DIGITAL
REACH
INITIATIVE
ROADMAP

The Digital REACH Initiative Roadmap
FOR THE DIGITAL REGIONAL EAST AFRICAN COMMUNITY HEALTH INITIATIVE

The Digital REACH Initiative is a plan coordinating regional action that brings together stakeholders from the East African Community (EAC), EAC Partner States, development partners, the private sector, and other key partners to improve health outcomes across the EAC through the creation of a robust enabling environment and the implementation of strategic regional health programs supported and facilitated by digital health. This initiative has been developed based on collaboration and inputs from representatives of each of the EAC Partner States (the Republic of Burundi, the Republic of Kenya, the Republic of Rwanda, the Republic of South Sudan, the United Republic of Tanzania, and the Republic of Uganda.)

BENEFITS OF REGIONAL COORDINATION IN DIGITAL HEALTH

Achieve **economic efficiencies** through cost savings, economies of scale, and shared digital health resources across the region

Support **improved health systems** by enhancing data sharing, policies and standards, access to and continuity of health care, disease surveillance, and use of data for decision-making

Yield **faster and better implementation** by positioning region as a digital health leader, accelerating implementation progress within and across Partner States, supporting use of evidence for decision-making, and sharing best practices

Vision 2028
Interconnected health systems for a healthy and prosperous East Africa

Mission Statement
Maximise the power of digital health in East Africa by ensuring an enabling environment and by implementing scaled, coordinated, transformational, and innovative approaches

PUBLIC HEALTH EDUCATION AND AWARENESS: Improve direct-to-patient care, community knowledge and services, patient education for preventive care, and behaviour change

HEALTH WORKER EDUCATION AND TRAINING: Support capacity building through training, knowledge sharing, and performance management

SUPPLY CHAIN MANAGEMENT: Improve supply chain efficiency, drug procurement, and economies of scale through better tracking and bulk purchasing

POPULATION HEALTH STATUS: Optimise data sharing, track regional priority patient indicators, and promote use of health research to support health policies and further health agenda

DIAGNOSTIC AND TREATMENT SUPPORT: Share health records to improve access, continuity, and efficiency of care and to support portability of health insurance at the regional level

SURVEILLANCE AND RESPONSE: Build capacity and improve surveillance to prevent, detect, and respond to infectious diseases, emergencies, and outbreaks

RESOURCE ALLOCATION AND MANAGEMENT: Develop a long-term sustainable financing strategy and facilitate resource planning, management, and tracking that optimises resource mobilisation and deployment

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ORGANISATION FORMATION AND MANAGEMENT WORKSTREAM

HEALTH PROGRAMS WORKSTREAM
Drive the Design and Use of Solutions

ESTABLISH THE EAST AFRICA OPEN SCIENCE CLOUD FOR HEALTH (EAOSCH)

A real-time regional data warehouse for caturing, storing, retrieving, analysing, and manageing national and regional health data

DRIVE REGIONAL AND CROSS-BORDER PROGRAM IMPLEMENTATIONS

Drive regional and cross-border implementations that realise the value of coordinated regional action in digital health.

SUPPORT OF COUNTRY-SPECIFIC PROGRAM IMPLEMENTATIONS

Provide technical assistance for country-specific implementations in Individual Partner States to enable integration with regional digital health programs.

DESIGN IMPLEMENTATIONS USING TRANSFORMATIONAL TECHNOLOGIES

Lead the development, testing, and use of new, transformational technologies in regional or country-specific health programs to identify new efficiencies.

SUPPORTIVE REGIONAL ENABLING INFRASTRUCTURE AND ENVIRONMENT

INFRASTRUCTURE WORKSTREAM

Establishes the foundational technical components that suport all other workstreams, allow for timely data access and sharing, and enable services and applications to function through a regional services cloud.

SERVICES AND APPLICATIONS WORKSTREAM

Support the access, exchange, and management of data and content through specific service offerings and software tools.

LEADERSHIP AND GOVERNANCE WORKSTREAM

Regional advocacy and leadership

STRATEGY AND INVESTMENT WORKSTREAM

Coordination, leveraging of global goods, and bulk purchase negotiation

LEGISLATION, POLICY, AND COMPLIANCE WORKSTREAM

Regional policy alignment and guidelines

WORKFORCE WORKSTREAM

Human resource sharing, standards for health education, accreditation, performance

