

Cooperability for Interoperability

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Consultation



Malaria Test



Malaria Treatment



Interoperability for Better Care



What would this achieve?

- Collect data once; use many times
- Cooperation among stakeholders
 - Use consistent/standard rules
 - Sensitivity to legal, ethical, and social requirements
 - Commensurate levels of security, privacy, and confidentiality
- Use a single set of foundational elements

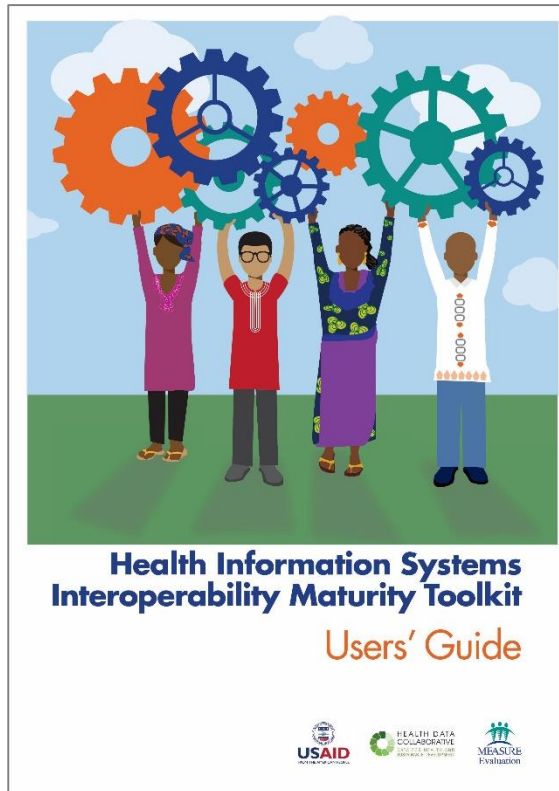
Better Health Outcomes



How would this happen?

- There is more to interoperability than technology systems
 - Cooperation among people, systems, and organizations
- Need everyone at the table
 - Policymakers, program managers, healthcare providers, technologists, donors, etc

Interoperability is no small task.



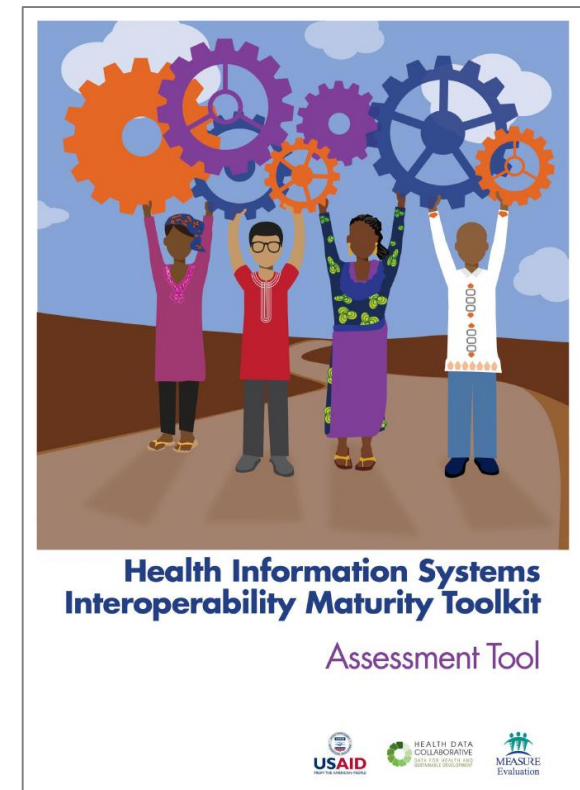
Health Information Systems Interoperability Maturity Toolkit

MEASURE Evaluation
December 2017
Version 0.5

HEALTH INFORMATION SYSTEMS INTEROPERABILITY MATURITY MODEL						
Domain	Subdomain	Level 1: Nascent	Level 2: Emerging	Level 3: Established	Level 4: Institutionalized	Level 5: Optimized
Leadership and governance	Governance structure for HIS	The country lacks HIS capacity or does not follow processes systematically. HIS activities happen by chance or represent isolated, ad hoc efforts.	The country has defined HIS processes and structures, but they are not systematically documented. No formal or ongoing monitoring or improvement process exists.	The country has documented HIS processes and structures. The structures are functional. Metrics for performance monitoring, quality improvement, and evaluation are systematically used.	Government and stakeholders use the national HIS systems and follow standard practices.	The government and stakeholders routinely review interoperability activities and modify them to adapt to changing conditions.
	Interoperability guidance documents ¹	Existing governing body for health information systems (HIS) is constituted on a case-by-case basis. OR no governing body exists.	An HIS governing body is formally constituted and has a scope of work that includes the people responsible for data governance oversight. The governing body oversees interoperability directly or through a separate technical working group (TWG).	The HIS governing body conducts regular meetings with stakeholder participation.	The HIS governing body is government-led, consults with other ministries, and monitors implementation of HIS interoperability using a work plan. It mobilizes resources—financial, human resources (HR), and political—to accomplish its goals.	The HIS governing body is legally protected from interference or organizational changes. The HIS governing body and its TWG are nationally recognized as the local for HIS interoperability. The governing body works in liaison with other similar working groups regionally and/or around the world.

¹ The approved documents (policies, strategies, and frameworks) that guide HIS, and digital health/health work in a country.

