COVID-19 TO ROUTINE IMMUNIZATION INFORMATION SYSTEM TRANSFERABILITY ASSESSMENT (CRIISTA) USER GUIDE

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MOMENTUM A Global Partnership for Health and Resilience

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MOMENTUM works alongside governments, local and international private and civil society organizations, and other stakeholders to accelerate improvements in maternal, newborn, and child health services. Building on existing evidence and experience implementing global health programs and interventions, we help foster new ideas, partnerships, and approaches and strengthen the resiliency of health systems.

MOMENTUM Routine Immunization Transformation and Equity (the project) applies best practices and explores innovations to increase equitable immunization coverage in USAID-supported countries. The project is USAID's flagship technical assistance mechanism for immunization working in 18 countries around the world. It works to build countries' capacity to identify and overcome barriers to reaching zero-dose and under-immunized children and older populations with life-saving vaccines and other integrated health services, including rebuilding immunization systems adversely affected by the COVID-19 pandemic. It also supports COVID-19 vaccination across countries, with a wide range of circumstances and needs.

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ABBREVIATIONS

CRIISTA	COVID-19 to Routine Immunization Information System Transferability Assessment
EPI	Expanded Program on Immunization
EIR	electronic immunization registry
HMIS	Health Management Information System
IC	information collection
IIS	immunization information system
MOH	Ministry of Health
RI	routine immunization
SAW	suitability assessment workshop

GLOSSARY

Architecture: A description of how the different pieces of a technology and/or information system work together.

Comprehensive multi-year strategic plan: A document outlining the national immunization plan to support planning and management of immunization activities.

Data privacy: The capacity to guarantee that patients' personal data will be protected against intentional and unintentional exposure.

Data standards: Methods, protocols, terminologies, and specifications for the collection, exchange, storage, and retrieval of information associated with health care applications.

Digital health intervention: Any health service or treatment that is delivered using technology that aims to facilitate, capture, or exchange knowledge.

Electronic immunization registry: Confidential, population-based information system that contains data on vaccine doses administered.

Electronic medical record: An electronic record of information on the health of each patient.

Expanded Program on Immunization: A global program of the World Health Organization with the goal to make vaccines available to all children and other eligible people in all countries.

Health Information System: Digital systems with open data that comes from different sources that is ethically used to generate strategic information for the benefit of public health.

Immunization information systems: Systems designed to provide relevant immunization information to the distinct management areas of the Expanded Program on Immunization.

Interoperability: The ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged.

National Immunization Strategy: A document outlining the national immunization plan to support planning and management of immunization activities.

INTRODUCTION

CRIISTA Overview and Problem Statement

The COVID-19 pandemic and vaccine introduction led many countries to invest in new immunization information systems (IISs) to collect, manage, and use COVID-19 vaccination data. Many countries have recognized these investments as a potential opportunity for strengthening routine IISs.

The COVID-19 to Routine Immunization Information System Transferability Assessment (CRIISTA) aims to facilitate a thorough process for collecting and reviewing relevant information to support decision-making around whether it is appropriate to scale a COVID-19 IIS, or parts of it, for use in routine immunization (RI). It is organized into five thematic areas:

- Context.
- Functionality.
- Technology.
- Users.
- Resources.

> In countries where COVID-19 IISs have been generally successful, governments are wondering whether these systems could be used for RI. The CRIISTA framework provides a systematic process for gathering evidence and making recommendations to inform these decisions. This user guide explains each step in this process.

Each thematic area poses questions about the current COVID-19 IIS, the current and desired state of the routine IIS, and the gaps between them. Scores are then calculated to assess whether a COVID-19 IIS is suitable for RI.

Primary Users and Potential Applications of CRIISTA

Primary users	Potential Applications
Decision-makers and program managers working with or in Ministry of Health (MOH), Expanded Program on Immunization (EPI), or Health Management Information System (HMIS)	• Assess whether to transfer and scale-up a COVID-19 IIS for RI. • Guide planning for transfer and scale-up. • Identify potential facilitators and gaps for successful transfer and scale-up.
Implementing and technical partners	• Support collection and synthesis of information about the COVID-19 IIS and the RI context to present to decision-makers.
Funders	• Assess whether and what to invest in the transfer and scale-up of a COVID-19 IIS for RI.
Researchers	• Retrospectively assess suitability of COVID-19 IIS for RI. • Guide assessment of facilitators and gaps of successful transfer and scale-up.

