

TERMS OF REFERENCE FOR WASHWISE DIGITAL TOOL AND DASHBOARD DEVELOPMENT

DELEGATION: Tdh Foundation, India Country Office

PROJECT: **AROGYA SWASTHYAKENDRA** - An Initiative to Create Healthy Healthcare Facilities Through Strengthening System to Improve WASH in Healthcare Facilities (HCFs) in Sundarbans, India.

PROGRAM: Health -WASH

1. About Terre des hommes

Terre des hommes (Tdh) is a leading Swiss child relief non-profit organization with headquarter in Lausanne, Switzerland. The Foundation has been helping over three million children and their families in need for over 60 years, defending their rights regardless of their race, creed, or political affiliation. Tdh's mission is to improve the living conditions of the most vulnerable children by direct support, advocacy, promoting child participation for the respect of their rights, strengthening communities and institutions to better respond to children's needs. In over 30 countries, Tdh protects children against exploitation and violence, improves children's and their Caregiver's health and provides emergency psychological and material support in humanitarian crises.

Tdh Foundation in India has been registered since 2008 as a Liaison Office and it has provided technical guidance and support to government structures and civil society organizations to defend and promote children's rights. Tdh's main programme priorities in India are Unsafe Migration, Maternal and Child health, WASH and Emergency response. Tdh's office in India is in Kolkata; and project interventions currently cover the states of Jharkhand and West Bengal. In 2023 through projects and together with local NGO partners, Tdh has reached more than 1,55,000 beneficiaries, including vulnerable children and their families.

2. About the Project

Sundarbans region, situated in the Bay of Bengal, is the world's largest delta and is highly vulnerable to the impacts of climate change. Healthcare facilities (HCFs) in this region face significant challenges, including a high patient load and a severe lack of basic water, sanitation, and hygiene (WASH) services for both staff and patients. Tdh along with its local partner Sundarban Social Development Centre (SSDC) is implementing Arogya Swasthyakendra project to improve water, sanitation and hygiene services in the healthcare facilities.

WASHWise, is envisioned to bridge gaps in coordination between health authorities and local government (PRI), streamline communication, and strengthen operation and maintenance systems for sustainable WASH improvements in HCFs.

WASHWise Application is for the Healthcare Facility (HCF) Staff, Block and District officials to provide assistance in improving the quality of WASH services at the HCF. The proposed WASHWise application offers a scalable and sustainable digital solution to address key challenges in the operation and maintenance of WASH services in HCFs through streamlined communication, real-time monitoring, digitalised information-repository, and built-in dashboard tracking the status of WASH services to support timely decision-making and efficient resource utilisation.

3. Scope of Work

The contracted agency will be responsible Android Mobile App Development with Back Office Support for 1 Year and Data Hosting and Security on secured server for 1 Year

Under this scope of work the contracted agency will perform the following task:

A. WASHWise Application

WASHWise Application will be a multilingual application in English and Bangla. WASHWise application will be accessed through android base devices (online and offline mode) and web-based dashboard.

WASHWise Application will have 3 modules –

- E-Learning Module,
- Reporting Module
- Feedback and Resolution Mechanism

It will be used by Health care facility staff, Block Medical officer and District Chief Medical Officer of Health to improve the quality of WASH Services through different modules mentioned above. Application will send notification to different user on the basis of information collected by different modules. Admin users will have a right to send push notification on different topics.

Key Features of WASH Wise Application:

- **1. User Access:**

The application will have five levels HCF, Block, District and State. The application will be accessed by different users at different levels through role-based access. Tdh will provide the details of the type of users, their roles and access rights.

- **Language of the Application:** The application will be in English and Bangla with possibility of adding languages later.

2. Knowledge Module

2.1 E-Learning Module: The e-learning module in WASHWise is designed as a practical digital learning aid to strengthen infection prevention and control (IPC) practices within healthcare facilities. Featuring capsule videos and interactive content. The module will be used by infection control Nurse of respective health facility for training and capacity building of cleaners on IPC. The e-learning Module will have Training modules which will have sub modules (6) on different topics, modality will be slide show, animations and videos.