Health Information Systems Interoperability Maturity Model



HIS Interoperability Maturity Toolkit

Session Plan

- What are the pieces of the toolkit?
- Why did we choose a maturity model concept?
- How was the toolkit developed?
- What are the components of the maturity model?
- How will this toolkit be used?
- What are the next steps for the toolkit?
- **More questions from you**

HIS Interoperability Maturity Toolkit

Maturity model

Assessment tool

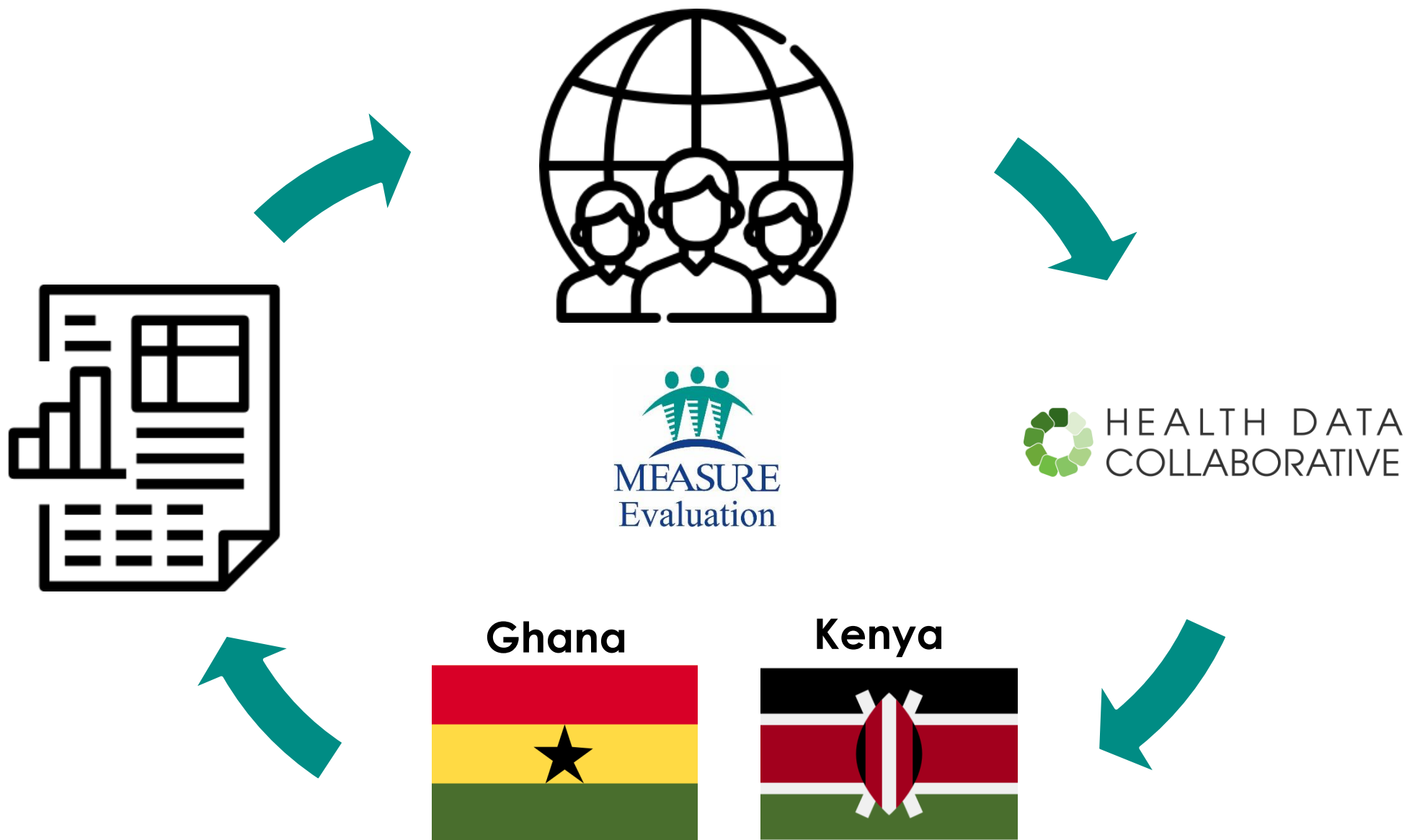


Users' Guide

Why a maturity model?

- A maturity model helps assess “as-is” status with an eye to improving it
- Describes improvement path
- Helps define metrics to monitor and measure progress
- Offers a common framework for HIS improvement

