Deploying DIGIT HCM in Kebbi: How interactive dashboards and customised reports transformed data-informed decision-making and improved key SMC campaign processes

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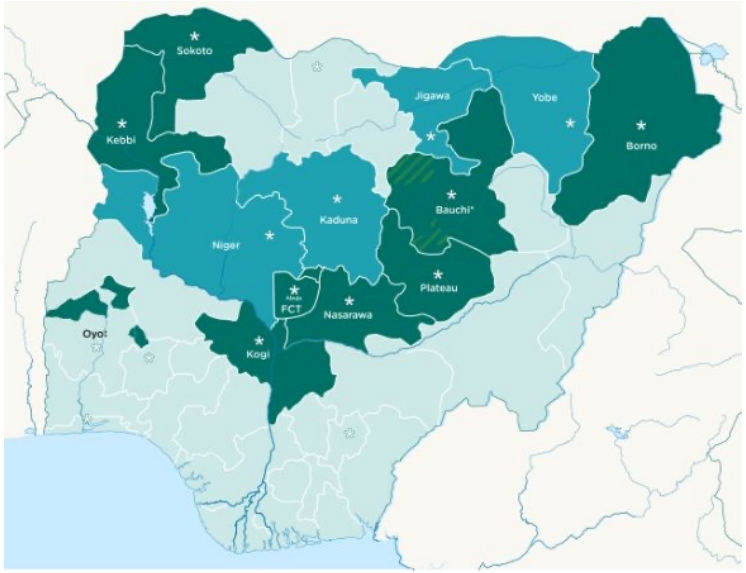
About Malaria Consortium

Malaria Consortium is one of the world's leading non-profit organisations specialising in the prevention, control and treatment of malaria and other communicable diseases among vulnerable populations.

Our mission is to save lives and improve health in Africa and Asia through evidence-based programmes that combat targeted diseases and promote universal health coverage.

Seasonal malaria chemoprevention (SMC)

- SMC is a community-based malaria prevention strategy for high-burden, seasonal areas, providing antimalarial medicines during peak transmission.
- Community distributors deliver SMC medicines door-to-door to children (3–59 months) in four or five cycles, spaced 28 days apart.
- SMC implementation relied on traditional paper-based data collection, causing accountability issues, reporting delays and poor data quality.
- Manual methods were labour intensive, error prone and slowed data analysis, impacting monitoring and decision-making.
- Malaria Consortium began the incremental rollout of campaign digitalisation across the states where we work in 2023.



Why digitalise SMC?

- Greater accountability — transparency on how data have been collected, where and by whom
- Reduced time between data collection and analysis, enabling effective use of data for decision-making to improve campaign management in real time
- Real-time stock monitoring to prevent drug shortages and reallocate excess
- Faster tracking of adverse medication effects to allow rapid follow-up
- Aggregated checklists for better supervision
- Improved data storage and flow from community to national level
- Optimisation of campaign investment — data reusable in future campaigns and other community health initiatives

DIGIT by eGov Foundation

DIGIT in Nigeria

SMC digitisation in Nigeria is not new — other platforms (including RedRose, DHIS2 and Reveal) have been used previously.

DIGIT HCM was successfully introduced during the fourth cycle of the 2024 SMC round in Kebbi, using a 'bring your own device' (BYOD) operating model across 21 local government areas (LGAs) in October 2024.

This was the first use of a digital solution to support SMC implementation in Kebbi state, with strong stakeholder engagement throughout — from national and state malaria programmes to key partners.

Introduction of the tool followed software development lifecycle (SDLC) phases — requirements, design, implementation, testing and deployment — to ensure reliability, scalability and user-centred outcomes.

Aims: Test the feasibility of using DIGIT in Nigeria using a BYOD model and gain learnings to inform future scale-up.

