



**World Organisation  
for Animal Health**  
Founded as OIE

CBD/CD2022/1

## **COMPETITIVE DIALOGUE PROCEDURE**

### **B. FUNCTIONAL PROGRAMME MINIMUM REQUIREMENTS**

#### **PERFORMANCE OF VETERINARY SERVICES (PVS) PATHWAY INFORMATION SYSTEM**

**WORLD ORGANISATION FOR ANIMAL HEALTH (WOAH)**

whose statutory name is

**“OFFICE INTERNATIONAL DES EPIZOOTIES”**

#### **DEADLINE TO SUBMIT:**

**APPLICATIONS: 22 AUGUST 2022 - 18:00 (PARIS LOCAL TIME)**

Applications may be deposited at WOAHA reception desk, from **Monday to Friday and from 9:00 to 12:00 and 14:00 to 18:00.**

WOAH Contact Point: See Document A, Article 1.1



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### 1. Introduction

The [PVS Pathway](#) offers international expertise in the form of capacity-building activities and missions to WOAHA Members in 4 stages ([Orientation](#), [Evaluation](#), [Planning](#), and [Targeted Support](#)). The PVS Pathway has shown strong uptake with more than 140 countries involved since 2006. This engagement has generated a wealth of data – over 430 [reports](#) with valuable data on weaknesses, strengths, and recommendations across 45 Critical Competencies of animal health systems. However, most of the data produced remains difficult to access and unstructured as no central database nor information system exist.

More than 200 PVS Evaluation and Follow-up missions have been conducted to assess the capacities of national (governmental) Veterinary Services (VS). During these field-based evaluations, qualified experts travel to the country to interview VS officials, and visit different facilities, representative of animal health management activities (e.g., abattoirs, animal markets, laboratories, different administrative levels of VS, etc.). The experts use the [PVS Tool](#) as a grid of evaluation to produce a [report](#) containing predominantly qualitative data findings. The report goes through editing and validation processes before the country decides its confidentiality status (e.g., public, shared with Partners and Donors, or confidential). Countries are encouraged to request follow-up PVS Evaluations to re-assess the progress of their capacities every 3-5 years.

Currently, all mission planning and implementation processes are manual; there is no centralised data repository accessible to Members nor structured datasets or databases to store and access data directly.

Phase 1, Stage 1 of this project as described below focuses on building the PVS Evaluation Database and minimum requirements of the IT infrastructure to host past and future reports and data. Specific components will focus on the PVS Evaluation reports and their data (starting with a subset), creating a repository for reports, structured transactional databases for data, and connecting users to reports and data for better use and analysis.

### 2. Objectives and overall expectations

The “PVS team” (within the Capacity-Building Department, or CBD) and IT digitalization project team identified the priorities for Phase 1 Stages 1 and 2 described in this document, Functional Programme, which describes the minimum component requirements and scope, based on business and technical needs identified to support the digitalization project.

The current project focuses on **Phase 1 of the PVS Evaluation Database** development (Stage 1 Firm Tranche) and the **PVS Evaluation System** development (Stage 2 Conditional Tranche).

Generally, the PVS Evaluation database and system must be able to connect data and initiatives, respect and preserve an understanding of the context in which data and information are collected, allow reuse of the data for different applications, and adhere to a future-proof, modular, and flexible approach to ensure that the system is sustainable, able to fill identified gaps, and is capable of incorporating and adjusting to changing needs of stakeholders beyond the project period. The architecture should also be



flexible to ensure that the system is viable in the long term, and capable of incorporating and adjusting to stakeholder needs that may evolve over time.

The PVS Pathway reports include unstructured and qualitative data. Options for report analysis, summarisation, and visualisation are needed. In this regard a major project aim is to build natural language processing or similar (i.e., text analytics, machine learning) to support data extraction and analysis. The PVS team requires support to explore these options and this will be a major focus of the Competitive Dialogue.

