INFORMATION SYSTEMS FOR HEALTH – IS4H
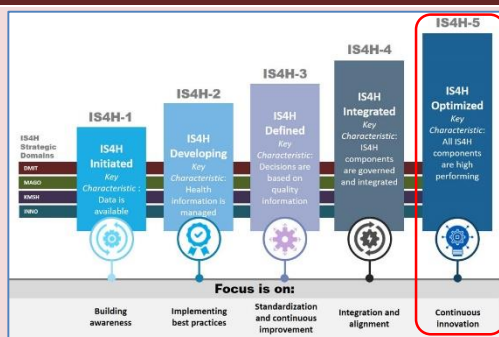
Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

Department of Evidence and Intelligence for Action in Health

The Information Systems for Health Maturity Assessment Tool (IS4H-MM) describes the method, tool and questions for assessing organizational capacity related to governance, data management, digital transformation, innovation and knowledge management. The IS4H-MM is organized according to the 4 strategic goals of the IS4H conceptual Framework and the 4 Strategic Areas of the Plan of Action for the Americas. The IS4H-MM is also a reference framework guiding Information Systems for Health to keep walking through the changing path of information and knowledge revolution, and how countries and organizations might grow in capabilities to operate, interact and benefit from them.

Data Management and Information Technologies

Maturity Level 5 Characteristics	IS4H Framework components
• Large data sets integrated from multiple sources are readily available for analysis to support decision making. • Data from multiple data source types, including unstructured sources such as social media and various types of devices are used in health analysis. • Large data sets integrated from multiple sources are readily available for analysis to support decision-making.	Data Sources
• Data management policies, procedures and best practices are consistently applied, resulting in availability of quality data. • Formal data governance mechanisms (committees, policies, data quality frameworks, data sharing agreements, etc.) have been established among national health stakeholders and are effectively functioning. • Continuous improvement processes established to monitor and invest in data quality.	Data Governance
• Information systems for health are interoperable, enabled by a national infrastructure that uses current standards, technologies, and architectures.	Standards for Quality and Interoperability
• Information products are developed from a range of structured and unstructured data sources. Data for decision-making is available in near real time to all stakeholders.	Information Products
• There is evidence of significant interoperability across health platforms. • Integrated national repositories from multiple data sources.	IT Infrastructure

Management and Governance

Maturity Level 5 Characteristics	IS4H Framework components
• The governance and management of IS4H is fully transparent and integrated across national stakeholder organizations.	Leadership and Coordination
• IS4H is fully sustainable, supported by an investment model that ensures the required human resources, processes, legal-ethical framework, knowledge and technologies are available to deliver ISH effectively, and to continually invest in new capabilities as they emerge.	Financial Resources
• The legal-ethical framework fully enables the use of information and technology to improve health outcomes and the performance of the health system while protecting individuals and populations and is responsive to emerging innovations.	Legislation Policy and Compliance
• IS4H functions are defined, performed and aligned across national stakeholders. Functions are integrated across national stakeholders, optimizing performance, value and investments at the national level.	Organizational Structures and Functions
• There is a national strategy for building IS4H human resource competencies that includes national and international educational institutions to ensure the long-term availability of skilled IS4H resources.	Human Resources
• There is a National IS4H Strategic Plan. • Operational plans are aligned and integrated across multisectoral stakeholders.	Strategic and Operational Plans
• IS4H governance includes representation from multi-sectoral partners. • IS4H roles, responsibilities and functions are aligned across multisectoral partners.	Multisectoral Collaboration
• Data and information can flow freely among national and international partners in support of agreements, guided by frameworks that ensure the ethical use of information that protects individuals and populations.	National and International Agreements

Knowledge Management and Sharing

Maturity Level 5 Characteristics	IS4H Framework components
• Health authorities and their multisectoral partners are fully learning organizations. • The organizational culture encourages the free-flow of knowledge throughout the organization, enabled by KM processes, tools and technology.	Knowledge Process
• The KM&S systems are fully operational. Integration of technology with content architecture.	Knowledge Architecture
• Strategic communications are informed by advanced analytics in near real-time.	Strategic Communications
• Decisions by health authorities and other health system actors are transparent, driven by evidence and engagement with civil society and the public.	Social Participation
• Formal relationships have been established with academia/scientific community focused on supporting specific projects or studies, support decision-making and programs evaluation.	Academia and scientific community
• As an integrated organizational practice, participating and creating networks is focused in helping the organization to continually identify and adopt emerging knowledge.	Networks

Innovation

Maturity Level 5 Characteristics	IS4H Framework components
• There is expert knowledge and capacity among technical staff that go beyond routine analysis required. There is annual capacitation and budget towards training. • Health Analysis can be done real-time and routine clinical, management and policy decision-making are based on timely analysis. • Data driven decision-making for public health strategies and activities.	Health Analysis for Decision-making
• Online tools and platforms for data dissemination and analysis (e.g., data repositories, dashboards, portals, visualization tools, spatial data, etc.) are appropriately and securely available for different user types, such as policy makers, manager, clinicians, and public stakeholders.	Tools
• Knowledge of IS4H Key Concepts and digital literacy is high among leadership and staff, and there is evidence that these concepts are routinely applied in practice at all levels and across sectors.	Key Concepts
• Open data principles are fully applied. Full interaction with national and international partners regarding the use of data analysis to strengthen decision making.	Open Government
• IS4H are fully resilient during disasters. The operation of information systems for health and access to information is available during and after emergencies and disasters.	Preparedness and Resilience
• The health sector is fully integrated into e-government initiatives and platforms.	eGovernment
• Digital health technology enables population health management and the rapid response to disease incidents and public health emergencies. Citizens are empowered to manage their own health and to proactively engage with health care providers. Health care workers have access to data and tools that support real-time decision making.	Digital Health