HARMONISATION, STANDARDS, AND INTEROPERABILITY WORKSTREAM

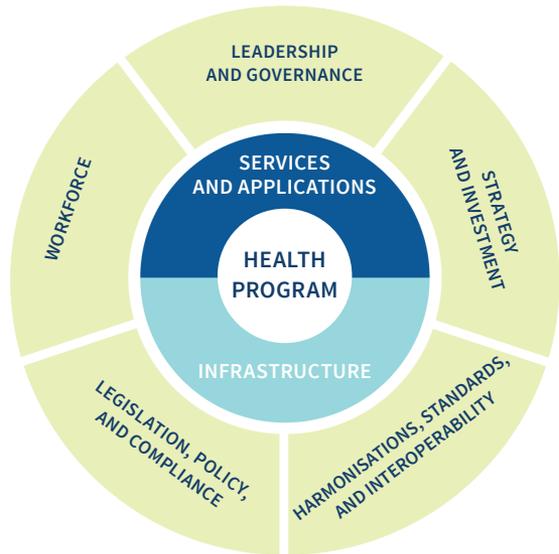Principles for data sharing, interoperability, and tool design

TECHNICAL TEAM

K4Health
Knowledge for Health

Vital Wave

SPONSORSHIP

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Unifying Framework

The roadmap introduces a unifying framework to organise the Initiative's focus and workstreams. The framework features digital health programs at the centre. These programs are enabled by two critical ICT components—services and applications and infrastructure. They are supported by an enabling environment comprised of leadership and governance, strategy and investment, harmonised standards and interoperability, the development of and compliance with legislation and policy, and a skilled health workforce. The EAC will play a major role in creating and supporting the enabling environment for digital health and in the design and use of digital health solutions, to ensure sustainability and scale.

Credit: Inspired by Theory of Change developed by PATH and Vital Wave and used in Tanzania's digital health roadmap

Potential Health Programs

EAST AFRICA OPEN SCIENCE CLOUD FOR HEALTH (EAOSCH): Establish a real-time regional data warehouse for capturing, storing, retrieving, analysing, and managing national and regional health in East Africa, creating a supporting structure for the seamless sharing of health data across EAC Partner States and facilitating the tracking of key performance indicators (KPIs) for implementations like East Africa Cross Border Health Services (EA-CBHS) and the One-Health approach.

REGIONAL AND CROSS-BORDER PROGRAM IMPLEMENTATIONS: Drive regional cross-border implementations that address key challenges associated with delivering quality health services to mobile populations and border communities. This includes the use of innovative health technology for disease surveillance, detection, and response.

COUNTRY-SPECIFIC PROGRAM IMPLEMENTATIONS: Provide technical assistance for country-specific implementations in individual Partner States to enable integration with regional digital health programs. Examples include providing pooled technical implementation expertise for country implementations as well as support to Partner States for implementing unique IDs, telemedicine infrastructure, and national strategies and policies in alignment with regional objectives.

IMPLEMENTATIONS USING TRANSFORMATIONAL TECHNOLOGIES: Lead the development, testing, and use of new, transformational technologies to identify new efficiencies. Examples include GIS for predicative surveillance risk modeling, blockchain for secure electronic healthcare records, precision health applications for personalised medicine, and automated data mining for early disease outbreak alerts.

The Path Forward

Roadmap	**Strategic Planning**	**Costing Plan**	**Resource Mobilisation**	**Initiative Launch and Execution**
EAC approval				
By end of 2017	Q1–Q2 2018	Q1–Q2 2018	Q3–Q4 2018	By end of 2018

