Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE **Americas**

IS4H TOOLKIT

IS4H FUNCTIONAL ASSESSMENT

DEPARTMENT OF EVIDENCE AND INTELLIGENCE FOR ACTION IN HEALTH PAHO/WHO

www.paho.org/ish

Information Systems for Health Toolkit
Functional Assessment

IS4H-FA 1.0

Acknowledgments

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Department of Evidence and Intelligence for Action in Health
Pan American Health Organization - World Health Organization

1. What is an IS4H Functional Assessment?

The IS4H Functional Assessment is a country-led process, with technical assistance from PAHO, for assessing the *functions* (the operational activities performed by an organization to achieve its mission) currently performed by national health authorities and their partners related to *Information Systems for Health (IS4H)*.

The IS4H Functional Assessment provides a mapping of the IS4H functions currently performed by the Ministry of Health and the Health Authorities/Institutions against a normative IS4H functional model. The output of the assessment is a *gap analysis that* should serve as the input for national authorities to develop tailored interventions and strategic partnerships that address these functional gaps in the short and long term.

The IS4H Functional Assessment is focused on assessing core **IS4H functions** across four domains:

- Information Technology Management,
- Information Management and Analysis,
- Health Informatics, and
- Knowledge and Performance Management,

as well as across three key **Enabling Functions**:

- Stakeholder Relationship Management,
- Administration, and
- Operational Resilience

and three Solution and **Service Delivery Functions**:

- Solution Development,
- Solution Deployment and
- Service Delivery.

> *The outcome of the assessment can be used as a key input for IS4H strategic planning, human resource plans, service level agreements and organizational re-structuring efforts to ensure that the country is able to effectively plan, deliver and sustain IS4H.*

The assessment seeks to identify whether these functions are currently being performed at the strategic level, the management level and the operational level (see *Section 1.4 for an overview of the IS4H Functional Model*). It is important to note that the IS4H Functional Assessment only assesses whether a function is formally performed within the health system, it does not assess how well or effectively the functions are performed.

2. IS4H Functional Model

The IS4H Functional Model reflects normative or best practice functions required to sustainably support and deliver the key IS4H components in the Strategic Framework. The IS4H Functional Assessment is typically applied to the national health authority (e.g., the Ministry of Health) although it can be applied to any national or sub-regional authorities with responsibility for delivering and supporting the components of the IS4H Strategic Framework.

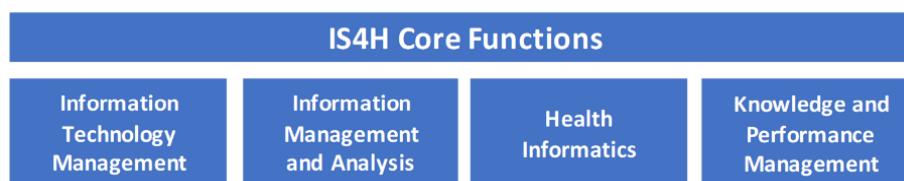|	Enabling Functions			IS4H Core Functions				Solution and Service Delivery Functions		
	Stakeholder Relationship Management	Administration	Operational Resilience	Information Technology Management	Information Management and Analysis	Health Informatics	Knowledge and Performance Management	Solution Development	Solution Deployment	Service Delivery
Strategic Functions	IS4H Stakeholder Strategic Priorities & Needs Identification; Communication & Stakeholder Relationship Strategy	Operational Model	Risk Management Strategy; Operational Continuity Strategy	IT Governance; IT Strategy; IT Architecture; Technology Innovation	Information Governance; Information Strategy; Information Architecture; Health Info Innovation	Health Informatics Governance; Health Informatics Strategy; HI Innovation	KM Strategy; Knowledge Networks; KM Innovation; Performance Frameworks	Solution Development Strategy	Solution Deployment Strategy	Support Service Strategy
Management Functions	Comm. Planning/Mgt; Stakeholder Guidance; Change Mgt Planning; Training Development/ Management	Budgeting & Financial Control; HR Planning & Administration; Vendor Management	Risk Compliance Control; Operational Continuity Planning; Security	IT Systems Portfolio Management; IT Systems Management and Control	Information Architecture and Standards Mgmt; Information Lifecycle and QA Planning; Information Privacy	Protocol Development; QA and Safety Management; Process and Outcome Optimization	Knowledge Taxonomy, Tools and Methods; Knowledge Translation; Performance Monitoring	Solution Development Lifecycle Planning; Solution Architecture	Solution Implementation Planning; Change Deployment Control	Service Delivery Planning; Service Quality Assurance
Operational Functions	Communication Development and Delivery; Change Management Support; Training Services and Delivery	Procurement & Contract Management; Vendor Service Coordination; Project Management	Auditing and Compliance; Continuity Operations	Network Administration; Server/Storage Administration (Tier 2/3); End-User Device Administration	Health Records Management and Quality Assurance; Coding and Classification; Reporting & Analytics	QA and Safety Compliance; Clinical Analytics Support	Knowledge Resource Coordination; Knowledge Products Creation; Knowledge Dissemination	Solution Development; Solution Testing and Quality Assurance	Network and End-User Device Implementation; Solution Rollout	Application Management & Configuration (Tier 1); Help Desk Operations; User Identity & Access Management