While not its primary focus, parts of CRIISTA may also be used to inform decisions about how to integrate COVID-19 vaccination data reporting and management into existing RI data systems.

About this Document and the CRIISTA Toolkit

The CRIISTA User Guide is a resource for implementers and users of the CRIISTA framework. (For more information on typical roles in the CRIISTA process, please see CRIISTA Team and Participant Roles, below). It is also a resource for Ministry of Health (MOH), Expanded Program on Immunization (EPI), and Health Management Information System (HMIS) decision-makers to review and decide whether using the CRIISTA framework is appropriate for their circumstances. The User Guide has been designed with the aim of assisting and supporting the use of the CRIISTA framework from pre-planning through completion.

The CRIISTA User Guide is part of the CRIISTA Toolkit that also includes the CRIISTA Workbook (an Excel document where planning information, desk review and key informant interview outputs, and final consensus data are all recorded) and the CRIISTA Suitability Assessment Workshop Template (a PowerPoint template that provides guidance on synthesizing key informant/desk review information and is also used to facilitate the final consensus building activity).

Before you begin…

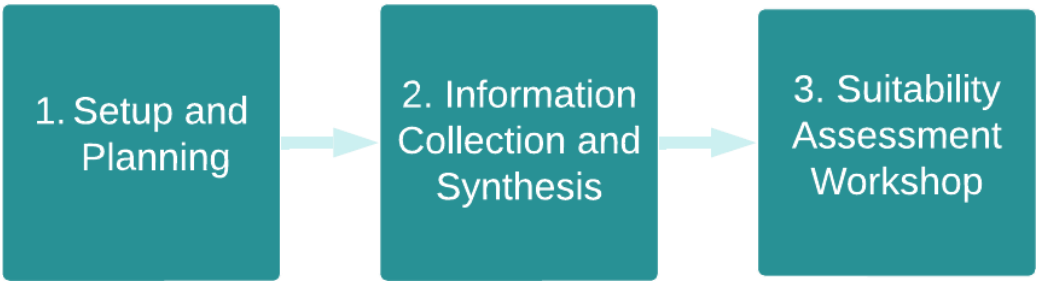
The CRIISTA assessment should only be used when the question or decision of whether to transfer the COVID-19 IIS to RI is a serious consideration on decision-makers' agendas. The assessment requires human and financial resources, and as such should only be used when its ultimate recommendations–positive or negative–are likely to be acted upon.

Is CRIISTA Right For Me?

Before committing to a CRIISTA implementation, it is important to review and evaluate whether this framework would be helpful for your situation and needs. *Note that the table below contains suggestions—CRIISTA could be adapted or revised for contexts outside of its original scope.*

CRIISTA is for you if…	**CRIISTA is *not* for you if…**
The COVID-19 data-related innovation you would like to evaluate ***is*** an IIS such as an electronic immunization registry (EIR), HMIS, etc.	The innovation you would like to evaluate ***is not*** an IIS
AND	***OR***
There is strong political or institutional ***support*** for the eventual scaling of this innovation to RI.	There is strong political or institutional ***opposition*** for the eventual scaling of this innovation to RI.
AND	***OR***
The ***existing*** COVID-19 innovation is generally seen as successful and/or has the potential to be successful after scaling its functionalities to uses for RI.	You are hoping to evaluate and plan a ***new*** IIS for RI, or the existing COVID-19 innovation is perceived to have been unsuccessful.

IMPLEMENTATION PROTOCOL



While assessments should be tailored to a country's needs and context, CRIISTA was developed to support a rapid three-step process (outlined in greater detail in the "Process Overview" section below):

1. Setup and Planning: where the goals for the assessment are refined and a workplan is developed using the CRIISTA Workbook.
2. Information Collection and Synthesis: gather information around the existing COVID-19 IIS, the proposed RI IIS, and related context and requirements. Information is gathered via desk review and key informant interviews and used to populate the CRIISTA Workbook. That information is then summarized into a slide deck (CRIISTA Suitability Assessment Workshop Template) to be used in the third step.
3. Suitability Assessment Workshop (SAW): convene a workshop with key decision-makers, review analyzed information from the previous steps, and have workshop participants respond to a series of Likert scale prompts that serve as the framework for a final discussion on what is feasible, opportunities for impact, and ultimately (if applicable) next steps.

