

## TERMS OF REFERENCE (TOR)

### Developer for Developing Village Malaria Worker's Quality Assurance Mobile Application.

#### Background

The National Center for Parasitology, Entomology and Malaria Control (CNM), has been implementing a strengthened and comprehensive malaria program since 2004 through a series of grants received from the Global Fund for HIV/AIDS, TB, and Malaria (GFATM). The UNOPS as the Principal Recipient for the Regional Artemisinin Initiative 2 Elimination (RAI2E) Grant received funding from the Global Fund to collaborate closely with CNM in the malaria fight. CNM is designated as the Principal Implementing Partner (PIP) for the program of Regional Artemisinin Initiative 2 Elimination in Cambodia. CNM in collaboration with UNOPS and other partners, endeavours to ensure more effective decentralized malaria control operations at provincial and operational district levels and bring down the malaria related morbidity and mortality in the country.

#### Objective and Justification:

Village Malaria Worker (VMW) Unit in collaboration with Malaria Information System (MIS) team proposes a long-term plan for loading current VMW Quality Assurance (QA) system to be linked with the MIS system through development new tool called "QA module of MIS application" has been raised by the VMW program in efforts to deal with the above constraint. This QA module of MIS application will be developed to 1/ improve the data quality of assessment through live data on the MIS system, and 2/ obtain real time data assessment for the decision making. The application will be developed based on the existing QA checklist for VMW. The questions and scoring will remain the same. Moreover, the application will be installed in the existing tablet of HC and OD so that they can complete the assessment.

#### Scope of Work

The VMW QA module will be build using current technical infrastructure of the MIS, building an android module for QA within the current MIS app, and a web module within the MIS web application. The module will use same list of users and VMW/MMW location as the MIS, and the set of standard functionalities such as permissions, user access and other non-functional requirements specified in the sections and the consultant will work closely with CNM Technical Bureau and senior database management officer to execute the specific tasks described below

#### Specific Tasks

##### 1. Develop the Android QA app:

Health Center (HC) will be used QA module of HC MIS app on their android tablets for conduct VMW/MMW supervision. CNM, provincial health department (PHD) and operational district (OD) users will use the QA module in the CNM, PHD and OD App. Each user will have different type of user access to define the VMW/MMW they can collect data from. The app will provide access to the different QA modules by clicking the QA icon in the main landing page of the MIS app:

a. **Supervision Checklist Data Collection:** This module will allow the users to see the list of upcoming scheduled supervisions and collect data for those VMW/MMWs or others. The checklist will include the seven sections in the current form:

- Inquiry: Assess the training background of the provider.
- Test: Assess the counselling to patient before testing, testing procedure, and counselling to patient after testing.
- Treat: Assess the counselling before treatment including read the result, instruct about the prescription, counselling after treatment including the side effect and drug resistant.
- Reporting and documentary: Assess the note in the used RDT and patient register book.
- Workplace assessment: Assess the availability of electricity or light, gloves, clock, thermometer, ACT & RDT and its expiry date.
- Waste Management: Assess the medical waste control.
- Education check: Malaria education in the community by VMWs.

b. **Reports/Monitor:**

It will show a scorecard and a few indicators with a time filter and geographical filter. Data will automatically synchronize with the MIS server. After PHD/OD/HC finished their supervision, they can see total score, show score by sections and show schedule for next supervision based on prioritization visit schedule score, which relies on case burden data from the last 6 months. Dashboard will show on Tablets' OD/HC information (#complete/#incomplete supervision villages, range of high to low of total score, rang of high to low score for each section, etc.) in order to provide a set of analytics for decision making.

2. **Develop MIS Web portal:** CNM/PHD/OD can log in into MIS web portal to see dashboard and reports in MIS web portal for tracking/follow up to HC. Dashboards will allow to monitor VMWs' performance over time offering some analytics that inform supervisor of the performance of a particular administrative unit (down to village). The report module will be named Quality Assurance and will generate the following reports:
- a. Next Visit and Performance: This table will help supervisor plan their supervision visits to villages. Prioritize which village to visit first, second, third by seeing a list of Villages sorted out by priority. It will also show a complete report of all VMWs' performance last score collected through the Android app. Will have time period filter and an export functionality that will export the in a pdf format the form of that questionnaire.
  - b. Raw Export: User will be able to export a raw file of all supervisions results in Excel (. xls) format by selecting a valid time period.
  - c. Separate Set of Dashboards.

### Expected outputs

The consultant shall;

- Android QA mobile application for health center, operational district, provincial health department and CNM is developed.
- Quality Assurance of reports and Dashboards are set up in MIS.

### Table of Deliverables, Schedules and Payment plan

No	Tasks	Deliverables	Estimated timing	Payment Schedule
1	Develop the Android QA app	QA module is developed in MIS app and can be used as a tool for conducting VMW/MMW supervision by CNM, PHD, OD and HC staff through their tablets	45 days	30% upon acceptable completion
2	Develop MIS Web portal	CNM/PHD/OD can log in into MIS web portal to see dashboard and reports in MIS web portal for tracking/follow up to HC and monitor VMWs' performance	16 days	30% upon acceptable completion
3	Prepare user guides for using the updated App and MIS	one user guide is for MIS and another is for App	5 days	40% upon acceptable completion
		<b>Total Duration</b>	<b>66 days</b>	<b>100%</b>

Note; Payment shall only be made after submission of a report (to be approved by the National Malaria Program) for each of the milestones

**Qualifications:**

Bachelor or Master Degree in information technology, computer science, or other relevant fields

- Strong Android mobile application development skills
- Strong database development skills using MySQL and Ms SQL server
- A minimum of 5-10 years' experience in computer programming like PHP, Java, Ruby, Firebase or similar
- Ability to think analytically, synthesize and clearly present complex processes and issues related to the development of malaria surveillance
- Experience in Malaria or public health is desired
- Experience in Malaria Information System (MIS) is desired
- Experience of using SMS technology for data collection is desired
- Familiarity with the health system in Cambodia is desired
- Proven experience in leading consultative processes; ability to conduct/facilitate sessions related to the development of the consultation meetings.

**Reporting:**

The contractor shall be expected to submit activity reports in line with the set deliverables and these reports shall be submitted for review and acceptance by the National Malaria Program before any payment is made.

**Schedule of Payments**

Payment will be done in several instalments as communicated in the table above.

**Period**

The work is to be concluded within 66 working days from the date of signing the contract.  
The contractor shall share their proposed implementation schedule in line with the set deliverables