Digital Square and USAID Present: Global Goods Map & Match for COVID-19

May 25, 2021
Agenda

- Digital Square overview
- Background of Map & Match activity
- Findings from our assessments
- Overview of Map & Match outputs
- How to use Map & Match country briefs
- Common questions among country governments, investors, and other stakeholders
- Final thoughts
Overview of Digital Square

Digital Square is a digital health marketplace—or ‘square’—where supply and demand come together to accelerate health equity through the development, adoption, scale, and delivery of digital health innovations in low- and middle-income countries. We help funders, country leaders, implementers, and global policy makers learn about high-quality, trustworthy digital health software that is appropriate for low-resource settings.
Map & Match Goals

Map existing digital health tools deployed at scale in country.

Identify digital health tools already deployed for COVID-19 response and vaccine distribution.

Identify digital health tools that can be adapted for COVID-19 response and vaccine distribution.
Key lesson from Ebola.

Adapting existing digital tools rather than deploying new ones helped:

- Speeds up deployment.
- Saves money.
- Reduces duplicative investments.
- Leads to sustainable tools.
- Increases government leadership.
- Enables exchange of data.
OpenLMIS is Malawi’s national digital supply chain tool used in 650 facilities for over 300 commodities.

OpenLMIS launched a separate, simplified instance called OpenLMIS COVID-19 Edition, which is a lighter weight and quicker start-up tool to help Malawi manage COVID-19-related commodities based on the WHO product list.
Map & Match Methods

**Phase 1: Initial Mapping**
140 countries

Rapid assessment through a desk-based literature review.

High-level gap analysis between deployment/adaptations across countries.

**Phase 2: Expanded Mapping and Country Profiles**
22 countries

Expand research to include global and country surveys.

Interviews with open-source software developers to understand adaptations.

Interviews with Ministry of Health officials to understand Ministry priorities.

Coordinate and share with USAID Missions, across the donor community, and other stakeholders.
Investor and Partner Coordination

Coordination and alignment has been a key tenant throughout the Map and Match project.
A ‘use case’ refers to a specific type of information collected, stored, tracked, analyzed, or visualized as it relates to the functional response to an epidemiological event, specifically COVID-19. One digital health tool can be deployed for multiple ‘use cases’.

- Case management
- Contact tracing
- Event-based surveillance
- Health facility & provider administration
- Infection prevention control
- Laboratory systems
- Learning & training

- One Health
- Points of entry
- Risk communication & community engagement
- Routine surveillance
- Supply chain
- Vaccine planning, monitoring and delivery*

* Added for COVAX
Phase I

Literature Review
Phase I: Outreach and Feedback

Phase I: July 2020 – October 2020

- **277** Organizations or individuals contacted to contribute documents to the desk review.
- **142** Organizations or individuals submitted documents, reports, and website for review.
- **749** Documents, websites, reports, and landscapes submitted and reviewed.
Phase I: Software and Digital System Deployment

- **135** countries with at least one tool identified in landscape.
- **2,910** number of digital tool deployments identified.
- **78%** percent of digital deployments NOT identified in the Digital Health Atlas.
Phase II
Community-Based Data Collection
The 22 countries with briefs already developed or forthcoming include:

Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Cambodia, Cameroon, Côte d’Ivoire, Ghana, Indonesia, Kenya, Malawi, Mozambique, Myanmar, Niger, Pakistan, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Uganda, Vietnam, Zambia, and Zimbabwe.
Research Objectives for Phase II

• For each of the prioritized countries, understand the depth of tools available.
  • Verify or expand on the Phase 1 tool landscaping (i.e., learn more about existing tools, use cases, and how widely tools are in use).
  • Highlight gaps in tool deployment as it relates to COVID-19.
  • Understand unique country contexts that would inform tool choice (e.g., systems integration priorities, privacy laws, language, donor and partner engagement, government resources/buy-in).
• For each country, identify tools at scale that have the potential to be used for COVID-19 response.
Methods

• Online survey tool to collect information in our focus countries.
  • Initial outreach list developed using Phase 1 data.
  • Survey tool was designed to enable snowballing, allowing us to expand outreach.

• Key Informant Interviews with selected Digital Square global goods to understand scale, deployments, challenges, and opportunities.

