Brand usage and style development must be consistent with [WOAHA branding manual](#)

Accessibility and usability of the system by people with the widest range of capabilities

Annexes

Annex B1 - Compliance grid-RL&CC

Annex B2 – RL & CC User Guide