End of each module will have a quiz to check the understanding of topics. The Trainer will also submit a Training report at the end of training.

Daily quiz: One question related to health and WASH practices to be popped up on daily basis. The user has to choose from two options. At the end of month, app will show score based on the answers provided in quiz

2.2 Information Repository: In addition to that E-learning module will have Information Repository which will contain Guidelines, IEC Material, informative videos etc. The content on Information repository could be uploaded through admin Panel.

3 Reporting Module

Reporting module will have a set of different reports Format which will be filled by Nurse at the HCF level at the identified frequency. Nurse will receive notification when reports are due for submission

3.1: Supervision of WASH Facilities: This Supervision Report will be filled up by Nurse once in a month. This report will be consisting of status of water, sanitation, hygiene, waste management, environmental cleaning services in General Service Area and in Delivery Room. Notification will be send to block and district on the basis of data

3.2 Digital stock register: This module will also have a digital stock register for cleaning equipment. Nurse will also update digital stock register for cleaning equipment on a monthly basis.

3.3 Kayakalp Assessment & Report: This report is to be filled up by Nurse on quarterly basis based on Kayakalp indicators Block and District level users will also fil it during supportive supervision facility visit. (The report will include a summary of findings along with the areas requiring improvement, as identified through the indicators score)

3.4 WASH FIT Assessment & Report: This report is to be filled up by Nurses on 6 monthly basis based on WASH FIT indicators. (The report will include a summary of findings along with the areas requiring improvement, as identified through the indicators score).

3.5. Healthcare Facility Information : This report will be filed by Nurse. It will be updated on a quarterly basis.

3.6 In-App Surveys: Quick polls on app usability or recent training on a quarterly basis. This poll questionnaire will be filled out by all users.

Module 3: Feedback and Resolution Mechanism:

- This Module will be filled up by Nurse. This section will be used to flag issues related to non-functionality of water, sanitation, hygiene facilities in HCFs.
- Nurse will flag the issue from the list and Block Medical Officer of Health will receive the notification regarding the issue.
- Issue will remain open for Block Medical Officer of Health to resolve up to specific period of time. Different category of issues will have different t issue resolving window as per the WASH FT guidelines.

If the issue remain unresolved and issue resolving time window has passed than issue will be escalated to district user. He will also receive a notification in this regard. This will enable ICN to flag issue related functionality of water, sanitation and hygiene facilities in health facility, with an option to escalate it to higher authority. ICN will also close the matter once it is addressed.

B. WASHWise Dashboard:

Dashboard displays the data captured by WASHWISE to program managers and government officials at various levels (District, Block, and Health Care Facility) though interactive dashboard, standard reports, and query builder reports.

- **User Access:** Dashboard will be available to multiple users at various levels (State/ district/block /HCF according to data access permissions and roles.
- **Dashboard:** An interactive dashboard that provides a summary of the progress on selected data elements and indicators
 - There will be approximately 10-12 items display zones for graphs and charts on the dashboard at state, district and block level.
 - Dashboard of 10-15 selected indicators on WASHWise app for IPC Nurse.

- **Reports:** There will be a provision to generate and download the following reports (in multiple formats like MS Excel, CSV, PDF, MS word etc.):
 - Predefined standard reports (10-15 in number) to be generated at multiple level (District/ block /facility) based on predefined indicators and aggregated data.
 - **Data Analyzer (Query Builder):** Interactive tool to view and analyze the data:
Customized reports to be generated based on a selectable list of data elements and indicators and selection criteria related to periodicity and hierarchical level.
- **Notifications:**
Application will send the different type of notification to the users

Real-Time Alerts & Notifications: on the basis of data filled in on various reports.