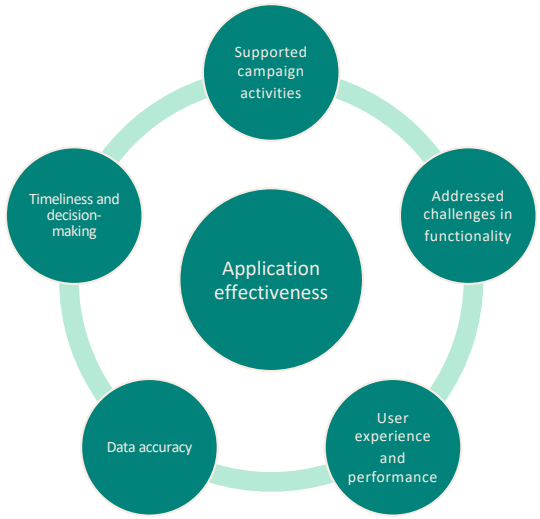
DIGIT for SMC — key components

Post-campaign digitalisation evaluation

We conducted a performance evaluation to examine the DIGIT HCM application's deployment

The evaluation assessed key stakeholders' overall satisfaction with the application

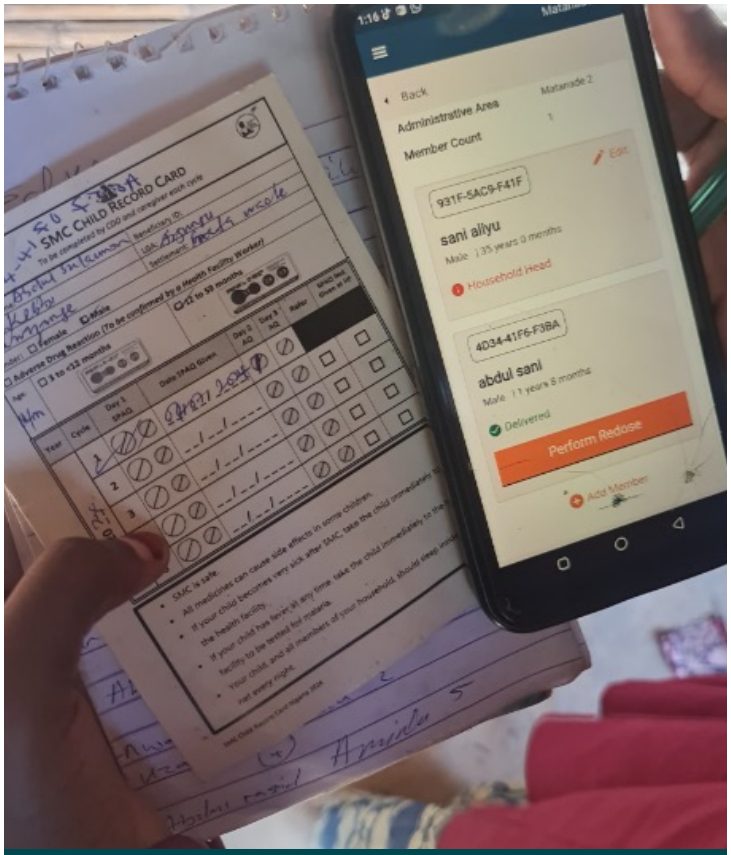
A key objective was to determine how effectively the application enhanced key campaign processes



The evaluation employed a mixed-methods approach, collecting data through structured surveys and user feedback from 460 respondents across five user groups: **community distributors**, **health facility workers**, **supervisors**, **logisticians** and **data managers.**

Highlights and key results

- **7,200 application users** trained across 21 LGAs
- **First implementation globally** of DIGIT HCM using BYOD operating model
- **User acceptance score of 95 percent**, based on feedback, indicating strong acceptability of the application
- **Users embraced fully digital approach** by day 2, with no option to revert to paper
- **Cross-organisational technical 'help desk'** established to troubleshoot technical issues during campaign implementation
- **Timely and available data** at all levels for reporting and informed decision-making during and after campaign
- **Campaign reached over 1.3 million children**
- **Achieved 91.1 percent administrative coverage**
- Shift to digital tools **improved reporting accuracy**, reducing reported coverage of SMC distribution from over 102 percent in cycles 1–3 to a more accurate 91 percent in cycle 4.



