PROTOTYPING COLLABORATIVE SURVEILLANCE

Moving from the "what" to the "how"

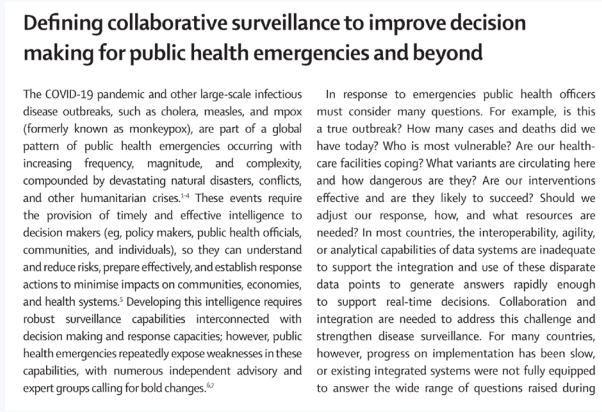
Resolve to Save Lives Approach and Early Experience Sharing

RESOLVE TO SAVE LIVES

May 17 2024

TRANSLATIONAL ROLE FOR RTSL

- **Resolve to Save Lives (RTSL) will support prototyping implementation of collaborative surveillance in Mozambique, Zambia, and Ethiopia**
- **This initiative will build off and support:**
  - Existing surveillance initiatives and country priorities
  - WHO AFRO Transforming African Surveillance Systems (TASS) flagship
  - WHO Mosaic Framework for Respiratory Pathogens
  - Other external investments including the Global Fund, Pandemic Fund, and WB MPA
- **A key aim of this work is to rapidly learn and share lessons with WHO**
- **WHO's convening power will be critical to scale learnings, sensitize member states and regions, and provide guidance**



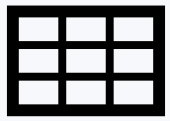
Defining collaborative surveillance to improve decision making for public health emergencies and beyond

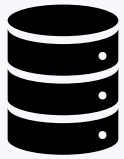
The COVID-19 pandemic and other large-scale infectious disease outbreaks, such as cholera, measles, and mpox (formerly known as monkeypox), are part of a global pattern of public health emergencies occurring with increasing frequency, magnitude, and complexity, compounded by devastating natural disasters, conflicts, and other humanitarian crises.[1-4] These events require the provision of timely and effective intelligence to decision makers (eg, policy makers, public health officials, communities, and individuals), so they can understand and reduce risks, prepare effectively, and establish response actions to minimise impacts on communities, economies, and health systems.[5] Developing this intelligence requires robust surveillance capabilities interconnected with decision making and response capacities; however, public health emergencies repeatedly expose weaknesses in these capabilities, with numerous independent advisory and expert groups calling for bold changes.[6,7]

In response to emergencies public health officers must consider many questions. For example, is this a true outbreak? How many cases and deaths did we have today? Who is most vulnerable? Are our health-care facilities coping? What variants are circulating here and how dangerous are they? Are our interventions effective and are they likely to succeed? Should we adjust our response, how, and what resources are needed? In most countries, the interoperability, agility, or analytical capabilities of data systems are inadequate to support the integration and use of these disparate data points to generate answers rapidly enough to support real-time decisions. Collaboration and integration are needed to address this challenge and strengthen disease surveillance. For many countries, however, progress on implementation has been slow, or existing integrated systems were not fully equipped to answer the wide range of questions raised during

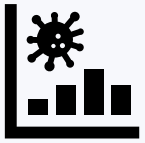
THE DATA INTEGRATION BLACK BOX

2. Identify Priority Datasets and Systems



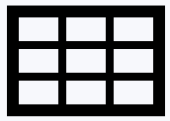


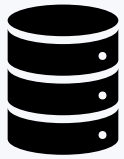
1. Define Use Cases



WORKING BACKWARDS

2. Identify Priority Datasets and Systems





3. Design Collaborative Solutions: Architecture and Governance

Prioritize modes of:

Systems Integration (SI)

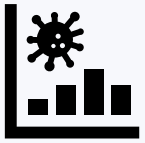
and/or

Data/Analytic Integration (DI)

based on decision-making and data use needs to start collaboration and identify further needs

To be effective, this work needs to address systems, governance, and financing and link people (egos), processes, and technology to a common aim