Co-creation Process



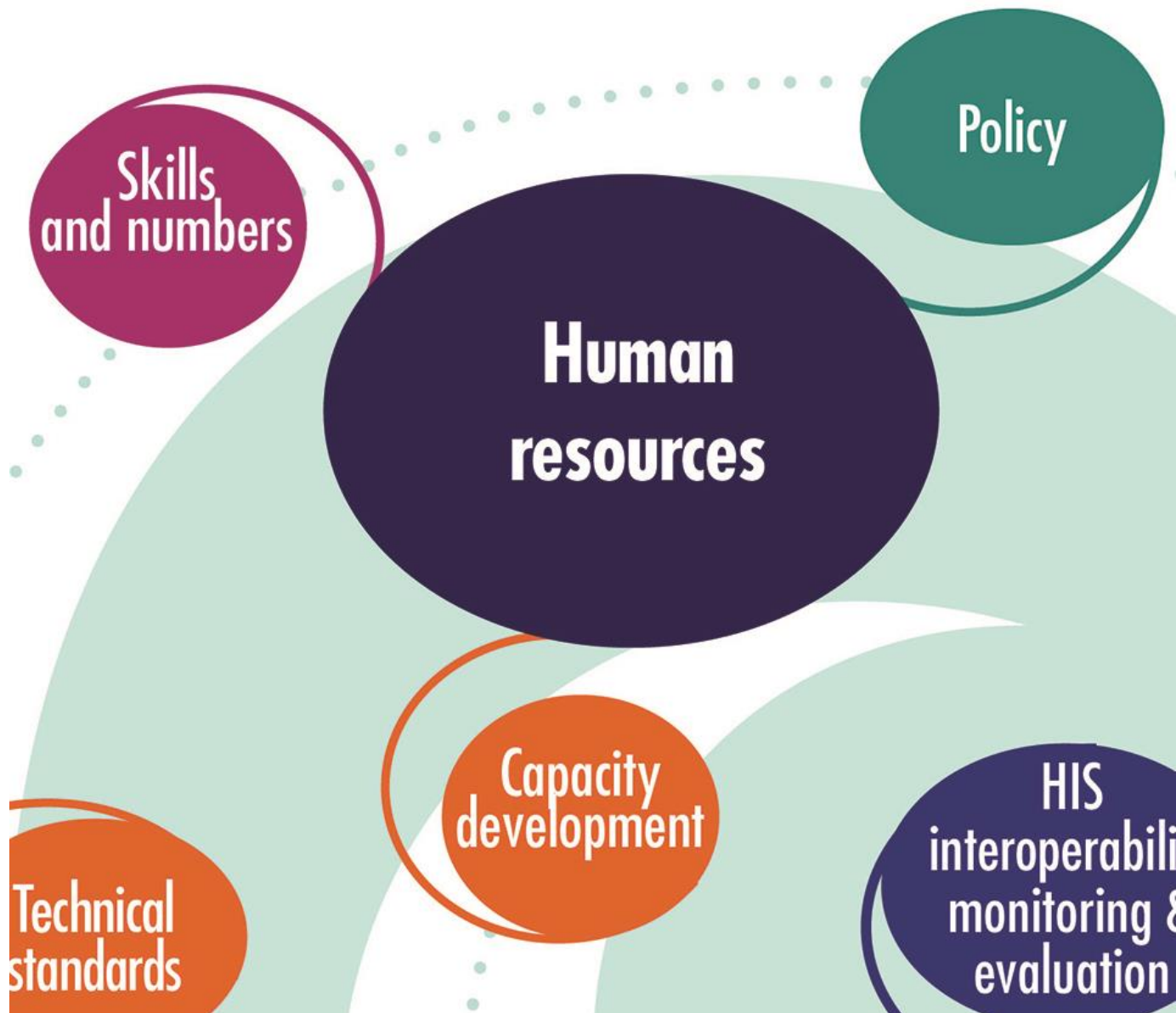
Cooperability is key.



