

Request for Proposal # 2022-005

Enhancing Digital Solutions to Support HPV Vaccination and Related Cancers Detection and Treatment in Rwanda – Phase One

1. Summary of Deadlines

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| Release of Request for Proposal | 14-Jan-2022 |
| Confirmation of interest due and fact-finding questions received by | 21-Jan-2022 |
| Response to fact-finding questions | 25-Jan-2022 |
| Proposals due | 8-Feb-2022 |
| Selection of short-listed suppliers | 11-Feb-2022 |
| Bidders notified of decision | 14-Feb-2022 |

Note that PATH reserves the right to modify this schedule as needed. All parties will be notified simultaneously by email of any changes.

1. PATH Statement of Business

PATH is the leader in global health innovation. An international nonprofit organization, we save lives and improve health, especially among women and children. We accelerate innovation across five platforms—vaccines, drugs, diagnostics, devices, and system and service innovations—that harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity. By mobilizing partners around the world, we take innovation to scale, working alongside countries primarily in Africa and Asia to tackle their greatest health needs. Together, we deliver measurable results that disrupt the cycle of poor health. Learn more at www.path.org.

1. Project Background

**Rwanda Digital and Data Systems for HPV, Phase 2**

Merck and PATH are partnering with the Government of Rwanda to develop comprehensive digital health information systems for HPV vaccination and related cancers utilizing digital and data technologies. The initiative to enhance the existing health information systems builds on a comprehensive assessment of the current state of Rwanda’s digital and data capabilities for HPV vaccination, cervical cancer, and related cancer screening. The initial assessment was conducted by PATH in collaboration with Rwanda Biomedical Center (RBC). The assessment identified and outlined the initial design of specific solutions that are most feasible and realistic to address current gaps and develop a more comprehensive integration of these systems to support Rwanda’s cervical cancer elimination priorities for future phases.

Following the landscape assessment report and consultative stakeholder reviews, both within and outside the ministry of health, and taking into consideration the country’s digital health implementation plan, a high-level solution approach was developed and validated. The proposed solution approach involves enhancing the existing comprehensive digital platform to allow for individual level patient monitoring and data exchange along the whole continuum of care across different diseases, from primary health care to tertiary-level care. The solution approach focusses on:

* An integrated approach toward a health information system and a less programmatic focus.
* Replacing the existing siloed registry systems within HPV, cervical cancer treatment, and other programs.
* Deployment at health centers and district-level hospitals, providing end-to-end visibility across health systems at all levels.

Building on the recommendations and results of the landscape assessment, PATH and RBC seek to partner with a software development organization to support the development, strengthening, and integration of existing digital systems to optimize data generation, flow, and use.

The Government of Rwanda envisions the use of a single, comprehensive electronic medical record (EMR) across all public primary health care facilities. This system will support all medical records maintained by public health care facilities while also providing software and integration standards to private entities that support health care services in the country. The digitalization journey began with foundational systems such as the national health client registry, health information exchange, health facility registry, and the health care worker registry. These systems are currently in place, and it is envisioned that soon the disease-specific digital systems will be phased out and the country can adopt and scale up the single, comprehensive EMR that is under development. As for HPV and cervical cancer, the following digital tools are currently being used to support business processes for HPV and cervical cancer vaccination, screening, treatment, and reporting.

* **mUzima**: An Open Data Kit (ODK)-based mobile application for registering and screening patients. The tool also has forms for lab investigation requests and client referrals to other facilities. The application is primarily used in health centers and district-level hospitals that provide cervical and breast cancer screening services.
* **OpenMRS Cancer Screening**: An online OpenMRS-based web application that stores all the cervical and breast cancer screening information, serving as the back end to the mUzima mobile application. The application is used primarily for entering lab result data and advanced clinical diagnosis and care at district-level hospitals.
* **OpenMRS Oncology (BUTARO Hospital)**: An online OpenMRS-based web application for registration, diagnosis, staging, treatment, and overall management of cancer patients. Currently being used at the Butaro Health Center.
* **National Cancer Registry**: Web-based module built under DHIS2 tracker software that is used to collect and store information on confirmed cancer cases. The system is primarily used by cancer registry focal persons at district, provincial and referral hospitals to register confirmed cancer cases.
* **DHIS2 Immunization Tracker**: DHIS2 tracker application that is used for the collection and storage of routine vaccination data. This application is primarily used at the health center-level, where routine vaccination takes place. Currently, this application does not include HPV vaccination.
* **Canreg5**: This desktop-based application is recommended by WHO as a standard system for storage and analysis of all cancer data. It allows for a comprehensive cross-country analysis of cancer burden.

