

Performance of Routine Information System
Management (**PRISM**)

USER'S KIT



**Moving from
Assessment to Action**

October 2018



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For any questions about the tools or implementing any part of the assessment, please contact: measure@measureevaluation.org.

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ABBREVIATIONS

HIS	health information system
HMIS	health management information system
ICT	information and communications technology
MAT	Management Assessment Tool
M&E	monitoring and evaluation
MOH	ministry of health
OBAT	Organizational and Behavioral Assessment Tool
OVC	orphans and vulnerable children
PRISM	Performance of Routine Information System Management
RHIS	routine health information system
SMART	specific, measurable, achievable, relevant, and time-bound
USAID	United States Agency for International Development

OVERVIEW OF THE PRISM SERIES

Using data to make evidence-informed decisions is still weak in most low- and middle-income countries. Especially neglected are data produced by routine health information systems (RHIS). RHIS comprise data collected at public, private, and community-level health facilities and institutions. These data, gleaned from individual health records, records of services delivered, and records of health resources, give a granular, site-level picture of health status, health services, and health resources. Most are gathered by healthcare providers as they go about their work, by supervisors, and through routine health facility surveys.

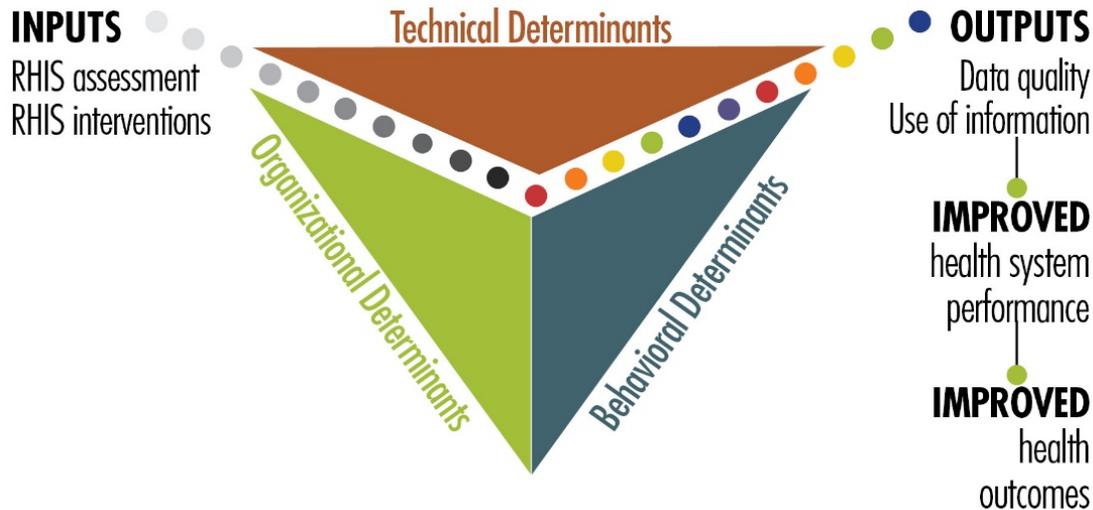
When routine data are lacking, or are not used, the results can be lower-quality services, weak infection prevention and control responses, lack of skilled health workers available where they are needed, and weak supply chains for drugs and equipment. These factors contribute to poor health outcomes for people.

MEASURE Evaluation, which is funded by the United States Agency for International Development (USAID), has provided technical and financial assistance to strengthen RHIS for more than 15 years. We have contributed to best practices at the global level and to the strengthening of RHIS data collection, data quality, analysis, and use at the country level. One of the project's mandates is to strengthen the collection, analysis, and use of these data for the delivery of high-quality health services.

MEASURE Evaluation developed the Performance of Routine Information System Management (PRISM) Framework and suite of tools in 2011 for global use in assessing the reliability and timeliness of an RHIS, in making evidence-based decisions, and in identifying gaps in an RHIS so they can be addressed and the system can be improved. The framework acknowledges the broader context in which RHIS operate. It also emphasizes the strengthening of RHIS performance through a system-based approach that sustains improvements in data quality and use. PRISM broadens the analysis of RHIS performance to cover three categories of determinants that affect performance:

- **Behavioral determinants:** The knowledge, skills, attitudes, values, and motivation of the people who collect, analyze, and use health data
- **Technical determinants:** The RHIS design, data collection forms, processes, systems, and methods
- **Organizational determinants:** Information culture, structure, resources, roles, and responsibilities of key contributors at each level of the health system

