



Republic of Mozambique
Ministry of Health

Stronger Labs. Stronger Health. Safer Communities.

LABORATORY MAPPING

Experiences sharing:
Opportunities, challenges, Lessons



MAP
our labs



ASSESS
our capacity



CONNECT
our network



OPTIMIZE
our resources



STRENGTHEN
health security



Data for decisions.
Evidence for action.
Impact for people.



Dr. Felix Pinto

MD, MSc, Clinical Pathologist
Medical Assistance Directorate – Diagnostic Department
Ministry of Health



Collaboration
Across countries
Across disciplines



Learning
Share experiences
Learn together



Action
Better data
Better outcomes



Impact
Resilient laboratory systems
for a healthier Africa

ASLM ECHO Session | In partnership with Africa CDC





OUTLINE OF THE PRESENTATION

Mapping Our Labs. Strengthening Our System. Improving Health Outcomes.

- 01  Background
- 02  Laboratory Network
- 03  Sample Transportation System
- 04  Laboratory Information System & LabMap Integration
- 05  Quality Management & EQA
- 06  Laboratory Integration & Optimization Process
- 07  Lab Role in Surveillance
- 08  Implementation Strategy
- 09  Past and Future
- 10  Key Takeaways & Way Forward



LAB MAPPING DRIVES IMPACT



Evidence-based planning



Optimized resources



Improved access to diagnostics



Stronger surveillance



Health security for all



REPUBLIC OF MOZAMBIQUE
Ministry of Health



Together for Stronger
Laboratories and Health Systems



Better Data. Better Decisions.
Better Laboratories. Better Health.



BACKGROUND & CONTEXT

Understanding our health system to map, plan and strengthen laboratories



MOZAMBIQUE: National Health System Policy

Public (NHS) & Private & Community Subsystems



MANAGERIAL STRUCTURE

Central, Provincial and District levels



NEW LEVELS OF ATTENTION

Primary, Secondary, Tertiary



DISEASES PRIORITIES

EPIDEMIC THREAT: Cholera, Meningitis, Typhoid, Influenza, Hemorrhagic Fevers

ERADICATION: Polio, Measles, Rubella, Tetanus

PUBLIC HEALTH CONCERNS: Maternal death, Malaria, Rotavirus, Rabies, RTVs



Reliable laboratory data. Better decisions.
Stronger health outcomes for all.

KEY HEALTH & LABORATORY INDICATORS



36 millions

Pop. (proj. 50 millions 2044)

45%

Pop. < 14 yrs

2.6%

Rate of growth



70 Hospitals
>1850 HF

15 Molecular biol. labs
30% lab coverage



2.4 millions

PLHV (prevalence 12.5%)

2.1 millions

PLHV ART

361:100k

TB Incidence (lab)

25%

TB-HIV

WHY THIS MATTERS FOR LAB MAPPING



Understand where
labs are and what
they can do



Identify gaps in
coverage and
capacity



Optimize sample
transport and
referral networks



Integrate data for
evidence-based
decision making



Strengthen surveillance
and health security



STRONGER LABORATORIES. STRONGER HEALTH SYSTEM.

Mapping today for a healthier Mozambique tomorrow.



BACKGROUND

Strong policy framework guiding laboratory systems and enabling data-driven planning



Good data. Strong labs.
Better decisions. Better health for all.

NATIONAL POLICY AND REGULATORY FRAMEWORK FOR LABORATORY SYSTEMS

Quarta-feira, 21 de Janeiro de 2026

I SÉRIE — Número 13



BOLETIM DA REPÚBLICA

PUBLICAÇÃO OFICIAL DA REPÚBLICA DE MOÇAMBIQUE

SUPLEMENTO

SUMÁRIO

Assembleia da República:

Lei n.º 3/2026:

Alinha o estabelecimento do regime jurídico do Sistema Nacional de Saúde, abreviadamente designada SNS.

Lei n.º 4/2026:

Cria a Autoridade de Supervisão de Seguros e de Fundos de a Pólices de Moçambique, abreviadamente designada ASEPM.

ASSEMBLEIA DA REPÚBLICA

Lei n.º 3/2026

de 21 de Janeiro

Havendo necessidade de estabelecer o regime jurídico do Sistema Nacional de Saúde, adequado à complexidade e desafios do Sector, aliados à actual conjuntura socio-económica e às transições demográfica e epidemiológica no País, ao abrigo do disposto no artigo 89º conjugado com o número 1 do artigo 178º, ambos da Constituição da República, a Assembleia da República determina:

Artigo 4
(Princípios)

O Sistema Nacional de Saúde orienta-se pelos seguintes princípios:

- Acceso universal – garante que todos tenham acesso aos serviços de saúde, independentemente de sua origem étnica, religião, condição socio-económica, género, ou opção política ou qualquer outra característica;
- Complementaridade – promove a complementaridade entre os diferentes níveis de atenção à saúde, de modo a garantir que os subsistemas de saúde se complementem e colaboram na melhoria da saúde da população;
- Dignidade humana – preconiza a preservação da integridade física e mental dos doentes e prevenção dos riscos de saúde;
- Respeito pelos direitos humanos – reconhece a necessidade de garantir os direitos fundamentais das pessoas no contexto dos cuidados de saúde;
- Equidade – promove o acesso equitativo aos serviços essenciais de saúde, distribuindo de maneira justa para atender às necessidades de grupos vulneráveis e marginalizados;
- Integração de cuidados – promove o enquadramento da prestação de serviços integrado através de um sistema articulado de referência e contra referência;
- Participação comunitária – envolve a comunidade na tomada de decisões relacionados à saúde;
- Transparência – promove a prestação de contas claras e acessíveis sobre as actividades e decisões do sistema;
- Sustentabilidade – assegura a continuidade dos serviços de saúde a longo prazo, garantindo a sua viabilidade económica, social e ambiental.



