



Federal Republic of Somalia  
Ministry of Health & Human Services



# Implementing campaign digitalization amid insecurity and displacement

Adaptations from Somalia's 2025 ITN campaign



# Why this matters



## Fragile Context

Somalia delivers malaria interventions in a **fragile and dynamic context**.

Insecurity, displacement, and severe access constraints make traditional campaign planning and real-time oversight extremely difficult.



## Digitalization Supports:

-  **Better planning**  
Facilitates rapid microplanning updates in shifting contexts
-  **Real-time operational visibility**  
Monitoring progress as it happens on the ground
-  **Faster reporting & decision-making**  
Reducing lag between data collection and action
-  **Stronger accountability**  
Improving overall data quality and trust



# Somalia malaria program context



## Operational Context

Long-standing malaria program operations evolving through the country's rebuilding stages, adapting to a dynamic environment.

## Partnership Model

Implementation relies heavily on strategic partnerships to ensure coverage:

- ✓ Collaboration with local and international NGOs
- ✓ Technical partners for specialized support

## Federal System Shapes Delivery



### Federal NMCP

Responsible for high-level governance:

Policy

Coordination

Guidance

Grant Oversight (Malaria + RSSH)



### Federal Member States

Operational execution and supervision:

Implement Routine Activities

Supervise Delivery

# LLIN delivery channels in Somalia



## Routine LLIN



### Ongoing Distribution

Delivered continuously through fixed health services and facilities.



### Reported via DHIS2

Data flows directly into the national health information system.



### NMCP Support

Managed directly by NMCP at both national and state levels.

vs

## Mass ITN Campaign



### Periodic Implementation

Executed once per campaign cycle (or during emergencies).



### NGO Support

Heavily supported by local NGO partners for last-mile delivery.



### Legacy Systems

Previously relied on manual registers and fragmented ODK elements.

# Before 2025: Main Limitations



## Manual + ODK

The previous system relied on **physical registers** supplemented by basic ODK data collection.

This hybrid approach created significant data silos and operational delays.

## ! Operational Pain Points



### Fragmented reporting

Slow consolidation of data from disparate sources prevented a unified view.



### Limited real-time visibility

Supervisors lacked immediate insight into campaign progress and coverage gaps.



### Difficult data quality checks

Harder to run daily consistency checks at scale across manual records.



### Intensive reconciliation

Significantly more effort required for final reporting and data cleaning.

# 2025: What Changed



## The Big Shift

### Full Digitalization via DHIS2

In 2025, Somalia moved from fragmented manual systems to a unified digital approach for the mass ITN campaign.



2025

## Implementation & Goals

### Mass ITN Campaign on DHIS2

Campaign reporting was successfully migrated to the national DHIS2 platform.

### Technical Support

Implementation supported by **HISP Tanzania** to ensure robust configuration.

### Strategic Alignment

Goal: Move campaign reporting into the **same national platform** used for routine LLIN distribution.

# 2025 Campaign Scale



ITNs Distributed / Planned

# 3.14M

(3,139,621 Nets)

Successful mass distribution across targeted areas using DHIS2 platform

### Geographic Coverage

15 Regions | 32 Districts

### Reporting Frequency

Daily Reporting cycle

*\*Site consistency varied based on field capacity*

### Data Quality & Integrity

75% Completeness

- Daily Consistency Checks: Routine verification of incoming data streams.
- Duplicate Reduction: Focused ongoing review to correct inconsistencies.

# What exactly was configured in DHIS2



## Data Capture Scope

*Focus on minimum critical data to ensure speed and accuracy in the field.*



### Demographic Information

Household head, location details



### Distribution Data

Number of nets distributed per household

## DHIS2 System Modules



### Tracker App

Mobile data collection for individual records



### Aggregate

Summary data reporting and compilation

### Events

Capturing single-point distribution events



### Datasets

Structured data definitions for standardized reporting

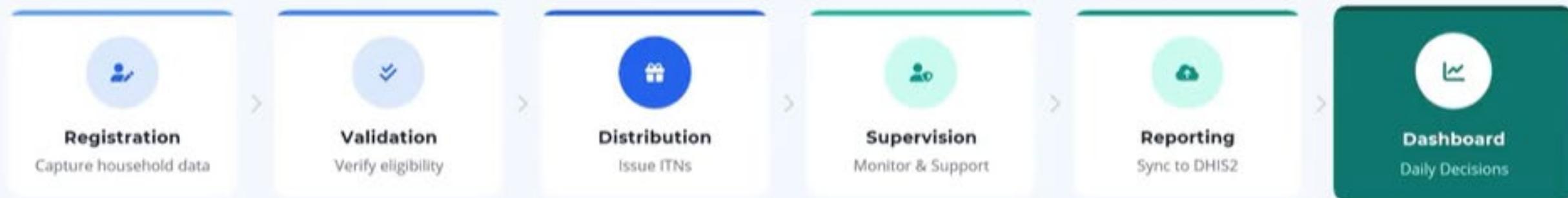


### Dashboards

Real-time visualization for decision making



# End-to-end workflow



## Field Operations

Data is entered directly at distribution sites using mobile devices. Registration and validation happen instantly before nets are handed over.