Figure 1. PRISM Framework



What the 2018 PRISM Series Offers

With USAID’s support, MEASURE Evaluation has revised the PRISM Tools and developed other elements, based on the PRISM Framework, to create a broad array of materials: the “PRISM Series.” It’s available on the MEASURE Evaluation website (<https://www.measureevaluation.org/prism>) and has the following components:

- **PRISM Toolkit**
 - PRISM Tools (this is the fundamental manual of PRISM Tools)
 - PRISM Tools to Strengthen Community Health Information Systems
- **PRISM User’s Kit** (consisting of four guidance documents)
 - Preparing and Conducting a PRISM Assessment
 - Using SurveyCTO to Collect and Enter PRISM Assessment Data
 - Analyzing Data from a PRISM Assessment
 - Moving from Assessment to Action (this document)
- **PRISM Training Kit**
 - Participant’s Manual
 - Facilitator’s Manual
 - 9 PowerPoint training modules

This new, more comprehensive PRISM Series is useful for designing, strengthening, and evaluating RHIS performance and developing a plan to put the results of a PRISM assessment into action.

The revised “PRISM Tools”—the PRISM Series’ core document—offers the following data collection instruments:

RHIS Overview Tool

This tool examines technical determinants, such as the structure and design of existing information systems in the health sector, information flows, and interaction of different information systems. It looks at the extent of RHIS fragmentation and redundancy and helps to initiate discussion of data integration and use.

Performance Diagnostic Tool

This tool determines the overall level of RHIS performance: the level of data quality and use of information. This tool also captures technical and organizational determinants, such as indicator definitions and reporting guidelines, the level of complexity of data collection tools and reporting forms, and the existence of data-quality assurance mechanisms, RHIS data use mechanisms, and supervision and feedback mechanisms.

Electronic RHIS Performance Assessment Tool

This tool examines the functionality and user-friendliness of the technology employed for generating, processing, analyzing, and using routine health data.

Management Assessment Tool

The Management Assessment Tool (MAT) is designed to take rapid stock of RHIS management practices and to support the development of action plans for better management.

Facility/Office Checklist

This checklist assesses the availability and status of resources needed for RHIS implementation at supervisory levels.

Organizational and Behavioral Assessment Tool

The Organizational and Behavioral Assessment Tool (OBAT) questionnaire identifies behavioral and organizational determinants, such as motivation, RHIS self-efficacy, task competence, problem-solving skills, and the organizational environment promoting a culture of information.

Uses of the PRISM Tools

These PRISM tools can be used together to gain an in-depth understanding of overall RHIS performance, to establish a baseline, and to rigorously evaluate the progress and effectiveness of RHIS strengthening interventions every five years, contributing to the national RHIS strategic planning process. Each PRISM tool can also be used separately for in-depth analysis of specific RHIS performance areas and issues.

INTRODUCTION

A main strategy for strengthening RHIS focuses on developing and reinforcing a country's long-term planning for an integrated health information system (HIS), which includes all data sources, health metrics, and tools. These guidelines support that effort.

After you assess the performance of an RHIS using one or more of the PRISM tools and analyze the assessment data, the next step is to develop an action plan. Action planning helps you focus on the major technical, organizational, and behavioral determinants that impede on the realization of the benefits of the RHIS in your country or your organization for which the PRISM assessment was carried out.

A well-prepared action plan for strengthening the RHIS, based on the evidence generated by the PRISM assessment, will help you identify the appropriate interventions and resources needed to achieve specific goals in a defined time frame to improve the performance of the RHIS. Action planning also assigns specific tasks to the appropriate people and promotes effective follow-up and accountability for the achievement of RHIS strengthening goals.

The main users of these generic guidelines for action planning for RHIS strengthening following a PRISM assessment are national RHIS managers, district managers, program managers, district- or program-level RHIS managers and experts, monitoring and evaluation (M&E) experts, implementing partners, and researchers. The guidelines describe several techniques and methods to use in developing the plan.