LEGAL FOUNDATION

Law 3/2026 | Law 4/2026

Establishing the legal framework for the National Health System.



REPÚBLICA DE MOÇAMBIQUE

MINISTÉRIO DA SAÚDE

DIRECÇÃO NACIONAL DE ASSISTÊNCIA MÉDICA
DEPARTAMENTO DE MEIOS AUXILIARES DE DIAGNÓSTICO

Estratégia de Laboratórios Clínicos e de Anatomia Patológica 2026 – 2035



Maputo, Dezembro de 2025



STRATEGIC DIRECTION

National Laboratory Strategy
2026–2035

Vision, priorities and roadmap.



REPÚBLICA DE MOÇAMBIQUE

MINISTÉRIO DA SAÚDE

LISTA NACIONAL DE DIAGNÓSTICOS IN VITRO ESSENCIAIS



anarme
Autoridade Nacional
Reguladora de Medicamentos, IP

1ª Edição



ESSENTIAL DIAGNOSTIC GUIDANCE

National List of Essential
In Vitro Diagnostics (IVDs)
Standardizing and prioritizing tests.

WHY THIS MATTERS FOR LABORATORY MAPPING



Provides the policy and regulatory foundation for mapping activities



Ensures alignment with national strategies and health priorities



Supports planning based on essential diagnostics and service needs



Enables evidence-based decision making and resource optimization



Strengthens coordination across all levels of the health system



Improves access to quality diagnostics and health security



A strong policy environment is the foundation for accurate lab mapping, effective planning and resilient laboratory systems.



LABORATORY NETWORK

Expanding access. Strengthening capacity. Saving lives.

NETWORK OVERVIEW



71

Hospitals
>1890 HF's



2500

Lab professionals
30% lab coverage



2000

Instruments



370

Low volume
molecular



40

Conventional
VL

CAUSES OF DEATH



- HIV
- Cancer
- Trauma
- Cardiovascular Disease
- **Gastrointestinal infection**
- Pneumonia



GAPS

SRS, QMS,
Network, FLTP, LIS, HR, AMR



LABORATORY LANDSCAPE



513 Labs (**15 MLabs**)



2467 Professionals Lab



● **04** labs level 3: CH

● **16** labs level 2: PH, GH

● **442** labs level 1: DH, HC



10 PHL



08 Reference labs

KEY

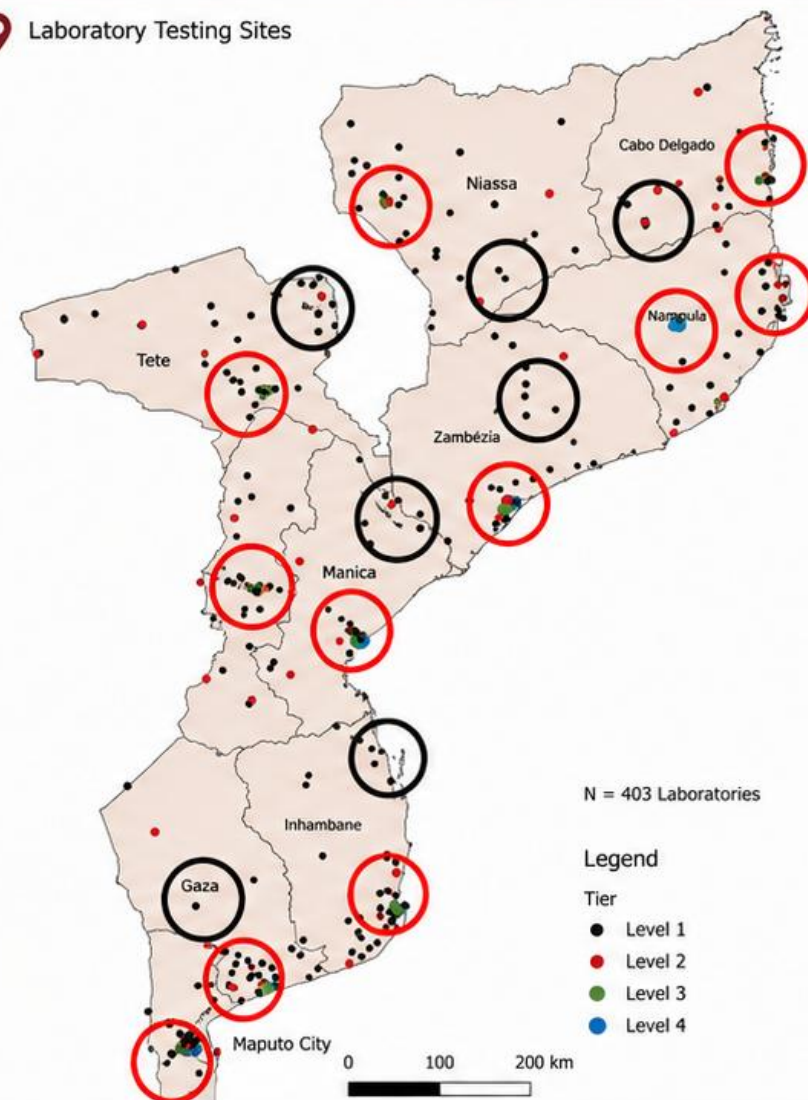
CH: Central Hospital
GH: General Hospital
HC: Health Center

PH: Provincial Hospital
DH: District Hospital

MAPPING OUR LABS FOR BETTER IMPACT



Laboratory Testing Sites



A strong and well-distributed laboratory network is the backbone of effective **diagnostics**, **surveillance** and health security.



SAMPLE TRANSPORTATION SYSTEM

Efficient sample referral. Timely results. Better patient care.