The development of services should consider the following elements:

- Adherence to WOAHP IT infrastructure standards (Annex B1)
- User Management should be done through existing WOAHP applications (Azure Active Directory and Bitrix24 CRM)
- API approach should be adopted
- Agile approach will be applied
- Adherence to WOAHP Data protection checklist (Annex B2)
- Allow reuse of the data for different applications, while respecting context of initial data collection
- FAIR principles should inform the system development for leveraging data for other applications
- Trilingual management of the system is required

The main objectives of Phase 1 are defined in Table 1, along with the associated components and milestones for each Stage of the project.

**Table 1: Objectives, Phases, components, and milestones for Stage 1 and 2 of Phase 1**

Objective	Phase	Components	Milestones
Set up infrastructure of the PVS Information System in coordination with WOAHP IT Infrastructure team, which will host the different areas of the PVS Pathway components	Phase 1, Stage 1 (Firm Tranche)	IT infrastructure to host the PVS Pathway IS Firm Tranche: <b>Search and View Tool for reports, API, web portal, login page, document repository, etc.</b>	<u>Milestone 1:</u> Infrastructure of PVS Information System is validated, deployed and allows the integration of the different components of the PVS IS (Firm Tranche), with regular coordination with WOAHP IT Infrastructure team and according to WOAHP IT standards
Digitalise the PVS Evaluation portion of the PVS Pathway through the development of transactional databases and analysis	Phase 1, Stage 1 (Firm Tranche)	PVS Pathway Document Repository	<u>Milestone 2:</u> Migration of existing finalised PVS Pathway Reports in document repository
		Transactional Databases for <b>quantitative</b> data	<u>Milestone 3:</u> Database models developed and validated; Quantitative data cleaned and migrated into transactional databases
		Transactional databases for <b>qualitative</b> data (subset of reports in ENG, then FR and SP if feasible)	<u>Milestone 4:</u> Database models developed and validated; Qualitative data cleaned and migrated into transactional databases
		Quantitative analysis	<u>Milestone 5:</u> Quantitative analysis and dashboard validated
		Thematic qualitative analysis (One Health insights)	<u>Milestone 6:</u> Qualitative analysis and dashboard validated



Ensure the interoperability of the PVS Evaluation Database and other WOAHA datasets	Phase 1, Stage 1 (Firm Tranche)	API to insure the interoperability between WAHIS, Status, The Observatory, etc.	<u>Milestone 7: Effective interoperability</u>
Ensure users have access to PVS Evaluation Database content	Phase 1, Stage 1 (Firm Tranche)	Search and View Tool for report, login page and simple web portal	<u>Milestone 8: Content accessible according to user profile through the search tool or directly on tabs in the simple web portal</u>
Finalize infrastructure of the PVS Information System in coordination with WOAHA IT Infrastructure team to host all components of the PVS Pathway	Phase 1, Stage 2 (Conditional Tranche)	IT infrastructure to host the PVS Pathway IS –Conditional Tranche: Full web portal development; More sophisticated user controls for more access to documents, data, and dashboards	<u>Milestone 9: Full IT infrastructure for the PVS Evaluation System delivered and allows the integration of the different components of the PVS IS (Conditional Tranche), with regular coordination with WOAHA IT Infrastructure team and according to WOAHA IT standards</u>
Complete the PVS Evaluation System and transactional databases and analysis	Phase 1, Stage 2 (Conditional Tranche)	Integration into transactional database for qualitative data for additional PVS Evaluation reports  Full qualitative analysis	<u>Milestone 10: Database, document repository and website/login enrichment with new additional analysis, data dashboard and, searchability functionalities and tools</u>
Enrich the interoperability options	Phase 1, Stage 2 (Conditional Tranche)	API to insure the interoperability potential other WOAHA information system	<u>Milestone 11: Effective interoperability with eventual other WOAHA information system</u>
Allow users access to more content	Phase 1, Stage 2 (Conditional Tranche)	Search and view tool for more additional reports, dashboard, etc. and full web portal items	<u>Milestone 12: More content accessible according to user profile through the search tool or directly on menus in the full web portal</u>

Additional details are provided for each user story presented by Phase and Stage in Tables 2 and 3.

