openIMIS Initiative

Strategic Principles *(March 2018)*

1. Preamble

As the Director-General of the World Health Organization already stated in 2017 ' All roads lead to universal health coverage (…), it is a fundamental human right(Dr. Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization, Remarks at the High-level Political Forum, New York, USA, 17 July 2017). With the adoption of the Sustainable Development Goals, this claim started to be put into reality. As the overarching target of Goal 3.8 (Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all), UHC has become a central tool and aim of Global Health, strongly supported by German and Swiss Development Cooperation.

2. Digital change

Universal Health Coverage policies and coverage plans, eHealth Strategies, implementation challenges, and available technologies may vary from country to country. Yet, many countries face similar problems and have a fundamental need for consistent data exchange between health care providers, insurers, government agencies, and other stakeholders. Hence, developing a shared approach that is applicable to numerous countries could best address these difficulties. ICT solutions that address common challenges and that can at the same time be tailored to specific needs have in the past been successfully designed by open source software communities such as DHIS-2, OpenMRS (open Medical Record System) and OpenLMIS (open Logistics Management Information System).

Despite their tremendous contribution to public health, these products were aligned with the past MDG era and the existing technology gap serving a health systems approach instead of a disease specific one remained.

An increasing number of countries is in the process of expanding health coverage and social protection of their population, particularly to people working in the informal sector and rural populations including vulnerable groups. To increase efficiency of health and social protection systems and to support the decision making for sustainable health and social protection financing, national digital strategies focusing on interoperability are required to overcome the fragmentation of available IT solutions. Management of these systems is complex and data-intensive. Modern health and social protection systems cannot be controlled without an all-encompassing approach to data management. Despite historic, political and cultural differences that have brought about different health policy strategies and health and social protection system orientations, the basic functions and business processes within health and social protection systems are usually similar enough to allow for standardized approaches to data management and the effective facilitation of these processes.

ICT solutions have been developed for supporting business processes and data management in different countries' health and social protection systems. Occasionally, these solutions have been implemented with a pilot character within narrow regional boundaries or address only

selected processes within an overarching health and social protection system context. ICT solutions have also been developed by different types of social (health) insurance schemes as many low and middle-income countries gradually expand health coverage and financial protection to more population segments. Upscaling available solutions to a national level is a complex task and most countries do not have and/or mobilize sufficient financial and technical resources to implement, customize and manage complex ICT systems.

3. openIMIS

3.1 Background

The openIMIS initiative has set out to fill this gap and provide digital solutions for reaching Universal Health Coverage (UHC) and Universal Social Protection (USP).

The Insurance Management Information System (IMIS), which was designed by the Swiss Tropical and Public Health Institute (Swiss TPH) was funded by the Swiss Agency for Development and Cooperation (SDC). It constitutes an IT solution suitable for the effective management of different types of (health) insurance and potentially other financing mechanisms for social (health) protection in low- and middle-income countries moving towards UHC and USP. IMIS was first implemented in 2012 as the IT backbone for operating community health funds (CHF), district-based pre-payment schemes in Tanzania. The system was then adopted for a mutual health insurance scheme in Cameroon and — supported by the German Development Cooperation – for operating Nepal's national health insurance scheme. IMIS has grown organically and has demonstrated the potential for easy adaptation to different types of health financing and social protection mechanisms moving towards UHC and USP. Therefore, SDC decided to support the development of an open source solution based on IMIS in order to make it more broadly available to countries and organizations.

By the end of 2016, an IMIS master version has been developed and has been tested in 2017 by Tanzania and Nepal. The master version's source code was published on GitHub and an open source software community will be set up around it. The purpose of this community is to modularize, maintain and regularly update the software.

3.2 Value proposition and scope

Many developing countries in Asia and Africa have already introduced some kind of public health financing and social protection mechanism but are now dealing with highly fragmented IT applications among implementers. Other developing countries have yet to implement programs, or are in the final planning stages, and their governments would like to use lessons learnt and avoid making unnecessary mistakes.

In recent years, the focus of IT projects in health systems has been on data extraction, monitoring and evaluation, and not on improving the operational side of social health insurance implementations.

openIMIS is an open source software initiative for the management of information related to insurances and other financing schemes serving to fill the above-mentioned gap.

3.2.1 ICT solution for social (health) insurance and other financing schemes

The Master Version of openIMIS stands out with the following modules and functionalities:

- Functionalities: enrolment; verifications; claim submission; claims review; client Feedback
- Online- and offline installation;
- Front end interface allows for quick registration procedures even for remote, rural population
- Fraud control
- Contribution collection module
- Dashboard and reports

3.2.2 Value proposition

Global Good for UHC and USP

The openIMIS Initiative aims to foster an open source solution as global good which is affordable, manageable and continuously optimized.The openIMIS Initiative provides a comprehensive system linking beneficiary, provider and payer data. It is managed and continuously improved by an open source software community. With an open source software, the copyright holders make the source code available for anyone to copy, modify, and distribute. The openIMIS product is available under the GNU AGPL v3 Lizenz (GNU Affero General Public License Version 3), which allows free download, changes to the code, but also asks the downloading party to feed new developments back to the community.

The open source approach has been chosen over a proprietary solution due to its many advantages, as:

- efficiency gains of being able to build on other countries' experiences;
- progress towards international standardization of health systems data;
- avoidance of vendor lock-in;
- flexibility for adaptations;
- (technical) support by an international community of practice.

Modular and adaptable design

The openIMIS product will have a modular build, allowing it to be adapted to the needs of a variety of low- and middle-income countries on their path to UHC and USP. While the core of the software will cover commonly needed functions and reflects the main business processes of (health) payer organizations, it still has to be customized according to country specific requirements when implementing the product in different contexts.