THE SAMPLE REFERRAL JOURNEY



POLICY & STRATEGY

MoU USG

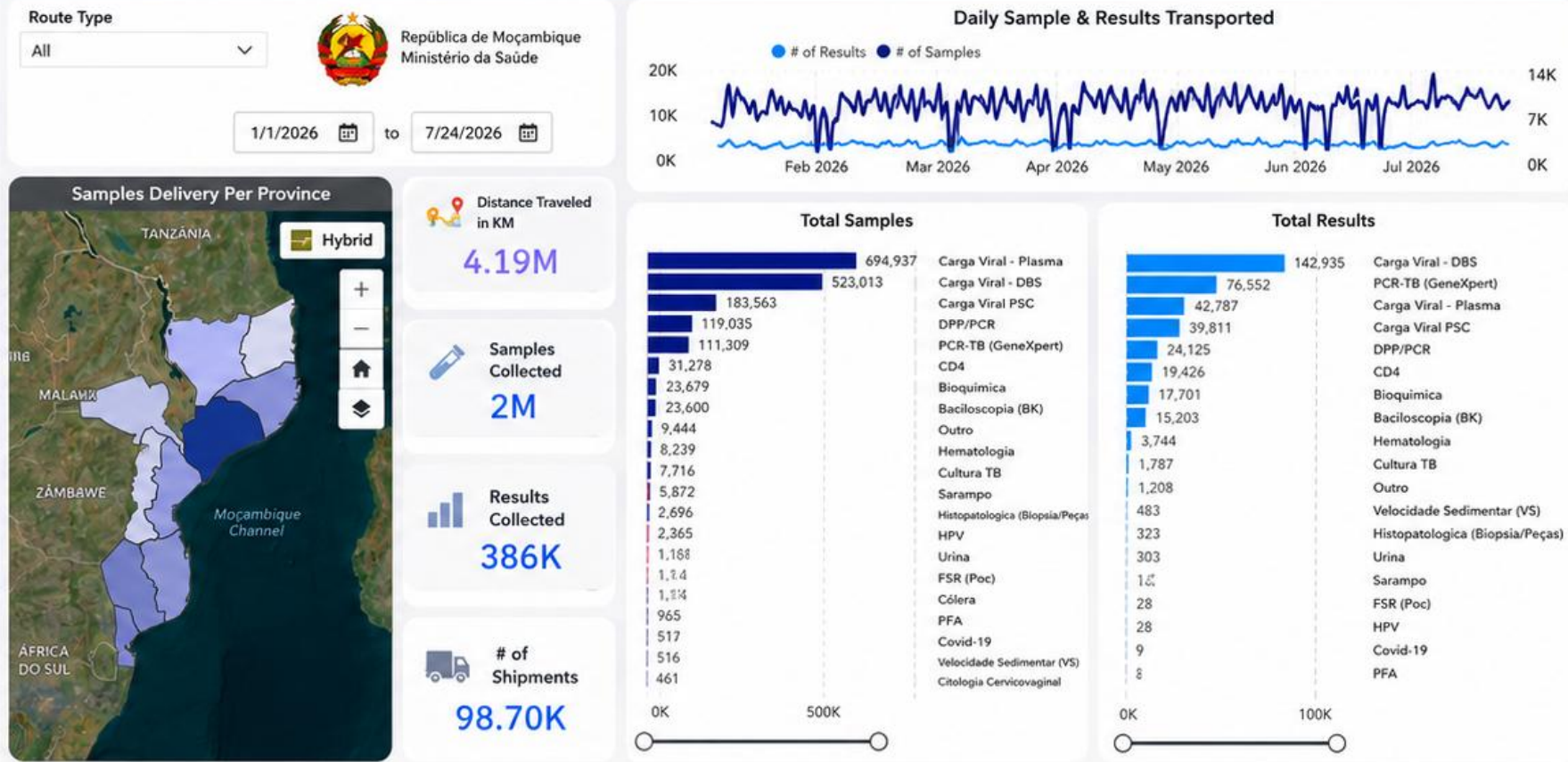
- ✓ Extended budget until 2030
- ✓ Integrated GHSA priorities
- ✓ Phase out approach

TWG

- ✓ To define transition strategy



NATIONAL SAMPLE TRANSPORTATION DASHBOARD



A STRONG SAMPLE TRANSPORTATION SYSTEM ENSURES:



Timely & accurate
diagnosis



Better surveillance
& outbreak response



Optimized use of
resources

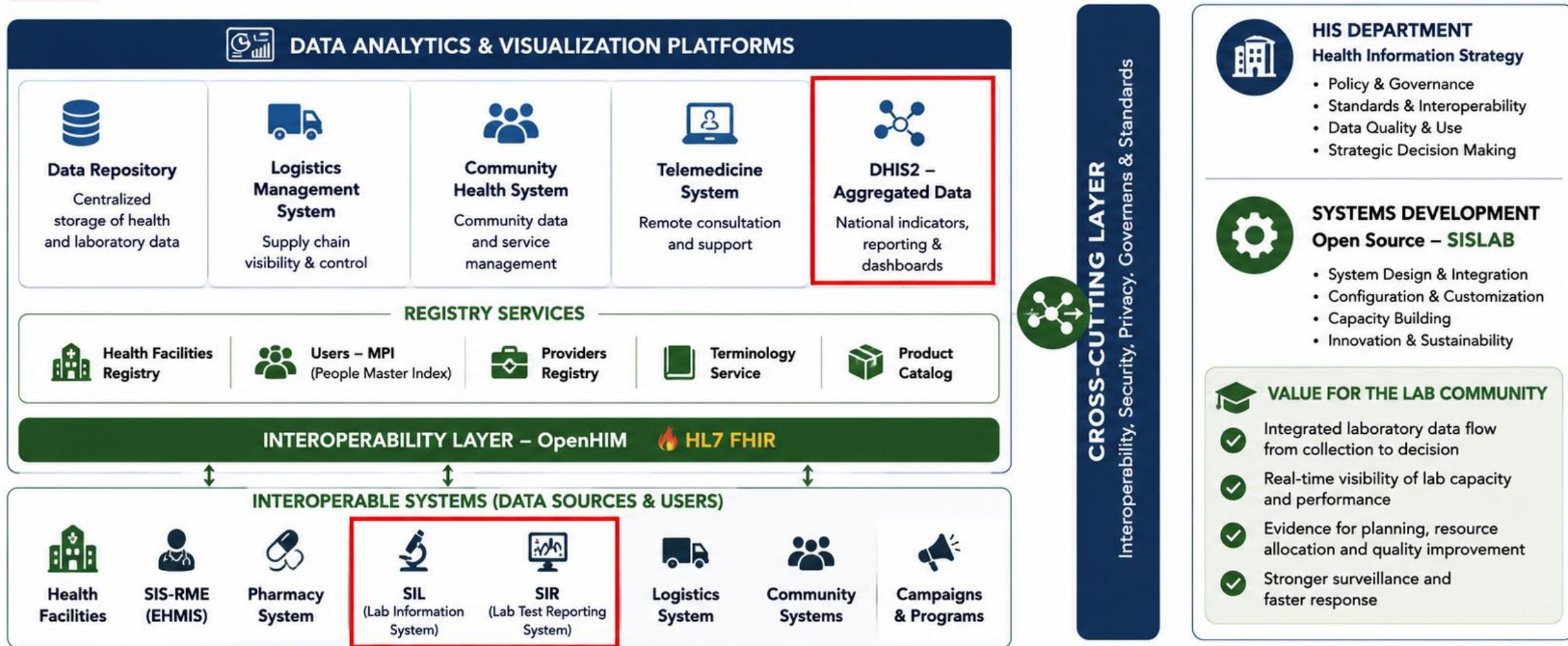


Improved health
outcomes



LAB INFORMATION SYSTEM & LabMap

Integrated. Interoperable. Insightful. Actionable.



Connecting data. Empowering laboratories. Improving health outcomes.
Lab Information Systems driving the future of laboratory services in Mozambique.



LAB QUALITY AND ACCREDITATION

Quality assured labs. Trusted results. Better health outcomes.

2024



QUALITY MILESTONE

05 Clinical Labs accredited

2025



STRENGTHENING QUALITY SYSTEMS

Program granted by GF to establish
EQA panels and Maintenance Center
RTQCI

2026



EXPANDING ACCREDITATION

Prepare District, Provincial and
General hospital **labs for**
accreditation - WB



STRONG LEADERSHIP. COMMITTED PARTNERS.

Building a culture of quality across the laboratory network.



OUR FOCUS



Strengthen quality management systems



Implement EQA and proficiency testing



Establish **Maintenance Center** for sustainability



Scale accreditation to improve quality and trust



OUR IMPACT

Accredited labs deliver reliable results that drive
better patient care, surveillance and health security.



Reliable
Results



Quality
Assurance



Stronger
Systems

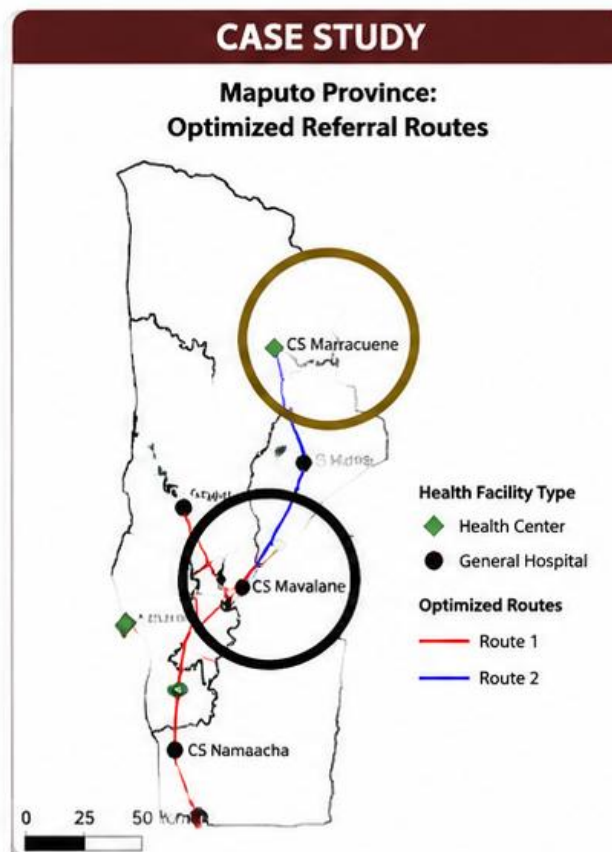
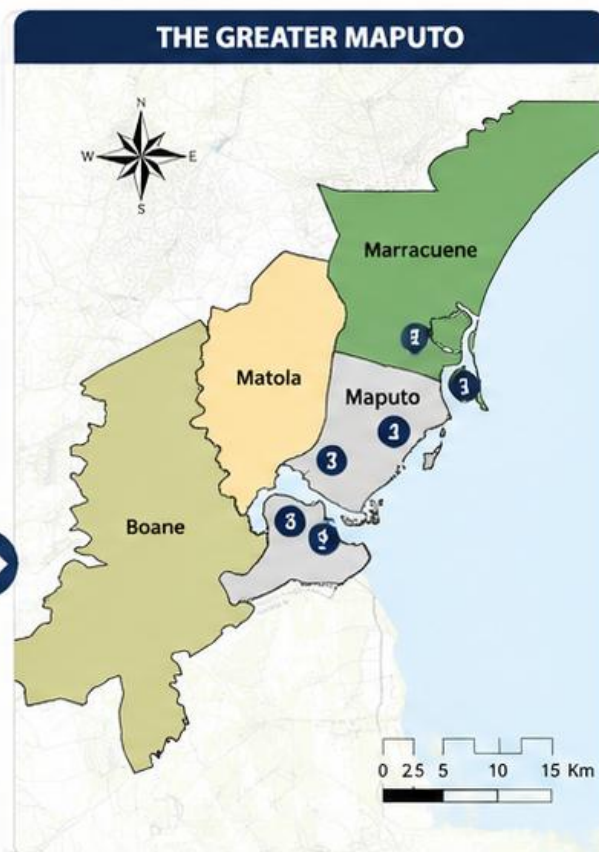


