

CALL FOR PROPOSALS

Contractual partner for the Development of Data Warehouse and Interoperability for Applications under the National Tuberculosis Program



World Health Organization

Representative Office
for the Philippines

1. Summary

The World Health Organization (WHO) Philippines is looking for a contractual partner for the development, implementation and support of data warehouse and data interoperability for applications under the National Tuberculosis (TB) Program (NTP), under an Agreement for Performance of Work (APW) contract.

The proposals are due by 18 March 2021.

2. Background

The NTP in the Philippines finds and treats approximately 350,000 people each year. The program includes public and private health care providers tasked with finding, testing, and treating people for TB as well as providing preventive care. The complexity of the program and diversity of implementers requires robust standardized approaches. This ensures each Filipino is given high-quality care regardless of who they are and where they seek care.

While the Integrated TB Information System (ITIS) hosts the majority of TB program data there are several other digital systems and applications that have been developed and implemented as part of the TB initiative and has a growing need for robust data reporting, data extraction and data sharing across the TB applications ecosystem.

Problem Statement

There has been consistent data growth annually and an increasing demand for innovative digital solutions for integration and data sharing.

Despite continuous efforts to optimize extracts, data loads and queries, there is steady increase in load times, decrease in overall performance, user experience and challenges in data timeliness, risking failure of existing integration and data sharing between applications.

3. Timeline

The implementation timeline for the project is from **22 March to 30 June 2021**.

4. Place of Assignment

Manila, Philippines

5. Scope of Work

Implementation of a next generation data warehouse platform enabling easy interoperability between different TB applications.

The scope of the engagement includes:

- (i) Understand and review existing ecosystem of TB applications.
- (ii) Gather information from stakeholders on the needs for current and future data, reporting needs.
- (iii) Identify options per industry best practices for a long-term platform that can meet all stakeholder data and reporting needs.
- (iv) Develop and implement a robust data warehousing platform to meet all data needs.
- (v) Develop and implement global standards-based exchange (e.g. HL7-FHIR) platform for data exchange, data extraction, data streaming and data reporting.
- (vi) Implement best practices for metadata repository from global standards, WHO's metadata registry and FHIR data models. Also develop a data dictionary describing the contents, format, and structure of a database and the relationship between its elements.
- (vii) Data migration and sync with existing applications into the data warehouse.
- (viii) Test and validate the data warehouse with existing TB ecosystem and applications like ITIS, the End TB App Suite and others.
- (ix) Using the data warehouse platform's ability, convert and store data from multiple sources into a consistent format for better data analytics and data insights.
- (x) Create a user-friendly data dictionary and metadata repository.
- (xi) Help improve the overall decision-making process by transforming data into purposeful information and create more useful reports with ease.
- (xii) Create a robust mechanism to remotely import / sync data from GeneXpert® Systems (HL7) and similar diagnostic machines, including IoT devices.

In coordination with WHO Philippines and the Department of Health, the selected contractual partner shall perform the following activities.

1. Deliverable 1: Assessment and Report
 - I. Study the existing TB applications ecosystem
 - II. Assess the current and future needs for data and reporting with all stakeholders
 - III. Share a report with recommendations, pros and cons and comparisons between different options that can be implemented
 - IV. Share a detailed architecture of the proposed solution
2. Deliverable 2: Data Warehouse and Interoperability Platform
 - I. Develop and implement data warehousing platform that best meets the current and future needs
 - II. Develop data marts as per the needs of existing applications
 - III. Develop and implement data interoperability mechanism to standardise the data sharing, and reduce the overall effort of integration and development of APIs across central systems
 - IV. Develop remote integration with laboratory systems like GeneXpert® and others, including IoTs as needed.

- V. Develop modules that help the decision makers to get access to data with robust data analytics and data insights
- VI. Develop and implement robust ETL based (or other) mechanism to share large volumes of data between applications
- VII. Develop and implement data dictionary and metadata repository

6. Qualifications

Education and Certifications:

- The team lead must have a university degree in information technology or a related field
- A team member with a post-graduate degree in public health or a related field is desirable

Experience required:

- Minimum of five (5) years of relevant experience in relevant development.
- The contractual partner must submit a relevant portfolio of previous work.
- Previous experience in providing services to WHO, other UN agencies, DOH or other government agencies is desirable.
- Familiarity with existing Health Information System used for TB preferably in Philippines
- Prior experience with Implementation of FIHIR based solutions preferably in Philippines

Skills/Technical Skills and Knowledge:

- Demonstrate strong skills in mobile app design in limited-connectivity settings.
- In-depth technical knowledge of TB control is desirable.

Language requirements:

- Excellent verbal and written English communication and facilitation skills

Other requirements:

- All developed code and intellectual property will be owned by the World Health Organization in accordance with WHO policies in order to allow for future development.

In addition, the contractual partner must have no direct or indirect interest in the tobacco industry, alcohol industry, arms dealing or human trafficking.

7. Competencies

- Creative and strategically oriented
- Able to adapt to relevant and reasonable project demands and submit deliverables within timelines

8. Submission Requirements

Interested institutions should submit electronic copies of the following:

- Cover letter
- Proposal with financial details and proposed timeline
- Company profile

Address all documents to:

Dr Rabindra Abeyasinghe

WHO Representative to the Philippines

Ground Floor, Building 3, Department of Health San Lazaro Compound

Rizal Avenue, Sta Cruz, Manila

Please submit the electronic copy of the documents with the title “**Contractual partner for the Development of Data Warehouse and Interoperability for Applications under the National Tuberculosis Program**” to Mrs Ying Chen (cheny@who.int) copied to wpphlwr@who.int. Only shortlisted applicants will be contacted by WHO Philippines.

Deadline of submission of proposals is on **18 March 2021**.