Other possible additional services under the larger PVS Pathway digitalization project (to complete the PVS Pathway Information System) include and are described in Table 4:

- Development of the Targeted Support System: PVS Sustainable Laboratories
- Development of the PVS Planning system & Gap Analysis
- Development of a PVS Experts Management system
- Development of a PVS Baseline Document Form
- Development of the Targeted Support System: Other Targeted Support

### 3. Phase 1 (Stages 1 and 2) user stories and major activities and considerations

Table 2 contains the user stories and major considerations for the scope of each activity for Phase 1, Stage 1 (Firm Tranche).



**Table 2: User stories and major activities, considerations, and scope for Stage 1 of Phase 1**

User Story	Major Activities, Considerations, and Scope
<b>Stage 1 (Firm Tranche)</b>	
<p><b>Infrastructure of PVS Information System is ready for future stages' and phases' development</b></p>	<p>Set up minimum required <b>infrastructure of PVS Information System</b> so that the different PVS Pathway components can be hosted in subsequent stages and phases. The development must be done in the respect of the WOAH IT Infrastructure standards<sup>1</sup> (Annex B1). WOAH standards for application hosting and monitoring are Microsoft Azure. It is requested to the Tenderer to use this technology to implement the PVS Information System.</p> <p>WOAH has already outsourced the management of their IT infrastructure building, IT security and IT platform building and maintenance to an identified IT Service Provider. The Service Provider will identify an IT infrastructure project manager in charge of all those tasks.</p> <p>The Service Provider will oversee:</p> <ul style="list-style-type: none"> <li>• Development of all features required by WOAH</li> <li>• Co-Writing of technical document architecture (segregation of duties must be clearly defined during the kick-off as it depends on the project type)</li> <li>• Application maintenance and functional support to key users</li> <li>• Liaise and participate to workshop with IT infrastructure project manager</li> </ul> <p>The Service Provider will have to identify a project manager as a Single Point of Contact for all requests and meetings in close contact with the IT infrastructure and Business project managers.</p> <p>The Service Provider will oversee:</p> <ul style="list-style-type: none"> <li>• Security and Network management. They are WOAH's Security operations centre,</li> <li>• Building the azure IT infrastructure.</li> <li>• Building the IT platform (new website base, etc.) if hosting is managed by WOAH based on information provided by the Service Provider</li> <li>• Supporting the Service Provider during development phases for Kubernetes (K8s) subjects and all infrastructures questions.</li> </ul> <p>Once the IT platform is built, full access will be provided to the Service Provider.</p>
<p><b>PVS <a href="#">reports</a> are housed in repository where content is accessible through user permissions</b></p>	<p><b>Set up of document repository:</b></p> <ul style="list-style-type: none"> <li>• Document repository for internal and external users (Members and Partners) according to user permissions (Confidential data determined by country referential, meaning that users from one country can only access the reports of their own country)</li> </ul> <p><b>Migration of reports:</b></p> <ul style="list-style-type: none"> <li>• All PVS Pathway reports will be migrated to the repository (~430 reports + evidence)</li> </ul>
<p><b>PVS <a href="#">reports</a> and quantitative data (from public to shared to confidential data) are accessible by users according to their user profile</b></p>	<p><b>Development of a simple Web Portal &amp; Login Page</b></p> <ul style="list-style-type: none"> <li>• Admin setting to manage the content in the web portal, manage the metadata, document repository, create accounts, set users permission, etc.</li> <li>• Tabs for access to             <ul style="list-style-type: none"> <li>- Document Repository</li> <li>- Search and View tool</li> <li>- LoA and CC performance (PowerBI dashboard by country (country access only) and by cohort with stratification)</li> </ul> </li> <li>• It should be possible for every Member engaged in the PVS Pathway, Partners and all WOAH staff to have access to</li> </ul>

