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Overview – GS PSM

15 November 2024

Overview

Background

Challenge: Persistent Procurement and supply chain (PSM) related issues hinder access to affordable GS equipment, reagents, and consumables. SLA gaps cause frequent machine downtime, limiting the expansion of GS for multi-pathogen surveillance and clinical use in Africa.

Focus: Developing Procurement and Supply Chain Management (PSM) solutions specific to genomic sequencing in Africa with a focus on Mozambique and Nigeria

Country specific activities:

1. Install base mapping for labs with GS capacity
2. Mapping PSM process for select labs and identify bottlenecks

Outputs

The finding and interventions developed are expected to enhance use of genomics for key MOH programmes, including Malaria, Polio, HIV, and pandemic threats across Africa

1) **GS Install Base Tool:** For tracking GS equipment across labs to inform policy formulation and decision making.
2) **PSM Solutions:** Identify actionable PSM interventions and develop them into Advocacy, Advisory, and Technical Notes.
3) **Alternative Procurement Models:** Explore service-based pricing models, such as sequencing as a service, equipment rental, and leasing.
4) **Establish Community of Practice:** A forum for stakeholders to address PSM challenges, share knowledge and tools and create more collaboration opportunities.

Introduction to the GS Install Base tool

Objectives:

Provide a comprehensive view of the Genomic Sequencing landscape in Mozambique and Nigeria but can be expanded to other member states.

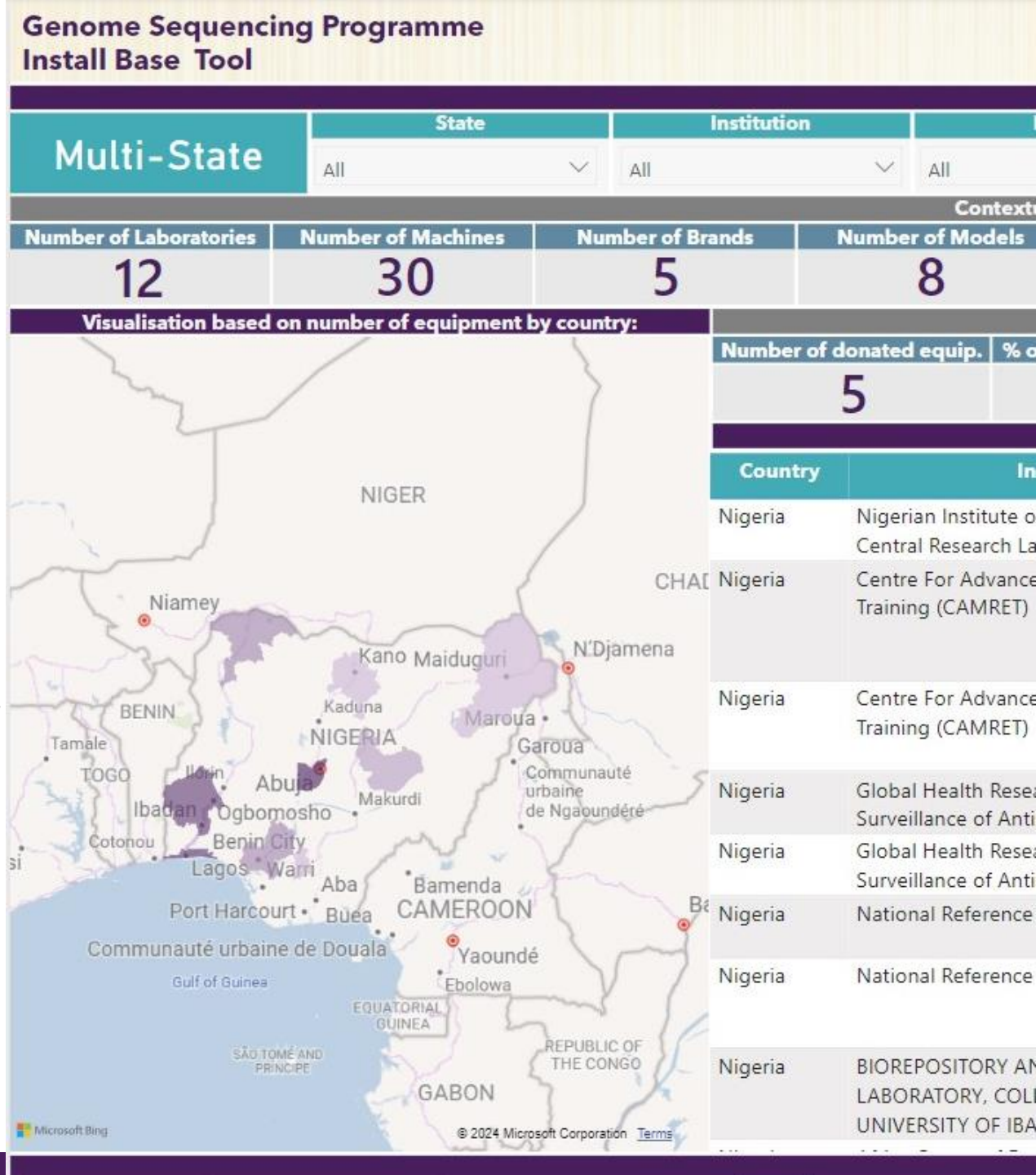
The tool contains the following reports and additional insights (see next slides)