2.1 Enabling functions

Enabling functions are those functions required to support IS4H Core Functions and Solution and Service Delivery functions. Typically Enabling Functions are already performed by the organizations through existing strategic, management and operational functions.

Enabling Functions

Stakeholder Relationship Management	Administration	Operational Resilience
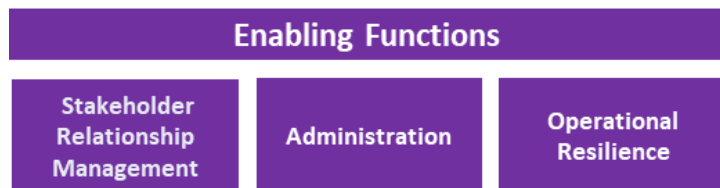
2.2 Core functions

IS4H Core Functions represent the key strategic, management and operational functions across the IS4H strategic domains and sub-components within the PAHO IS4H Strategic Framework. The IS4H Core Functions are the essential functions required to plan, delivery and support IS4H activities and goals.

IS4H Core Functions

Information Technology Management	Information Management and Analysis	Health Informatics	Knowledge and Performance Management

2.3 Solutions and Delivery functions

Solutions and Service Delivery functions support the strategy, planning, implementation and ongoing support of IT, information management, health informatics and knowledge management solutions.

3. IS4H Functional Assessment Process

The IS4H Functional Assessment follows a standard process across five stages:

Stage 1: Pre-Assessment Planning

1) Ministry of Health or Institution requests technical support for an IS4H Functional Assessment through the PAHO Country Office.

2) Ministry of Health identifies a country focal point (for liaison with PAHO).

3) Virtual sessions to review the process and develop a plan for the IS4H Functional Assessment.

4) Desk review of available documentation

5) Preparation of in-country stakeholder meetings.

Stage 2: In-Country IS4H Functional Assessment Mission

6) PAHO technical consultant briefing with PAHO Country Office;

7) Kick-off meeting with MOH focal point and MOH leadership to introduce objective, methodology and results;

8) Meetings with MOH and key stakeholder subject matter experts to gather information and evidence for IS4H functional assessment;

9) Debriefing meeting with PAHO Country Office.

Stage 3: IS4H Functional Assessment Report

10) PAHO technical consultant completes desk review of documents and findings from stakeholder meetings on-site.

11) PAHO technical consultant prepares the IS4H Assessment Report, including the gap analysis of the current IS4H functions performed by MOH and/or other health authorities.

Stage 4: Collaborative Planning and Design

12) PAHO technical consultant facilitates on-site workshop with key stakeholders to review gaps and recommendations and to collaboratively develop solutions and approaches to identify priority IS4H functional interventions (e.g. training, recruitment, partnerships, organizational re-structuring, outsourcing, etc.).

Stage 5 Opportunities and Options Report

13) PAHO technical consultant prepares a report on the opportunities and options for addressing identified gaps based on stakeholder direction from the collaborative planning and design workshop outcomes.

14) The Opportunities and Options Report should be used as a key input to ongoing strategic planning, including organizational and human resource restructuring, the development of the national IS4H Strategic Plan, various organizational and unit operational plans, partnership development plans and outsourcing planning.

4. Dashboard of Findings

Key Findings are organized by the functions within the IS4H Functional Model. Key findings for each function are summarized in table format and include a dashboard indicator of Assessment Finding.

