



## Achieving the vision of 'shared investment, shared benefit' community software development

### GAP Project Success Story

OpenLMIS believes in an open source software development philosophy of *'shared investment, and shared benefit'* whereby our community of global users are linked through a core code base, and enhancements made by one country can be accessed and used by anyone in the community. To achieve this vision, the United States Agency for International Development (USAID) and Digital Square funded the GAP Project, a 1 year initiative to unify the OpenLMIS codebase.

Prior to the implementation of the GAP Project, the OpenLMIS community was comprised of a set of nation-wide implementations who were all using slightly different versions of OpenLMIS. Furthermore, the core code was often forked in different directions, and we lacked a plan or vision for community alignment on the various versions implemented. Because countries were using different versions of the software, their priorities, problems, and measures for success were different too. In this environment, community collaboration to improve OpenLMIS as an open source product became increasingly difficult as the user needs continued to diversify over time. OpenLMIS version 3.x is the current, community-supported version of OpenLMIS, which allows countries to share the same code base, and benefit from each others' contributions and new features over time. The GAP project was introduced as a critical step in breaching the code gap for the national-level deployments of OpenLMIS v2. in Tanzania and Zambia, with the end goal of creating an upgrade path to OpenLMIS v3. Tanzania and Zambia were chosen as the representative v2 instances because of their long implementation history and continued active development by the local JSI team located in Zambia.

### Achieving the vision of 'shared investment, shared benefit'



An initial 'gap analysis' (funded by USAID through Digital Square) was conducted to identify feature parodies between the different versions of the software. The GAP project was then initiated to engage software development teams who would add new features in order to bridge

this divide according to the identified feature priorities. The aforementioned implementations allowed us to include a broad range of features in the gap analysis, given their maturity and the continued expansion of the feature set. The GAP project was successful in completing 22 of the features identified in the gap analysis, and laying the groundwork for future software upgrades to version 3.x in Tanzania and Zambia. Three notable features include the conversion of a requisition to an order and subsequent transfer to a warehouse system, integration with the OpenHIE mCSD facility registry, and the recreation of many of the original eLMIS reports in the new OpenLMIS reporting system. This work represents the success of four organizations (John Snow Inc., SolDevelo, Ona, and VillageReach) working collaboratively to deliver quality software and add valuable features within the timeframe and budget of the project.

Alfred Mchau, an LMIS Technical Advisor from the Global Health Supply Chain Project (GHSC/PSM) has been involved since the infancy of this project, and agrees that the project outcomes will be highly beneficial for the future eLMIS systems in both Tanzania and Zambia. He also expects that the work will support their ongoing efforts to transition the eLMIS to the government of Tanzania by 2023.

*'As advisors, it is our goal to leave the Tanzania eLMIS system in a position where it can benefit from future releases, new features and support. The Gap Project has enabled this transition.'*

*Alfred Mchau, GHSC/PSM*

From the outset, this project prioritized in-country perspectives on feature priorities, so that user feedback and Ministry of Health needs were continually reflected in the project roadmap. The use of in-country developers, and close coordination with partners was essential in ensuring accurate representation of country priorities. Through participating in some of the core feature development for the project, technical staff in Tanzania and Zambia were also able to gain a greater understanding and appreciation for the v3 product. They learned how newly added features like using product kits, could be beneficial to their constituents at the country and community level. This internal capacity building around v3 features is a key prerequisite for ensuring that a future upgrade is successful and sustainably maintained with local technical expertise.

## Benefits of the GAP Project for OpenLMIS



## Looking Ahead

Simultaneously with the GAP Project, the OpenLMIS technical team has also been working on an approach to create an upgrade path for Tanzania. This work, known as Project Casper, has successfully identified an incremental upgrade path, allowing for a gradual transition from v2 to v3, while also providing many of the key benefits from the new reporting capabilities in v3. This approach has been proven successful from a technical standpoint, and it's pilot implementation is currently under discussion with stakeholders at the Tanzania Ministry of Health.

## Benefits of Upgrading

For countries using older versions of OpenLMIS, there are many benefits to upgrading to the latest software version, including new features and support from the growing community of global v3 users. By using the most current version of OpenLMIS, countries can take advantage of the v3 architecture: extending the system where necessary to meet country-specific needs while maintaining the ability to receive OpenLMIS Core software updates.

- **Features:** An upgrade to OpenLMIS v3 will make a variety of new features available. Examples include: Stock Management; Reporting and Analytics; Vaccine support and more.
- **Maintenance / Ongoing Operations:** Receive ongoing software updates (version 3.x.y) that provide new features, bug fixes, and performance improvements.
- **Interoperability:** OpenLMIS v3 uses standards-based interoperability such as HL7 FHIR and GS1 standards that fit the OpenHIE architecture.
- **Shared Value:** A large pool of countries sharing the same code base allows them to share features and benefit from each others' contributions.

The GAP Project represents an important turning point in the OpenLMIS initiative, which is well-aligned with our 'shared investment, shared benefit' philosophy. The project was successful in highlighting the issues associated with code forking and version parodies, as well as set our community on a path where countries feel aligned and motivated to upgrade to the latest version.

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