



# Digital Square Capabilities

COVID-19

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## Introduction

Digital Square is a PATH-hosted initiative that connects health leaders with the resources necessary for digital transformation. This initiative brings partners together to improve how the global community designs, uses, and pays for digital health tools and approaches. By strengthening coordination within the global community, Digital Square reorients the market to better match tools and approaches to the needs of countries and communities.

**Digital Square is leveraging its unique role and strengths to support countries, donors, and partners in the response to the COVID-19 pandemic. Harnessing existing relationships across the global digital health ecosystem, we mobilize our robust network of partners in coordinated response. We also utilize PATH's work in global health security, malaria, primary health care, and the broader digital and data portfolio to more comprehensively support country partners in ensuring essential health services remain available.**

Digital Square's response to COVID-19 continues to be shaped by three core lessons from the 2014 West Africa Ebola outbreak including:

- Advocating for and supporting country-level adaptation of existing tools and technologies.
- Leveraging investments made in software tools since 2014 that have created more robust options for countries.
- Ensuring investments contribute to long-term, ongoing strengthening of health systems.

**Digital Square is able to build on this work to provide (1) coordination and alignment across the digital health sector; (2) support to global goods; and (3) direct country support and capacity strengthening.**

## Coordination and Alignment

**DIGITAL SQUARE CAN SUPPORT GREATER COORDINATION AND ALIGNMENT BETWEEN DONORS, HOST COUNTRY INSTITUTIONS, PUBLIC SECTOR ORGANIZATIONS, AND/OR PRIVATE SECTOR PARTNERS AS DIGITAL HEALTH INNOVATIONS ARE ADOPTED, ADAPTED, AND SCALED IN RESPONSE TO COVID-19.**

Digital Square has been supporting coordination and collaboration with partners to increase visibility into how digital tools are being adapted to support country responses to COVID-19. Digital Square can continue to foster this coordination among actors including increasing visibility into how global goods and other partners are deploying tools for COVID-19 response, as well as how countries are using these tools.

## Information consolidation and sharing

Digital Square is gathering and updating information on how global goods are adapting their tools or technologies to address COVID-19. This information is being presented in several highly attended public webinars and is available on the [Digital Square wiki](#). We are also gathering information from our global good partners about resourcing and support needs related to COVID-19 and sharing with investors. Digital Square continues to explore how best to capture and make available all of this information to a wide range of audiences. Documenting the impact of the collective of tools and sharing ongoing lessons learned not only mitigates challenges in the current response environment but also sets country health systems up for success through the recovery phases.

## Support to Global Goods

**DIGITAL SQUARE IS SUPPORTING THE ADAPTATION, IMPLEMENTATION, AND SCALING OF DIGITAL HEALTH GLOBAL GOODS RELEVANT TO COVID-19 RESPONSE WITHIN COUNTRY HEALTH SYSTEMS.**

Digital Square promotes the development, adoption, and re-use of digital health global goods, increasing the availability, adaptability, and maturity of digital tools deployed. Approved Digital Square global goods are quickly adapting their software to add COVID-19 specific modules for case reporting, contact tracing, communication with frontline health workers, training and tools for health workers, supply chain management, facility mapping, and other use cases.

### Data Standards

Digital Square is co-leading the new [OpenHIE COVID-19 Task Force](#), which supports collation of information relating to data standards and data exchange relevant to the pandemic response. The goal of this task force is to ensure that rapidly deployed solutions can be integrated into national digital health architectures and contribute to long-term health system improvements. Leading up to the formation of this group, Digital Square led the documentation of data models and standards used as part of the COVID-19 response, including international standards such as the International Classification of Diseases (ICD) and Health Level Seven Fast Healthcare Interoperability Resources (HL7 FHIR), and standards for global good tools such as DHIS2 Tracker, CommCare, and Surveillance Outbreak Response Management and Analysis System (SORMAS). The task force is focused on four key topics:

- Collating information relating to data standards and exchange relevant to the COVID-19 response.
- Identifying gaps in and establishing standards for data exchange priorities.
- Providing documentation and guidance, to both the global good community as well as owners of proprietary software tools, on adherence to these standards.
- Ensuring that rapidly deployed solutions can be integrated into the national digital health architectures.

