Digital Solutions for Malaria Elimination

Request for Proposals

May 2018
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RFP DIGITAL SOLUTIONS FOR MALARIA ELIMINATION

Background

To provide countries with a comprehensive malaria information system, a consortium of programmatic and technical partners including the Clinton Health Access Initiative (CHAI), the University of Oslo (UiO), Vital Wave, and the World Health Organization (WHO) has come together to develop and roll out digital solutions. These solutions will include mobile tools and enhancements to DHIS2 (the de facto health management information system and malaria surveillance platform in many countries). Vital Wave is managing the selection of mobile tool partners by means of this Request for Proposals (RFP).

Digital Solutions for Malaria Elimination Overview

Surveillance systems are the backbone of malaria elimination programs, providing information on where and how transmission is occurring and how interventions should be targeted. However, countries face substantial technical challenges in rolling out integrated case-based information systems that collect timely, high-quality data and facilitate appropriate decision making for elimination. To address these technical challenges, the consortium assessed existing surveillance systems in order to identify gaps that can be addressed with enhancements to DHIS2 (the de facto malaria information system in many countries) and selected mobile tools.

To inform technical requirements for software development, in-depth interviews with malaria programs, end users, and technology experts were conducted globally and in three regions – Greater Mekong Sub-region, Sub-Saharan Africa, and Mesoamerica and Hispaniola. These findings are represented in detail in the Software Requirements Document and its associated appendices here: https://github.com/ds4me/ds4me-wiki/wiki/Requirements-Documentation. Note that the Software Requirements Document is a living document that may be updated with new requirements and user stories over time.

With the consolidation of these findings and requirements for software development, partners are being selected to apply digital solutions to use cases including case detection, notification, and investigation; focus investigation; and intervention activities. These solutions will be user tested, piloted, and rolled out in ten countries across regions to strengthen existing surveillance systems, – in addition to being made globally available as a digital toolkit for malaria surveillance.
Objective of the RFP

This RFP seeks to identify technical partners that have mature, open-source mobile platforms (or licenses that can be extended to public use mobile platforms) that, with additional investment, could be enhanced to support the malaria surveillance use cases and requirements as detailed in the Digital Solutions for Malaria Elimination Software Requirements Document. The ideal mobile platform for each scope of work detailed below is one that is already used at scale in numerous countries for similar use cases (e.g., for health programs or disease areas other than malaria) and has similar requirements to those outlined in the Software Requirements Document in its existing software development roadmap. This investment will catalyze the enhancement of such systems in order to optimize and speed up development rather than creating a tool from scratch.

This RFP is focused only on the technical enhancement of mobile platforms and iterative testing with grant partners. Pilot-testing, configuration, and deployment of country-specific applications of the enhanced mobile platforms constitute a separate effort that will be driven by National Malaria Control Programs (NMCPs) in up to ten countries, supported by CHAI country offices and other in-country implementing partners through alternate means of funding. While NMCPs will drive this effort, technical partners selected from this RFP are expected to be heavily involved in the design, build, and pilot testing of country-specific applications in two-to-three priority countries through separate funding for implementation. The details related to country selection and piloting (e.g., budget for any required travel by technical partners to priority countries) will be discussed separately with selected partners, following the selection process.

The envisioned solution is comprised of multiple, interoperable, digital tools that are also linked to DHIS2 as described in the separate scopes of work below. Bidding organizations are encouraged to form consortia and submit joint proposals if appropriate.
RFP Process and Key Dates

1. RFP release: **May 7, 2018**

2. Questions related to the RFP should be sent to Vital Wave by **May 11**, no later than midnight Pacific Daylight Time. Responses will be sent directly to the requesting bidder by May 16. Questions should be sent to:

   Derek Treatman, Director, Technology Solutions, Vital Wave
derek.treatman@vitalwave.com

   With a copy to:
   Brendan Smith, VP, Professional Services, Vital Wave
brendan.smith@vitalwave.com

3. Timeslots to allow bidders to ask follow-up questions to Vital Wave will be made available between **May 16 – 22**. Bidders will be notified of exact dates and timeslots by May 15. Anonymized questions from all bidders sent by email or raised during follow-up calls and responses will be published to all bidders on May 22.