• Key Informant Interviews with the Ministry of Health in each of the focus countries to validate country information and understand country context.
Outputs of Map & Match
Map & Match created easy-to-read analysis for each of the 22 countries in Phase II. There is a lot of variability in the information found through our assessment. Some countries have tools for all use cases, many of which are already being adapted and used to support COVID-19 response. Many still rely on paper-based tools and have limited use and scale of digital technologies.
The **Digital Applications and Tools Across an Epidemiological Curve (DATEC)** is a strategic framework for governments, investors, implementing organizations, and the digital health community at-large to better understand how existing digital tools can be adapted and used during different phases of an outbreak. This framework is meant to highlight how digital technologies, which should already be present in a country, can most strategically be leveraged to augment response during an epidemic and/or pandemic. This V1 framework is not specific to COVID-19 but uses the COVID-19 pandemic as a reference to illustrate use of digital tools, such as contact tracing, laboratory information systems etc.
Map & Match focused on identifying Scaled Systems

**Number of end users:** determining *who* is using a tool and *where*. Information can be evaluated using the number of health workers, number of clients, or number of facilities using a tool.

**Breadth of tool use:** understanding the *number ways* in which a tools is used, such as use cross health focus areas or digital health intervention areas.

**Institutionalization:** delves into how well the tool is integrated into the country’s priorities by understanding if the tools has dedicated resources, and/or is included as a tool that is necessary for health workers to use in formal job descriptions.
We learned during the West Africa Ebola outbreak response prioritizing the reuse and adaptation of existing digital tools is vital to quickly scale access to time-sensitive disease information and data.

Many global goods can be adapted and used across different sets of use cases in response to the COVID-19 pandemic.

**Why does this matter?**

"During a new crisis, we’re so happy to be able to use existing tools with just new functionalities. It’s avoiding us to be overwhelmed and/or confused with a new tool again—please consider our time load."

- Health workers and Ministry of Health staff in Senegal
• Executive summary/overview of the project.
• Annex information about digital tools which support vaccine deployment.
• Map & Match survey tools (data model).
• Final data set of Phase I and Phase II data (will be live on M&M website by May 31).
• GIZ’s Digital Preparedness Pandemic Assessment Tool and information on how to use the tool.
• Information about how we are updating data to the Digital Health Atlas.
How to Use Map & Match Country Briefs
About Each Brief

• These briefs are meant to be a starting point and aim to:
  • Provide a quick assessment of existing tools related to the COVID-19 pandemic.
  • Highlight where digital health tools might support gaps in the COVID-19 response.

• Limitations of the country briefs:
  • Only the tools related to pandemic response are featured in the briefs – additional tools can be found in the full dataset, which can be used for secondary analysis.
  • Briefs did not collect information about ICT infrastructure or health verticals.
  • Briefs are solely focused on COVID-19 adaptations.
  • Our data do not capture 100% accurate information as tools and adaptations are changing. Additionally, the digital health tool information was collected via landscapes and self-reported information via surveys and interviews.
In Senegal, our assessment found **50 digital tools**, with **27 tools** scaled nationally. There are already **16 tools deployed for COVID-19**.
The assessment found that there are **seven pandemic use cases** that did not have many digital health tools. Five use cases have one tool and two use cases (diagnostic tools and lab systems) have none. For these use cases, we have highlighted potential tools that could support Senegal’s COVID-19 response.
The briefs provide an **overall mapping** of all the tools in country, highlighting both current COVID-19 use cases (blue) and possible adaptations (green). This allows staff to quickly scan the existing tools in country and determine where the opportunities lie.
Opportunities Identified

Briefs also showcase digital health tools that can be adapted for other use cases. For example, Senegal HMIS (based on DHIS2) a digital health tool deployed in Senegal has been adapted for COVID-19 use cases in other countries. DHIS2 can be adapted in Senegal for Lab systems and vaccine delivery use cases.
In addition to summary information, the briefs provide **descriptions of tools** used in each country, highlighting both current COVID-19 use cases (blue) and possible adaptations (green). Where the information was available, the briefs display **funders, implementers, and scale** information. **Licensing** information is also included to enable implementers to consider the price of the software upfront.