1. Define Use Cases



Area 1

Plan for prevention and preparedness

Area 2

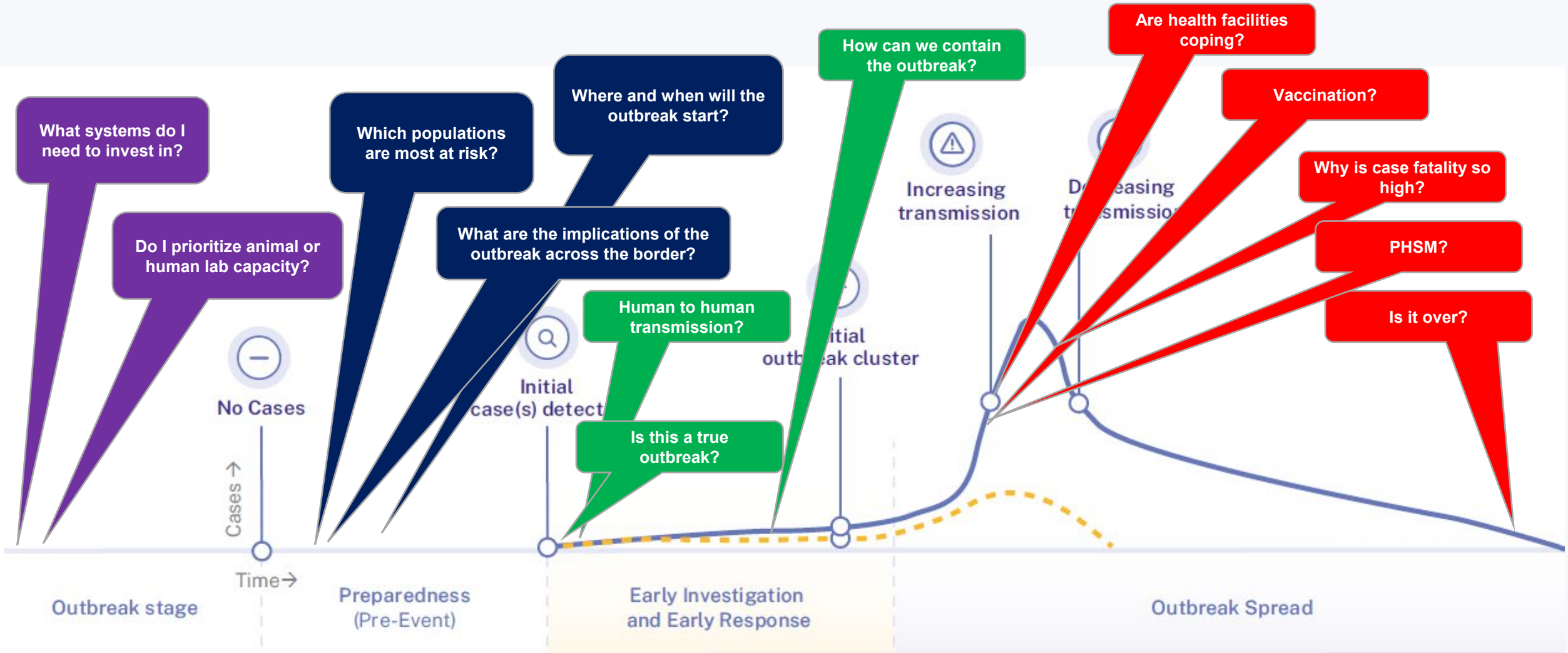
Monitor and forecast risk

Area 3

Event detection, risk analysis, and response initiation

Area 4

Monitor response and adjust interventions



DECISION-MAKING NEEDS DRIVE THE WORK

Area 1

Plan for prevention and preparedness

Area 2

Monitor and forecast risk

Area 3

Event detection, risk analysis, and response initiation

Area 4

Monitor response and adjust interventions

Systems, **G**overnance, **F**inancing

S

- **Data products**
- **Data sources and flows**
- **Technology**

G

- **People**
- **Processes**
- **Policies and Regulations**

F

- **Existing (Implementation and Prioritization)**
- **New (Resource Mobilization)**

HOW: SPRINTING FOR CHANGE MANAGEMENT

- The ideas behind Collaborative Surveillance aren't new – but getting specific on what the end of the process looks like, and how to create **practical plans and priorities** has been a major challenge

- RTSL adapted processes and learning from design thinking and sprinting to help stakeholders create **prototypes** that address **decision-making needs**

- This work requires combining design thinking with systems thinking approaches, since **solutions in isolation** (i.e., multiple standalone apps, platforms, hosting) have been a common challenge