Better Health
Outcomes



LAB INTEGRATION AND OPTIMIZATION

Data-driven insights to strengthen networks, improve access and optimize resources.



KEY LABORATORY NETWORK INDICATORS

	MAPUTO PROVINCE	
	Population	2.66 millions
	Health facilities	133
	Laboratories	41
	Samples referred (2024)	363k
	MAPUTO CITY	
	Population	1.14 millions
	Health facilities	38
	Laboratories	18
	Samples referred (2024)	179k
	MAPUTO (PROVINCE + CITY)	
	Population	3.8 millions
	METROPOLITAN AREA	
	Population	3.2 millions

OUR FOCUS



Optimize sample referral routes



Improve access to quality testing



Maximize resources and reduce gaps



Strengthen surveillance and response



OUR IMPACT

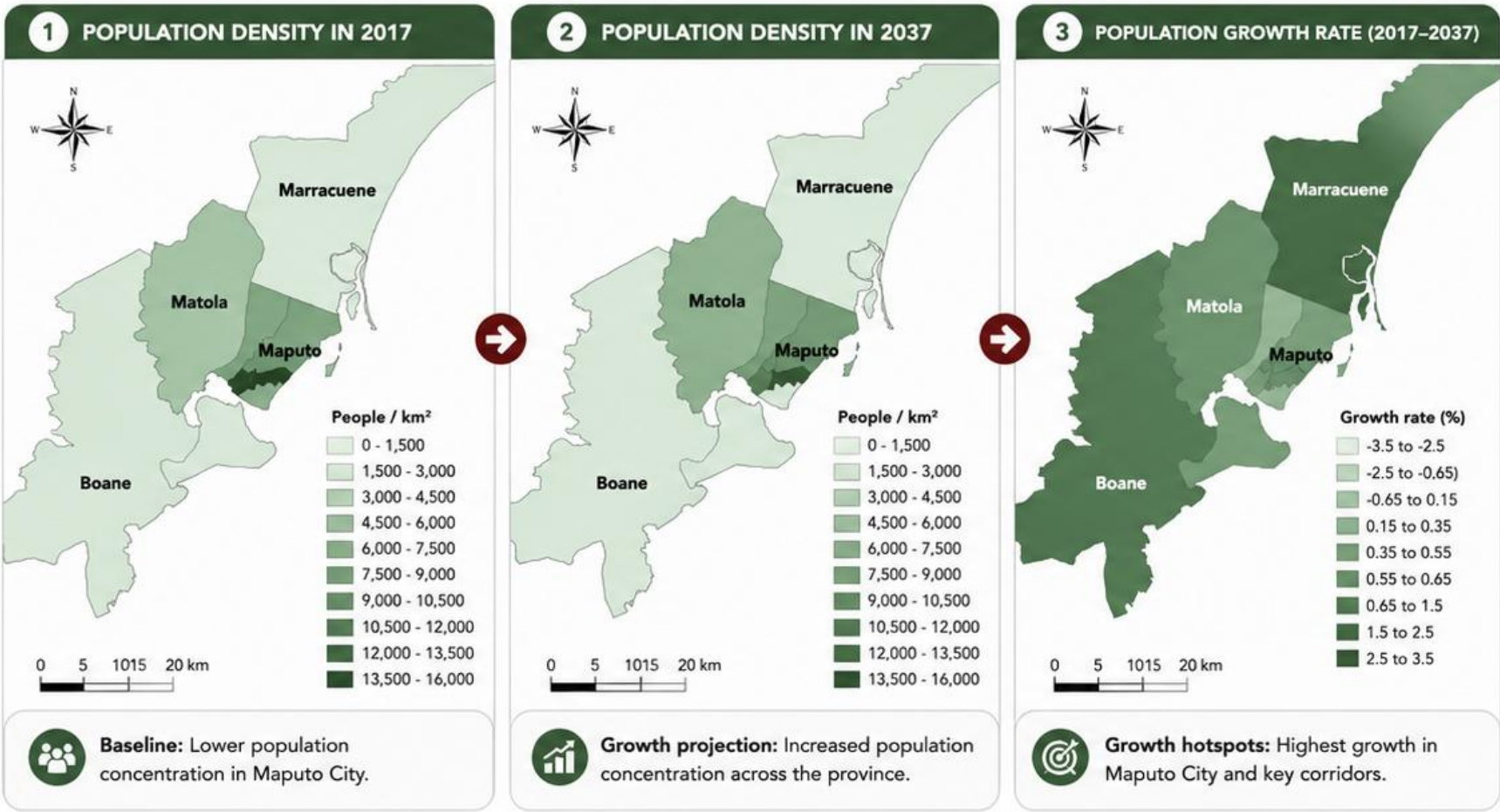
Smarter networks.
Stronger laboratories.
Better health outcomes.



Mapping. Integrating. Optimizing. Delivering quality diagnostics for all.