**Table 2. An in-depth look at digital health tools to support the COVID-19 response, continued.**

<table>
<thead>
<tr>
<th>Digital health tool</th>
<th>Purpose</th>
<th>Use case(s)</th>
<th>Funder(s)</th>
<th>Implementer(s)</th>
<th>Licensing</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wellvis COVID-19 Triage Tool</td>
<td>Wellvis COVID-19 Triage Tool is an application that allows users to self-assess their COVID-19 risk category based on their symptoms and exposure history. It is free to users. The application also allows digital health care appointments that can be paid online.</td>
<td>Case management, infection prevention and control</td>
<td></td>
<td></td>
<td>Commercial</td>
<td></td>
</tr>
<tr>
<td>AfriDoctor</td>
<td>AfriDoctor is an online platform that digitalizes the patients’ care paths and brings the health providers closer to their patients. The platform allows the patients to book online appointments with their providers and receive free SMS reminders. The platform provides providers with a calendar management tool, invoicing and medical records management tool, and visibility/referencing of health structures.</td>
<td>Case management, vaccine delivery and planning</td>
<td>eCare Group</td>
<td>eCare Group</td>
<td>Commercial, National</td>
<td></td>
</tr>
<tr>
<td>CommCare</td>
<td>The National Malaria Control Program (PNLP) uses the CommCare mobile application to carry out surveillance and track malaria cases. Providers send SMS messages from their mobile phones to monitor key indicators weekly at the health center level. The SMS messages sent from the field are compiled at the central level of the PNLP in Dakar and at the regional level where the agents can see, download, and process the data. The PNLP also uses a CommCare application to monitor the use and stock of antimicrobial products by nurses at health centers in the Kolda region via weekly SMS messages. PNLP is exploring plans with Dimagi to extend this use to the Saint-Louis region and to integrate the data from the system into DHIS2.</td>
<td>Case management, contact tracing, diagnostic tools, event-based surveillance, health facility and provider administration, laboratory systems, supply chain</td>
<td>Grand Challenges International, PMI, PNLP</td>
<td>Aff Associates, Africare, Plan International, RTI International</td>
<td>Open source, Subnational</td>
<td></td>
</tr>
</tbody>
</table>
"The purpose of using digital health tools is to collect data in real time that are complete and exhaustive for decision-making at the national level. Our current challenge is that we have a few tools being used in parallel but in a disconnected manner."

—Oumou Kalsom Diallo, Senegal Ministry of Health and Social Action

“I would like sustainability and country-level technical capacity strengthening so that one day MISAU can fully maintain our electronic health information systems. There is a huge need to focus on building the sustainability of technical assistance support because currently the University of Oslo provides much of the technical support and there is not enough local capacity.

—Dr. Helder Macul, Mozambique Ministry of Health

“We are using aggregated data for DHIS2 for COVID-19 response, but we would like to focus on collecting individual data moving forward too. We want to focus on patient management in digital health reform.”

—Giti Azim, Dr. Shifaa, Afghanistan Ministry of Public Health

"Supply chain management is mostly manual and there are currently no large-scale solutions in Kenya."

—Onenus Kamau, Kenya Ministry of Health
Tackling Questions about Digital Tools and the COVID-19 Pandemic Response
Questions from Country Leaders and Implementers

How can digital tools support the COVID-19 response?

The DATEC and Vaccine annex maps types of tools to different use cases. The DATEC is not specific to COVID-19 and can be applied to other pandemic/epidemics.

What open-source tools exist to support use cases like contact tracing or supply chain?

The Global Goods Adaptations Across Use Cases maps initiative approved global goods to the pandemic use cases, both where tools are already adapted to support the use case and where investments can be made to adapt that tool for additional use cases. There are other tools in the ecosystem including the JHU Digital Solutions for COVID Response document mapping contact tracing tools, and tools mapped as part of the Digital Public Goods Alliance housed at UNICEF.

What tools can support vaccine planning, rollout, and monitoring?

The Vaccine annex describes how digital tools can support diverse activities from planning vaccine introduction, enhancing communications as part a vaccination campaign, to effectively using data informing vaccine distribution.
Questions from Country Leaders and Implementers

How do I know which tools are already in my country?