4. Proposals must be emailed to Vital Wave on or before **May 29**, no later than midnight Pacific Daylight Time to:

   Derek Treatman, Director, Technology Solutions, Vital Wave
derek.treatman@vitalwave.com

   With a copy to:
   Brendan Smith, VP, Professional Services, Vital Wave
brendan.smith@vitalwave.com

5. Proposals will be evaluated by an independent review board, chaired by Vital Wave, using the criteria define here: [https://github.com/ds4me/ds4me-wiki/wiki/Selection-Criteria](https://github.com/ds4me/ds4me-wiki/wiki/Selection-Criteria)

6. Bidders may be sent clarifying questions by email following review of their proposals by **June 6**.

7. Responses to clarifying questions must be sent back by **June 11**, no later than midnight Pacific Daylight Time to:

   Derek Treatman, Director, Technology Solutions, Vital Wave
derek.treatman@vitalwave.com

   With a copy to:
   Brendan Smith, VP, Professional Services, Vital Wave
brendan.smith@vitalwave.com

8. Bidders will be notified by **June 25** of the decision and intent to enter into contract negotiations.
**Milestones and Timeline**

The following timeline should be used as a general guide to create the software development timeline and project plan in bidder proposals. Bidders should propose specific dates for releases and handover based on their estimated level of effort to fit the specific scope(s) of work covered in their proposals, and may propose dates that are different than those indicated below.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contract Technical Partners:</strong> Iterate with grant partners on statement of work and software development planning.</td>
<td>July, 2018</td>
</tr>
<tr>
<td><strong>Minimum Viable Product (MVP) Release and Testing:</strong> Iterative development and testing of an MVP application in 2-3 countries with grant partners. This release may include at minimum, user stories that have been prioritized as critical or MVP.</td>
<td>Q3-Q4, 2018</td>
</tr>
<tr>
<td><strong>Iterative Releases:</strong> Provide fixes and improvements to MVP application. Continue iterative development, testing, and piloting of additional user stories in 2-3 countries with grant partners with regular releases (e.g., monthly, quarterly).</td>
<td>end-2018 through 2019</td>
</tr>
<tr>
<td><strong>Handover:</strong> Provide relevant documentation and build capacity of NMCPs, CHAI country offices, and other partners to scale and maintain deployment.</td>
<td>end 2019 or early 2020</td>
</tr>
<tr>
<td><strong>Ongoing Support and Maintenance:</strong> Provide ongoing support and maintenance as per standard service level agreements (SLAs) and licenses.</td>
<td>Annual</td>
</tr>
</tbody>
</table>
Scopes of Work Overview

The RFP is divided into the three following mobile tool scopes of work for which competitive proposals from mobile tool providers are requested. Proposals must cover a minimum of one scope of work. Bidders may choose to apply for more than one scope of work in their proposal if desired. Proposals covering multiple scopes of work will not be viewed more favorably than proposals covering a single scope of work.

1) Case Detection, Notification and Investigation
2) Focus Investigation
3) Routine and Reactive Intervention

The first scope of work covers three distinct malaria surveillance use cases (case detection and notification, treatment, and case investigation), while the second and third scopes of work each cover one malaria surveillance use case. All scopes of work also cover the supervision use case.

It is important to note that because the use cases covered in these scopes of work are often conducted independently from each other, by distinct actors, a tool designed to support one use case can potentially be deployed in countries where tools supporting other use cases are already in use. For example, the tool that supports the focus investigation scope of work could be implemented independently in a country that already uses other tools for case investigation or interventions. Additionally, a single tool could, if designed appropriately, be used for multiple scopes of work.