<sup>1</sup> WOAH IT Infrastructure standards



	<ul style="list-style-type: none"><li>- all their own reports and documents</li><li>- all public reports</li><li>- levels of advancement for all Critical Competency (CC)</li></ul> <ul style="list-style-type: none"><li>• based on confidentiality and country referential</li></ul>
<b>Reports and reports' content are searchable by users according to their user profile</b>	<b>Develop Search and View Tool for documents and quantitative data:</b> <ul style="list-style-type: none"><li>• Internal and external users (Members and Partners) will have access to documents/reports and quantitative data (Levels of Advancement (LoA))</li><li>• It should be possible for every Member engaged in the PVS Pathway, Partners and all WOA staff to search<ul style="list-style-type: none"><li>- all their own reports and documents</li><li>- all public reports</li><li>- levels of advancement for all Critical Competency (CC)</li></ul></li><li>• based on confidentiality and country referential</li></ul> <b>Customisation of the search tool</b> <ul style="list-style-type: none"><li>• Filters to facilitate search (e.g., country, region, CC, pillar, theme, etc.) are needed</li></ul>
<b>PVS Data is available for analysis in structured transactional databases</b>	<b>Data extraction:</b> <ul style="list-style-type: none"><li>• <b>Quantitative data:</b> all Levels of Advancement (LoA) for all CC of PVS Evaluation and Follow-up reports contained in .xls table. Backstopping needed to ensure complete and correct data in table, potentially to be extracted from .doc/.pdf reports</li><li>• <b>Qualitative data:</b> PVS Evaluation<sup>2</sup> and Follow-up reports<sup>3</sup> 2014-2019 and 2022-2023<sup>4</sup> to be extracted from .pdf reports</li><li>• PVS Evaluation and Follow-up reports 2014-2019 and 2022-2023 (~55 ENG reports; using standardised report template since 2014; 90% of data in reports to be migrated to database). Start with English language reports first, but with priority to French (~30 reports) and then Spanish reports (~10 reports) if feasible in timeline. Mapping of data across languages will add complexity and will need to be considered.</li><li>• <b>This is a main component of the Competitive Dialogue.</b> The qualitative data in .pdf adds complexity to the database development, and therefore will need to be considered in the feasibility study of the solutions proposed during Competitive Dialogue process.</li><li>• Feasibility on the best-adapted tools to be used to develop and extract data to provide the needed analytical outputs should be provided by Tenderers (including a realistic timeline and feasibility study).</li></ul> <b>Data cleaning:</b> <ul style="list-style-type: none"><li>• Cleaning and verification between Tenderer and Business will be iterative with emphasis on highest quality work product rendered by due dates</li><li>• Mapping of data across languages will add complexity and will need to be considered.</li></ul> <b>Data migration</b> (quantitative and qualitative) to database model <b>Database access:</b> <ul style="list-style-type: none"><li>• WOA staff access only, according to existing user permissions</li></ul> <b>Data view and access permissions:</b> <ul style="list-style-type: none"><li>• Qualitative &amp; quantitative data for <b>internal</b> users</li><li>• Quantitative data only for external users (Levels of Advancement (LoA))</li></ul>

<sup>2</sup> <https://www.woah.org/app/uploads/2021/03/2019-pvs-tool-final.pdf>

<sup>3</sup> <https://www.woah.org/en/what-we-offer/improving-veterinary-services/pvs-pathway/pvs-pathway-state-of-play-and-mission-reports/>