LAB INTEGRATION AND OPTIMIZATION

Stronger networks. Smarter placement. Greater impact.



CASE STUDY: MAPUTO PROVINCE

Evidence-based planning to optimize laboratory networks and improve access.

KEY INSIGHTS & LAB OPTIMIZATION IMPLICATIONS



MAPUTO PROVINCE

Population	2.66 millions
Health facilities	133
Labs	41
Samples referred (2024)	363k



MAPUTO CITY

Population	1.18 millions
Health facilities	38
Labs	18
Samples referred (2024)	179k



PROJECTED POPULATION

2025	3.8 millions
2037	5.1 millions



Strategic takeaway

Align laboratory capacity with population growth to improve access and quality.



OUR TAKEAWAY

Use data to integrate. Optimize to serve.
Stronger labs for a healthier Mozambique.



Data-driven decisions



Optimized lab placement



Efficient resource allocation



Better access, better outcomes

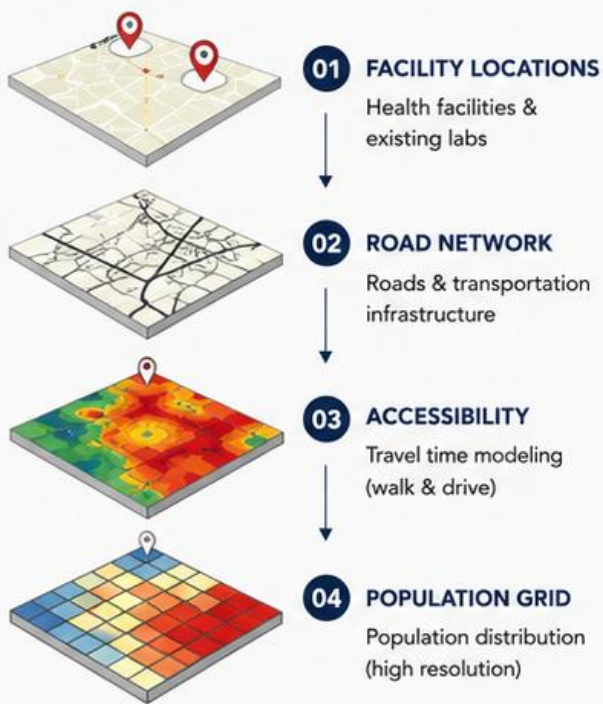


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LAB INTEGRATION AND OPTIMIZATION

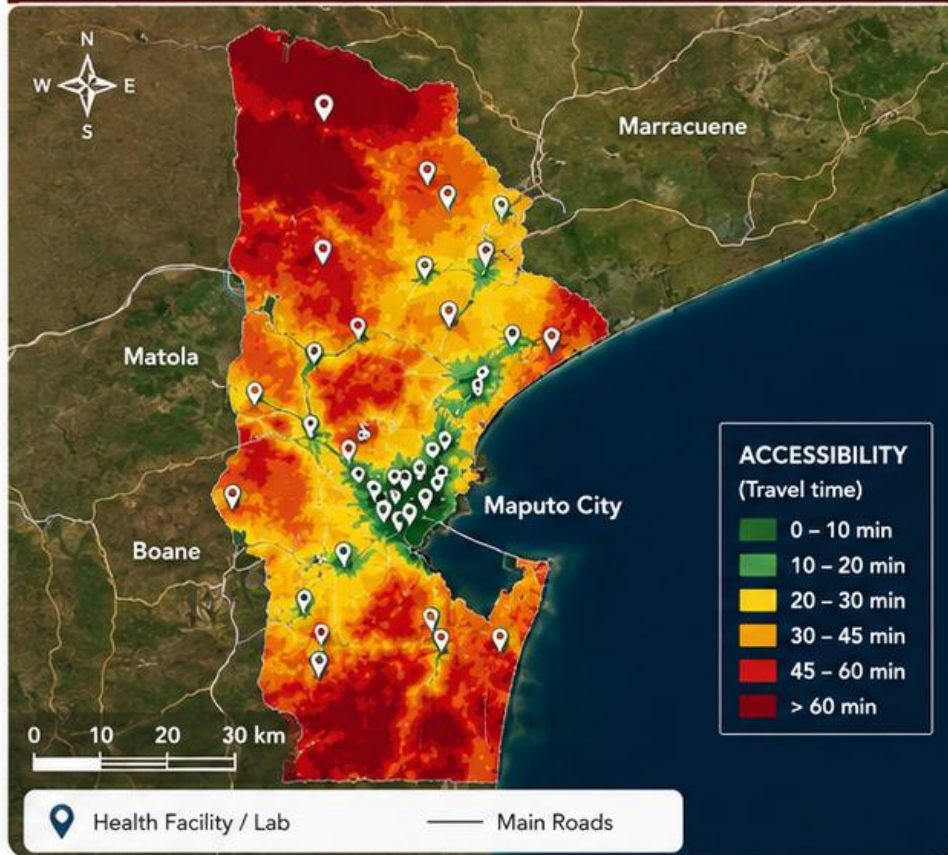
GIS-powered insights to optimize lab placement and improve equitable access to diagnostics.

GIS ANALYTICS WORKFLOW



Integrated spatial analysis for evidence-based decision making

CASE STUDY: MAPUTO PROVINCE



POPULATION ACCESS TO LAB SERVICES



30 MIN WALKING DISTANCE

➔ **58.44%** of population

Limited access on foot in peri-urban and rural areas.



10 MIN DRIVING DISTANCE

➔ **83.66%** of population

Significant improvement with short driving distance.



30 MIN DRIVING DISTANCE

➔ **88.63%** of population

Majority of population reached within 30 minutes.



PROJECTED POPULATION COVERAGE

2025 **3.8 million**

2037 **5.1 million**



KEY TAKEAWAY

GIS analysis helps identify priority areas, optimize lab placement, and **expand equitable access** to quality diagnostics for all.



