

Terms of Reference for Database Engineering Consultant

Introduction: Pact and Triple R

Triple R (Insika ya Kusasa) is a 5-year USAID \$40,000,000 project supporting the Government of the Kingdom of Eswatini and USAID in accelerating progress towards the 95-95-95 targets and sustainable HIV epidemic control by preventing new infections and reducing OVC and AGYW vulnerability. The project works in 24 Tinkhundla and aims to reach OVC (0 – 17 years), adolescent girls (15 – 19 years), young women (20 – 29 years), and OVC caregivers with HIV prevention and impact mitigation interventions that prevent new HIV infections and reduce vulnerability. Triple R is implementing DREAMS interventions targeting AGYW age 10 – 29. The project applies a flexibly structured mentoring approach focused on HIV prevention, SRH, life skills, and youth livelihoods. The project also uses SBCC and mobilization approaches to generate demand for high-impact services, using a human-centered design to directly engage beneficiaries in refining key messages. Insika ya Kusasa is expanding comprehensive and adolescent-friendly outreach services, strengthening bi-directional referrals between community and clinical platforms, and improving GBV prevention and case management.

Background: Shared Partner Database

Triple R has invested in building a DHIS2 database for its DREAMS data management system. Herein referred to as the “Triple R DREAMS database”, the DHIS2-based data management system is designed to longitudinally track data reflecting Triple R’s delivery of services to DREAMS beneficiaries, and their uptake of layered services as defined in the DREAMS service package. In addition to tracking client-level data for DREAMS activities, the system is meant to calculate DREAMS MER indicators, aggregate these for reporting, and create simple data analytics and dashboards for monitoring program progress.

To supplement Triple R’s DREAMS database, the project’s M&E system also uses CommCare for case management, and PowerBI for data analytics. Together, this three-part system enables community workers to submit data in real time and track client dashboards that show their critical needs to help prioritize services. The system is currently accessible to Pact and 11 sub-grantees who are implementing OVC and DREAMS interventions and thus allows not only integrated reporting of DREAMS indicators but also client sharing across partners for referral to services by other providers.

USAID has engaged Pact to upgrade and expand the Triple R DREAMS database into a national system for DREAMS reporting, where not only Pact and sub-grantees, but also other DREAMS prime implementing partners (IP’s) in the country can report into a single platform for calculating AGYW_PREV and services.

Objective

To expand and develop Triple R’s database into a national DREAMS database for implementing partners in Eswatini for AGYW_PREV data management, monitoring, and reporting.

Key Specifications for DREAMS database:

- 1) Create a shared space to store client enrollments so that clients can be referred across partners
- 2) Partners-specific access: exclusive space for client-level service data management and calculation of partner specific achievements for each implementing partner

- 3) Ability to aggregate AGYW_PREV from multiple partners and thus allowing single, de-duplicated reporting of AGYW_PREV at OU level

Scope of Work:

Pact seeks to engage a consultant that will assess the data architecture and programming needs to transform Triple R's DHIS2 instance into a functioning country-wide DREAMS database for implementing partners and then conduct the configuration and programming to transform the system. Pact will be responsible for convening the IP's and agreeing upon shared service classifications and harmonized data elements while the consultant will be responsible for developing out the DHIS2 instance to meet the needs of a multi-partner system. Pact will manage its own data and CommCare collection system and will ultimately be responsible for managing the DREAMS DHIS2 when completed; Partners will be responsible for basic system administration of their needs on the DREAMS database and management of their own separate data management systems. The consultant is expected to find viable solutions for sharing of clients while protecting data on a harmonized system that has the capacity to accept data from multiple partners' existing data systems.

Tasks:

- Review Pact and IP data points for harmonization and follow-up on any potential logical flaws or challenges in integrating data from outside systems
 - partners will be responsible for availing and mapping APIs or data submission if using an outside system; however
 - consultant needs to be aware of their plans to properly configure/account for significant needs
- Review needs and submit detailed upgrade plan with timebound configuration milestones
- Configure and adjust metadata to hold new services (data elements and program) of other IPs
- Adapt enrollment space and advise on workflow to allow for client pool to be accessible to record services by different partners
- Enable mechanism for referrals and recording services by different partners, through advising on workflow and setting up TEI UIDs. Partners with independent systems will develop APIs to CommCare and DHIS2 to allow for referrals issued by Community workers through Pact's CommCare to be accessible to partner database and feedback. DHIS2 consultant will advise on viability of set up
- Adjust Pact CommCare to DHIS2 API to meet needs of shared IP data elements
- Configure partner specific accesses and data protection mechanisms
- Test validity of UID fidelity and client de-duplication
- Configure country wide performance indicators including DREAMS services and key MER Indicators (OVC_SERV, OVC_HIVSTAT, PP_PREV, AGYW_PREV, PREP_NEW, GEND_GBV, HTS_TST, HTS_TST_POS, HTS_SELF) and configure exportable solution when indicator calculation not possible
- Create custom repeatable query report for export of Track Entity Instance/enrollment UIDs and services (to calculate AGYW_PREV)
- Test calculation, visualization and dashboards for the key indicators listed above
- Configure target setting platform in relation to the DREAMS services indicators listed above to enable progress monitoring for system users

- Conduct load testing that accounts for multiple data entry routes and verifies system performance
- Modify and re-test system following IP feedback
- Work with Pact Senior Information Systems Developer and Strategic Information Technical Lead to map and validate data flow from partners into DHIS2 system
- Produce documentation of system configuration (architecture, major decisions and design principles, data dictionaries and user/admin manuals)
- Orient DREAMS Partners Developers on configuration specifications and basic maintenance/troubleshooting of the system.

Performance Timeline

Deliverable	Due Date	Comments
Submit detailed work plan with milestones	10 September 2020	
Metadata configuration	15 September 2020	
Adjust Pact API if necessary	15 September 2020	
Adapt enrollment space, access, partner permissions	30 September 2020	
Configure partner and shared indicators	30 September 2020	
Preliminary testing/feedback	15 October 2020	
Configure APIs with partners	30 October 2020	
Build out SQL queries/ custom reports	30 October 2020	
Load Testing	10 November 2020	
Integrate Feedback and launch	20 November 2020	
Orientation to developers & System documentation	30 November 2020	

Proposal Submission

Proposal format: Firms should submit proposals with five sections:

1. Technical Proposal: firm should provide narrative with development and implementation methodology, proposed system structure, technical requirements for deployment, and timeline to cover all functional areas, by task. (page limit: 5)
2. Staffing List: information on the consultancy team, describing roles, profiles of consultants, participation level, and CVs.
3. Financial Proposal: should provide the total cost of the project, assuming a deliverables-based contract, and clearly detail project costs (such as hourly rate, materials needed, etc.). The financial proposal must be submitted in Excel.
4. Past Performance: firms will provide at least two examples of a type of work similar in scope to this request with justification of relevance.
5. References: firms must provide a minimum of three professional references for similar project work, along with contact phone number and email.

Proposal submission deadline **30 August 2020**: Applicants are encouraged to express interest by August 26. Applications must be submitted per the timeline on the cover sheet. At Pact's discretion, any

application received after the exact date and time specified for receipt may be considered ineligible for consideration.

Submission method for proposals: Submit applications electronically to Cody Ragonese at cragonese@pactworld.org. Documents must be submitted in Microsoft Word, Excel or Adobe PDF.

RFP Questions: Pact will accept questions on the RFP and current data systems from interested bidders per the guidelines on the cover page. Responses to submitted questions will be provided by Pact to all parties who express interest in the RFP.