<sup>4</sup> No reports from 2020 and 2021





<p><b>Databases communicates with other WOAHA data and information systems (API+ interoperability with major WOAHA datasets, e.g., Status, Observatory, WAHIS)</b></p>	<p>Database development and API:</p> <ul style="list-style-type: none"><li>• Development and setting up of the PVS Evaluation Data model and Database</li><li>• Development of API to insure interoperability with others major WOAHA datasets e.g., Status, Observatory, WAHIS</li><li>• WOAHA staff only should have access to databases, datasets, and dashboards according to existing user permissions</li><li>• <b>This is a main component of the Competitive Dialogue.</b></li></ul>
<p><b>Data migration is digitalized, avoiding manual entry and migration</b></p>	<p><b>Develop data extraction and migration mechanism:</b></p> <ul style="list-style-type: none"><li>• To integrate easily and quickly new PVS Evaluations (and the data contained therein), an automated migration mechanism is needed to ensure that the databases are populated automatically, so that WOAHA business units consuming data will have access with little/no delay.</li><li>• The needs of countries with different technological resources have to be considered (e.g., some may not have sufficient bandwidth, so offline automated data migration should be a maintained functionality).</li><li>• An offline report template exists for standardised prospective report formatting and ease of migration, and will be the basis of database design</li></ul>
<p><b>Quantitative analysis and dashboards/charts are available to authorised users, considering analysis type</b></p>	<p><b>Develop/provide the tools for quantitative analysis:</b></p> <ul style="list-style-type: none"><li>• All LoA and for all CC</li></ul> <p><b>Development of Dashboards and visualisations:</b></p> <ul style="list-style-type: none"><li>• Shared PowerBI workspaces and Export of PowerBI dashboards/reports (cohort only due to confidentiality) is needed</li><li>• This will allow sharing of insights outside WOAHA with Members, Partners, and Donors using PowerBI controls and validation pathways developed by WOAHA Data Management Working Group (DMWG)</li><li>• WOAHA staff access only for 2023, according to existing user permissions (upon request/nomination)</li></ul>
<p><b>Qualitative (text-based) analysis and dashboards/charts are available to authorised users, considering analysis type</b></p>	<p><b>Development of qualitative analysis tool and dashboards for specified qualitative data as a proof of concept:</b></p> <ul style="list-style-type: none"><li>• Strengths, weaknesses, and recommendations of the PVS relevant CC to “One Health” thematic analysis from 2014-2019 and 2022-2023 PVS Evaluation and Follow-up reports (from ~55 ENG reports; using standardised report template since 2013) to be analysed.<ul style="list-style-type: none"><li>- <b>This is a main component of the Competitive Dialogue.</b></li><li>- Start with English language reports first, but with priority to French (~30 reports) and then Spanish reports (~10 reports).</li><li>- Mapping and qualitative data analysis across the three (3) official WOAHA languages adds complexity and therefore will need to be considered in the feasibility study during Competitive Dialogue.</li><li>- Feasibility on scope of analysis along with which tools are used (and combination of both factors) to provide the needed analytical outputs should be provided by Tenderers in tendering process (including advice on realistic timeline feasibility).</li><li>- Key phrases using natural language processing or similar approaches will be needed and the Service Provider will be expected to support the definition and refinement of key phrases.</li></ul></li></ul>



- A straightforward solution is expected from the Tenderer to retrieve and analyse qualitative data using natural language processing or similar or to propose any other appropriate tool that can add value to the data asset.
- Development of dashboard and visualisations:**
- Export of PowerBI dashboards/reports (cohort only due to confidentiality) is needed
  - This stop-gap measure will allow sharing of insights outside WOAAH with Members, Partners, and Donors using PowerBI controls and validation pathways developed by DMWG
  - Power BI search functions for data in datasets is a fit-for-purpose, standard tool for business needs for WOAAH staff access only, according to existing user permissions (upon request/nomination)

Table 3 contains the user stories and major considerations for the scope of each activity for Phase 1, Stage 2 (Conditional Tranche).

**Table 3: User stories and major activities, considerations, and scope for Stage 2 of Phase 1**

User Story	Major Activities, Considerations, and Scope Stage 2 (Conditional Tranche)
<b>Infrastructure of PVS Information System is complete for full roll-out and all functionalities included</b>	<p>Complete development of all <b>infrastructure of PVS Information System</b> so that the different PVS Pathway components are fully operational. The development must be done in the respect of the WOAAH IT Infrastructure standards<sup>5</sup> (Annex B1).</p> <p>WOAH has already outsourced the management of their IT infrastructure building, IT security and IT platform building and maintenance to an identified IT Service Provider. The Service Provider will identify an IT infrastructure project manager in charge of all those tasks.</p> <p>The Service Provider will oversee:</p> <ul style="list-style-type: none"> <li>• Development of all features required by WOAAH</li> <li>• Co-Writing of technical document architecture (segregation of duties must be clearly defined during the kick-off as it depends on the project type)</li> <li>• Application maintenance and functional support to key users</li> <li>• Liaise and participate to workshop with IT infrastructure project manager</li> </ul> <p>The Service Provider will have to identify a project manager as a Single Point of Contact for all requests and meetings in close contact with the IT infrastructure and Business project managers.</p> <p>The Service Provider will oversee:</p> <ul style="list-style-type: none"> <li>• Security and Network management. They are WOAAH's Security operations centre</li> <li>• Building the azure IT infrastructure</li> <li>• Building the IT platform (new website base, etc.) if hosting is managed by WOAAH based on information provided by the Service Provider</li> <li>• Supporting the Service Provider during development phases for K8s subjects and all infrastructures questions</li> </ul> <p>Once the IT platform is built, full access will be provided to the Service Provider.</p>
<b>PVS Pathway reports and documentation are housed in repository where content is</b>	<p>Extend Document Repository to include all baseline documents and supporting evidence</p> <ul style="list-style-type: none"> <li>• Baseline documents should be accessible and associated to key phrases (e.g., legislation, surveillance, control plans, etc.)</li> </ul> <p>Data view and access permissions:</p>