CRIISTA at a Glance

	1. Setup and Planning	2. Information Collection and Synthesis	3. Suitability Assessment Workshop
Key Activities	• Form advisory panel. • Begin work planning, including defining assessment parameters, identifying participants and roles. Develop activity budget if needed. • Review and adapt CRIISTA framework. • Identify key informants, documents for desk review.	• Conduct a desk review of relevant documents. • Conduct key informant interviews. • Review and synthesize information gathered from the desk review and key informant interviews. • Prepare for the SAW.	• Gather stakeholders and key informants for the workshop. • Review assessment scope and completed work so far. • Review summarized/synthesized information from the desk review and key informant interviews. • Complete Likert scale activity. • Conduct final discussion to identify outcomes and next steps.
Outputs	• Assessment terms of reference. • Updated CRIISTA framework (if applicable). • Well-defined advisory panel and implementation team. • List of key informants and documents for desk review.	• Completed information collection (IC) tabs in CRIISTA workbook. • Finalized CRIISTA SAW slide deck, including summarization of information from the IC workbook tabs.	• Completed SAW worksheet (in the CRIISTA Workbook). • Notes summarizing key takeaways from Likert scale activity and final discussion. • A summary of key outcomes, including next steps, in narrative (or other appropriate) form.
Duration	• 1-2 weeks, including a half-day meeting.	• 3-4 weeks.	• 1-2 days.

CRIISTA Participant Roles

In most countries, the assessment process will be led or co-led by the EPI program. Even when COVID-19 IISs are led by other government agencies due to their emergency and multi-sectoral nature, the EPI program should have a leadership role in this assessment, along with digital health and data experts.

IMPLEMENTATION TEAM

- Responsible for administering the assessment, collecting information, and facilitating the workshop.
- Responsible for formatting information synthesis into materials for the SAW and leading the development of the final deliverable following the SAW.

- Key competencies: project management; desk research; informational interviewing; and subject matter familiarity in immunization, digital health, government/NGO workflows.
- Should include the EPI manager or a designee, the EPI staff person responsible for monitoring and evaluation or a designee, and someone very familiar with the implementation of the COVID-19 IIS.

ADVISORY PANEL

- Members of the advisory panel include individuals with decision-making authority who have an interest in understanding whether or not it is appropriate to scale the COVID-19 IIS to RI. This should include the EPI manager or their designee, the EPI staff person responsible for M&E, a representative of the division responsible for national information systems, someone closely involved with the implementation of the COVID-19 IIS, and sub-national immunization managers and health information system focal points.
- An advisory panel chair should be appointed. This person "champions'' the CRIISTA process, appoints other advisory panel members, and works to ensure participation among key informants. This may be the EPI manager.

KEY INFORMANTS

- Subject matter experts who are identified in the planning stage and contribute to the IC activity via key informant interviews.
- Key informants may also participate in or lead information syntheses and/or attend the final SAW.

Process Overview

The directions below provide an overview of the CRIISTA Implementation Protocol. More detailed instructions can be found in the included CRIISTA Workbook and CRIISTA Suitability Assessment Workshop Template**.**

STEP 1: SETUP AND PLANNING

OVERVIEW

The setup and planning step defines the parameters of the assessment, includes key preparatory steps for the assessment, and identifies and engages key stakeholders who will be critical to the success of the assessment.

ACTIVITIES

- **Define Parameters of Assessment**
  - Identify the COVID-19 IIS that is being evaluated for scaling to RI.
  - Define roles and responsibilities for who will make up the CRIISTA implementation team.
  - Define a timeline for the assessment, as well as the required resources.
  - Outputs: Assessment terms of reference and/or workplan; completed "Planning" tab in the CRIISTA Workbook.
- **Review and Adapt CRIISTA Framework for Specific Context**
  - The implementation team reviews questions in the framework and, where necessary, adapts wording, language, content, etc, for the specific context. This work should be completed by reviewing and making changes to the CRIISTA Workbook.

  - Output: Revised “IC” and “SAW” tabs in the CRIISTA Workbook.
- **Prepare for IC and Synthesis**
  - Identify potential key informants to fill gaps in documented information (advisory panel members should ensure they will be able to recruit key informants to participate in the process).
  - Identify and gather information sources, including national strategic and operational documents for digital health or eHealth and immunization. Confirm whether the COVID-19 IIS has been evaluated. If not, the Workbook question prompts will help synthesize experiences and user assessments of the IIS. Determine likely sources for answers to each question based on available documentation, national policies, and available key informants.
  - Output: List of desk review documents and key informants recorded in the CRIISTA Workbook’s “Planning” tab.
- **Prepare for the SAW**
  - Logistical preparation (location, duration, agenda, etc).
  - Stakeholder mapping and engagement. This step is only conducted if the process is led by an implementing partner. If this is being led by MOH/EPI then it will take the form of a participant list rather than a mapping exercise.
  - Output: scope of work/plan for workshop.