Data-driven planning



Optimized referral routes



Improved access for communities



Stronger labs, healthier nation



LAB INTEGRATION AND OPTIMIZATION

GIS & SRS analytics to optimize referral flows and laboratory network placement.



CASE STUDY: MAPUTO PROVINCE

Using Spatial Referral System (SRS) to identify optimal lab locations and reduce access barriers.

WHAT WE ANALYZED



Referral Flows

Patient movement patterns to labs and health facilities



Road Network & Barriers

Transport infrastructure, rivers and access constraints



Population Distribution

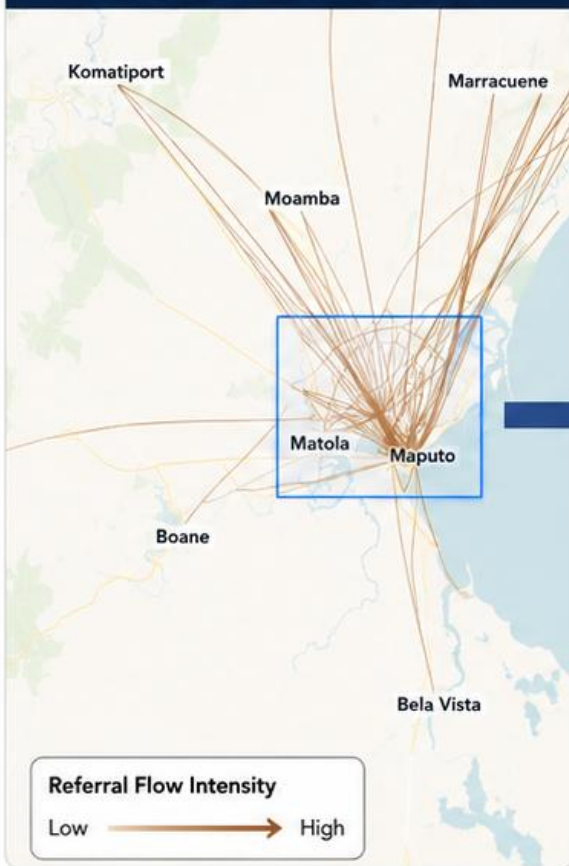
High resolution population data for demand mapping



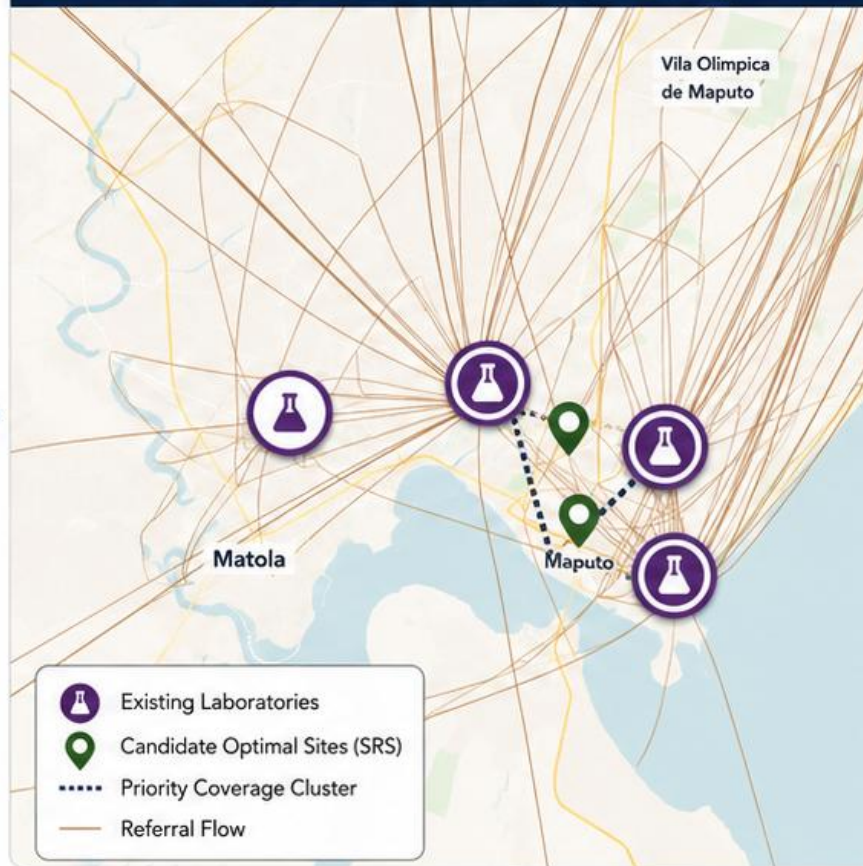
SRS Optimization

Identified priority locations to maximize coverage and equitable access

REFERRAL FLOWS OVERVIEW



OPTIMIZED LAB PLACEMENT (ZOOM IN)



KEY IMPACTS



30 MIN WALKING DISTANCE

58.44%
of population

Limited access on foot in peri-urban and rural areas.



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83.66%
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Significant improvement with short driving distance.



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88.63%
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Majority of population reached within 30 minutes.



PROJECTED POPULATION COVERAGE

2025 **3.8 million**

2037 **5.1 million**



STRATEGIC TAKEAWAY

SRS-powered insights enable smarter lab placement, stronger networks, and better health outcomes.



Data-driven decisions



Optimized referral routes



Improved access for communities



Stronger labs, healthier nation



LAB INTEGRATION AND OPTIMIZATION

Building an integrated, resilient, and high-performing laboratory network for better health outcomes.

1



INTEGRATION AND OPTIMIZATION OF THE LABORATORY NETWORK



Align resources, services, and systems to maximize efficiency and equitable access.