<sup>5</sup> WOAAH IT Infrastructure standards





<p><b>accessible through user permissions</b></p>	<ul style="list-style-type: none"> <li>• WOAAH staff should have access to all baseline documents and supporting evidence</li> <li>• Members should have access to only their own baseline documents and supporting evidence</li> </ul>
<p><b>PVS reports and data (from public to shared to confidential) are accessible by users according to their user profile</b></p>	<p>Development of the full Web Portal</p> <ul style="list-style-type: none"> <li>• Enrich the Admin setting to be able to manage the more content in the web portal, the metadata, to create accounts, to set users permission, etc.</li> <li>• Simple web portal previously developed in the Stage 1 plus additional menus such as: home, documents, data, news and forms, etc. Details will be provide at a later stage in the full programme user requirement specifications</li> <li>• This stage will depend on the development of online Forms developed in Stage 2.WOAH staff, Members, and Partners should have access to the full functionality of the web portal according to user profile</li> </ul>
<p><b>PVS Reports and reports' content are searchable by users according to their user profile</b></p>	<p>Enrich and customize the Search and View Tool for reports, supporting documents, report content, and dashboards</p> <ul style="list-style-type: none"> <li>• Baseline documents should be searchable and associated to key phrases, (e.g., legislation, surveillance, control plans, etc.)</li> <li>• The search tool should be an intelligent system to retrieve information</li> <li>• WOAAH staff should be able to search reports, supporting documents, report content, and dashboards containing quantitative and qualitative data analysis</li> <li>• Members should be able to search only their own reports, supporting documents, report content, and dashboards containing quantitative and qualitative data analysis as well as any public reports</li> <li>• Customisation of the search tool with filters to facilitate advanced search is needed</li> </ul>
<p><b>PVS Data is available for analysis in structured transactional databases</b></p>	<p><b>Add all existing PVS Evaluation reports (FR and SP post-2013 (if needed) and ENG, FR, and SP pre-2013)</b></p> <ul style="list-style-type: none"> <li>• This activity is focused on broadening the data extractions cleaning, and migration of additional qualitative data already collected (retrospective) in order to make it available for deepened analysis</li> <li>• This will require adaptation of the databases to accommodate retrospective data using the prior offline report template and data mapping between languages (ENG, FR, and SP)</li> <li>• Cleaning and verification between Service Provider And Business will be iterative with emphasis on highest quality work product rendered by due dates</li> <li>• WOAAH staff only should have access to datasets, according to existing user permissions</li> </ul>
<p><b>Databases communicate with other WOAAH data and information systems (API+ interoperability with major WOAAH datasets, e.g., Status, Observatory, WAHIS)</b></p>	<p>Enrich the development of the database and API:</p> <ul style="list-style-type: none"> <li>• Development of new API to ensure interoperability with others major WOAAH datasets not considered previously</li> <li>• WOAAH staff only should have access to databases, datasets, and dashboards according to existing user permissions</li> </ul>
<p><b>Data entry is digitalized, avoiding manual entry</b></p>	<p><b>Development of fillable, online data entry forms</b></p> <ul style="list-style-type: none"> <li>• Future data collection will automatically populate the database model in temporary tables in the background to facilitate cleaning,</li> </ul>



harmonisation, finalisation and validation for migration to the appropriate transactional databases