Each scope of work also covers specific software requirements, described in the Software Requirements Document. Each requirement details several user stories which describe actor-centric functional needs that the tool must support, grounding design and development in the context of specific actors and their activities. Many software requirements are designed to apply to multiple scopes of work and the use cases they cover. The benefit of this approach is to center the mobile tools on functional use cases while encouraging design and development synergies where there are similar functional software requirements across use cases.

Each mobile tool will also be expected to leverage common goods (specifically, a geospatial widget and enhancements to DHIS2) being developed by grant partners and the Community of Practice (CoP). The scopes of work for these common goods are included below for reference by bidders. The geospatial widget (scope of work #4) will be developed collaboratively by CoP members, while DHIS2 enhancements (scope of work #5) will be developed by UiO.
Mobile Tools Scopes of Work

Bidders are requested to use the attached Bidder Coverage Tool (BCT) to describe how their existing mobile tools can be enhanced to cover (1) relevant malaria surveillance use cases, and (2) relevant requirements. The BCT allows bidders to map existing features to each use case and requirement, and estimate the time and effort necessary for new development. Bidders should refer to the Software Requirements Document, where each use case and requirement is described in detail.

The tables below indicate which use cases and requirements from the Software Requirements Document are associated with each scope of work and should be completed in the BCT.

Important notes:

► Bidders must apply for a minimum of one complete scope of work, and should only apply for more than one if the proposed solution thoroughly covers the specified use cases within those scopes of work.

► Bidders must submit a total of one written proposal (see Proposal Format below) and one completed BCT, which may cover one or more scopes of work.

► Bidders are requested to complete only the rows on the “Use Case Coverage” and “Requirements Coverage” tabs in the BCT that are associated to the scope(s) of work for which they are applying, as defined in the scope of work tables below (rows for “critical”, “minimum viable product”, and “must have” user stories for each scope of work are required, rows for “should have” and “could have” user stories are optional).

► Supporting materials to the BCT (e.g., screenshots, diagrams) should be submitted as appendices to proposals with notes indicating for which use case or requirement they apply.

► Bidding organizations are encouraged to form consortia and submit joint proposals if appropriate. Bidders may be encouraged to work with others after the selection process to align and synergize tools across use cases towards the support of a cohesive surveillance system.
### Scope of Work 1
Case Detection, Notification, and Investigation

**Use Cases to be completed in BCT:**
- 1.0 Passive Case Detection (PCD) and Notification
- 2.0 Treatment
- 3.0 Case Investigation
- 6.0 Supervision

**Requirements to be completed in BCT:**
- A: Usability All
- B: Data Inputs – Data Submission, Integrity, and Relationships All
- C: Data Outputs – Analytics and Notifications All*
- D: Task Management All
- E: Data and App Management All
- F: Integrations All

### Scope of Work 2
Focus Investigation

**Use Cases to be completed in BCT:**
- 4.0 Focus Investigation
- 6.0 Supervision

**Requirements to be completed in BCT:**
- A: Usability All
- B: Data Inputs – Data Submission, Integrity, and Relationships B1, B2
- C: Data Outputs – Analytics and Notifications All*
- D: Task Management All
- E: Data and App Management E1, E2, E3
- F: Integrations All

### Scope of Work 3
Routine and Reactive Intervention

**Use Cases to be completed in BCT:**
- 5.0 Routine and Reactive Intervention
- 6.0 Supervision

**Requirements to be completed in BCT:**
- A: Usability All
- B: Data Inputs – Data Submission, Integrity, and Relationships B1*, B2, B3
- C: Data Outputs – Analytics and Notifications C1, C3*, C4, C5
- D: Task Management All
- E: Data and App Management All
- F: Integrations All
*Some select user stories within a requirement may be excluded from the scope of work if they include language specific to other functional use cases (e.g., a user story that specifies “focus classification” may only apply to scope of work #2, despite being captured in a requirement that is broadly applicable to other scopes of work).