1.Install Base Report:

- Details sequencing machines, labs, and operational status.
- Highlights functionality and service coverage.
- Supports optimization of public health system efficiency.

2. Market Segmentation Report:

- Analyses GS equipment market with a focus on shaping objectives.
- Aims to reduce equipment costs and ensure stable pricing.
- Enhances supply chain resilience and procurement strategies.



Key Insights – Data Overview (Mozambique & Nigeria)

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Data scope

19
Participating Laboratories

59
Genomic Seq. Machines

2
Dynamic Reports

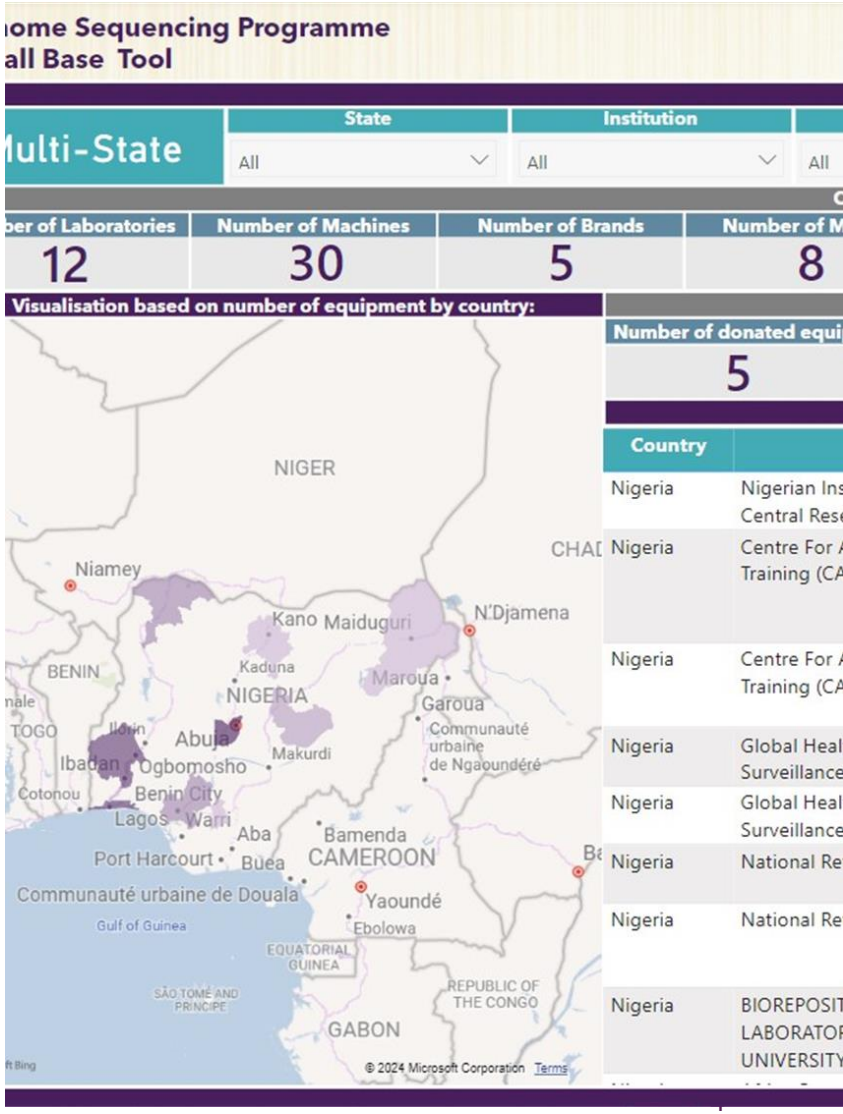
35
Tracked indicators

Tool characteristics

2
Adopting agencies

3
Different versions

- Ms-Excel data base
- Power BI-based dashboards
- Low maintenance required
- High security



Key insights - Market Segmentation

ONT

35.85% Market share

19 Machines

17 MinION Series

2 GridION Series

Insights:

- NGA – unavailable support for servicing equipment and difficulty in contacting the manufacturer.
- NGA - Inability to procure consumables.
- MOZ – There's no need for preventive maintenance.