- Any simplification identified of the data entry forms is needed
- Any metadata to be collected is needed
- The PVS Evaluation Mission Report Forms are tools that will be used by PVS Pathway Experts to draft PVS Evaluation (or Follow-Up) mission reports
  - It is available in two (2) offline templates (2013 PVS Tool and 2019 PVS Tool) used since programme inception
  - Should be accessible in the web portal
  - Should be fillable collaboratively online by external experts before, during, and after a mission until the report is finalised
  - Should be downloadable, fillable, and uploadable offline

**Automated data extraction:**

- Quantitative data: LoA for all CC of PVS Evaluation and Follow-up reports after 2023
- Qualitative data: PVS Evaluation and Follow-up reports after 2023

**Automated data cleaning:**

- Testing should be conducted on retrospective data
- Piloting of tools will be possible through real-time data collection and missions for prospective data
- Cleaning and verification between Service Provider and Business will be iterative with emphasis on highest quality work product rendered by due dates

**Quantitative analysis and dashboards/charts are available to authorised users, considering analysis type**

**Enrichment of dashboards and visualisations**

- Given that additional data will be available, multivariate analysis should be conducted to discover insight between quantitative and qualitative data
- Analyses, dashboards, and visualisations should be automatically updated with the addition of new reports and data.
- WOA staff only should have access to databases, datasets, and dashboards according to existing user permissions
- Members should have access to their own dashboards according to existing user permissions
- Partners should have access to cohort and public dashboards according to existing user permissions

**Qualitative (text-based) analysis and dashboards/charts are available to authorised users, considering analysis type**

**Extension of development of qualitative analysis tool and dashboards:**

- Extend the quantity of data to be analysed (reports, language, contents, etc.)
  - (building on the initial analysis (strengths, weaknesses, and recommendations of the PVS relevant CC to “One Health” thematic analysis from 2014-2019 and 2022-2023 PVS Evaluation and Follow-up reports)
- A complete descriptive analysis is expected for all CC
- Economics and trade are proposed as additional thematic
- Additional thematic analyses can be suggested by the Tenderers.

**Enrichment of dashboards and visualisations**

- Upscaling of the qualitative analysis by integrating additional qualitative data (FR and SP post-2014 and ENG, FR, and SP pre-2014)
- Added complexity with data analysis across three (3) official languages
- WOA staff only should have access to databases, datasets, and dashboards according to existing user permissions
- Members should have access to their own dashboards according to existing user permissions
- Partners should have access to cohort and public dashboards according to existing user permissions



**Report development and validation process is automated and digitalized (workflow automation)**

Development of report workflow automation:

- Report development process is automated and digitalised
- Report validation process is automated and digitalised
- The process flow of validation of PVS Evaluation reports is already defined
- The collaboration and automation vision is already defined
- Any simplification of the workflow identified is needed
- WOAHA staff should have access to all forms and processes
- Experts should have access to their own missions and reports in the pipeline and historically
- Members should have access at different stages in the pipeline according to their role and place in the workflow
- Any metadata to be collected is needed

#### 4. Considerations on team experience and expertise desired

Given the objectives, components, user stories, and scope of the project, the PVS Team has identified some desired experiences and expertise for realisation of Phase 1 (Stages 1 and 2):

- Business needs orientation and understanding of the business context: interpret and analyse expressed and unexpressed needs
- Multidisciplinary approach and demonstrated experience to bring together different sectors to respond to stakeholders' and users' needs
- Data-driven focus in order to leverage use and applications of valuable data assets
- Subject matter expertise and experience in Veterinary Public Health/public health management, health information systems, or quality management systems in the health, development, trade, governance, or agriculture sectors
- Information system development project in AGILE methodology
- Azure platform, Azure tool, Azure API Management, API lifecycle management
- Development of manually triggered workflows (ex. When document is ready for further review by other stakeholders)
- Development of web-based systems, website (with HTML, JS, CSS, etc.)
- Document-level granularity user permission and SSO integration and active directory
- Database development, e.g., models, cleaning, harmonisation, integration, migration, etc.
- Development of dynamic forms that allows extraction of information, developing forms that can feed into the transactional database and linking Report Form content to qualitative dashboard
- Power BI and in the use of cognitive services for data analysis, dashboards & chart creation
- Setup of metadata for contents, documents, images, etc.
- Building search engine with cognitive possibility
- Training to information systems administrators and specialists prior to testing and during handover

#### 5. Possible Additional Services

Table 4 contains the user stories and major activities and considerations for the scope of each activity for Phases 2 to 7 as possible additional services. Document A Article 1.6 contains the information on projected development schedule and possible additional services. The order of the following Phases can be adjusted as dictated by business needs and/or technical considerations or may occur in parallel as needed. The most efficient ways to integrate the different PVS Pathway components under each phase will need to be assessed. Linkages with other WOAHA programmes will be established when needed.