**Common Goods Scopes of Work (for reference)**

<table>
<thead>
<tr>
<th>Scope of Work 4</th>
<th>Geospatial Widget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Cases to be completed in BCT:</strong></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Requirements to be completed in BCT:</strong></td>
<td>A: Usability</td>
</tr>
<tr>
<td></td>
<td>G: Geospatial Widget</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope of Work 5</th>
<th>DHIS2 Enhancements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use Cases to be completed in BCT:</strong></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Requirements to be completed in BCT:</strong></td>
<td>A: Usability</td>
</tr>
<tr>
<td></td>
<td>B: Data Inputs – Data Submission, Integrity, and Relationships</td>
</tr>
<tr>
<td></td>
<td>C: Data Outputs – Analytics and Notifications</td>
</tr>
<tr>
<td></td>
<td>H: DHIS2 Enhancements</td>
</tr>
</tbody>
</table>
Proposal Format

The vendor’s proposal shall be submitted in the format outlined below:

1. **Letter of Transmittal**: The proposal letter shall be addressed to the contact(s) listed and shall include the complete name of the firm or person(s) submitting the proposal, the main office address, primary contact person’s name, title, telephone number, email as well as a signature of representative legally authorized to bind the proposal.

2. **Overview Statement**: Indicate for which scope(s) of work the vendor’s proposal applies. Include an understanding of the scope(s) of work and how the vendor’s work would enable this.

3. **Vendor Profile and Qualifications**: Include vendor and executive information, including:
   
   A. Resumes and qualifications of the management team and key staff (including any project managers, product managers, and core developers) that would be involved,

   B. Proof of financial stability and adequacy of resources to complete the scope(s) of work,

   C. A description of experience completing similar projects, and

   D. Why the vendor is uniquely qualified to complete the selected scope(s) of work and how this work aligns with the vendor’s core mission and other current or planned investments or projects.

4. **References**: Provide at least three (3) references of current work with other clients of similar scope. Include a brief description of the work and the name, title, address, phone number and email of a relevant contact person.

5. **Use Cases**: For each use case associated to the scope(s) of work, please complete the relevant rows on the “Use Case Coverage” tab of the BCT in Excel, describing how closely the mobile tool already supports each use case, and estimating the level of effort (LOE) needed to build and test an app for each sub-process. Any supporting materials (e.g., screenshots, storyboards, other diagrams) should be attached to the proposal as appendices with notes indicating for which sub-processes each appendix applies.

6. **Requirements**: For each requirement category associated to the scope(s) of work, please complete the relevant rows on the “Requirements Coverage” tab of the BCT in Excel, describing what user stories the mobile tool already supports, and estimating the LOE needed to develop new features or enhance existing features. Any supporting materials (e.g., screenshots, visual mockups) should be attached to the proposal as appendices with notes indicating for which user stories each appendix applies.

7. **Ease of Use**: Provide narrative and/or supporting material (e.g., screenshots, visual mockups, other diagrams) to demonstrate ease of use and intuitiveness of user experience of the current platform. Include details on the ability and ease of setting up and updating the platform through configurations (through an admin user
interface) and customizations (through minimal revision of code that does not require intervention by core platform developers).

8. **Integration Experience:** Please provide a proposed architecture diagram and describe previous work integrating with large-scale health information systems, other mobile tools, and open-source code libraries, including:

   A. The vendor’s proposed approach to integration with DHIS2 as a national HMIS, including:
      - Flexibility to adapt to any DHIS2 configuration,
      - Adherence to DHIS2 security processes (DHIS2 security patterns, encrypted database),

   B. The vendor’s proposed approach and/or previous experience with exchanging transactional (e.g., case-based) data with other mobile tools and DHIS2,

   C. The steps required to incorporate an external open-source code library to the vendor’s existing mobile tool, and

   D. Previous challenges encountered performing similar integrations with external systems, what challenges are foreseen for this scope of work, and the strategy or stages for a successful integration.

