



# Healthsites alignment with OpenHIE architecture

## Overview

Healthsites.io plans to support the maintenance of baseline health facility data with OpenStreetMap.

In order to support the Health Information Systems being used within Ministries of Health such as DHIS2, Healthsites.io intends to support the FHIR standard for exchanging electronic health records as it relates to health care facilities.

During the notice B development phase Healthsites specified a phased implementation plan. Our developers and digital producers will implement this standard and test with project partners.

## Executive Summary

The investment will fund the integration of Healthsites.io with Health Information Systems that support the FHIR standard. This will allow Ministries to take advantage of baseline health facility data in OpenStreetmap to maintain their master facility list. This has a variety of benefits including cost saving, improved accessibility and enhanced data analysis.

We will make use of the The Instant OpenHIE project and provide incremental value while gaining experience with FHIR by taking a phased implementation approach.

We will continue working with the project team established during the Notice B phase. Specifically Janusz Slota (Healthsites) and Doug Moran (eHealthAfrica)

## Consortium Team

Open Healthsite Consulting Ltd leads the project. It provides business analysis and Agile project management. We intend to manage the work in a similar way to the work done in Notice B. The difference this time is that we want to place the primary use cases of Epidemiologists and the Instant OPenHIE approach at the center of the work.

We request collaboration with end users (**Epidemiologists**) of the data.

We request collaboration with **Jembi Health Systems** and the **Asia eHealth Information Network (AeHIN)** who are experienced in implementing the FHIR standard and are Advancing Instant OpenHIE.

We plan to collaborate with individuals and partners established during the pilot phase of the Notice B. These users are experienced software developers and organisations that maintain Health Information Systems. They make use of data in the field to support use cases such as vaccination roll out campaigns and strategic purchasing.

## Project Description

The Global Healthsites Mapping Project is building an open data commons of health facility data with OpenStreetMap. We believe that by leaning on the methods and infrastructure of OpenStreetMap, baseline health facility data can be maintained.

Key activities of Healthsites include:

- Enabling National health agencies and organisations to share and contribute data to OpenStreetMap
- Enabling collaboration between national health agencies and volunteer communities
- Connecting multiple data streams to build higher quality data
- Explore Human Centered Design to drive the development of the data

Saving health facility data to OpenStreetMap improves interoperability and harnesses the contributions of citizens, academic institutions, businesses and organisations who use the data in their daily operations. In addition to cost savings, improved health facility data supports epidemic preparedness, immunization programs, disaster response, Maternity care and Health capacity planning.

When a natural disaster or disease outbreak occurs there is a rush to establish accurate health care location data that can be used to support people on the ground. This has been demonstrated by events such as the Haiti earthquake and the Ebola epidemic in West Africa. As a result, valuable time is spent establishing accurate and accessible baseline health data. Healthsites establishes this data and the tools necessary to upload, manage and make this data easily and readily accessible.

Healthsites will take the following steps on it's way to full FHIR compatibility.

Phase 1 - Allowing applications to read and write to OpenStreetMap via Healthsites.io

Phase 2 - Develop the services required to implement a minimal RESTful FHIR based exchange framework and be conformant to "RESTful FHIR"

Phase 3 - Expand phase 2 to support create, search, and update health facility data.

We will work with the Instant OpenHIE project as well as with end users epidemiologists . We will test our software using test scenarios described in the project user stories.

We plan to link into the Instant OpenHIE project by developing tooling around the OpenHIE Architecture.

- **Deliverables & Schedule:** We will establish a Global service for Ministries of Health. Ministries will be able to integrate the Healthsites Module into their DHIS2 instance and use it to maintain their Master facility list.
  - We estimate that the development will take six months.
- **Risk Mitigation:**
  - Risk - Poor collaboration with project partners based in Senegal.
  - Mitigation - through engagement with experienced OpenHIE practitioners ( **Jembi Health Systems, Asia eHealth Information Network (AeHIN)** ) who understand the use case and operate the same software.