Illumina

33.96% Market share

18 Machines

2 NextSeq Series

9 MiSeq Series

3 iSeq Series

4 Other Series

Insights:

- NGA – High prices for replacement parts in the SLA.
- NGA - Significant delays in obtaining repair services.
- MOZ – No in-country capacity for servicing/repairing machines.

ThermoFisher

26.42% Market share

14 Machines

5 ABI series

3 IonTorrent Series

3 SeqStudio Series

3 Other models

Insights:

- NGA – High prices for replacement parts in the SLA.
- NGA - Significant delays in obtaining repair services.
- MOZ – No in-country capacity for servicing/repairing machines.

Key insights - GS machine SLA coverage

SLA coverage

32
Machines covered by SLA

24
Machines NOT covered by SLA

2
Machines with unknown SLA status

Reasons for lack of SLA coverage

1 Lack of funding

MOZ – IIAM – ThermoFisher - SeqStudio

8 Unknown reasons

(3) NGA – CAMRET – Illumina/MiSeq + Illumina iScan + ONT/Minion

(1) NGA – CERIT – ONT/Minion

(1) NGA - Biorepository and Clinical Virology Laboratory – ONT/Minion

(1) NGA – GEAP – ONT/Minion

(1) NGA - Africa Center of Excellence for Population Health and Policy – ONT/Minion

(1) NGA - Molecular Research Foundation for students and scientists – ONT/Minion

4 Expired SLA and renewal in process

(2) MOZ – Biotec. And Genetics Lab – Illumina/Miseq + ThermoFisher/ABI3500

(2) NGA – GHRU – Illumina/MiSeq

8 No SLA contracted when procuring

(5) NGA – GHRU – ONT/Minion + Thermofisher/ABI 3500 + ThermoFisher SeqStudio

(5) NGA – National Reference Lab – ONT/Minion

3 Expired SLA with no renewal

(3) NGA – NIMR – ThermoFisher/SeqStudio + ONT/Minion + BGI Genomics/SEQ G50

Disclaimer:

1. ONT does not have an SLA for procurement in Nigeria.
2. ONT uses plug-n-play technology requiring little to no maintenance.

Workshop on PSM Solutions (23-24 July)

Background

About: A meeting was held with 60 plus stakeholders (online + offline) on 23-24 July in Addis Ababa cohosted by Africa CDC and FIND and funded by BMGF and Africa CDC

Overview of Identified Hypothesized Solutions

1

Transparent & Committed Service & Maintenance Support

Establish an S&M framework, identifying what in-country maintenance and servicing levels (onsite and remote) are needed by whom to ensure optimal operational performance.

Standardise a suite of S&M services appropriate for LMICS

Develop a set terms of services that are standardised and are appropriate to LMICS contexts and harmonisation of donor-procured equipment practices to include SLA coverage.

2

3

Strengthen Procurement capacity

Enhancing the in country / regional procurement capacity through demand aggregation, alternate procurement platforms or other means to reduce dependency on global mechanisms and ensure consistent supply and transparent pricing through economies of scale.

Streamline Regulatory environment

Strengthen national and continental policies overseeing the procurement and donation of GS products with a focus on importation, incoterms, cost, and bundling aspects.

4

5

Capacity Building for PSM

Establish programmes , workforce, tools, processes, to support the training of key PSM areas, forecasting, supply planning.

Investment Case for GS PSM

Investment Case Development focused on increasing awareness and support (resources) for PSM in Genomic Sequencing.

6

Overview of Proposed Solutions

Solutions 2, 3 and 4 were selected and prioritized for Advocacy Note development

1

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Community of Practice

Objective

The CoP brings together Genomic Sequencing (GS) and Procurement and Supply Management (PSM) experts and stakeholders to collaborate on overcoming barriers in scaling GS services across Africa.

Role of COP

COP will be co-chaired by AFCDC and a secretariat, will meet every 6 weeks and will serve as a working forum for:

1. Coordination and Convening
2. Engagement and Continuous Improvement
3. Knowledge sharing and Collaboration
4. Priority Development and Monitoring
5. PSM Framework and Tools

GS PSM COP Participants

Open to all GS and PSM experts and will be an evolving group. Initially will comprise:

1. Members from 2023 Africa CDC GS TWG in Dakar
2. Participants from July 2024 workshop in Addis Ababa

Channels of Engagement

LinkedIN – 155 members

In Future – Webinars, virtual sessions, in person events.

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Thank you