

Assessment Background

The East African Community (EAC), a regional intergovernmental organization of six partner states, has worked for the past decade to improve the efficacy and efficiency of health services in member countries, with a focus on strengthening digital health (also known as eHealth). The EAC has committed to supporting regional actions to strengthen the enabling environment for effective digital health information systems (HIS).

In 2018, the EAC commissioned an assessment of the status of eHealth and the interoperability of its components across member states under the oversight of the EAC's East African Science and Technology Commission. In 2019, the Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC) of Tanzania, the President's Office of Regional Administration and Local Government (PORALG), and the Ministry of Health of Zanzibar partnered with MEASURE Evaluation—a project funded by the United States Agency for International Development (USAID)—to assess the interoperability and readiness of the United Republic of Tanzania's HIS as part of this regional assessment. This brief highlights the results of this assessment for Mainland Tanzania (hereafter referred to as "Tanzania").

Methods

The MOHCDGEC and MEASURE Evaluation used the HIS Interoperability Maturity Assessment Toolkit¹ to examine Tanzania's HIS according to three key domains of interoperability: leadership and governance, human resources, and technology. The assessment consisted of a desk review of existing literature and policies on digital health, meetings to interview and learn from HIS and digital health stakeholders, and workshops with HIS and digital health stakeholders. During the workshops, stakeholders from organizations that support HIS strengthening in Tanzania participated in guided discussions and reached consensus on the country's maturity level for each of the 18 subdomains of interoperability in the [HIS Interoperability Maturity Model](#).

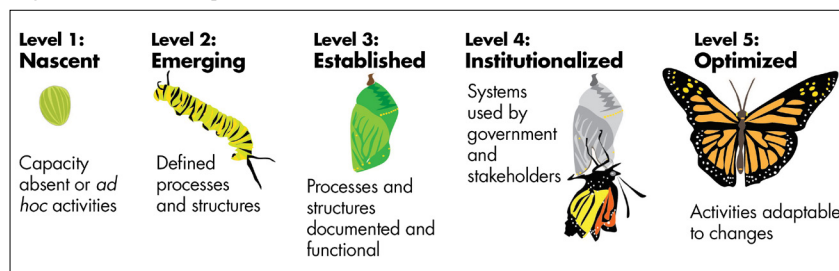
¹ MEASURE Evaluation. (2019). Health Information Systems Interoperability Maturity Toolkit. Retrieved from <https://www.measureevaluation.org/resources/tools/health-information-systems-interoperability-toolkit/health-information-systems-interoperability-toolkit>

East African Community Digital Health and Interoperability Assessments Results at a Glance: Tanzania

Five-Point Maturity Scale

The HIS Interoperability Maturity Model uses a five-point scale to assess processes, capabilities, and documentation related to each subdomain. The scale starts at "nascent" with a score of one, and goes to "optimized" with a score of five as shown in this figure.

Figure 1. Maturity model levels

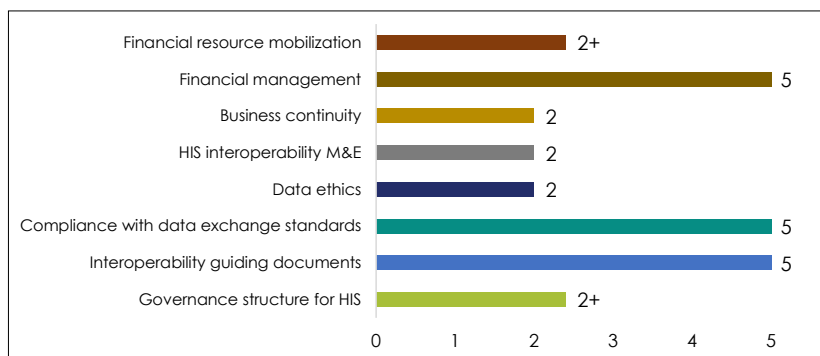


Results

The following figures depict the maturity level of each of the subdomains within the three domains (leadership and governance, human resources, and technology).