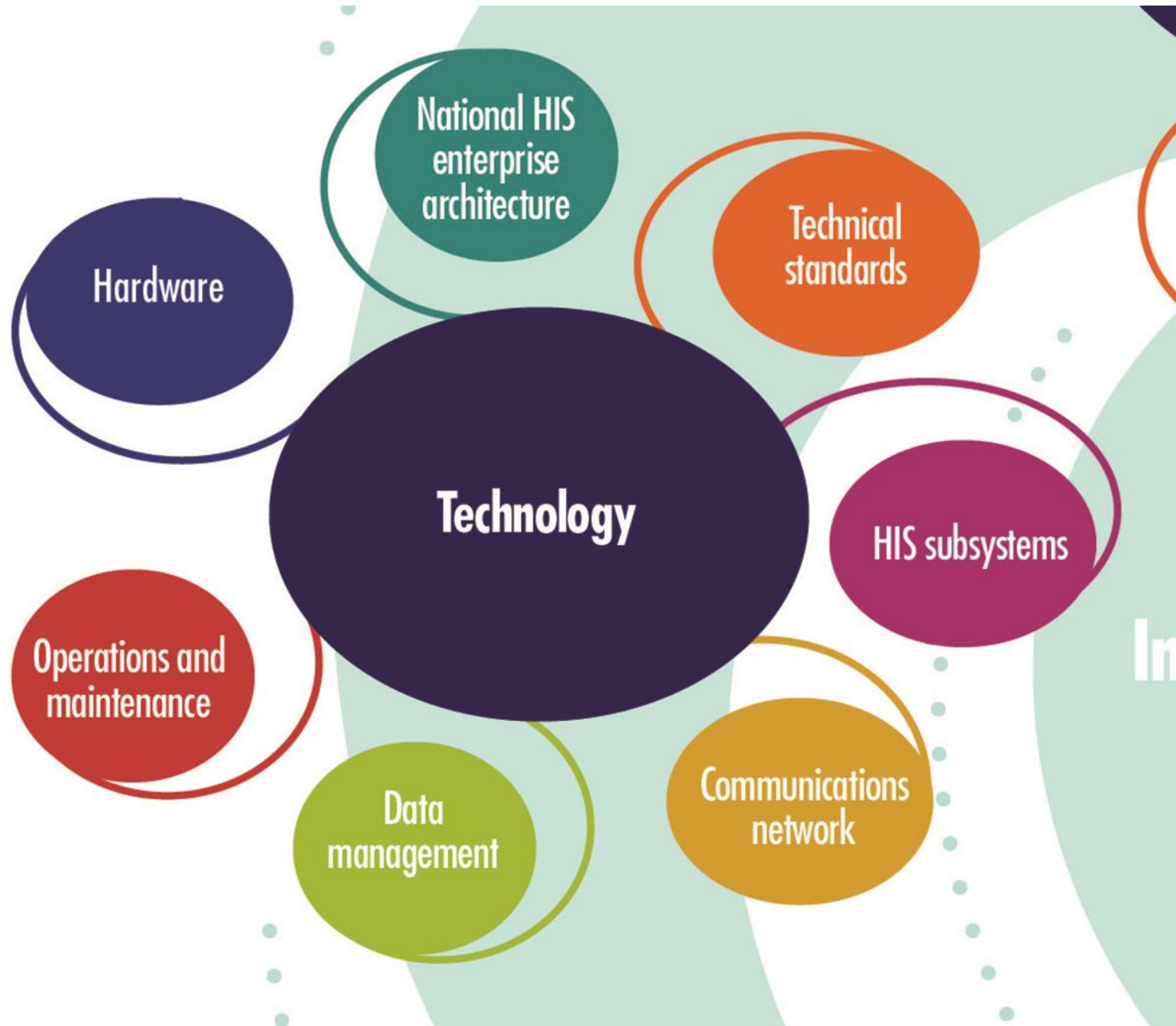
Domains: Leadership & Governance



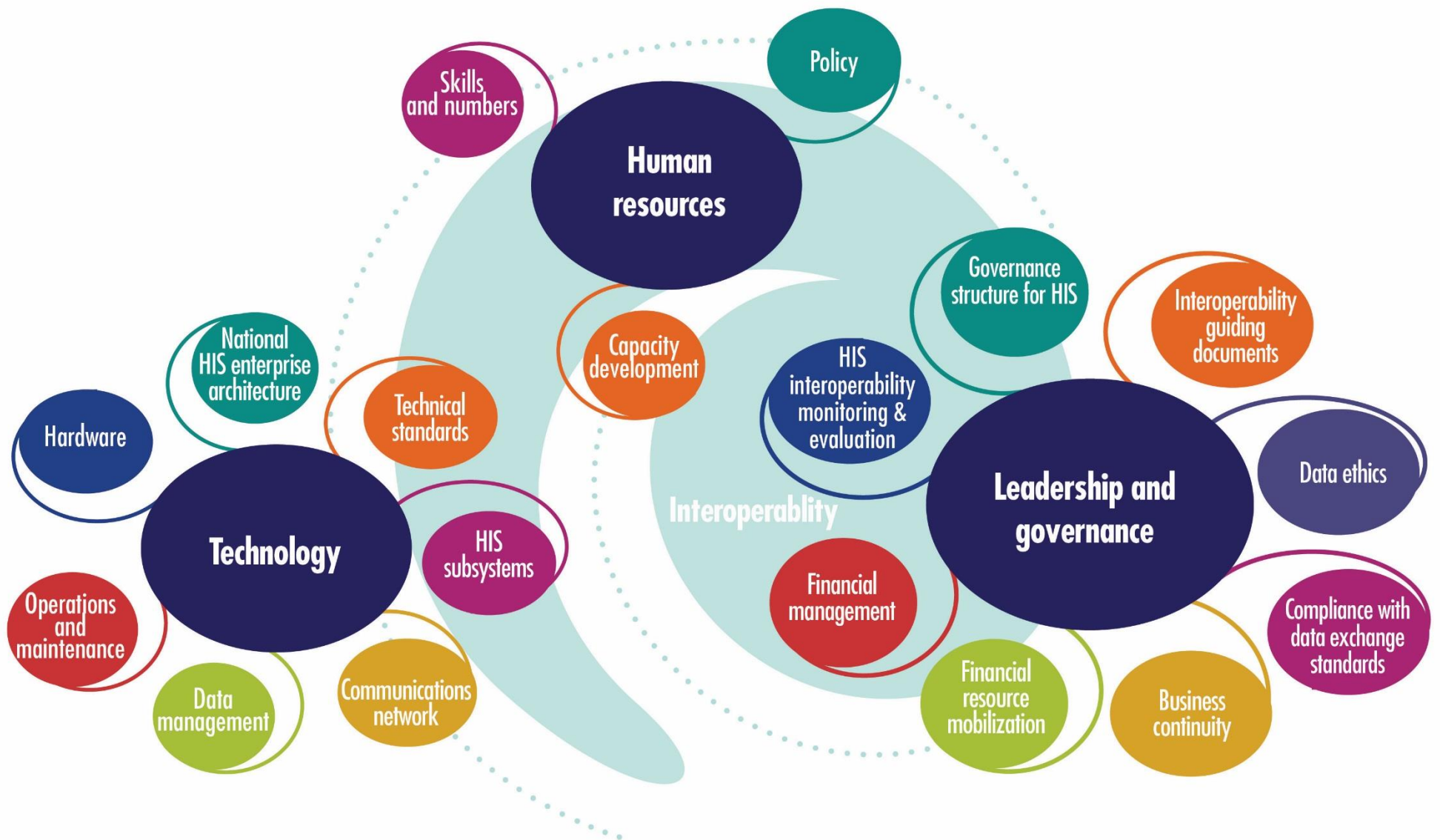
Domains: Human Resources



Domains: Technology



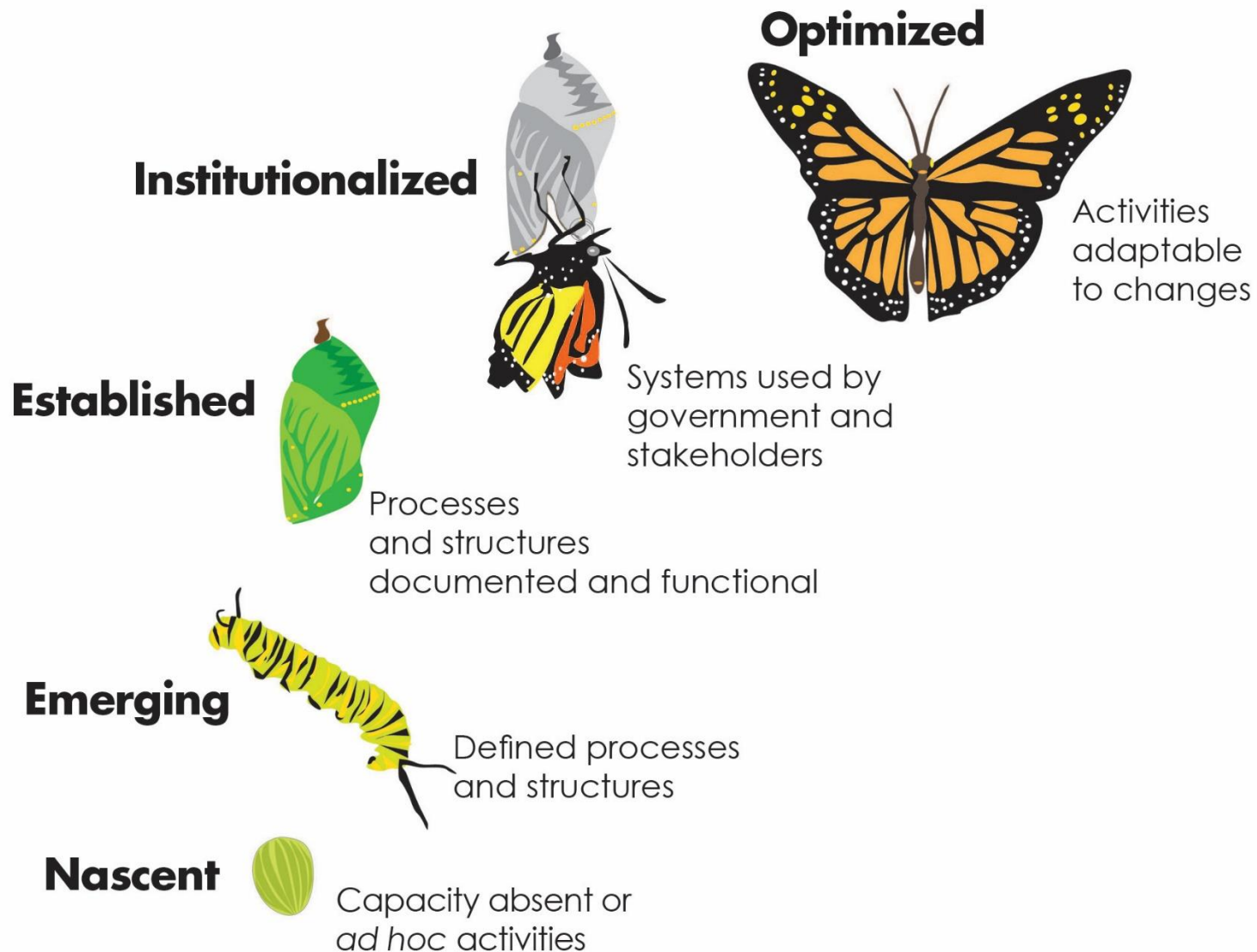
Interoperability



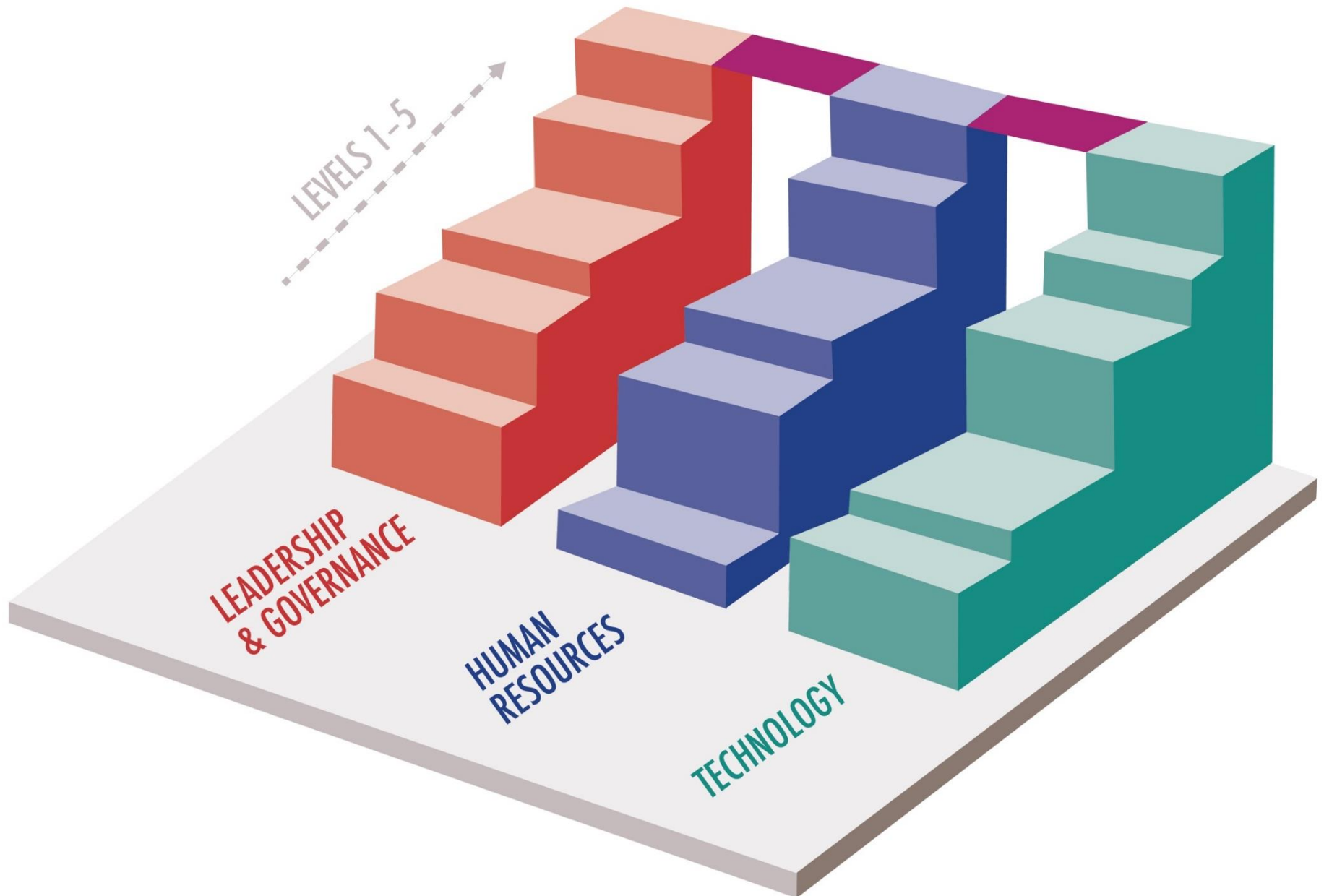
Path to Maturity

Levels: the transitional states in a maturity model

Typical levels:



Domains and Levels



Maturity Model

HEALTH INFORMATION SYSTEMS INTEROPERABILITY MATURITY MODEL						
Domain	Subdomain	Level 1: Nascent The country lacks HIS capacity or does not follow processes systematically. HIS activities happen by chance or represent isolated, ad hoc efforts.	Level 2: Emerging The country has defined HIS processes and structures. HIS processes and structures are not documented or ongoing measurement protocol exists.	Level 3: Established The country has documented HIS processes and structures. Quality improvement, and evaluation are systematically used.	Level 4: Institutionalized Government and stakeholders use the national HIS systems and standard practices.	