The guidelines are organized in the following sections:

- Purpose of action planning following a PRISM assessment
- Guiding principles for developing an action plan for RHIS strengthening, based on evidence generated by the PRISM assessment
- Action plan development process
- Examples of action plan interventions to improve RHIS performance based on a PRISM assessment

PURPOSE OF ACTION PLANNING FOLLOWING A PRISM ASSESSMENT

The purpose of action planning following a PRISM assessment is to prioritize the issues identified during the assessment; establish a coordination and collaboration mechanism for the implementation of RHIS strengthening activities; define actions to address RHIS performance issues and their determinants; and allocate a budget and establish responsibilities for implementing RHIS strengthening interventions. The action plan also serves as a monitoring tool for following up on the implementation and outcomes of the interventions that the plan describes.

The goal of the action plan is to strengthen management of the RHIS and improve the system's performance in terms of data quality and information use for decision making. To that end, the action plan lists specific, realistic, and achievable actions that address the RHIS inputs, and the technical, organizational, and behavioral determinants of RHIS performance, as identified during the PRISM assessment.

PRINCIPLES FOR DEVELOPING AN ACTION PLAN

The guiding principles for the development and implementation of an action plan to strengthen the RHIS, based on the results of a PRISM assessment, are as follows:

1. The process of developing and then implementing the RHIS-strengthening action plan should be led and owned by the country or organization responsible for the RHIS.
2. The action plan should be developed with the engagement of stakeholders, to ensure broad-based consensus and stakeholder buy-in.
3. The activities and interventions in the action plan should be relevant to the country context and address the priority needs of the country or organization, including its subunits.
4. The interventions should build on what already exists.
5. The activities and interventions should lead to the sustainability of the RHIS, so that the system can satisfy the information needs of the present and evolve as those needs change.

ACTION PLAN DEVELOPMENT PROCESS

The action plan development process has three phases: (1) stakeholder engagement; (2) review of the PRISM assessment results; and (3) action planning for RHIS strengthening.

Stakeholder Engagement

Unless they were already engaged during the PRISM assessment process, in the initial phase of action planning, it is essential to understand who your stakeholders are, as well as their interests, requirements, and capacity to contribute to the RHIS strengthening efforts. Your stakeholders have the power to influence the implementation of your action plan. It is therefore important to identify the organizations and people who have a stake in the RHIS; who are knowledgeable about your country or organization's RHIS; and who can advocate, mobilize, or commit resources to the development and implementation of a coordinated and harmonized RHIS-strengthening action plan.

A stakeholder analysis matrix (Table 1) can help you identify the organizations, people, and groups who are the stakeholders in an RHIS improvement process, either as contributors, influencers, or beneficiaries. The matrix is a structured way to define the roles that stakeholders play in the activity and assess the resources they could bring to bear. It also provides a framework for assessing the stakeholders' interests, knowledge, positions, alliances, resources, power, and importance. Who will resist the initiative? Who will support it? What are their reasons? The matrix helps you assess which stakeholders to include in the process, by determining their relative priority. Which stakeholders have the highest priority?

The identification and engagement of relevant stakeholders contribute to the development of an action plan that meets everybody's expectations and needs.

Table 1. Stakeholder analysis matrix

Name of stakeholder organization, group, or individual	Stakeholder description (primary purpose, affiliation, funding source)	Stakeholder's interest in the process (support or oppose the activity, to what extent, and why?)	Degree of influence in the process (little, medium, or strong)	Available resources (staff, money, technology, information, influence)	Level of involvement
		++ strongly in favor + in favor ○ neutral - oppose -- strongly oppose	S strong M medium L little		<ul style="list-style-type: none"> • Invite as part of the team developing the action plan • Invite to participate in key decision making processes, such as vetting or approving the action plan and mobilizing resources to implement the action plan • Consult from time to time (informal or formal)

Review of the PRISM Assessment Results

Review of the PRISM assessment's results is your best opportunity to understand and prioritize the RHIS problems that the assessment identified, discuss potential solutions, prioritize recommendations, and prepare a realistic action plan. To encourage and promote ownership of the assessment results, we recommend that you begin by conducting an internal review with the ministry of health (MOH), followed by a review in a workshop setting with a broader group of participants. In this phase of reviewing and analyzing the assessment's results, ensure that the designated participants from the MOH and other stakeholder organizations have the ability to analyze the PRISM findings, are knowledgeable about the country context and the country's RHIS, and, therefore, have the ability to recommend appropriate actions for RHIS strengthening. To ensure a productive review workshop, give the assessment report, charts, graphs, and other reading materials to the participants in advance, so they can prepare. You will also need to identify facilitators who have the skills to keep participants focused and on track to achieve the workshop's expected outcomes.