The country briefs map details of known tools deployed in country. Table 1 (blue shading) illustrates tools mapped to current pandemic use cases and Table 2 provides more information about the tool, who is supporting the deployment, and high-level information on scale. For countries where M&M did not produce a brief, the full dataset has some information on tool deployment.

How can I learn if a tool I already use can be adapted for different uses to support response to COVID-19?

Many tools have opportunities for adaptation and scale. The country briefs illustrate these opportunities using a green shading. Table 1 and Table 2 have more information including details about the tools. The brief also contextualizes Digital Square global good adaptations for scale.
Questions from Country Leaders and Implementers

Who do I contact to help adapt and scale tools for COVID-19?

There are many investors who are coordinating together and can offer support, including those whose logos are included in the brief. If you have existing relationships with USAID Missions, we recommend you start there. We also recommend you coordinate with the newly formed Digital Health Community of Excellence (DICE) led by UNICEF/WHO.

How else can I use the Map and Match data?

The full dataset is available for a deeper understanding of tools in countries and other secondary use cases. You can filter to see what tools are available. You can and should use the dataset to prepopulate information you intend to gather future assessments. The DPPA for example, is organized so that you can cut and paste M&M data directly into the tool and build on that dataset where you’d like to go deeper.
Questions from Investors and Digital Health Stakeholders

What information exists about current tools used in countries?
The country briefs and larger M&M dataset highlight tools that include those currently used in COVID-19 response. The Digital Health Atlas will eventually also house this information. Digital Square is also working with DIAL and UNICEF to cross reference digital tools use for pandemic use cases and in additional mapping work done in a subset of countries.

What are the vetted tools that investors and other partners can look to in supporting countries?
Digital Square does not formally vet tools but the Global Goods Adaptations Across Use Cases maps initiative approved global goods to the pandemic use cases. The Global Goods Guidebook is also an excellent resource to learn more about the over 30 global goods supported by Digital Square.
Who are the partners working in a specific country for essential coordination and collaboration?

For COVID-19 response, coordinating with DICE can connect with you partners in country. Gavi and Global Fund coordination is also critical for COVID-19 and COVAX. In the Map and Map country briefs, we include a list of know funders and implementers for each digital tool deployed in country (based on the information we gathered).

For future assessments, what tools are recommended?

Do not recreate the assessment tool wheel. Map and Match coordinated with GIZ to align pandemic use cases to the Digital Pandemic Preparedness Assessment Tool. This tool and its resources are featured on our M&M website. The DPPA is also aligned with the Edit tool. Do not create new assessment tools – adapt and build off existing tools like the DPPA that are vetted by investors.
Final Thoughts
What’s Next

• Dissemination of M&M materials and country briefs.
  • Outreach to USAID Missions to present country briefs.
  • Sharing resources across donor community.

• Work with partners who are conducting assessments to build on M&M Phase I dataset (i.e., CDC, UNICEF, GIZ).

• Conduct Map and Match assessments and create country briefs in other countries upon request.

• With additional resources, scale deployment where countries have need for COVID-19.
  • Align with DICE to highlight gaps and opportunities for countries.
  • Highlight country priorities to donors as they arise.
  • Continued coordination to support country priorities through Digital Square and partners.
Lessons Learned

• Coordination with partners and investors is essential.

• Collaboration and coordination takes time but can yield efficiencies down the road.

• Use existing data collection and assessment tools such as the DPPA. Build on data, such as the M&M dataset, that already exists.

• However, note the sector has survey fatigue. Find alternate ways for data collection such as KIIIs and informal phone calls provide more information, but also take a lot of time.

• Share data to the DHA – budget and plan time, ensuring your data is aligned to their data model.

• Conversations on scale are complex.
Thank you

All Map and Match resources can be found on the Digital Square website at [https://digitalsquare.org/covid19-map-match](https://digitalsquare.org/covid19-map-match).

For additional questions about Map and Match, please contact Amanda BenDor at [abendor@path.org](mailto:abendor@path.org).
Annex
Digital Square addresses the need for a thriving marketplace for digital health.

Alignment & Co-investment

Global Goods

Regional & Country Systems
Digital Square:

• Supports a shared vision.
• Grows the overall digital health sector.
• De-risks investment into digital health by making high-impact opportunities visible.
Digital Square:

- Allocates global good investments transparently and with community input.
- Provides rigorous yet pragmatic technical oversight on investments.
- Connects the global good community to each other and to country efforts.
- Secures investment for the maturation of global goods software.
71 countries use at least two Digital Square global goods, with many using six or more.