Through these activities, the task force aims to document FHIR mapping and prototyping for case reporting and contact tracing, map data elements into a standard data dictionary format

used by the World Health Organization (WHO) Accelerator Kits, and develop a vetted HL7 FHIR implementation guide for case reporting and contact tracing.

To support the adoption of the outputs from the OpenHIE COVID-19 Task Force, Digital Square is coordinating with the Digital Square Global Goods Community on the application of the task force's outputs. Digital Square is also supporting resource identification for software updates and adaptations required to implement data and data exchange standards, as well as system maintenance as technologies are adapted and strengthened for the recovery phase.

## Global Good Deployments

Digital Square offers technical assistance to support global good partners. This includes support for technologies to customize their solutions including aligning solutions with global standards for data exchange, as well as support for deployment in countries where ministries of health have agreed to scale the tools. Digital Square has provided support to the following global goods for COVID-related activities:

- **SORMAS:** Digital Square is supporting SORMAS, a digital health global good electronic Integrated Disease Surveillance and Response (eIDSR) tool that has a COVID-19 module and is deployed in Ghana and Nigeria. These countries were able to instantly deploy COVID-19 surveillance and response capabilities by updating the global good system they had already adopted.
- **mHero:** Deployed during the Ebola outbreak in West Africa, mHero connects iHRIS with UNICEF's RapidPro SMS platform, allowing rapid two-way messaging between Ministries of Health and frontline health workers. Digital Square supports the core development of mHero which is being deployed in Uganda and soon in the Democratic Republic of the Congo (DRC) to communicate with health workers during the COVID-19 pandemic. IntraHealth is exploring connection with other services such as Twilio and WhatsApp, as well as using the mHero Connector to connect with DHIS2, OpenMRS, and other global goods using FHIR standards.

Digital Square continues to advocate for addition resources and investments in global goods to further enhance the options for countries.

## Country Support and Capacity Strengthening

**DIGITAL SQUARE WORKS WITH COUNTRY GOVERNMENTS TO STRENGTHEN LOCAL CAPACITY FOR DESIGN, IMPLEMENTATION, AND MANAGEMENT OF HEALTH SYSTEM-WIDE APPLICATIONS OF DIGITAL TOOLS AND TECHNOLOGIES.**

## Training and Learning Programs

Digital Square is advocating for open source training courses to enable countries and institutions to easily and quickly update their training and learning programs to the latest science and protocols established by normative agencies such as WHO. While the urgency of the

COVID-19 pandemic is driving much of the focus on support for frontline health workers and communities, the science and therefore the triage, testing, and treatment protocols continue to evolve. Digital or virtual training options provide an avenue for rapid content updates and refresher trainings as the situation and guidance continues to evolve.

We utilize digital technologies to support learning and performance management of frontline health workers in four key ways:

- **Delivery of learning content:** Digital Square is partnering with the WHO, International Telecommunications Union, and TechChange to evolve a 10-day in-person workshop into a 4.5-day virtual learning course on digital health titled “Digital Health: Planning National Systems.” This course will be open source and available to frontline workers. The content has been developed with the deep engagement and feedback of representatives from more than 20 countries to date.
- **Provision of actionable information:** Digital Square can utilize PATH’s existing capabilities in providing actionable information for frontline health workers and their supervisions. PATH has deployed an immunization registry in Tanzania and Zambia via the Better Immunization Data (BID) Initiative, provided a robust pipeline of health, vector, and GIS data through the Visualize No Malaria initiative, and supported the development and national scale-up of Vietnam’s electronic immunization registry.
- **Strengthening peer and supervisor feedback loops:** Digital Square can utilize PATH’s capabilities in strengthening feedback loops using lessons from the BID Initiative, PATH’s Living Labs platform, and ongoing work in the DRC. These projects incorporate a range of strategies from informal peer communities on WhatsApp, an SMS platform for rapid information sharing, and human-centered design approaches when designing new interventions on performance management and learning.
- **Strengthening the quality and scalability of digital tools supporting learning and performance management of frontline health workers:** Digital Square manages a large volume of subawards supporting digital health software including those that strengthen learning and performance management. Examples of this support include: strengthening the governance and options for long-term sustainability of OpenLMIS; supporting information management for health workers through the Global Open Facility Registry (GOFR) and Instant OpenHIE; and providing technical partnership and award oversight to software including OpenSRP and CommCare.

## Regional and Global Networks

Digital Square provides support to a group of regional and global networks including the Asia eHealth Information Network (AeHIN), the Digital Health & Interoperability Working Group, and the Global Digital Health Network. Through a “network of networks,” Digital Square is engaged in active WhatsApp discussions sharing COVID-19 activities and experiences in Asia, Africa, and Latin America. Through this support, Digital Square can identify any redundant efforts, duplicate solutions, and piecemeal approaches as well as provide information on available technologies, capacity building opportunities, and links to resources.

## Country Support

Digital Square is able to support the needs of countries as they emerge in the COVID-19 response, particularly for countries that have a standing relationship with Digital Square or the wider PATH portfolio. The following examples demonstrate how PATH is already engaged with country governments as they coordinate and use digital tools in their COVID-19 response.

- **Democratic Republic of Congo:** In the DRC, PATH through its Global Health Security Partnership<sup>1</sup> portfolio provides technical and logistical support to the Ministry of Health as they develop a national response plan. The COVID-19 Presidential Task force is housed within the PATH DRC office, and builds from the support provided to the Emergency Operation Centers. Digital Square has submitted a concept note to USAID DRC to support digital solutions to the COVID response and to support the Ministry's Digital Health Strategic Planning process. The Strategic Planning process will in parallel strengthen holistic planning, investment, and governance of the essential digital solutions for COVID and future outbreaks and the health system itself. The concept note includes support for the redesign and redevelopment of a digital disease surveillance and response system as a building block to developing digital health technical expertise in-country, the development and finalization of the Digital Health Strategic Plan and Roadmap, and the strengthening of the government's agency for clinical information and health informatics—Agence Nationale d'Ingénierie Clinique, de l'Information et de l'Informatique de Santé (ANICiS).
- **Senegal:** In Senegal, PATH is supporting the Ministry of Health in the rapid development and deployment of the DHIS2 nCOV tracker to the existing DHIS2 system to improve the national government's ability to monitor and track suspected and confirmed cases. PATH is also supporting improvements to the community-based surveillance system in targeted districts to capture suspected COVID-19 cases. PATH supported the development of the COVID-19 Senegal National Response Plan.
- **Vietnam:** In Vietnam, PATH supported the Ministry of Health to rapidly develop a digital surveillance system which captures patient level data including contact information, development of clinical signs, laboratory testing, hospital enrollment, treatment progress, and discharge. The system was stood up and deployed in nine days. PATH is supporting the Ministry's use of their data for decision making including planning the purchase of supplies (i.e. dialogic test kits) and predictive modeling for outbreak areas. In addition, PATH supported Viettel to develop an online declaration form at border/immigration gates that is linked with Vietnam's COVID-19 reporting system.

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<sup>1</sup> Through the **Global Health Security Partnership (GHSP)**, PATH works with all levels of government to strengthen public health systems in the DRC, India, Senegal, Tanzania, and Vietnam. PATH has supported countries to leverage and improve interconnected health systems across laboratories, health facilities, and emergency operations centers; improve surveillance data quality; and promote data use to effectively address outbreak threats.