Interoperability

Additionally, opportunities to align and interconnect the openIMIS product with other existing digital solutions in the country (e.g. single registries, medical record systems, health

management information systems) should be explored to leverage existing structures and avoid engineering siloed ICT-solutions.

Sustainable approach

In-country and regional technical capacities have to be built and technical support needs to be offered especially during the customization of the software. The customization of openIMIS according to local needs should promote and build development capacity in the local software industry. Since a greater proportion of the technical and human resources will stay in the country, the sustainability of local cost-effective support is also improved. The initiative also seeks to create a community of practice for the software development and end users.

3.3.3 Nature of openIMIS Initiative

- openIMIS Initiative honors the principles for digital development, which are “living” guidelines that can help development practitioners integrate established best practices into technology-enabled programs;
- openIMIS Initiative seeks to provide a comprehensive system linking client, provider and payer data. This system will be managed and continuously improved by an open source software community;
- openIMIS Initiative will be a community of practice for the software development and end users, and provides capacity development services;
- openIMIS Initiative will engage diverse expertise across disciplines, will continuously document its work and share best practices and experiences widely and regularly;
- openIMIS Initiative is a global community, which is open to all stakeholders interested in exchanging and collaborating in the area of social (health) insurance for Universal Social Protection;
- openIMIS Initiative itself is part of global networks discussing and developing normative standards in digital health and will adhere and promote specific standardized approaches or tools.

3.3.4 Nature of the openIMIS product

- openIMIS product is a global good fostering the development of tailor-made solutions;
- openIMIS product is an open source solution, which is business process and data driven;
- openIMIS product will have a modularbuilt, allowing it to be adapted to the needs of a variety of low- and middle-income countries;
- openIMIS is a software product, which has the potential to work interoperable with other available IT solutions in the health sector such as Patient Management Systems or Electronic Health Record Systems. The interoperability will be reached by using international standards protocols and codes (e.g. Facility Codes, Service Codes, Diagnosis Codes etc.) to submit claims electronically;
- openIMIS product is designed with the user, for scale and a corner stone for sustainable growth;

- openIMIS product will be continuously improved and reused in new implementations, benefitting from the collaborative nature of the initiative.

4. Vision

The implementation of a continuously improved open source Management Information System for social (health) protection schemes (openIMIS) will lead to effectively managed insurance schemes and other financing mechanisms, and ultimately contribute to universal health coverage and universal social protection.

5. Mission

Continuously and collaboratively develop shared, open-source software to improve data and information management of (health) insurance and other financing mechanism for universal health coverage and universal social protection in low and middle-income countries, making openIMIS product a freely available Global Good[1].

6. Results

The overall goal to which the initiative strives to contribute, is the gradual inclusion of hitherto excluded populations into social (health) protection schemes, by improving the schemes´ data and information management capacities through openIMIS.

All outcomes and outputs listed below are geared towards achieving this overall goal:

Outcome 1: **An active network of developers and practitioners continuously advances the openIMIS software core, modules and country specific adaptation.**

Output 1: The openIMIS source code is publicly accessible under an open source license for country-specific customisation.

Output 2: A community of open source software developers is established and active.

Output 3: A feedback exchange between developers and actual users is facilitated regularly.

The Developer Community will be evolving according to customer needs and the capabilities and organizational aims of the different partners. GIZ assumes the responsibility (under the orientation of the Steering Group) to moderate and steer the community development. This includes identifying and supporting potential partners, creating opportunities and motivation for organizations and individual developers and implementers to contribute to the growth of the program. Part of this is an active and transparent communication approach, which reflects the open source and community approach.

[1] A global good is a tool that is adaptable to different countries and contexts. Mature digital health global good software is software that is (usually) Free and Open Source Software(FOSS), is supported by a strong community, has a clear governance structure, is funded by multiple sources, has been deployed at significant scale, is used across multiple countries, has demonstrated effectiveness, is designed to be interoperable, and is an emergent standard application.

Outcome 2: **In-country capacities are strengthened, in order to adapt, utilize and maintain the open-source software to country-specific needs.**

Output 4: On-the-job training for (health) insurance managers, experts and other people who will use the new software has been produced.

Output 5: Local capacities are strengthened in customizing and managing openIMIS.

The openIMIS Implementation Toolkit will orient the different involved stakeholders at country level to the diverse tasks involved in deploying an openIMIS based management information system. The resources in the toolkit will represent the collective experiences of how best to launch, support and use openIMIS, based on implementations over the past five years in three countries. New countries will be supported by the global network in training local human resources for the customization and management of openIMIS.

Outcome 3: **ICT infrastructure for Insurance and other finance mechanisms is complemented by openIMIS or specific modules.**

Output 6: Community Tools have been created and are maintained on a regular basis.

Output 7: Community of practice for users have been established in existing networks.

Output 8: Insurers / payers have received support to assess insurance schemes and other finance mechanisms regarding ICT infrastructure.

The practitioners community of practice will provide country input on challenges, priorities, and user requirements that will inform the direction and development of openIMIS. The expected outcomes for the community of practice are anticipated to improve knowledge and resources available at the global level which will shape global solutions supporting benefit management operations and which can be used at the country level to support the implementation and use of information systems supporting social protection programs.

7. Status

The openIMIS Initiative is not an independent legal entity but a collaborative mechanism between the interested parties stated in the Governance structure. **The Initiative aims to foster openIMIS as a knowledge sharing community and guiding approach for country implementations.** The coordination function of the initiative shall in all respects be administered in accordance with the respective applicable policies, procedures and practices of the hosting organization. The coordination function of the initiative is currently filled by the Gesellschaft für Internationale Zusammenarbeit (GIZ).

8. Collaborating parties

Governance structure, roles and responsibilities are detailed in the document “openIMIS Governance structure”.