Task Reminders- To fill different reports on time

1. **Escalation Pushes- Flagging cases to higher level if not resolved at specified time frame**
2. **Update Notification:** District user will be able to post the notification to users.

4. Platform Hosting, Management and Updates

This WASHWise Application will be available on Play Store for free download by the Users.

In the development and testing phase, the application will be hosted by the contracted agency on a secure server with the compliance of all necessary security protocols as per Gol protocols. The final approved application will be deployed on the data centre identified by the Tdh.

5. Technology

WASHWise application will be accessed through android base devices and web-based dashboard. The technology platform to be used for the development of WASHWise application will be finalized in consultation with Tdh and its partner agencies. The agency will propose the final technology and the architecture after the consultation meetings. The application will be built upon agreed on technology and the architecture.

Proposed Technical Requirement

Delivery and code versioning	Github repository
Application packaging	Docker Container and Docker Compose for multi services apps
Database technology	PostgreSQL
Coding Language	Highly recommended: Flutter / FlutterFlow
Data Visualization Tool	Apache Superset
Backend (Mobile apps)	Google Firebase (For projects allowing its usage in terms of data protection)
Health database	FHIR
Testing environment	A testing environment is mandatory

Internet connectivity

Offline-first architecture for projects with very bad connectivity

6. Data Protection

On Server, all data is stored in encrypted storage devices. This protects the data from physical disk access, even by the hosting provider. The protected data includes application code, database, images, documents and more. The encryption is implemented with Linux Unified Key Setup (LUKS), using industrial standard algorithm Advanced Encryption Standard (AES) with a strong 256 bit key. Sensitive data goes through an extra pass of brute-force-resistant Bcrypt encryption.

Server is also setup to provide the following:

1. Restrict usage to authorized users.
2. Logs and retains OS level activities such as logins, failed login attempts, file access, etc. providing an audit trail for forensic analysis.
3. Automated review of logs for malicious or anomalous activity.
4. Automated intrusion detection.
5. Requires multi-factor authentication to strongly establish the identity of users.
6. Facilitates creation and use of encrypted file systems.
7. Provides incremental backups and data archival.
8. Has documented and well-tested disaster recovery procedures.

All material, produced during the order fulfilment such as source code, data structures, documentation, design options, etc. will be transferred to Tdh after confirmation of the successful receipt and project completion.

7. Task and Output Details

The Agency will have to submit a technical and financial proposal, work plan and budget.

Tasks and Outputs

- a. **Finalize the technology requirements:** The agency will coordinate and work with TDH team to finalize and list out key features of WASHWise Application. The technology partner will also lead a brainstorming workshop with the TDH and its partners to finalize the technological requirements.
- b. **Develop the WASHWise Application:** The agency will develop WASHWise Application as per the finalized functional and technological requirements. The agency will work closely with Tdh which will support functional testing of the application and provide necessary feedback. All the feedback provided needs to be incorporated into the application prior to pilot testing.
- c. **Pilot testing:** The finalization of the Design and functionality of WASHWise app will be based on the outcome of a rigorous pilot test.
 - i. Before testing the platform, the technology partner will train the core team from Tdh and its partner organizations on the use of the WASHWise Application.
 - ii. The agency will also provide around-the-clock application management, network monitoring, and customer support - to ensure that there is minimum downtime, instant query resolutions and quick bug fixation.
- d. **Finalization of the WASHWise app:** Pilot testing the application in the real environment will provide critical insights. Based on the lessons learned, all further accommodations in design and functionalities will need to be finalized. A high quality, bug free application that meets the requirements is expected to be handed over to Tdh at the end of the engagement within 2 weeks after the pilot implementation is over.

