

(IUL)452-CEPI/452/2022/5

## **Terms of Reference – Revision and modification of surveillance applications and databases**

### Introduction

The aim of the consultancy is to revise and modify the existing Covid-19 application stacks and databases to integrate influenza surveillance. In response to Covid-19, these applications were developed and deployed for production on demand to cater to the needs. With the scale down of emergency operations, this is the best time to modify and enhance these applications need to ensure better interoperability and performance.

### Objectives

The main objectives of the consultancy are:

- (i) Revision and modification of the existing applications to integrate influenza surveillance.
- (ii) Optimize the vaccination applications and reuse the existing data and infrastructure.
- (iii) Develop necessary tools and integration components to integrate existing vaccination management software with new vaccine logistics management systems.

### Key tasks

The expected tasks of this consultancy are as follows:

1. Integrate influenza surveillance into lab management application.
2. Develop, test, deploy, bugfix, and support software platforms used for vaccination management.
3. Work with the team in understanding new requirements due to changes in the situation and develop application development plans.
4. Follow best practices in Software Development with a special emphasis on Test Driven Development (TDD).
5. Manage and maintain application platforms, and databases used for vaccination management and vaccination data integration.
6. Support IT team in maintaining application infrastructure ensuring security of data.
7. With guidance from the Ministry of Health, to establish a plan for the reuse of applications developed for the Covid-19 response vaccination program.
8. Develop and implement new features necessary to align software with changes in policies, laws, and regulations.

## Deliverables

Redesign the lab management application according to workflow. And implement the following features:

- Integration of influenza surveillance.
- Dynamic forms.
- Option to manage sampling kits for the administrative user.
- Option to manage labs for administrative users.
- Option to manage Lab kits for administrative users.
- Dynamic questionnaires for samples taken.
- Management interface for samples.

Study and develop workflow diagrams for the vaccination process, data management process, and case tracking process.

- Develop an application to manage vaccination programs (campaigns).
- Dynamic management of vaccines, doses, stocks, storage, and other vaccine-related aspects through the application.
- Manage individuals.
- Manage vaccination centers with the vaccinators, vaccine supervisors, and vaccination process in the centers.
- Manage vaccination sessions and other timings of vaccination in vaccination centers.
- Dynamic questionnaires for vaccination programs and centers.
- Administrative management of vaccines (manage vaccinations).
- API for vaccination data communication.
- Vaccination age group definition.

Redesign and develop the backend case management system as a lightweight and more scalable system. This will include:

- Redesigning and managing user management features.
- Roles and permission management features
- Documents management features.
- API for the application.

Development of system deployment diagrams and API documentation.

Redesign and develop administrative management interface for vaccination appointments application.

- Appointment slots create and update.
- Set rules for appointment eligibility.
- Manage and monitor appointment requests.
- Site supervisor logins for management.

Technical documentation outlining the deployment process, dependencies, production environment, and other dependencies.

### Required Qualifications and Experience

1. Master's Degree in computer science or related field, with professional work experience of 3 years or more,

OR

Degree and above in Computer Science or related field, with professional work experience of 8 years or more.

2. Must have 2+ years' work experience in designing and developing software solutions using;

- i. PHP, .NET, and Java or NodeJS
- ii. Go and python
- iii. MySQL or Postgres or MSSQL or MongoDB or MariaBD or Oracle.

Added advantage - additional skills/expertise

- Experience in any PHP web application framework.
- Proficient understanding of MSSQL and MongoDB.
- Good graphics skills and knowledge in UI design
- Project Management Skills.
- Time management skills with the ability to meet deadlines.
- Experience in developing and managing applications for nationwide health-related program management.

### Duration

The duration of the assignment is 3 months. The deliverables must be reached within this time frame.

The consultant will work with Information Technology Division of Ministry of Health.

For procurement: Evaluation

- |   |     |
|---|-----|
| 1. Knowledge of specific job skills (Proposal): | 15% |
| 2. Related education / training:                | 15% |
| 3. Previous consultancy experience:             | 20% |
| 4. Fee:   | 45% |
| 5. For local consultants                        | 5%  |

Interested candidates should submit a proposal inclusive of fee details to the following address on or **before Tuesday, 26<sup>th</sup> July 2022 by (12:00 pm) to:**

**Health Protection Agency**

**Ministry of Health**

**Roashanee Building, Roashanee Magu**

Or applications can be submitted via email through:

**hpa@health.gov.mv**

**Note:** If the submitter is an Individual, submit the CV and relevant educational certificates (attested) and national ID (for locals) or passport copy. If the submitter is a company please submit a company profile/portfolio, the attested copy of company registration, and if the company is registered for GST, submit the GST registration copy along with the proposal.

Further information regarding the consultancy may be obtained from (3014485)

4<sup>th</sup> July 2022

Terms of Reference approved by:



Maimoona Aboobakuru

Director General of Public Health