Source: Digital Health Atlas (DHA) and self-reporting from 28 Digital Square global goods across the 3 lowest market segments. A more thorough, complete analysis will be initiated following community input on the strategy and its metrics. Digital Square is working with the DHA to ensure that data is captured including specific interoperability capabilities between systems that are deployed in a country.
Digital Square:

- Coordinates resources and expertise from multiple investors to support country and regional digital health initiatives.

- Supports regional and country digital health leaders to successfully lead and execute digital health transformation initiatives to strengthen health systems.
GIZ is developing a Digital Pandemic Preparedness Assessment (DPPA) tool. Early in the Map and Match project, GIZ and Digital Square coordinated to align on use cases and use case definitions to ground both the design of the DPPA and research protocol for Map and Match. The goal is to align findings from Map and Match and directly upload some of the data to populate the DPPA.
Understand your country context

Use existing frameworks to understand the needs for each country. Digital Pandemic Preparedness Assessment (DPPA) Tool aims to provide a systematic methodology to identify needs for digital tools that integrate with countries’ existing digital ecosystem. Map and Match coordinated with GIZ to align pandemic use cases to the DPPA.
Digital Square is coordinating closely with UNICEF to capture additional data from Phase II on digital tools supporting vaccine planning, deployment and monitoring. We are sharing all of our Phase I and Phase II research with UNICEF to compliment their own efforts to map the presence of tools and digital technologies used for health initiatives including a focus on COVID-19.
• The Digital Health Atlas is a WHO global technology registry platform aiming to strengthen the value and impact of digital health investments, improve coordination, and facilitate institutionalization and scale.

• After completing Phase 1 of M&M, WHO requested that we upload information we gathered from this exercise to the DHA to add onto the global digital health technology registry.

• The Digital Square team is currently working on with WHO to enable uploading stubs of data from 130 countries to the DHA and encourage others in the digital health space to update the missing information on the tool implementations once this is uploaded.

• Digital Square will also work with WHO to enable uploading of data for Phase II. Much of our data collection tool aligns with DHA criteria.
Coordination with other projects

• Digital Square is happy to share data collected through Map and Match with partners conducting digital health assessments

• Digital Square is happy to connect partners with GIZ, UNICEF, and other initiatives conducting digital health assessments

• Digital Square recommends partners use existing assessment tools, adding questions as needed.
  • DPPA
  • Gap Tool
  •/Edit Tool from the Kati Collective

• Digital Square recommends all data be shared to the Digital Health Atlas
What is the Digital Health COE (DICE)?

- The DICE is a multi-agency consortium with a UNICEF-WHO co-hosted secretariat. UNICEF will run day-to-day activities and will manage funding for operations.
- The DICE will provide coordinated, standardized support to Governments, initially responding to support requests for preparation and deployments of mature digital technologies to support health service delivery in the context of the COVID-19 pandemic.
- DICE will align with donor agencies and support Governments to identify and apply for funding for deployments using costed investment cases (e.g. via the C19RM).
How can support be requested

- Contact the DICE secretariat to request technical assistance: contact@digitalhealthcoe.org

- Support requests should be from or endorsed by Government and have been going through existing technical/donor coordinating mechanisms

- TA should be aligned with National Vaccine Deployment Plans (NDVPs) and leverage existing Global Fund (C19RM), GAVI and other assistance mechanism

- Support will be provided through existing regional and country structures, including Government, UN, and DICE consortium partners
How to Adapt and Scale

- Identify your holistic needs with your partners using tools like the Digital Pandemic Preparedness Assessment (DPPA)
- Map your needs to use case(s) using tools like the Digital Applications and Tools Across a Pandemic Curve (DATEC)
- Evaluate the systems based on use case, searching for adaptations and current uses on Table 2 of your country brief and other tools like our global goods use cases
- Do a deep dive into the systems, using Table 3 of your country brief and other resources
- Evaluate selected systems on other metrics like scale, with our scale framework
- Reach out relevant stakeholders to select, coordinate and scale singular digital health systems