Considering the infrastructure limitations in the country, as well as business cases that are outside of routine health service delivery processes the mUzima system, National Cancer Registry, and HPV Immunization tracker will still have a role to play with the adoption of a functional and comprehensive EMR. This scope of work defines software enhancement of existing systems to support current business processes while taking into consideration the ongoing EMR software development.

1. Scope of Work and Deliverables

**A. Scope of Work:**

This scope of work defines the enhancement phases of information systems for HPV and cervical cancer screening and treatment. The software development organization will be expected to work with RBC, PATH, and other stakeholders and lead the following work.

## Enhance the national cancer registry to enable data exchange with OpenMRS Oncology System

1. Identify use cases for integration of the national cancer registry and OpenMRS.
2. Conduct data mapping exercise and develop requirements for all the identified integration use cases to support information exchange needs.
3. Identify and document data exchange standards that will be used to support information exchange between the two systems.
4. Perform necessary technical upgrades of the source and destination systems to improve their capabilities to support information exchange.
5. Develop integrations through the health information mediator to support integration use cases.
6. Develop integration test cases and conduct integration tests to validate functionality of the developed use cases.
7. Work with RBC to implement the successfully tested integrations and use cases in production environment for automated data exchange between OpenMRS Oncology and DHIS2 Cancer registry.
8. Develop user and technical documentation for the developed integration use cases.

## Enhance mUzima mobile application

1. Review current and improved business processes maps and requirements to understand the existing gaps and required areas of improvements.
2. Develop detailed requirements, improved system design, and architecture to address the identified gaps.
3. Take lead in defining and managing software development sprint plans and end-of-sprint review sessions.
4. Perform software development upgrades based on the updated business processes, detailed requirements, and improved architecture.
5. Conduct routine technical review meetings with the user advisory group to provide guidance and inputs on the software development process.
6. Develop test cases, conduct user acceptance tests, and document test results.
7. Participate in routine project management meetings and other relevant meetings for close monitoring of the project and software development processes.
8. Provide technical support in setting up the necessary infrastructure to support the implementation and use of the improved digital tool.
9. Develop user, technical, and business documentation to support the implementation and use of the improved mUzima digital tool.
10. Develop training materials and conduct user trainings to national trainers of trainers (TOTs).

## Enhance DHIS2 Vaccination Tracker to incorporate HPV vaccination business process and information needs

1. Develop business process maps and requirements for incorporating HPV immunization functionality into the DHIS2 immunization tracker.
2. Develop software design and architecture plan to support the enhancement of DHIS2 tracker to support HPV vaccination.
3. Take lead in defining and managing software development sprint plans and end-of-sprint review sessions.
4. Perform software development upgrades based on the detailed requirements and improved architecture and design.
5. Conduct routine technical review meetings with the user advisory group to provide guidance and inputs on the software development process.
6. Develop test cases, conduct user acceptance tests, and document test results.
7. Participate in routine project management meetings and other relevant meetings for close monitoring of the project and software development processes.
8. Provide technical support in setting up the necessary infrastructure to support the implementation and use of the improved digital tool.
9. Develop user, technical and business documentation to support the implementation and use of the improved mUzima digital tool.
10. Develop training materials and conduct user trainings to national TOTs.

B. Deliverables:

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| # | Deliverables | Due Date (anticipated) |
|  | 1. Document integration use cases and detailed requirements to support information exchange between National Cancer Registry and OpenMRS Oncology (BUTARO Hospital). 2. Fine tune detailed requirements, software architecture, and design for enhancing mUzima mobile application. 3. Detail requirements, software architecture, and design for enhancing DHIS2 immunization tracker. 4. Software development sprint plan and technical approach documentation. | 1-Mar-2022 |
|  | 1. Enhance DHIS2 cancer registry (Beta version). 2. Develop integrations based on the identified use cases. 3. Enhance mUzima mobile app (Beta version). 4. Enhance DHIS2 immunization tracker (Beta version). 5. Technical report on software development process, detailed end of sprints results, and outputs. | 31-Mar-2022 |
|  | 1. Document test cases for enhanced DHIS2 cancer registry, mUzima application, and DHIS2 immunization tracker. 2. Technical report on user acceptance testing (UAT) and integration test results detailed passed and failed tests. 3. Implement integration between National cancer registry and OpenMRS Oncology (Butaro Hospital). 4. Enhance mUzima mobile app (version 1). 5. Enhance DHIS2 immunization tracker (version 1). | 15-Apr-2022 |

1. Proposal Requirements - Financial

Provide itemized costs for the total scope of this project, based on the scope of work and deliverables outlined in Section IV. The final scope of work may be subject to negotiation; however, bidder selection will be made against the original scope of work. Bids should include itemized costs for key elements of the scope of work, as follows:

* Percent participation in total level of effort according to key staff.
* Rates of key staff.
* Estimated total level of effort and associated costs.
* Itemization of all other costs, e.g., agency costs, agency fees, sub-contracted resources, administrative costs, supplies, tax, etc.