9. **Country Adoption and Growth:** Describe strategies for fostering adoption by national governments and determining responsibilities of NMCPs and in-country partners for sustainable operation and maintenance, including:

   A. The process for creating documentation and providing training to government and implementation partner staff for ongoing, local operation and maintenance,

   B. The model for fostering country ownership, including assessment of resources that governments or implementing partners need to put into place in order to own and operate the solution long term,

   C. The steps for handover of the mobile tool and an example of the largest project in the past that for which a handover to a government or implementing partner was successful,

   D. Technical and operational considerations for scalability, i.e. moving from 100 to 100k users, and what factors need to be considered by governments and implementing partners to scale.

10. **Software Development Roadmap:** Provide a high-level roadmap for enhancing the mobile tool to support the requirements including:

    A. Proposed software development timeline and project plan split by requirements. This should include, at a minimum, software development release targets for “critical,” “minimum viable product,” and “must have” user stories and app release dates,

    B. Outline of the process for testing, iterating on, and finalizing requirements,

    C. Outline of the process for communicating progress and risks during software development to grant partners, and
D. A risk mitigation strategy for problems that might arise during development.

11. **Support and Maintenance Model:** Provide an overview of support and maintenance services to be provided by the vendor following handover, including provision of required fixes, support for routine platform upgrade, and general technical consultation and support. Describe what the country will be responsible for maintaining and what the vendor will continue to provide including any relevant licenses and SLAs that will be needed.

12. **Switchover Cost:** Please describe the cost that might be incurred by a country to switch over to the vendor’s mobile platform if it is already using an existing legacy platform and how a country NMCP would justify such a cost.

13. **Budget:** Please provide the cost and time breakdown for the following categories.
   A. Software development, split at minimum by requirements
   B. Iterative testing and finalization of requirements
   C. Integration of the mobile platform with DHIS2
   D. Handover of documentation and provision of training to country NMCPs and implementation partners
   E. Long-term support and maintenance costs including annual licenses and SLAs

14. **Appendices:** Please provide any additional supporting materials for consideration alongside the proposal and BCT.
**Additional Information**

1. Vital Wave reserves the right to reject any or all proposals, to waive any informality in the RFP process, to terminate the RFP process or to terminate any award pursuant to this RFP at any time at the convenience of Vital Wave.

2. Vital Wave reserves the right to reject and not consider any responses that do not meet all the requirements of this RFP including, but not limited to, incomplete proposals and/or proposals offering alternate or non-requested service. All questions related to this RFP should be directed to Vital Wave.

3. Vital Wave reserves the right not to award a contract pursuant to this RFP if it has been determined by Vital Wave that the original successful respondent(s) is not able to deliver the required services in a satisfactory manner and/or within the terms as outlined in this RFP.

4. Vital Wave reserves the right, in the case that an award to the original successful respondent has been cancelled, to award another qualified respondent without conducting another solicitation of proposals for the services designated in this solicitation.

5. Vital Wave reserves the right to terminate a contract, awarded pursuant to this RFP, at any time at the convenience of Vital Wave, with a thirty (30) day written notice to the successful respondent(s).

6. Vital Wave reserves the right to negotiate the applicable cost proposed by the response that is pursuant to this RFP.

7. Vital Wave reserves the right not to compensate any respondent(s) for any cost incurred in responding to this RFP.

8. Vital Wave prohibits ex parte communication with any board member, review committee member, and/or staff member after the publication of Requests for Proposals. No Vital Wave board member, review committee member and/or staff member shall initiate nor accept any communication regarding any RFP that is under consideration. Any respondent shall be disqualified if it has been discovered that there has been an attempt to improperly influence directly and/or indirectly the review and evaluation process of a proposal in any way.