Level 5: Optimized The government and stakeholders routinely review interoperability activities and modify them to adapt to changing conditions.
Leadership and governance	Governance structure	Evolving governing body for health information systems (HIS) is constituted on a case-by-case basis OR no governing body exists.	An HIS governing body is formally constituted and has processes, functions, and responsibilities. The governing body oversees interoperability directly or through a separate technical working group (TWG).	The HIS governing body conducts regular meetings with stakeholders.	The HIS governing body is government-led, consults with other ministries, and oversees implementation of interoperability using a plan. It mobilizes resources—financial, human resources (HR), and political—to accomplish its goals.	The HIS governing body is legally protected from interference or organizational changes. The HIS governing body and its TWGs are nationally recognized as the lead for HIS interoperability. The governing body works in liaison with other similar working groups regionally and/or around the world.
	Interoperability guidance documents	HIS interoperability guidance documents are absent, and HIS interoperability is implemented on a case-by-case basis.	The governing body for HIS interoperability has drafted the necessary HIS interoperability guidance documents.	Interoperability guidance documents developed, tested, and adopted, and include reference terminologies and technical standards for data exchange.	The interoperability guidance documents are government-owned. They are consistently used and referenced in efforts to guide implementation of HIS interoperability.	Processes are in place to regularly monitor the implementation of the interoperability guidance documents. The interoperability guidance documents are regularly reviewed and updated based on lessons learned from implementation. These documents reflect international best practices.