This review workshop can be combined with the action planning phase. If you decide to make action planning part of the workshop, be sure that the workshop participants have the authority to make decisions. Alternatively, the first part of the workshop can be for RHIS experts to review and validate the quality and relevance of the assessment results and prepare summaries and presentations for the decision makers. In the second part of the workshop, relevant decision makers join the RHIS experts, are briefed on the assessment results and the recommendations, and contribute to the identification of actions and interventions to address the findings, and to the definition of the timelines, responsible persons and organizations, and required resources.

For the review and formulation of relevant recommendations to be effective, we recommend group discussions. The composition of and tasks assigned to each group may be as follows:

- Decision makers and other users: RHIS management (guidelines, policies, strategies) and use of health information
- Data managers and M&E specialists: data quality, management, and accessibility
- Health providers: data collection and reporting

A plenary session should follow the group discussions, to enable all participants to provide feedback and input on all groups' ideas and proposals, and to learn from one another.

If the PRISM assessment results review and the formulation of recommendations are conducted separately from the action planning session, the results and recommendations should be disseminated to the relevant decision makers, to inform and guide them to identify the appropriate strategies and actions for strengthening the RHIS.

Action Planning for RHIS Strengthening

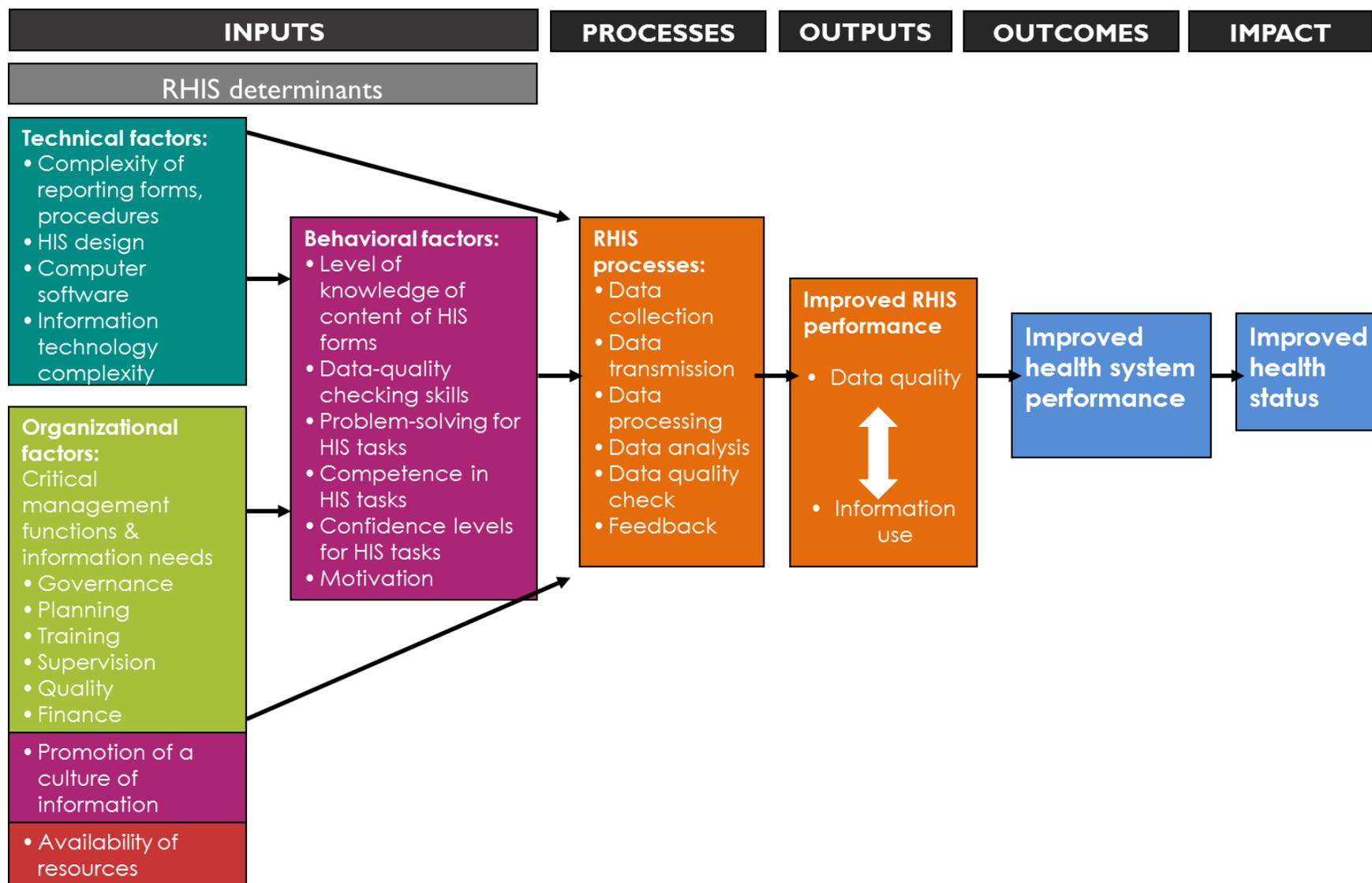
The RHIS strengthening planning process follows the review and discussion of the PRISM results and recommendations, and the identification and prioritization of strategies to achieve an improved, well-performing RHIS.

