

Developing Secure and Scalable ehealth Solutions

Aether is a reliable and secure development platform created by eHealth Africa to enable organizations to build solutions that curate and exchange live information. It utilizes “data contracts” between systems, simplifies the movement of data between applications, and helps developers adhere to best practices for ehealth system design.

Aether is an open source project that is freely available to everyone.

The beginning of the story

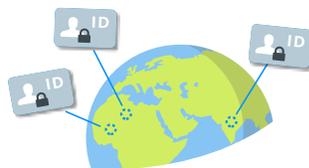
eHealth Africa’s years of experience in developing data-driven solutions for health systems has shown that we faced recurring challenges when building tailored solutions. We decided to solve many of these challenges once and for all, and came up with a unique application that enables us to speed up the way effective health intervention and emergency services decisions are made.

The challenges



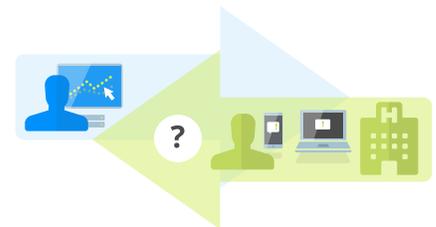
1. Interoperability

Clinical and laboratory data must be shared among partners in the public health sector. However, sharing information is complicated by the lack of defined and enforceable data structures. This is an expensive and time consuming problem.



2. Security and Privacy

Privacy and security are particularly important when handling personally-identifiable health records. Although right to health data protection is established, it is not always prioritized.



3. Lack of data workflow processes

Ineffective processes for creating, modifying, and releasing health data delays the availability of accurate, up-to-date information. This hinders the decision-making process and impacts public health services delivery.

„We believe that eHealth Africa solutions save lives when they are completed quickly, adopted fully, maintained easily and interoperate with other solutions.“

What aether does



Collection and mapping of different data sources

Aether collects structured input from a variety of sources using “data contracts”. Data contracts specify how each organization’s structured data is mapped to common definitions. By using data contracts, Aether ensures interoperability between data-producing and data-consuming applications.

Connecting to external applications in real time

Processed data is stored as messages which can be read by or published to external applications. Software developers are free to develop connectors for unsupported or custom applications using an Aether Software Developer Kit.

Data Masking and Publishing in Cloud environments

Patient privacy is assured by masking or transforming personal records. Aether can be deployed using high trust cloud environments such as Amazon, Google, Microsoft, as well as on-premises deployment in order to reinforce security and better manage data sharing workflows.

A world of possibilities: some of the use cases being impacted by Aether

CASE A

A Ministry of Health is doing a facility assessment survey and wants to view records as they are submitted. Aether manages the flow of data and automatically updates the survey dataset in a data portal.

CASE B

The same Ministry of Health wants to replicate data collected with a form in real time to a third party that will use the data for outbreak modelling. Aether detects, extracts, and securely forwards the data to the third party, masking personally-identifiable information.

CASE C

A country’s vaccine supplies are held in a large number of cold store units. Each of these use different hardware, with different sensors. Using Aether’s data contracts, it would be possible to transform the data from these sensors in real time and consolidate the information into a single dashboard.

We help you build custom open source solutions.
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