## Quality Control

Supervisors verify entries on-site, escalate issues immediately, and ensure errors are corrected quickly before end-of-day sync.



## Decision Making

National and state teams review dashboards daily to identify gaps, track stock, and issue course corrections for the next day.

# Governance and accountability



## National Level

NMCP Federal Team

Policy & Overall Coordination



## State Level

State Ministries (MOH)

Regional Supervision & Support



Dedicated Data Review Teams



## Daily Review

Teams review data submissions every evening to ensure completeness and accuracy.

- ✓ Verify consistency across sites
- ✓ Identify reporting gaps early



## Field Support

Provide active support to field teams at every distribution site.

- ✓ Remote & on-site coaching
- ✓ Guidance on device usage



## Troubleshooting

Coordinate corrections and technical troubleshooting during implementation.

- ✓ Fix data entry errors
- ✓ Resolve sync issues

# Data quality process



## How errors were handled: Daily Routine & Correction Cycle

09:00 AM



### Operations Start

Daily distribution begins at sites

During Day



### Real-time Checks

Discrepancies addressed immediately during operations

05:00 PM



### End-of-Day Review

National & State teams conduct final quality checks

### Rapid Correction Strategy

By addressing discrepancies immediately during or right after daily operations, the campaign avoided the backlog of errors that typically accumulates until the end of a campaign. This supported faster correction cycles.

### Designated Review Teams

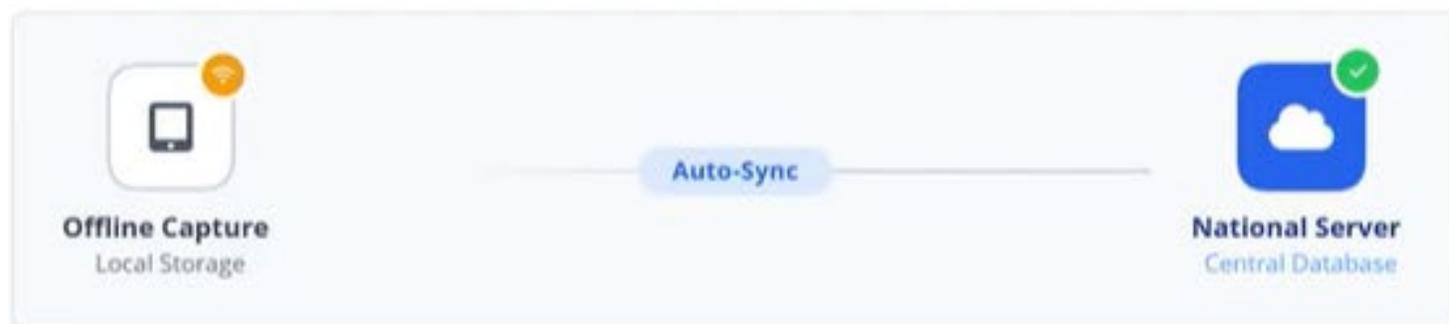
Specific national and state data teams were assigned solely to monitor incoming data streams, identify duplicates, and communicate with field supervisors for immediate resolution.

# Connectivity and offline strategy



## DHIS2 Android Capture

The campaign utilized a hybrid data entry model. Devices store data locally during field operations and automatically synchronize with the national server once internet connectivity is available.



### What Worked

#### Resilience to Connectivity Gaps

Offline capture capability significantly reduced operational disruption in remote areas where internet access was intermittent or non-existent. Teams could continue working without pauses.

### Key Challenge

#### Virtual Training Limitations

Security constraints forced a shift to virtual training (Zoom/Teams). This limited hands-on practice, affecting device readiness and user confidence in some sites compared to in-person sessions.

# Partner coordination model



## One Reporting Standard

All partners aligned on common DHIS2 tools and reporting expectations. National and state review teams provided support based on each partner's site capacity.



### New Ways

Local NGO Partner



### WARDI

Local NGO Partner



### HIRDA

Himilo Relief & Dev.