The planning process likewise requires good facilitation to develop an action plan that describes specific, measurable, achievable, relevant, and time-bound (SMART) objectives and activities, and with responsibility for the implementation of each activity assigned to a specific person or organization.

Contextualizing the RHIS Strengthening Conceptual Model

Base the action plan on the review of the PRISM assessment results and the associated recommendations, which the relevant stakeholders will have developed in a consultative process. The foundation of the assessment and the resulting action plan is the PRISM Conceptual Model (Figure 2), which presents the relationship of RHIS inputs and processes with the outputs, outcomes, and impact of the RHIS. It also defines the technical, organizational, and behavioral factors that influence the outputs and outcomes of RHIS strengthening interventions. The PRISM Conceptual Model guides a purposeful process for formulating recommendations for RHIS strengthening and deciding on appropriate actions. It empowers stakeholders to explore and contextualize innovative strategies and interventions to solve the problems identified during the PRISM assessment. For example, technical interventions to introduce information and communications technology (ICT) solutions for real-time access to data to support prompt decision making require coupling the ICT solutions with organizational interventions to establish good management, interoperability, and maintenance of the ICT systems, and making a conscious effort to develop the skills of health and ICT staff. Use of the PRISM Conceptual Model helps you see the critical elements needed to address the problems that the PRISM assessment identified.

Figure 2. The PRISM Conceptual Model



Prioritizing Strategic RHIS Strengthening Activities

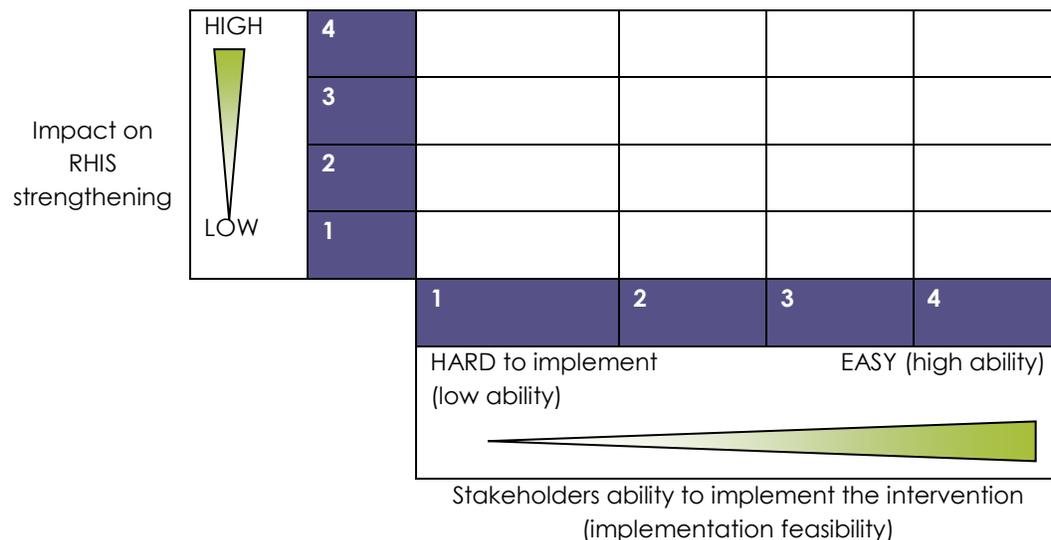
When formulating recommendations and developing the action plan, it is important to prioritize those activities that will lead to the most improvements in the RHIS, with available resources or for which resources can be mobilized. The sustainability of the interventions is also a consideration when identifying priority activities for RHIS strengthening.