PARTICIPANTS

Key informants (lead); IC and implementation team.

OUTPUTS

- CRIISTA terms of reference.
- Content adaptations (if applicable).
- Workplan.
- Established advisory group.
- List of strategic documents.
- List of key informants.

Securing Stakeholder Participation and Engagement

Following the setup and planning meeting, the CRIISTA advisory board chair should work (with their staff) to secure commitments from other senior leaders to join the advisory board (and participate in the SAW), as well as from the key informants identified in the setup and planning meeting.

STEP 2: INFORMATION COLLECTION AND SYNTHESIS

OVERVIEW

The implementation team leads IC and synthesis activities for both the existing COVID-19 IIS and the proposed RI IIS, as well as information related to strategic priorities for both information and communication technologies (ICT) and immunization. This process begins with a desk review and is followed by key informant interviews to answer any questions that haven't been addressed by the desk review. Finally, using the CRIISTA Suitability Assessment Workshop Template, the team synthesizes data from the desk review and key informant interviews into summaries and conclusions to use as the basis for the SAW.

ACTIVITIES

- **Desk Review and Key Informant Interviews**
  - Based on the workplan established in the planning stage, the implementation team conducts a desk review and performs key informant interviews to populate the five "IC" tabs (one for each domain) within the CRIISTA Workbook. The implementation team can use the Workbook prompts to develop a tailored interview guide to fill gaps remaining from the desk review.
  - Output: completed "IC" tabs in the CRIISTA Workbook.
- **Synthesis**
  - Using prompts contained within the CRIISTA Suitability Assessment Workshop Template, the implementation team discusses and synthesizes the information from the "IC" tabs for each domain. The workshop slides provide guidance on which information to consider when formulating high-level findings for each domain.
  - Optional sub-activity: Key informants are given the opportunity to review the workshop slides.
  - Output: populated synthesis slides in workshop template slide deck.
- **Workshop Preparation**
  - IC and implementation team prepares final edits and formatting for the Suitability Assessment Workshop Template. Great care should be taken to ensure that these documents are presented in a format that is comfortable and accessible to workshop participants. The provided template includes prompts, but facilitators should select and customize only the ones that they feel are most appropriate for the assembled group. Depending on availability, key informants should also be encouraged to participate in the preparation and review of workshop materials.
  - Output: finalized slide deck.

PARTICIPANTS

IC and implementation team (lead), key informants.

OUTPUT

Completed "IC" tabs in the CRIISTA Workbook; completed CRIISTA Suitability Assessment Workshop Template.

STEP 3: SUITABILITY ASSESSMENT WORKSHOP

OVERVIEW

Using the collected and analyzed information from the previous two steps, decisionmakers meet to review and build consensus around whether or not to scale the existing COVID-19 IIS to RI.

ACTIVITIES

- **Workshop**: Participants gather for an in-person SAW led/facilitated by a workshop moderator. The goal of the workshop is to validate the assessment findings and co-creation recommendations.
- **Recommendations**: The facilitator leads a discussion of the assessment findings and uses provided tools (CRIISTA Workbook, CRIISTA Suitability Assessment Workshop Template) to develop recommendations for next steps related to:
  - Whether the COVID-19 IIS is appropriate and feasible for scale.
  - Gaps, opportunities, next steps.
- **Final deliverable:** Based on aims established in Step 1, a final deliverable is developed that describes the rationale for the decision on whether to scale the COVID-19 IIS to RI (if one is reached), and/or a description and rationale of any next steps to be taken. Depending on the use-case, this deliverable could be a report, an advocacy tool, or other knowledge product.

PARTICIPANTS

CRIISTA advisory panel, CRIISTA implementation team, other decision makers, key informants (if possible)

OUTPUT

Completed consensus building activity with results recorded in the "SAW" tab in the CRIISTA Workbook; recorded summary, consensus, and next steps (if appropriate) in the CRIISTA Suitability Assessment Workshop Template

APPENDIX A. SUITABILITY ASSESSMENT WORKSHOP OVERVIEW

Workshop Objectives

The purpose of the workshop is to convene key stakeholders (e.g., MOH and EPI decision makers, and other immunization stakeholders) to jointly complete the framework assessment for the selected tools or processes and gather feedback on the framework.