Example

Subdomain: Governance structure for HIS

**Level 1:
Nascent**

**Level 2:
Emerging**

**Level 3:
Established**

**Level 4:
Institutionalized**

**Level 5:
Optimized**

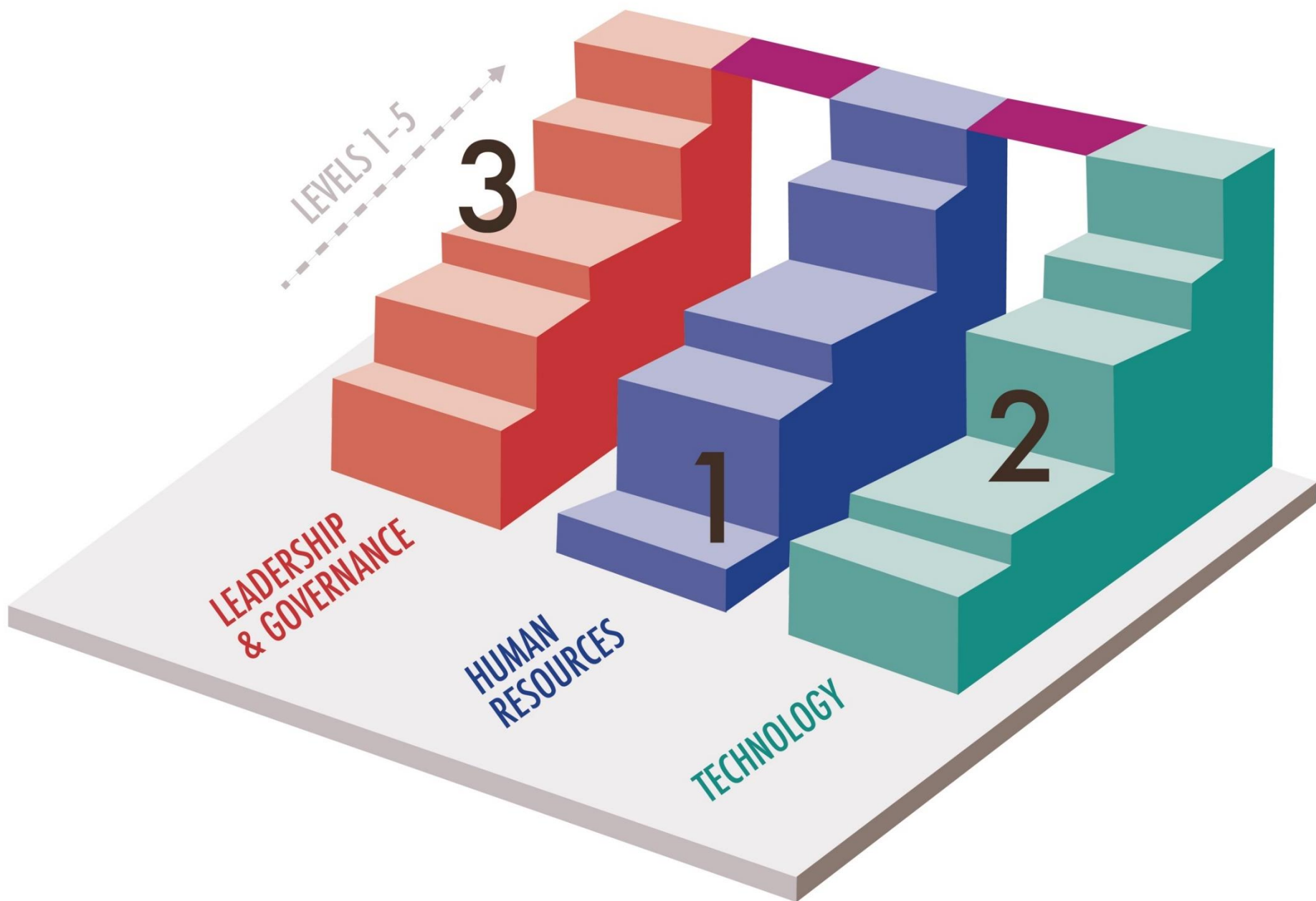
No formal HIS
governing body

Formally
constituted HIS
governing body
with data
governance
responsibility

Governing
body meets
regularly

Government-
led governing
body monitors
implementation
of work plan

Governing
body is legally
constituted and
nationally
recognized as
HIS leader



Assessment Tool



Health Information Systems Interoperability Maturity Toolkit

Assessment Tool



DOMAIN: LEADERSHIP AND GOVERNANCE

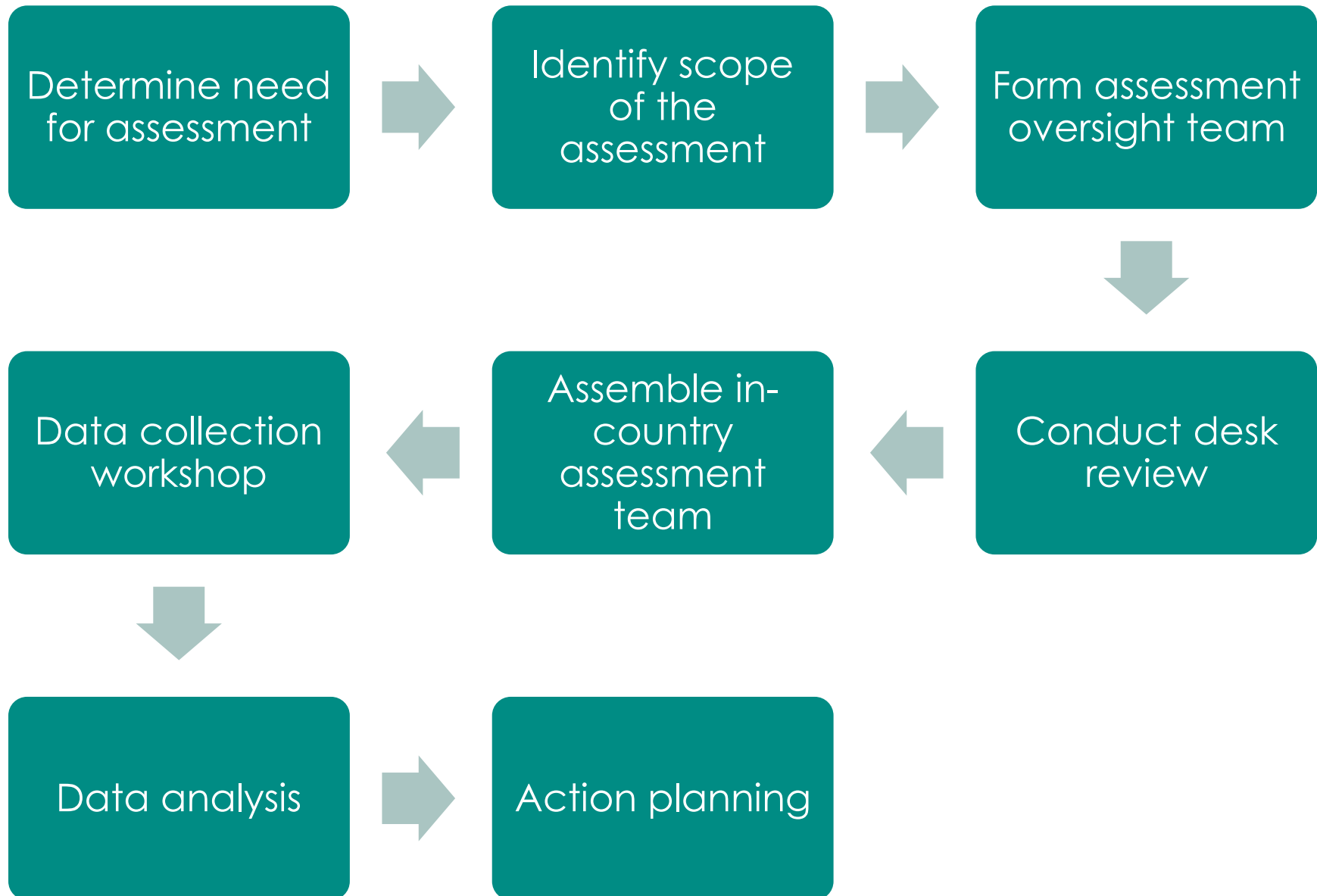
A. Subdomain: Governance Structure for HIS