Participants in the action planning session can use the prioritization matrix (Figure 3) to score the proposed/recommended activities, based on their expected impact on RHIS strengthening and on the ability of the organization and stakeholders to implement the activities. The scores help prioritize the interventions that are the most feasible and likely to yield the greatest results.

The prioritization exercise is conducted through a consensus process. Participants in the action planning session agree on the level of impact each recommended intervention will have and the ability of the stakeholders to implement it, all the while considering the available resources (human, financial, ICT, etc.). Participants can work in small groups to discuss and complete the matrix, and then come together in a plenary session to produce one completed matrix.

The prioritization matrix is arranged with a scale for impact on the vertical axis and a scale for ability to implement with required level of investment (human and financial resources, efforts, and time) on the horizontal axis. Each axis is divided into four scores: 1 represents the lowest score for the attribute and 4 represents the highest. The interventions with the most impact, that are the easiest to implement, and that require minimal investment are put in the top right cells of the matrix, and the interventions with the least impact and that are least feasible (i.e., require a high level of human or financial resources or efforts) are put in the lowest cells of the matrix on the left.

Figure 3. The prioritization matrix



Depending on the context, the use of this matrix helps distinguish relevant interventions that are easy or relatively easy to implement and that produce moderate to high impact from those that are less feasible or yield low impact.

Appendix 1 provides examples from several countries of interventions based on PRISM assessment findings.

Once an intervention has been determined, it should be broken down into well-defined subactivities, so that the person or organization responsible for implementation and the budget can be assigned. Figures 4 and 5 provide examples of how to break down the main intervention into subactivities that result in RHIS strengthening.

Scheduling and Budgeting Activities

The purpose of scheduling and budgeting is to elaborate the overall RHIS action plan, thereby providing a roadmap for the activities under each recommended intervention. Understanding the required work efforts for the implementation of each recommended intervention allows participants in the action planning to break activities down and estimate the resources and time required for implementation accurately. Aligning the activities with the resources they require makes it possible to estimate the costs of RHIS strengthening efforts and determine how much time implementation of the action plan will take.

Figure 4. Example 1: Activity breakdown. Implementation of DHIS 2 to allow real-time data access