Dashboard indicators include:

- **Present (Green)** – the function is present in the organization(s) assessed and formally documented (for example in an organizational structure, or unit/department mandate, or job descriptions).
- **Present with Gaps/Challenges (Yellow**)– the function is partially performed, or stakeholders have identified gaps or issues with the performance of the function. For example, the function may be performed informally, but is not part of the formal mandate of a unit or role; the function may be formally documented, but there are insufficient roles to fully sustain/implement the function; the functional may be performed within the organization, but IS4H components are not currently included within the function.
- **Planned (Blue)** – the function has been formally documented (e.g. in organizational structure, unit mandate/roles; job descriptions), but has not yet been implemented.
- **To Be Developed (Red)** – the function is not yet performed.

The Key Findings table also includes a description of the reviewed evidence to support the assessment of the specific function. Evidence typically includes stakeholder interviews and a review of relevant documentation, such an organizational chart, unit/department mandates and role, individual job descriptions, and standard operating procedures. Where no supporting evidence is provided, the assessment is made based on stakeholder interviews, with the notation that no evidence was provided.

Comments reflect additional information from stakeholder interviews and documentation and may also include specific opportunities for future planning.

	Enabling Functions			IS4H Core Functions				Solution and Service Delivery Functions		
	Stakeholder Relationship Management	Administration	Operational Resilience	Information Technology Management	Information Management and Analysis	Health Informatics	Knowledge and Performance Management	Solution Development	Solution Deployment	Service Delivery
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Key

Present	Planned	Present with Challenges/Gaps	To Be Developed

Figure 1 Example of a Dashboard of findings

5. Identifying Opportunities and Options

The assessment identifies potential opportunities and, where applicable, different options for addressing functional gaps that were identified in the previous section. Broadly, the potential opportunities and options include the following approaches for addressing functional gaps:

Opportunity/Option	Description
Strengthen existing governance structures	Strengthen existing data management and governance functions that enable sound decision-making by establishing and strengthening leadership and coordination structures.
Strengthen existing organizational functions	Strengthen existing technical functions by adding IS4H functions into organizational unit/team mandate and roles, or potentially adding additional human resources to meet demands of expanded role. New functions should be reflected within existing or new Standard Operating Procedures.
Strengthen existing role functions	Strengthen an existing role by adding IS4H functions to job description
Strengthen existing role functions through training	Strengthen an existing role through specific IS4H related training or education to improve existing individual and organizational capacity.

Establish new organizational function	Develop new organizational functional unit (e.g. department, team) to perform IS4H function
Establish new role function	Develop new role to perform IS4H function within an existing functional unit or a newly established functional unit.
Partner with an external organization	Establish a partnership with another organization (government, non-profit, educational) to perform selected functions. Partnership *may* require funding from MOH to support/compensate external organization.
Outsource function	Contract with third-party organization to perform functions, typically on a "fee-for-service" basis under a formal Service Level Agreement.

6. Describing the Findings with Opportunities and Options

The description of the Dashboard of Findings linked with their opportunities and options will be presented in a standardized table format for each indicator, organized by each function (Core, Enabling and Solutions and Delivery) and divided by levels (Strategic, Managerial and Operational):

When describing the findings, it is recommended to edit the table with the colors described in this document.

Function Category (Core, Enabling or Solutions and Delivery)	
Level (Strategic, Managerial and Operational)	
Indicator name	**Indicator status**
Findings category	**Description**
Key activities within function	
Evidence	
Comments	
Opportunities and Options Summary	
Opportunities and Options Discussion	

7. Final Report structure

The assessment report follows a standard structure, containing:

Section 1 Document Overview
       1.1 Background
       1.2 Overview IS4H Functional Assessment Process
       1.3 IS4H Functional Model
Section 2 Key Findings
       2.1 Overview
       2.2 Key Findings: Enabling Functions
              2.2.1   Stakeholder and Relationship Management
              2.2.2   Administration
              2.2.3   Operational Resilience
       2.3 Key Findings: IS4H Core Functions
              2.3.1   Information Technology Management
              2.3.2   Information Management and Analysis
              2.3.3   Health Informatics
              2.3.4   Knowledge and Performance Management
       2.4 Key Findings: Solution and Service Delivery Functions
              2.4.1   Solution Development
              2.4.2   Solution Deployment
              2.4.3   Service Delivery
Section 3 Conclusion