Leadership and Governance

Figure 2. Leadership and governance subdomain maturity levels in 2019

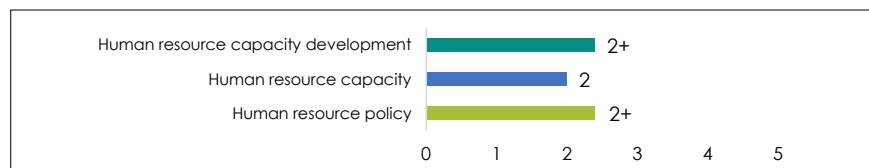


The assessment results highlighted the leadership and synergy of MOHCDGEC and PORALG in developing a vision for the health information exchange (HIE) in Tanzania. Interviewees commented that activities were more coordinated and that the government required more documentation to approve a project. The HIS governing body, the eHealth Steering Committee, however, had not met in over two years at the time of the assessment. Tanzania has many documents to guide interoperability, including but not limited to the 2013–2018 eHealth

Strategy,² Digital Health Investment Roadmap,³ Guidelines and Standards for Integrated Health Facility Electronic Management Systems,⁴ the draft digital health strategy 2019–2024,⁵ and the Tanzania health enterprise architecture under development at the time of the assessment. There were structures in place to verify that HIS subsystems met compliance and certification criteria and to budget for and track expenditures in HIS at the national level. Tanzania's national data protection law was not specific to health.

Human Resources

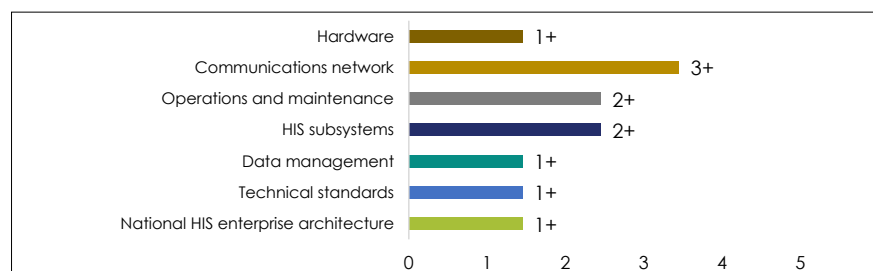
Figure 3. Human resources subdomain maturity levels in 2019



Tanzania completed an assessment of human resources in the public sector that included the staffing and skills needed for HIS and HIS interoperability, but HIS was not included as a specific cadre in the healthcare workforce, categorized instead under information and communications technology (ICT). There was growing capacity in the public sector to support digital HIS, through bachelor's degree, master's degree, and in-service training programs. Resources to implement these training programs were limited. The country also received technical assistance and support from donors and implementing partners to support digital HIS. At the time of the assessment, Tanzania was developing its own national electronic medical records (EMR) system named GoTHOMIS, which would require a long-term human resources plan to build and for it to be sustainable.

Technology

Figure 4. Technology subdomain maturity levels in 2019



At the time of the assessment, Tanzania was still developing its health enterprise architecture, but did have documented plans for its HIE. Implementing partners and donors were working on distinct tasks to support various aspects of the HIE, including the health information mediator (HIM), e-Logistics Management Information System, mHealth platform, integrated Health Facility Electronic Management Information System, health facility registry, client registry, and the digital solutions inventory. Tanzania is building a strong internet infrastructure, including a growing wide area network (WAN) and a National Internet Data Center (NIDC) with several sources of backup power. The MOHCDGEC and PORALG had a plan to implement permanent network connectivity across all levels of the health system to support the HIS.

² The United Republic of Tanzania, Ministry of Health and Social Welfare, n.d.

³ Government of Tanzania, n.d.

⁴ The United Republic of Tanzania, MOHCDGEC, 2016

⁵ The United Republic of Tanzania, MOHCDGEC, n.d.

Recommendations

The assessment generated the following recommendations for the MOHDEGC to further strengthen the digital HIS and HIS interoperability in Tanzania:

- **Revive the digital health governance structure** to ensure that the governance framework detailed in the new digital health strategy is implemented to guide investments in digital health.
- **Develop a health data security regulatory framework** to ensure that the draft HIS policy guidelines include provisions for health data security and privacy for both paper and digital systems and ensure that the guidelines adapt relevant provisions from available eGovernment Agency documents on security and privacy for the health sector.
- **Finalize development of the enterprise architecture.**
- With PORALG, **ensure that clinical subject matter experts are included in the design of GoTHOMIS**—experts who can help guide its design to support point-of-care decision making.
- **Ensure the implementation of M&E for the digital health strategy** for the accountability of all stakeholders involved in the strategy's implementation.
- Together with local training institutions, **integrate HIS and data use in HIS training courses** to reduce dependence on HIS projects for training.
- **Develop a strategic plan for mHealth technologies** including a strategy and oversight mechanism for mHealth implementation to ensure better long-term coordination and alignment with health system goals.

Key Contact

For the full assessment report or to learn more about the findings, please contact Haji Bamsi at the Ministry of Health, Community Development, Gender, Elderly, and Children of Tanzania:

haji.bamsi@afya.go.tz