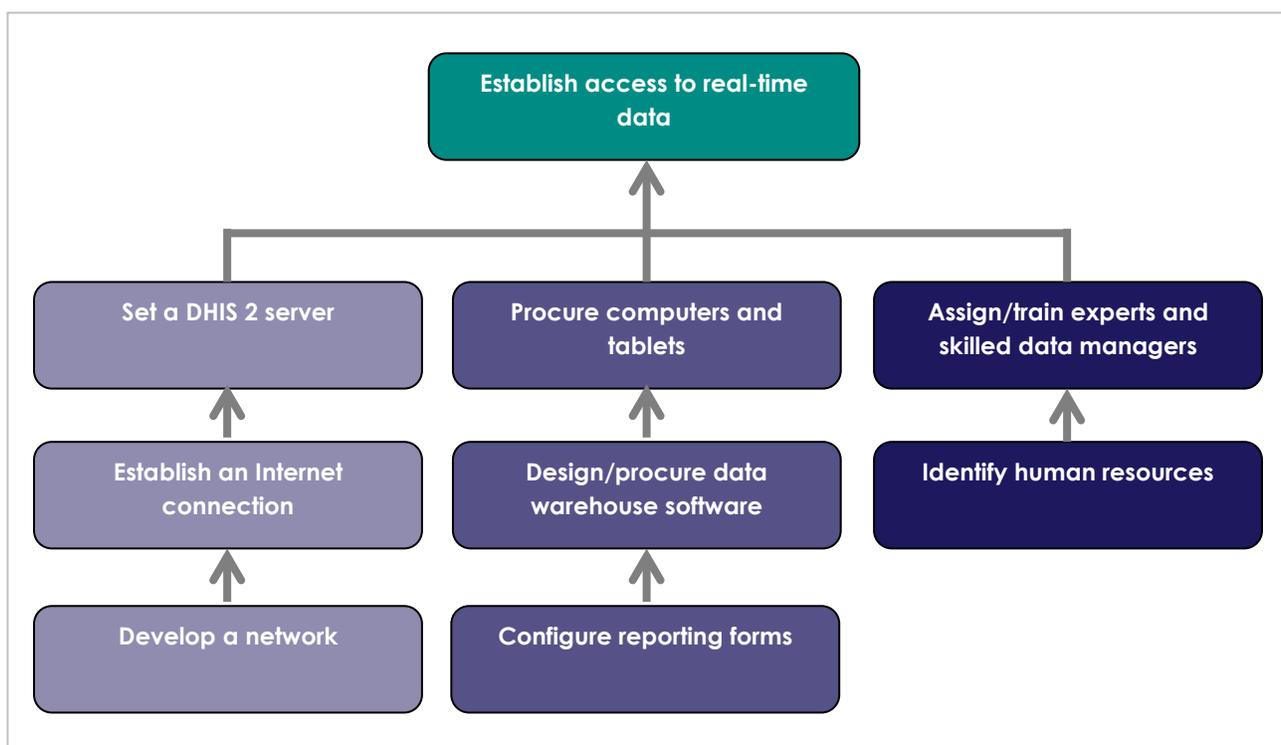


Figure 5. Example 2: Format for scheduling and budgeting activities

Recommendations	Objective	Activities	Short term	Medium term	Long term	Responsible entity	Supporting partner	Budget
STRATEGY 1								
I – Recommendation 1	Objective 1	1- Activity 1	x					
		2- Activity 2	x					
		3- Activity 3	x					
II – Recommendation 2	Objective 2	1- Activity 1	x					
		2- Activity 2	x					
		3- Activity 3		x				
		4- Activity 4		x				

Monitoring and Evaluation

M&E helps measure performance and assess the impact of different strategies, interventions, and inputs on the RHIS strengthening efforts. The results of M&E contribute to the learning experience and help decision makers improve the interventions.

The action plan itself serves as a monitoring tool to follow up the implementation of the interventions and activities it stipulates. Moreover, periodic application of the PRISM Performance Diagnostic Tool helps track progress in improving data quality, information use, and RHIS management. For evaluation purposes, the comprehensive PRISM assessment may be carried out every four to five years to measure changes in the overall RHIS processes, outputs, and outcomes. Regular review of action plan implementation and monitoring of findings helps stakeholders identify any needed mid-course corrections.

APPENDIX 1. EXAMPLES OF INTERVENTIONS BASED ON PRISM ASSESSMENT RESULTS

Year	Country / responsible organization	Scope	Assessment results	Interventions T = Technical O = Organizational B = Behavioral
2011	Cambodia Ministry of Social Affairs, Veterans and Youth Rehabilitation (MoSVY) UNICEF	Assessment of the performance of the pilot orphans and vulnerable children (OVC) data collection and reporting system at village, commune, district, province, and nongovernmental organizational levels	<ul style="list-style-type: none"> • Data accuracy ranges from 36% to 57% at the village level, and from 50% to 75% at the commune and district levels for the two indicators. • Only 14% at the village level and 75% at the commune and district levels know the report submission deadline. • Data processing and analysis: 75% of the communes and 100% of the districts compile data and produce aggregated data. • OVC data collection is not harmonized with the commune database. • There are multiple registers and reporting forms. • There are limited human resources. • There is low understanding of how to use data at the village level. • Use of information for resource mobilization is 38% at the village level and 67% at the commune and district levels. • 33% use data to inform policy at the commune and district levels. • Feedback provided from the district and commune levels to the lower level is 100%. • Only 71% of the village reports are discussed with the higher level. 	<ul style="list-style-type: none"> • Finalize the OVC indicator definitions and data collection and reporting tools (T). • Revise the data flow (T). • Propose the following changes for the scale-up and capacity building plan: <ul style="list-style-type: none"> ○ Strengthen supervision capacity (O) ○ Improve coordination and collaboration (O) ○ Harmonize OVC data collection and reporting (T)
2007 and 2010	China Yunnan and Guangxi Provinces	End line assessment of the health management information system (HMIS) and HIV/AIDS reporting system; compares	<ul style="list-style-type: none"> • Overall use of information is better in the new (83%) and old (86%) intervention counties than in the control group (74%). • Use of HIV service information is higher in the new intervention counties (50%) than in the old 	<ul style="list-style-type: none"> • Develop a training manual on the use of information focused on HIV/AIDS services (O). • Train more than 350