- e. **Application Hosting and Maintenance:** Agency will deploy the application on the google play store. Initially the agency will host the application on secured server and ensure the compliance to data protection guidelines of Gol and State of West Bengal. The agency will be responsible for deployment of WASHWise Application to a sever identified by Tdh. Agency will provide the maintenance and update up to 6 months of transfer of WASH Wise Application.
- f. **Training:** The agency will develop training material to aid the training of the users. Agency will train the master trainers from Tdh and its partner organisations on different functionalities of the WASHWise Application for data visualization and analysis.
- g. **Bug Resolution Protocol for Washwise Application**
During pilot testing and regular use of the Washwise application, any bugs or technical issues identified will be resolved within **24 hours**. A dedicated team will quickly address these issues to ensure minimal disruption and maintain a seamless user experience.
- h. **Handover of Technical documents and Source code:** The agency will hand over the technical documents and source code to the Tdh.

8. Contract Period

Total Contract Period- 12 months

- **For development and testing:** 6 months
- **For post deployment support:** 6 months

9. Safeguarding and ethical guidelines

The Development of IT platform will be guided by the following ethical principles and considerations:

- Tdh requires a 'do no harm to children' and 'no harm to communities' as a central theme of the endline. This is to be interwoven into all aspects of the endline.
- A responsible authority from the agency must sign the Terre des hommes Child Safeguarding Policy and Global Code of Conduct and be willing to adhere to its principles and expected practices. If a breach of the policy or code of conduct takes place the consultancy will be terminated immediately without any financial burden on Tdh.
- Informed consent should be given before participating in a study, and the participants should be able to withdraw at any moment. Respondents should be explained how the Study findings are likely to be used. They must then be asked, and must be free to choose, whether: they can be quoted in materials; photographs can be taken and used, name can be used in material. Their choices must be clearly recorded and always kept with their testimony and/or the relevant media.
- If it is agreed that all or any part of a participant's testimony should be confidential, then that commitment must be clearly recorded and respected. If the testimony is to be made anonymous, or used with a false name, make sure that any other identifying details are also changed.
- The agency must maintain data security and provide a data security plan.
- No money should be given for participating in a survey, unless participants would have incurred direct financial cost for ensuring their participation.

During the survey, any serious protection case identified should be reported or referred. Participants to the survey should be enabled to contact Tdh team or the supervisor of the survey to report any major issue.

10. Ownership and disclosure of data/information

All documents, design, data and information shall be treated as confidential and shall not without the written consent of Tdh be made available to any third party. In addition, the agency formally undertakes not to disclose

any parts of the confidential information and shall not, without the written approval of Tdh share it with any third party.

The utilization of the report is solely at the decision and discretion of Tdh. All the documents containing both raw data / materials provided by Tdh or any of its partners on their behalf, both in soft and hard copies are to be returned to Tdh upon completion of the assignment. All documentation and reports written as, and as a result of the research or otherwise related to it, shall remain the property of Tdh. No part of the report shall be reproduced except with the prior, expressed and specific written permission of Tdh.

11. Budget

Applicants are requested to submit financial proposal along with technical proposal, based on the above mentioned requirements. The financial proposal should contain app development cost, hosting and maintenance support of app post deployment for 6 months.

Contract will be made with Tdh head quarter based in Switzerland and currency of payment will be Swiss Franc to the bank account of the applicant in India. Deductions of tax will be made as per law of the country if applicable.

12. Application process and timeline

Interested agencies are invited to submit the following application documents:

1. Expression of interest outlining how the agency meets the selection criteria and their understanding of the ToR .
2. Technical proposal is to be submitted following the requirements mentioned in ToR.
3. Copy of profile of the agency, including the CVs of the key team members who will lead the assignment.
4. Two recent example of similar digital product by the applicant agency.
5. Financial proposal with all required details.
6. Contacts of 3 references / agencies where recent assignments have been undertaken
7. Recruitment procedure follows the Child Safeguarding Policy, including reference checks.
8. Only short-listed agencies will be contacted.

N.B.: Please mention – “**WASHWise Digital tool and Dashboard Development**” in the email subject line and send it to our email id ind.office@tdh.org by **5th November 2025**.