1. Proposal Requirements – Technical

Provide a narrative on your technical approach to accomplish the Scope of Work and Deliverables per section IV, including:

* Description of technical approach.
* Discussion of project management and roles of project team.
* Timeline to meet the deliverables.
* Potential obstacles and plan to overcome them.
* Identification of major internal and external resources.

Provide information on your overall qualifications, including:

* Profile of relevant corporate qualifications.
* Profile of relevant experience and examples of related work.
* Qualifications of key members of the proposed project team (attach CVs and provide details of back-up/standby teams).
* Number of years in business.
* If your company has more than one location, please indicate these qualifications for the site that is responding.

1. Proposal Evaluation Criteria

The following is a list of significant criteria against which proposals will be assessed. The criteria are listed in order of priority; however, they are not weighted.

1. Technical approach for the development and implementation of the solutions.
2. Experience and demonstrated capacity in enterprise level software development projects.
3. Costs (as detailed in Section V)

Note: PATH reserves the right to include additional criteria.

1. Instructions and Deadlines for Responding

A. PATH contacts

Technical/Program Contact: Hassan Mtenga, [hmtenga@path.org](mailto:hmtenga@path.org).

Procurement Contact: Teresa Gingras, [tgingras@path.org](mailto:tgingras@path.org).

B. Confirmation of interest

Please send a statement acknowledging receipt of this solicitation and your intent to respond or not respond no later than 21st Jan 2022. Send the confirmation to the contacts listed above.

C. Fact-finding questions

Questions on this solicitation will be accepted via email to the contacts listed above through 21st Jan 2022. Questions and answers to all questions will be provided on 25th Jan 2022 to all participants who confirmed interest. Please note that responses will not be confidential except in cases where proprietary information is involved. Inquiries after this date cannot be accommodated.

D. Proposals due: 8th Feb 2022

Completed proposals should be submitted by email to the contacts listed above. The subject line of the email should read: RFP # 2022-005 Your Company Name.

E. Selection of short-list

PATH reserves the right to select a short list from the bids received. PATH has the option to interview and discuss specific details with those candidates who are on the short-list.

F. Conclusion of process

Final award is subject to the terms and conditions included in this solicitation, as well as successful final negotiations of all applicable terms and conditions affecting this work.

1. Terms and Conditions of the Solicitation

A. Notice of non-binding solicitation

PATH reserves the right to reject any and all bids received in response to this solicitation and is in no way bound to accept any proposal.

B. Confidentiality

All information provided by PATH as part of this solicitation must be treated as confidential. In the event that any information is inappropriately released, PATH will seek appropriate remedies as allowed. Proposals, discussions, and all information received in response to this solicitation will be held as strictly confidential, except as otherwise noted.

C. Conflict of interest disclosure

Suppliers bidding on PATH business must disclose, to the procurement contact listed in the RFP, any actual or potential conflicts of interest. Conflicts of interest could be present if there is a personal relationship with a PATH staff member that constitutes a significant financial interest, board memberships, other employment, and ownership or rights in intellectual property that may be in conflict with the supplier’s obligations to PATH. Suppliers and PATH are protected when actual or perceived conflicts of interest are disclosed. When necessary, PATH will create a management plan that provides mitigation of potential risks presented by the disclosed conflict of interest.

D. Communication

All communications regarding this solicitation shall be directed to appropriate parties at PATH indicated in Section VIII. A. Contacting third parties involved in the project, the review panel, or any other party may be considered a conflict of interest and could result in disqualification of the proposal.

E. Acceptance

Acceptance of a proposal does not imply acceptance of its terms and conditions. PATH reserves the option to negotiate on the final terms and conditions. We additionally reserve the right to negotiate the substance of the finalists’ proposals, as well as the option of accepting partial components of a proposal if appropriate.

F. Right to final negotiations

PATH reserves the option to negotiate on the final costs and final scope of work and reserves the option to limit or include third parties at PATH’s sole and full discretion in such negotiations.

G. Third-party limitations

PATH does not represent, warrant, or act as an agent for any third party as a result of this solicitation. This solicitation does not authorize any third party to bind or commit PATH in any way without our express written consent.

H. Proposal Validity

Proposals submitted under this request shall be valid for 90 days from the date the proposal is due. The validity period shall be stated in the proposal submitted to PATH.