SPECIFIC OBJECTIVES INCLUDE:

1. Review the information gathered from desk review and interviews.
2. Refine the responses to questions as needed to complete the framework assessment.
3. Develop consensus on whether the tools/processes are suitable for transfer to RI, obstacles to implementation, and what conditions would need to exist for their successful transfer and scale-up.

Suitability Assessment Workshop Protocol

A lead facilitator and a recording note taker are selected from the IC and implementation team. The lead facilitator presents the completed Suitability Assessment Workshop template.

- During the discussion section, a slide for each domain will be presented that summarizes the findings from the information collected in Step 2 and prompts the workshop participants to answer a final round of questions based on a Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). In addition to taking notes, the recording note taker also records the consensus answers to the Likert scale prompts on the *SAW Input* tab of the CRIISTA Workbook.
- Once all Likert scale prompts have been completed, the *SAW Results* tab of the CRIISTA Workbook is shared with the participants and the results are discussed to inform recommendations and next steps.

Sample Agenda

8:30-9am	**Coffee and introductions** (all)
9:00-9:30am	**Opening remarks** (advisory board chair)
9:30-10am	**Review CRIISTA background** (implementation team) Implementation team presents Section 1 of the workshop slide deck
10am-noon	**Assessment findings** (implementation team)
noon-1pm	Lunch
1:00-2:45pm	**Consensus building discussion** (implementation team)
2:45-3pm	**Break** Implementation team copies results from the CRIISTA Workbook to the workshop slide deck
3-4pm	**Review results and decision discussion** (implementation team, advisory panel)
4-5pm	**Next steps and concluding remarks** (advisory board chair)

APPENDIX B. EXAMPLE IMPLEMENTATION TIMELINE

- Kickoff meeting (half day, chair and implementation team).
- Desk review (1-2 weeks, implementation team).
- Key informant interviews (~5 x one hour, implementation team and key informants).
- Information synthesis (1 week, implementation team and potentially key informants).
- Suitability assessment workshop (1-2 days, all).
- Follow-up (implementation team, TBD).

APPENDIX C. FUNCTIONALITY DESCRIPTIONS

Note that these functional requirements are mapped to the Gavi Identify, Reach, Monitor, Measure, Advocate framework

IDENTIFY

Decision support: Provides data-driven support to help health workers make decisions about client care.

Enrollment at birth: Registers a child for vaccination as close to birth as possible.

Nonroutine vaccine event data: Captures vaccination data in in non-routine settings (e.g., outreach events).

Population data & denominators: Captures child data (e.g., birth, death) by geographic or catchment area.

Triangulation with data from other sources: Incorporates data from additional sources (e.g., CHWs) and sectors (e.g., humanitarian and social safety net operations) and triangulates data.

Unique Identifiers: Uses a number or system for identifying each child registered for vaccination.

REACH

Financial resource management: Captures data on government and partner financial commitments to enable immunization service planning.

Health facility data: Captures a complete list of health facilities in the implementation area that is searchable, to understand where vaccinations are delivered.

Human resource tracking: Captures data on human resources to enable immunization service planning.

Individual demographic data: Captures data about each person in the system (including unique ID, name, sex, date of birth, caregiver contact information, place of residence, and status).

Linkages to other health areas: Captures data on services that are typically delivered alongside vaccination (e.g., growth monitoring, Vitamin A administration) to identify under-immunized children.

Reminder and recall messages: Sends manual and automated client messages via SMS, email, etc. to provide reminders.

Service delivery planning and management: Captures data to support immunization planning and management, such as geographic and population data to inform microplanning.

Vaccine event data and records: Captures information on the vaccine event (e.g., data, antigen, dose).

MONITOR

Data use practices: Supports data use through features that include aggregation, visualization, dashboards, and generation of reports on vaccination coverage, defaulters, etc.

Identification of under-vaccinated individuals: Triangulates across datasets to identify zero-dose children and highlight patients who have missed vaccinations or are overdue.

Stock management: Prevents stockouts by facilitating stock forecasting and planning; includes the ability to signal when vaccination stocks are low and reorder them.

Surveillance and outbreak detection: Ability to detect outbreaks of vaccine-preventable diseases and identify geographic regions most affected.