### Havoyoco

Horn of Africa Youth



### ISDP

Integrated Services



## Standardized Tools

All NGOs utilized the exact same DHIS2 configuration, data elements, and dashboard views, ensuring data comparability across all 15 regions.



## Tailored Support

National and state review teams adapted their supervision intensity based on each partner's specific capacity and local challenges.

# Security and displacement adaptations



## Dynamic Operational Context

Campaign implementation required constant flexibility to navigate insecurity and population movement.



● Insecurity

● Movement

● Response



## Agile Distribution Points

Distribution locations were adjusted in real-time when security access changed. Teams rapidly relocated to safer, accessible zones to ensure continuity without compromising safety.



## IDP Integration

Specific integration of Internally Displaced People (IDP) sites into distribution planning. Microplans explicitly accounted for temporary settlements to ensure vulnerable displaced families were not missed.



## Rapid Microplanning Updates

Microplans were treated as living documents, updated rapidly as populations moved. This ensured that nets and teams followed the people, rather than sticking to outdated census data.



## Digital Operational Visibility

Digital reporting provided quick visibility on site status. Supervisors could instantly see which sites paused due to security or resumed operations, allowing for faster resource reallocation.

# Challenges and mitigation



## Key Challenges



### Connectivity Interruptions

Intermittent internet access in remote districts prevented real-time data submission.



### Variable Partner Capacity

Differences in technical skills and resources across the 5 NGO partners and 32 districts.



### Training Constraints

Security risks limited in-person training opportunities, affecting device readiness.



### Insecurity & Access

Unpredictable security situation requiring rapid operational adjustments.



## Mitigation Strategy



### Offline-First Architecture

Enabled local data capture on devices with automatic synchronization when connectivity was restored.



### Daily Support Teams

National and state teams assigned to specific sites to provide daily review and targeted troubleshooting.



### Virtual + Coaching Model

Implemented virtual training sessions supplemented by intensive ongoing coaching during implementation.



### Data-Driven Agility

Dashboards used for daily decision-making to pause, resume, or relocate distribution activities safely.

# What improved (key gains)



## Operational Visibility

Improved real-time oversight at both **national** and **state** levels, allowing for immediate situational awareness.

## Faster Detection

Daily reporting cycles enabled quicker identification of problems, facilitating rapid response even with varying site capacities.

## Systemic Advancements



### Standardized Reporting

Unified data collection across **15 regions** and **32 districts**, eliminating fragmentation.

### Enhanced Data Quality

Ongoing review processes steadily increased data completeness and consistency throughout the campaign.

### Platform Alignment

Campaign data now aligns seamlessly with the national platform used for routine LLIN reporting (DHIS2).

# What we would do differently



## Refining the Model

Honest reflection on the 2025 campaign reveals critical areas for **optimization** in future cycles.

Addressing these early can significantly reduce friction during implementation and improve partner readiness.



## Key Adjustments:

-  **Earlier device planning**  
Secure allocation and readiness well in advance
-  **Simplify initial forms**  
Focus on minimum critical variables first to reduce load
-  **More onsite mentoring**  
Increase field-based coaching alongside virtual training
-  **Stronger pretesting**  
Pilot in diverse settings before full rollout
-  **Earlier partner assessment**  
Tailor support based on specific partner capacity



# Sustainability and Next Steps



## Institutionalization

- **Strengthen Capacity**  
Build national and state capability to maintain and adapt DHIS2 campaign configurations independently.
- **Standardize Training**  
Institutionalize digital training packages and supervision SOPs for consistent future rollout.



## Data Quality & Expansion

- ↑ **Improve Completeness**  
Target >75% data completeness through better device readiness and stronger field mentoring.
- ⚙️ **Enhance Dashboards**  
Refine visualizations for faster decision-making and real-time performance monitoring.
- ✖️ **Future Application**  
Apply this digital model to future campaign cycles and emergency response scenarios.

# Closing thoughts



## Digitalization is feasible even in fragile settings

The 2025 Somalia ITN campaign demonstrates that with the right adaptations, digital tools can enhance visibility and accountability in the most challenging environments.

# Thank you.

**National Malaria Control Program**

Federal Ministry of Health & Human Services, Somalia

### Critical Success Factors



#### Clear Governance

Defined national and state roles ensure accountability at every level of the campaign.



#### Offline Reality Planning

Systems designed for disconnection ensure continuity when infrastructure falls.



#### Partner Alignment

All implementing partners unified under one reporting standard and platform.



#### Daily Data Review

Data isn't just collected; it is reviewed daily to drive immediate operational decisions.