Descriptions provided here are intended to guide Tenderers and ensure evaluability and team composition. However, they may be adapted during application development. Documentation of such changes in succeeding Phases will be reflected on the user specification documents that will be developed.



**Table 4: User stories and major activities, considerations, and scope for Phases 2 to 7**

User Story	Major Activities, Considerations, and Scope
	<b>Possible additional services</b>
<b>Additional service 1 / Phase 2 –</b>  <b>PVS Targeted Support System: PVS Sustainable Laboratories</b>	<p>This tranche focuses on the PVS Sustainable Laboratories database. The system should be linked to the PVS Evaluation System, Expert Management System, Planning System and all of the Targeted Support Systems. This Phase involves integration in terms of data sharing, interface sharing, etc. This Phase involves digitalising the existing offline data entry forms (MS Excel with macros) and automating mission administration workflow and report validation workflow processes. The offline form is already developed according to best practices, and processes are mapped with SOPs in place from business perspective. Since most of the data in this Phase is already housed in a structured SQL database, it requires only the digitalisation of electronic forms for online data entry and automatic population into the existing SQL database and into existing Power BI dashboards. This targeted support contains primarily quantitative data already housed in a SQL database. Some business products for this tranche may be like those of Phase 1.</p> <p>The detailed requirements are under development.</p>
<b>Additional service 2 / Phase 3 –</b>  <b>PVS Planning System &amp; Gap Analysis</b>	<p>This Phase focuses on the PVS Gap analysis missions and Strategic Planning workshops. The system will be linked to the PVS Evaluation System, Expert Management System, and some of the Targeted Support Systems. Some data in this Phase comes from text in .docx or .pdf documents as unstructured data, and in .xlsx as quantitative data. Some business components for this Phase may be like those of Phase 1.</p> <p>The technical specifications are under development.</p>
<b>Additional service 3 / Phase 4 –</b>  <b>PVS Pathway Experts Management System</b>	<p>This Phase focuses on managing PVS Pathway experts' personal data, mission involvement, training needs/involvement, and competencies and expertise. The Phase links to Phase 1 PVS Evaluation System and will be linked to all other phases of the PVS Pathway digitalisation in the future as experts can be involved in different types of PVS Pathway missions. Thus, it is expected that the two systems are integrated. Additionally, integration with WOAHS CRM should be evaluated.</p> <p>The technical specifications are under development.</p>
<b>Additional service 4 / Phase 5 –</b>  <b>PVS Baseline Document Form</b>	<p>This Phase focuses on the further development and structuring of background data collection forms prior to and during missions (i.e., information/documents on the country and national Veterinary Services) through the development of an entry form. A word questionnaire exists but data collected needs to be structured further and links made to the repository and database created during Phase 1.</p> <p>The technical specifications are under development.</p>
<b>Additional service 5/ Phase 6 –</b>  <b>PVS Targeted Support System: Other Targeted Support.</b>	<p>This Phase covers the digitalisation of several types of PVS Pathway missions (e.g., legislation, workforce development, twinning, etc). This tranche will involve integration in terms of data sharing, interface sharing, linking according to major variable (country, CC, LoA, etc). Each PVS Pathway targeted support has its own set of documents, processes, and tools that will require guidance on the best way to automate processes.</p> <p>The detailed requirements for each targeted support are not yet known.</p>
<b>Additional service 6/ Phase 7 –</b>  <b>PVS Orientation System</b>	<p>This Phase of digitalisation focuses on the planning of sub-regional workshops with different Members' representatives. The Phase will involve integration with the PVS Pathway Expert Management System and the WOAHS Training Portal.</p> <p>The detailed requirements are not yet known.</p>