Definition: The exercise of technical, political, and administrative authority to manage national HIS affairs at all levels of a country's health system. The governance structure consists of the mechanisms, processes, and institutions through which actors and stakeholders articulate their interests, exercise their rights, meet their obligations, mediate their differences, and oversee the functioning of the HIS.

Statements	Check if applicable	Evidence
A1. Evolving governing body for health information systems (HIS) is constituted on a case-by-case basis OR no governing body exists.	<input type="checkbox"/>	
B1. An HIS governing body is formally constituted.	<input type="checkbox"/>	
B2. The governing body has a scope of work that includes the people responsible for data governance oversight.	<input type="checkbox"/>	
B3. The governing body oversees interoperability directly or through a separate technical working group (TWG).	<input type="checkbox"/>	
C1. The HIS governing body conducts regular meetings with stakeholder participation.	<input type="checkbox"/>	
D1. The HIS governing body uses a work plan (or another tool) to monitor the implementation of HIS interoperability.	<input type="checkbox"/>	
D2. The HIS governing body is government-led. ¹	<input type="checkbox"/>	
D3. The HIS governing body mobilizes resources (financial, human resources, and political) to accomplish its goals.	<input type="checkbox"/>	
E1. The HIS governing body is legally protected from interference or organizational changes.	<input type="checkbox"/>	
E2. The HIS governing body and its TWGs are nationally recognized as the lead for HIS interoperability.	<input type="checkbox"/>	
E3. The governing body works in liaison with other similar working groups regionally and/or around the world.	<input type="checkbox"/>	

¹ Government-led: When one or more government agencies manage the calendar of events, exercise leadership by chairing meetings, maintaining records of meetings, and following up on the implementation of actions.

Assessment Process



Mapping Assessment Results to Maturity Model

Domain	Subdomain	Level 1: Nascent	Level 2: Emerging	Level 3: Established	Level 4: Institutionalized	Level 5: Optimized	Subdomain Level
Human Resources	Human resources policy	There is no human resources (HR) policy that recognizes HIS-related cadres. Distribution of HIS human resources is ad hoc.	A national needs assessment has been completed showing the number of staff and types of skills needed to support HIS, including digital HIS and interoperability. HIS-related cadre roles and responsibilities are mapped to the government's workforce and schemes of work.	An HR policy and/or strategic plan exists that identifies the HIS, digital HIS, and interoperability skills and functions needed to support the national HIS and its digital HIS and interoperability.	Implementation plans are in place for growing a cadre of staff at national and subnational levels for digital HIS and interoperability.	A long-term plan is in place to grow and sustain staff with the skills needed to sustain HIS and digital HIS and interoperability. Performance management systems are in place to monitor growth and sustainability of the HIS workforce.	2
	Human resources capacity (skills and numbers)	The country has no dedicated cadre of staff for maintaining the digital HIS and interoperability. Responsibility for the HIS is added to existing positions.	The country depends on technical assistance from external stakeholders to support the national and subnational digital HIS and interoperability.	The country has a growing staff with skills in governance and leadership, data collection, data management, data sources, health information technology (IT), and managing information products. The staff are sufficient in numbers and skills at the national level, but inadequate at subnational levels.	The country has staff in sufficient numbers with relevant skills to support the digital HIS and interoperability at national and subnational levels.	The country has a sufficient and sustainable number of staff with an appropriate mix of skill sets to support the digital HIS and interoperability at national and subnational levels, and the interoperability of key systems. A human resources for health strategic plan is in place to continuously upgrade staff skills to reflect international best practices in digital HIS and interoperability, preferably with locally generated funds.	3
	Human resource capacity development	The country has no national training programs to build human resource capacity on digital HIS, including interoperability.	A nationally recognized pre-service training curriculum exists that outlines needed competencies for human resources for digital HIS and the interoperability of the HIS.	A plan exists for in-service training of HIS staff to build skills around digital HIS and interoperability based on a nationally or internationally recognized HIS curriculum.	The country has the capacity to train enough staff to support digital HIS and interoperability, through in-country pre-service and in-service training institutions or partnerships with other training institutions. Government and stakeholders provide sustainable resources for health ministry staff to receive training on HIS, including digital HIS and interoperability.	Opportunities and incentives are in place for continuing education in digital HIS and interoperability for HIS-related cadre staff, to keep them up-to-date as the HIS field evolves.	2
Maturity level of Human Resources domain:							2

Using Results for Action

- Results can be used for overall HIS strengthening:
 - Designing or updating interoperability component for eHealth strategy
 - Prioritizing interoperability HIS resources
 - Planning HIS enterprise architecture
 - Developing work plans with implementing partners
 - Submitting requests for funding from donors

What's next?

December
2017

Version
0.5
complete

FY 2018

Pilot
testing

Other
toolkit
pieces

Post-FY18

Global
public
good

For More Information



<https://www.measureevaluation.org/resources/tools/health-information-systems-interoperability-toolkit>

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