- **Collaborative Surveillance** has been seen as an **opportunity,** not a risk
  - Applying design approaches has been helpful to countries to get **specific** on existing initiatives (e.g., IDSR strengthening, data sharing, digital health) that are large flagships

PARTICIPATORY DESIGN APPROACH: AGENDA

Day 1 (Wednesday)

Create a common understanding of where we are: existing assessment and governance structures

Understand decision-making needs and limitations for *Cholera*

Day 2 (Thursday)

Understand decision-making needs and limitations for *Polio, Cyclones, Rabies, and COVID-19*

1

Design a prototype for a new or improved information product

2

Create data pipelines for how we will generate our new or improved information product

Day 3 (Friday)

3

Identify actions required to implement our data pipelines

4

Create a workplan

Review the workplan with Ministry and NIH leadership

WORK PRIORITIZED BY COUNTRIES (YEAR 1)

S	G	F
Systems	**Governance**	**Financing**
Informatics and Surveillance Systems Landscaping		Resource Mapping for Surveillance
Systems Architecture for Information Sharing for Public Health Emergencies (focus on building off or integrating DHIS2 infrastructure/databases)		Program Management Support for Disbursement and Implementation
Improved SitReps and event management systems (EMS)	Legislative and Policy Mapping for Data Governance	Linking enhanced intelligence to rapid preparedness and response funding
Leveraging Climate Data for Pre-Event Action	Strengthening TWG Structures and Human Resources for Surveillance Data	
Threshold Analysis to Leverage Aggregate Surveillance Data	Alignment and Prioritization Support for Multilateral Grants (e.g., World Bank, Global Fund)	

SKILLS AND AREAS OF FOCUS

1. **Sprinting for Change Management**: Inception of Collaborative Surveillance and Continuous Value Delivery

2. **Program Management for Collaborative Surveillance**: Translation of PMEP approaches to the surveillance endeavor, including tools and skills to leverage allocation and disbursement of multilateral funds

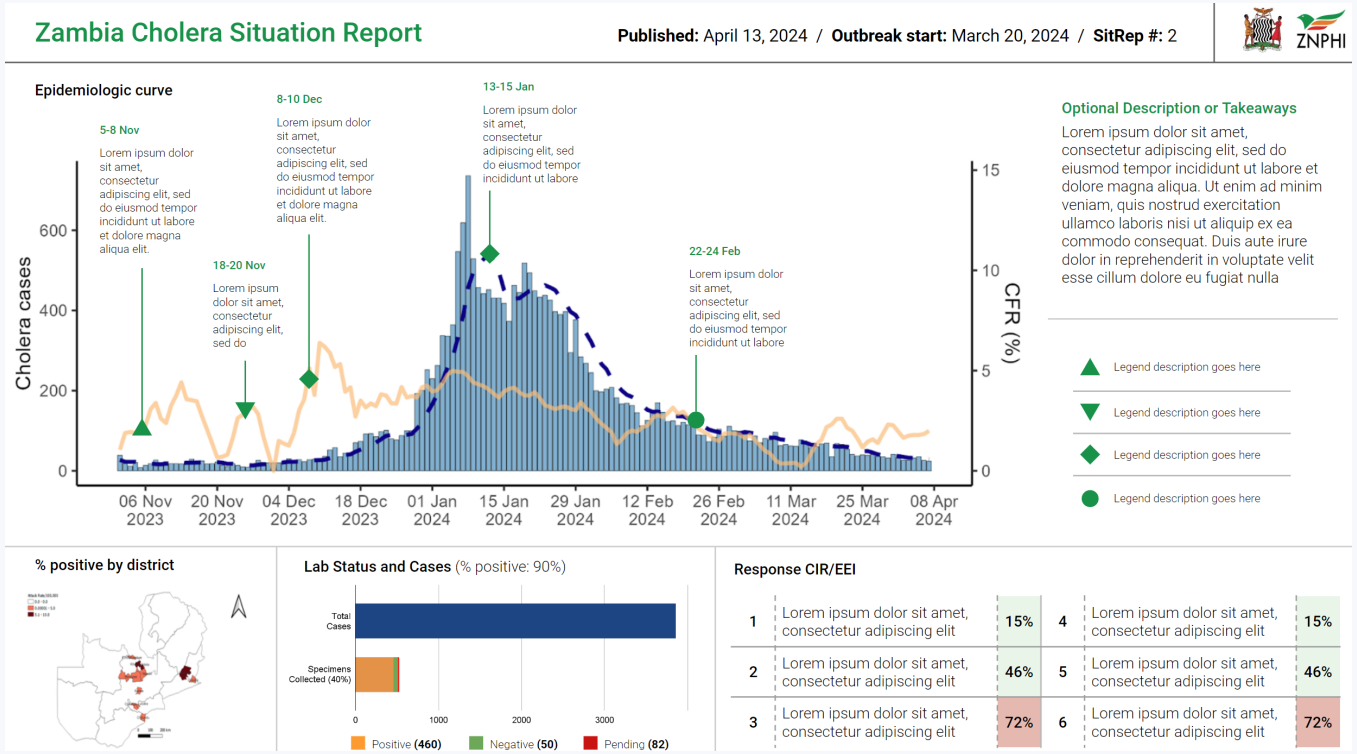
3. **Epidemic Intelligence+**: Data triangulation and critical thinking to address root causes and asking the right questions (e.g., integration of IOA approaches)