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WORKSTREAM	WORKSTREAM OUTCOME GOALS	REGION RESPONSIBILITIES *Summary*	PARTNER STATE RESPONSIBILITIES *Summary*
ORGANISATION FORMATION AND MANAGEMENT	• Establishes the essential structures required to establish the Digital REACH Initiative. • Sets up the initiative and provides the organisational and operating mechanisms required to manage the Initiative, including the execution of responsibilities contained within the other eight workstreams	Drive organisation development and determine the supporting frameworks, structures, staff and partners, and tools to manage the initiative.	Support organisation development and management activities of the region.
HEALTH PROGRAMS	• Establish an EAOSCH for capturing, storing, retrieving, analysing, and managing national and regional health in East Africa. • Drive regional and cross-border implementations that realise the value of coordinated regional action in digital health. • Provide technical assistance for country-specific implementations in individual Partner States to enable integration with regional digital health programs. • Lead the development, testing, and use of new, transformational technologies	Analyse health program data and platform usage. Drive cross-border program implementations. Support country-specific program implementations. Design innovative implementations with disruptive technologies.	Utilise regional cloud platforms to implement and improve health platforms based on evidence. Support EAC cross-border implementations. Share information on country-specific programs that would benefit from regional support. Enable innovation and new technologies.
INFRASTRUCTURE	• Develop and support a regional software enterprise architecture and regionally supported applications • A single EAC learning platform available to health workers for training on digital tools • A fully functional knowledge repository on digital health tools is available to health workers and maintained by a designated body • Regional tech support across identified digital health systems is available to Partner States to support digital tools	Identify, build, and host common technology components on a regional digital health services cloud. Provide knowledge repository platform for digital health training and eLearning. Provide regional tech support for digital health systems.	Agree on and enable information to be uploaded to the digital health regional services cloud. Budget for platform maintenance, and contribute resources and content. Make digital health training a continuing professional development and education requirement.
SERVICES AND APPLICATIONS	• Routine regional population health surveys and research as a service to Partner States • Monitoring and evaluation (M&E) and data analytics services are provided for expanded set of use categories and are in line with quality assurance protocols • Health workers in public facilities across the region receive public health messages and private-sector facilities are aware of the service and able to sign up • Public health messages are disseminated and are customised and tailored to account for different languages and cultures • Shared services and applications are built for regional and national use	Coordinate regional population health surveys and research. Provide M&E services. Use digital tools to disseminate localised public health messages to health workers. Develop regional architecture for common services and applications.	Adopt regional indicators, terminology, and surveys. Adopt common protocols, legislation, and standards. Agree on topics and develop rollout strategy for public health messages to health workers. Adopt and integrate with regional services and applications.
LEADERSHIP AND GOVERNANCE	• Widespread coordination of management systems within the region • Partnerships with development partners, academics, and economic blocks are in place • Co-planned regional activities and implementations take place	Coordinate logistical management and related systems, negotiate partnerships, and ensure integration across EAC initiatives	Implement logistical management and related systems. Support the creation and adoption of policies, standards, regulations, and frameworks.

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WORKSTREAM	WORKSTREAM OUTCOME GOALS	REGION RESPONSIBILITIES *Summary*	PARTNER STATE RESPONSIBILITIES *Summary*
STRATEGY AND INVESTMENT	• Regional solutions for resource mobilisation and telemedicine are implemented, data are being shared between the region and Partner States, and decisions are being made effectively based on that data • Data on supply chain, connectivity, and infrastructure needs are routinely compiled and used in negotiations with mobile network operators (MNOs), infrastructure vendors, and supply chain suppliers • Regional solutions for regional demand aggregation are implemented, data on purchase and usage of supplies and commodities are being shared between the region and Partner States, and procurement decisions are made effectively based on that data • Expanded communication infrastructure in areas with low connectivity is implemented • Region provides support to Partner States to plan, budget, and develop sustainable digital health business models • Common SMS codes implemented continiously to support health programs	Develop regional strategies and financing mechanisms for resource mobilisation, telemedicine, and infrastructure expansion. Perform demand aggregation and regional negotiations to lower costs.	Develop, implement, and share strategies to support regional plans in telemedicine, resource mobilisation, and infrastructure expansion. Commit to using goods, tools, and resources negotiated or financed by the region.
LEGISLATION, POLICY, AND COMPLIANCE	• Regional implementation and adherence to harmonised guidelines, policies, and protocols • Regional adoption of policies and regulations and adherence to best practices for data privacy, ownership, security, and sovereignty • Frameworks and cross-border agreements are implemented regionally • Performance data are collected routinely and feedback provided to Partner States • Implementation and adherence to regional policy across Partner States	Lead formation and harmonisation of data policies and standards. Develop cross-border agreements, software testing standards, and KPIs and policies for managing health emergencies.	Develop in-country guidelines, protocols, and platforms for data sharing between programs. Implement common data policies, best practices, and bilateral agreements for cross-border health service delivery. Adopt KPIs and guidelines.
WORKFORCE	• Full and common recognition of health care credentials across the region to improve resource allocation and allow health workers to move freely across Partner States • Health workers move freely from one country to another based on demand	Harmonise health and digital health training and performance M&E programs. Facilitate human resources sharing across the region.	Agree on training credentials and update in-country training curricula. Monitor agreed-to regional performance indicators for human resources. Create bilateral agreements and protocols to facilitate human resource sharing.
HARMONISATION, STANDARDS, AND INTEROPERABILITY	• Regional principles and capabilities for data sharing and digital tool design in place and used • Unique IDs used for identification of patients, health workers, facilities, and drugs • Best practices for interoperability, data sharing, and integration are in place and used • Set of agreed diagnostic algorithms developed and used regionally	Develop and promote regional principles on data sharing and unique IDs. Harmonise best practices for technical architecture and interoperability. Create minimum data set for diagnostic algorithms and referral guidelines.	Support regional guidelines with policies, regulations, and legislation. Agree on regional reference architecture and adopt best practices and middleware. Implement clinical referral guidelines against national guidelines.