2



SUSTAINING VERTICAL PROGRAMS THROUGH ESSENTIAL DIAGNOSTICS



Strengthen program performance, ensure quality, and promote system-wide traceability.

3



RESILIENCE AND QUALITY AS THE FOUNDATION OF THE SYSTEM



Build a resilient network that delivers reliable results and adapts to future challenges.

CONSOLIDATION AND INTEGRATION OF VERTICAL PROGRAMS: BUILDING RESILIENCE FOR THE FUTURE OF HEALTH

INTEGRATION & OPTIMIZATION



Consolidation of Services

One reference lab per province to eliminate fragmentation and avoid duplication.



Centralization of Resources

Optimize equipment, workforce, and sample logistics for maximum impact.



Operational Efficiency

Improve technical and operational performance across the laboratory network.

SUSTAINING VERTICAL PROGRAMS



Integration of Vertical Programs

Ensure all provincial labs perform HIV, TB, malaria, and other tests within a unified system.



Quality and Traceability

Maintain high testing standards with full traceability across programs and sites.



Shared Infrastructure & Systems

Eliminate redundancies and reduce costs through integrated use of lab platforms and information systems.

RESILIENCE & QUALITY



Adaptive Laboratory Network

Build a flexible system able to integrate new technologies and respond to outbreaks.



Strong Governance & Financing

Reinforce leadership and secure sustainable funding through strategic partnerships and innovative financing.



Efficiency & Scalability

Promote resource optimization and economies of scale across the laboratory network.



BETTER ACCESS

Equitable access to quality diagnostics for all.



Stronger Systems

Integrated, resilient, and future-ready networks.



Higher Impact

Data-driven decisions for better health outcomes.



Sustainable Results

Efficient use of resources for long-term impact.



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LABS AT THE HEART OF SURVEILLANCE & IMPLEMENTATION

Integrated, data-driven, and actionable—building a stronger laboratory network for better public health outcomes.



LAB: ROLE IN SURVEILLANCE



CENTRAL LEVEL



Upgrade Cholera surveillance tools

Modernize systems and tools for early detection and monitoring



TWG-Incident management team

Strengthen coordination for rapid response & decision-making



Case management pillar

Ensure timely case detection, reporting and follow-up



Laboratory pillar

Ensure quality testing, data flow and feedback for action



PROVINCIAL LEVEL



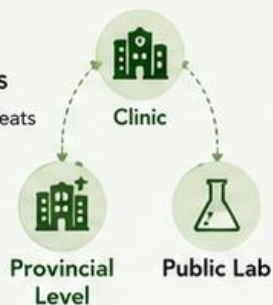
SRS ad-hoc for emergency issues

Cholera, Polio, measles and other priority threats



Laboratory surveillance support:

Support clinical and public health labs for quality data and timely reporting



IMPLEMENTATION STRATEGY



1 POLICY MAKING

To advocate to establish NHLS under the new National Health System Law.

- Strengthen legal and policy framework
- Define roles and standards
- Align with national priorities



2 STRATEGY ACTION

Integrated in the current Health Information System actions: GF, WB, USG.

- Harmonize investments and initiatives
- Leverage partner support
- Promote interoperability



3 IMPLEMENTATION PLAN

Routine update data to ensure quality and timeliness.

- Standardize data collection
- Strengthen data flow
- Monitor and review regularly



4 OPERATIONAL ACTIVITIES

Tool application at provincial level for action and oversight.

- Build local capacity
- Use dashboards and tools
- Support supervision and performance



OUR IMPACT



Earlier detection of outbreaks



Timely response and containment



Better data for better decisions



Stronger labs, healthier communities



STRONG LABS. STRONGER SURVEILLANCE. HEALTHIER COMMUNITIES.

PAST AND FUTURE

Building a data-driven, optimized, and resilient laboratory system for better health outcomes.

OUR JOURNEY



LabMap data do develop **NLSP 2026–2030**

Evidence-based planning for a stronger national lab network.



Expansion and **optimization molecular** technology

Scaling up access to advance diagnostics and innovation.



TB and HIV testing network **self assessment**

Driving quality improvement and network strengthening.



PlanWise limited & Update list heavy

Streamlining planning and prioritization for efficiency.



GC8 applied: RSSH, Labsystem, SRS,
MoU-USG **investments**

Leveraging partnerships to build a sustainable laboratory system.



Optimization MoH Lab network to **\$ economy**

Smart resource use for maximum impact and cost-efficiency.



Lab Maturity Monitoring **Ongoing**

Continuous monitoring to ensure quality and performance.



Establish **Unified Lab TWG**

Strengthening coordination for a unified and responsive system.

OUR ACHIEVEMENT



Certificate No: ACCC-LAB-2025-RL-12

Certificate of Participation

This certificate is presented to

Osborn Otieno

for your participation in a five-day training on
the Laboratory Maturity Monitoring
(LMM) evaluation.

Dr. Yawovi Kakou (Togo)

Acting Director

Centre for Laboratory Systems and Systems,
Africa Centres for Disease Control and Prevention

Dr. Shalick Girum (Ethiopia)

Medical Officer

Department of Laboratory,
Regulated Product Services,
Regional Office for Africa



December 4, 2025

LOOKING AHEAD: OUR COMMITMENT TO THE FUTURE



Strengthen data-driven
decision making with
LabMap and LMM insights.



Expand advanced diagnostics
and molecular capacity
across the network.



Improve quality and
resilience through
self-assessment and TWG.



Maximize partnerships
and investments for a
sustainable lab system.



Deliver efficient, equitable,
and high-quality laboratory
services for better health.



STRONGER LABS. SMARTER DATA. BETTER HEALTH OUTCOMES.





**TOGETHER FOR
A HEALTHIER AFRICA**