4. **Surveillance Architecture**: Approaches to designing an information system with clear focus on delivery (e.g., landscaping *successful* approaches to health sector and cross-sectoral data sharing systems)

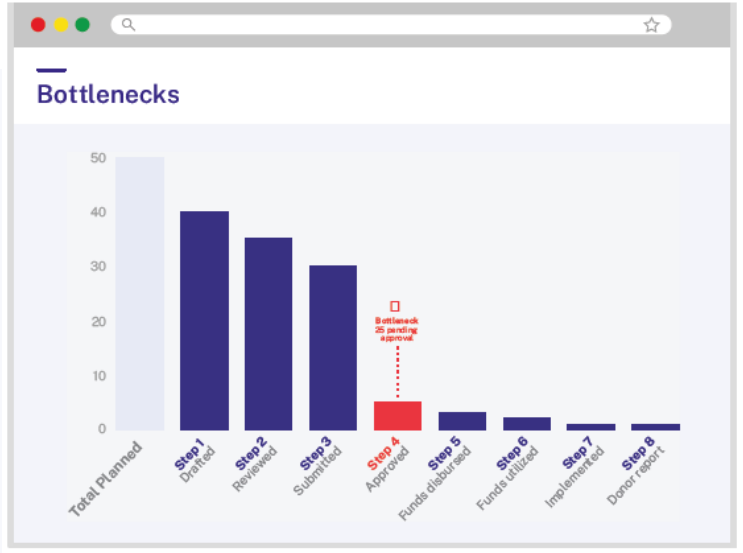
SKILLS AND AREAS OF FOCUS

1

Sprinting for Change Management: Inception of Collaborative Surveillance and Continuous Value Delivery

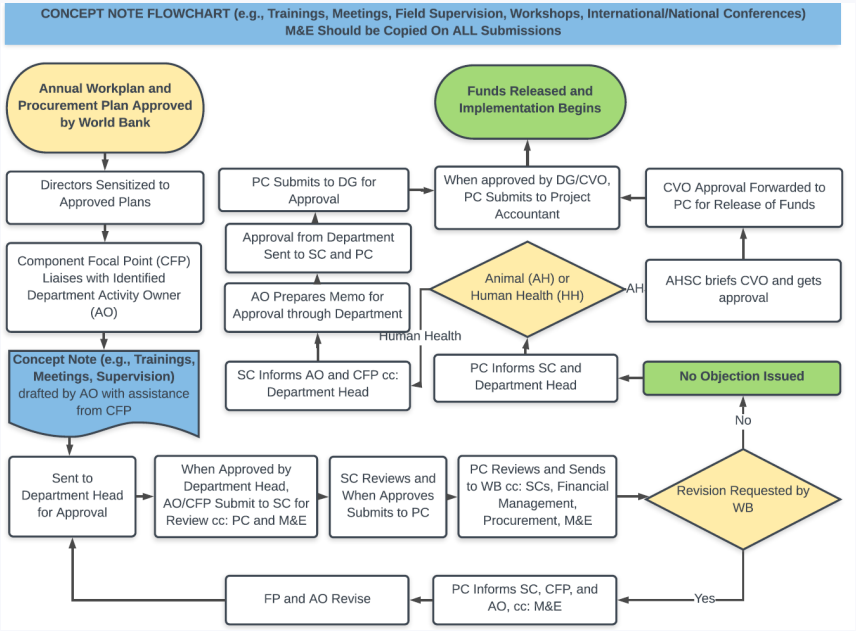


SKILLS AND AREAS OF FOCUS



2

Program Management for Collaborative Surveillance: Translation of PMEP approaches to the surveillance endeavor, including tools and skills to leverage allocation and disbursement of multilateral funds