Year	Country / responsible organization	Scope	Assessment results	Interventions T = Technical O = Organizational B = Behavioral
	CDC, Provincial HIV/AIDS Prevention and Control Working Committee Office	progress made in integrating and strengthening the HMIS and HIV/AIDS reporting systems between the old and new intervention counties and nonintervention areas	<p>counties (26%).</p> <ul style="list-style-type: none"> • The intervention counties met the HIV indicator targets better (67%) than the control group (50%). • Improved use of information for better management of services: more than 80% in the intervention counties, compared to 26% in the control group. • Use of HMIS information for decision making is higher (94%) in the old intervention counties than in the control group (86%). • HMIS task competence in terms of calculation, data plotting, and interpretation improved by 30%. • Knowledge and practice of performance improvement tools increased from 15% to 70%. • Promotion of the use of information in the intervention counties is better (68%) than in the control areas (50%). • Supervision quality reached 93% in the intervention area, compared to 88% in the control group. • 55% of facility staff received feedback in the intervention counties, compared to 12% in the control group. 	<p>staff (O).</p> <ul style="list-style-type: none"> • Introduce a new data analysis template for feedback (O).
2008	Côte d'Ivoire MOH Ecole Nationale Supérieure de Statistique et d'Economie Appliquée (ENSEA)	Surveyed 119 health facilities and 12 districts to assess the HMIS performance level and identify major determinants affecting HMIS performance	<ul style="list-style-type: none"> • Data accuracy: 40% for districts and 43% for health facilities. • Timeliness of reporting: 60%. • Data quality at health facilities: 50%. • Data analysis: 30%. • Use of information for decision making: 38% at health facilities and 44% at district level. • Inadequate supervision of the HMIS and lack of feedback: only 7% of districts provide feedback to health facilities. • Lack of management standards and procedures for 	<p>Develop RHIS improvement strategies based on the PRISM Conceptual Model:</p> <ul style="list-style-type: none"> • Select and validate indicators (T). • Integrate HIV/AIDS indicators into the RHIS (T). • Develop, test, and distribute data collection tools (T). • Provide informatics kits for better data

Year	Country / responsible organization	Scope	Assessment results	Interventions T = Technical O = Organizational B = Behavioral
			<p>the HMIS.</p> <p>Improvements observed compared to the 2003 assessment:</p> <ul style="list-style-type: none"> • HIV/AIDS data are collected by national tools and integrated in the HMIS. • Data quality is 60%. • Data completeness improved from 62% to 80%. • Data transmission between levels improved. • Availability of computerized databases in the districts increased from 30% to 77%. • Staff motivation to execute HMIS tasks reached 80%. • 82% of districts and 62% of health facility staff were confident in conducting HMIS tasks. • HMIS competencies found in 55% of health facility and 65% of district staff. • 92% of staff in charge of HMIS have been trained. • HMIS resources (computers, telephones, and UPS) availability improved. • Computer availability in districts reached 100%, but only 13% of health facilities and 34% of districts have Internet. 	<p>management (T).</p> <ul style="list-style-type: none"> • Develop RHIS courses and train health staff (B). • Establish training partnership with ENSEA to train health workers on data analysis and use of information (B). • Provide a data demand and use (DDU) training for decision makers (B). • Develop feedback bulletins for health offices at all levels (O).
2010	<p>Ecuador</p> <p>Ministry of Public Health</p> <p>National Institute of Statistics and Censuses</p> <p>General Directorate of Civil Registry, Identification, and Registration</p>	<p>Used PRISM tools for in-depth assessment of the RHIS</p> <p>Included 107 health facilities and 11 provincial health directorates</p>	<ul style="list-style-type: none"> • Data accuracy: 71%. • Timeliness: 56%. • Data completeness: 70%. • Significant difference between the promotion of data quality (79%) and actual skill in reviewing the quality of data (5%). • Problem-solving skills: 48%. • 90% confident in calculating data; only 78% know how to calculate data. • 59% demonstrated skills in information use. • 44% have data interpretation skills. 	<ul style="list-style-type: none"> • Design software and virtual platforms (T). • Train staff (B). • Establish inter-institutional committee to coordinate, monitor, and evaluate implementation of the strategic plan (O). • Design a M&E plan (O). • Develop proposal

Year	Country / responsible organization	Scope	Assessment results	Interventions T = Technical O = Organizational B = Behavioral
	National Secretariat of Planning and Development		<ul style="list-style-type: none"> • 24% can develop graphs. 	for a budget to ensure financial sustainability of the project (O). <ul style="list-style-type: none"> • Bring Social Security on board of the national committee as key player in the health service (O).

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