Consolidation and Linkage of existing plans, leveraging

Process Mapping, sensitization, and tracking for institutional clarity

Tracking Tools and Reports that identify bottlenecks and support monitoring

Creating clear **processes** and expectations **for collaboration**

People

Processes

Tools

SKILLS AND AREAS OF FOCUS

3

Epidemic Intelligence+: Data triangulation and critical thinking to address root causes and asking the right questions (e.g., integration of IOA approaches)

MOVING FROM DECISION NEEDS TO PROTOTYPES

1

Produtos de informação

Análise, síntese e comunicação de dados novos ou melhorados para o processo de tomada de decisões

Decision-Making Personas

Decision-Making Limitations

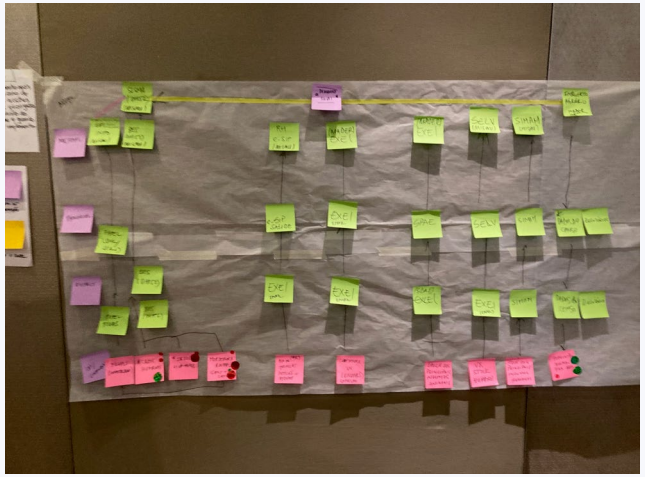
Information Product Prototype

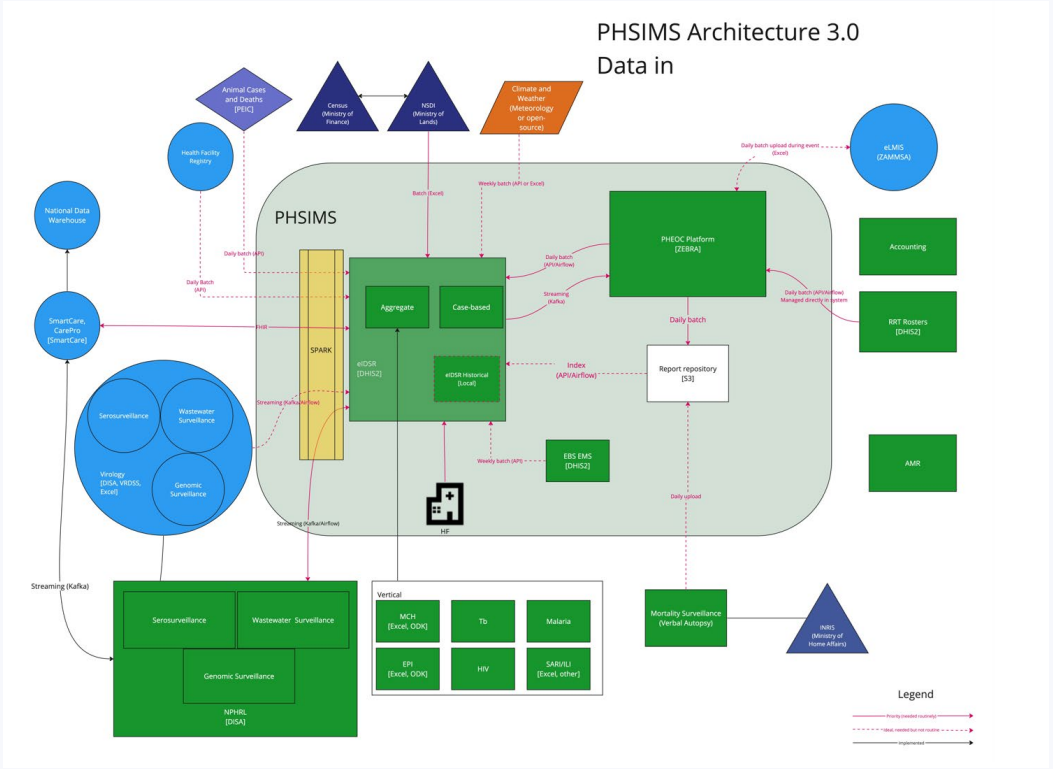
SKILLS AND AREAS OF FOCUS

4

Surveillance Architecture: Approaches to designing an information system with clear focus on delivery (e.g., landscaping *successful* approaches to health sector and cross-sectoral data sharing systems)

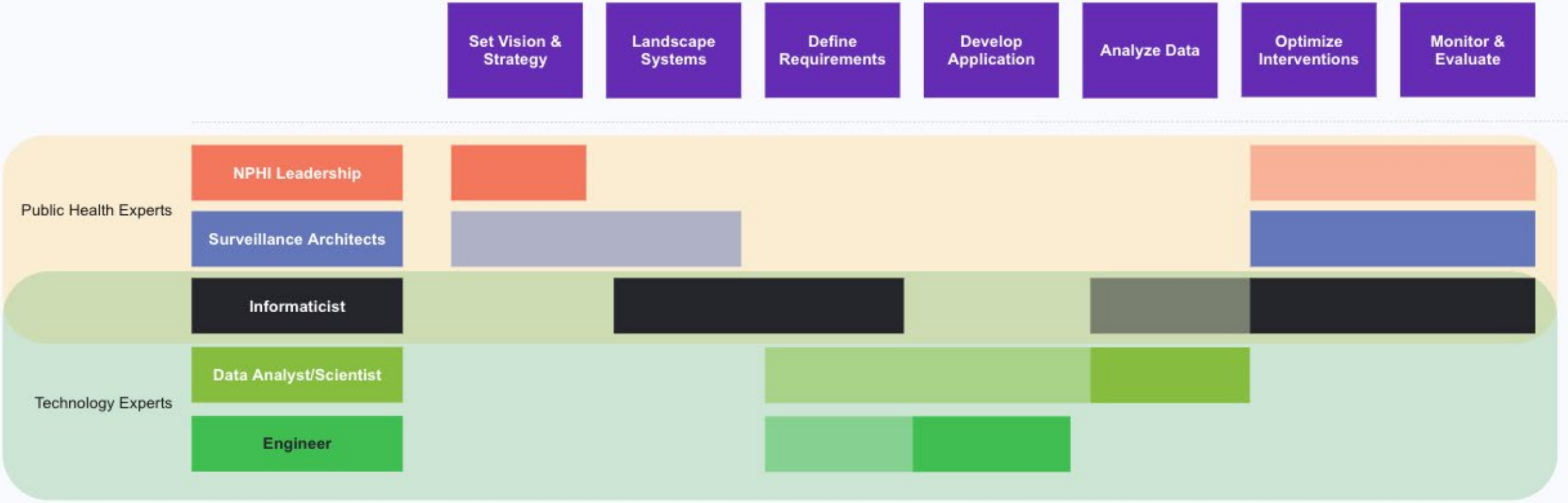
Cross-Sectoral Pipeline





HUMAN RESOURCES SUPPORT REQUESTS

HR & Iterative development of CS information systems and data products



COUNTRY REFLECTIONS

“This has opened our eyes that surveillance is not just about detecting new outbreaks”

“IDSR is critical but to make decisions we need data outside of IDSR”

“We have a systems salad we need to clean up – when you find yourself in a hole you must first stop digging”

“I learned data integration isn’t just about interoperability; it’s about how we can access and use the data for decision-making”

“If you prioritize everything, nothing gets done”

“Integration for decision-making is the goal, collaboration is the way”

CROSS-COUNTRY LEARNINGS

1. Collaborative Surveillance has been seen as common sense to countries: It has added value by looking at the **linkage and strengthening of existing planned initiatives** to a greater goal
2. **Change management** has been a major priority for the work: The *specifics* of collaboration change the way that different Ministries and Departments work together, so co-designing based on something that is a common solution to a high shared risk is critical to make progress
3. There are **many sources of available funding for surveillance work at this moment**: Creating clarity, alignment, and ensuring that program and financial management capacity exists within the recipient government agencies will be critical to show value and progress
4. Collaborative Surveillance has described a city ecosystem of data: **IDSR has been seen as the city hall, but must be supplemented by other sources** (e.g., climate, logistics/supply chain, animal data) and shared with other stakeholders to contribute to the biggest decisions