56 percent of community distributors and 98 percent of health workers reported having a good experience with the application and relying on it to improve the quality of their work (e.g. accuracy of records, speed of drug distribution)

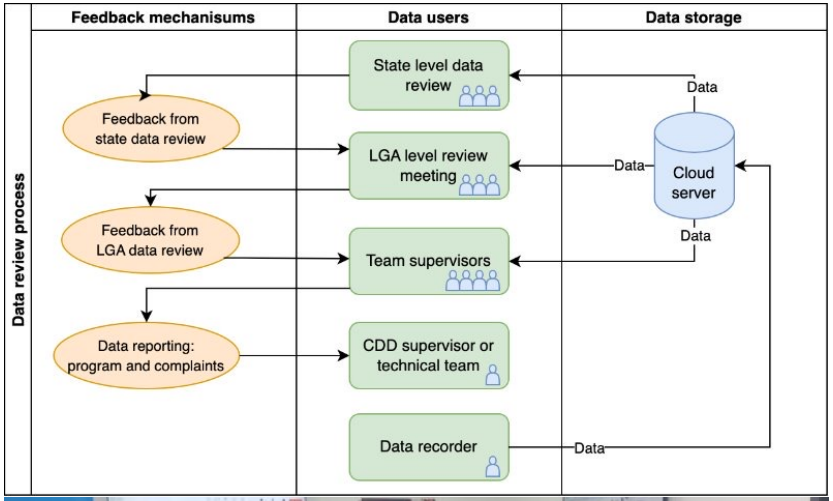
Strengthened data oversight improves response times

Team performance monitoring and supervision

- **Daily team performance tracked via key performance indicators on the dashboard:** children reached, commodities status, referrals, supervision and gaps requiring interventions
- **Issues reported via the complaint module:** technical, internet, user account, performance and data-related — routed to appropriate teams for action via central helpdesk.

Anomaly detection for data integrity

- **Proactive error identification:** Anomaly report flagged data collection inconsistencies, e.g. multiple registrations in a short timeframe and a high number of refusals on day 1, triggering immediate investigations
- **Efficient resolution:** Campaign data managers used dashboard insights to reroute anomalies to the right supervisors, ensuring same-day action/correction
- **Outcome:** Improved responsiveness to field issues and enhanced data accuracy through real-time performance tracking, structured issue resolution and timely correction of data anomalies.



User responses indicated that the application was effective in enhancing supervision, with high satisfaction reported across most groups — 98 percent of community distributors, 100 percent of health workers and logisticians, and 67 percent of data managers.

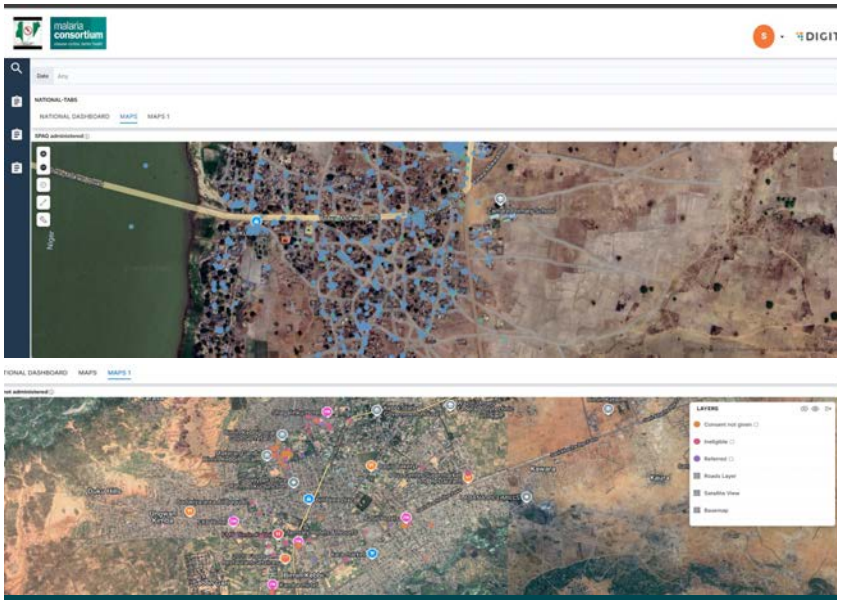
Insights and strategy changes: Geospatial maps for campaign monitoring

Use of geospatial maps for campaign monitoring

- Highlighted areas of low and high coverage by location for targeted follow-up
- Identified clusters of dense distribution, indicating possible mass administration in single locations
- Identified locations with high rates of refusal.

Targeted action: Improved data-driven decision-making enabled supervisors to pinpoint geographic trends, investigate anomalies and address issues such as high-refusal areas or clustered administration.

Impact: Targeted revisits improved household reach in previously missed areas, reduced refusal rates and ensured more balanced coverage across community.



Geospatial map analysis enabled supervisors to visually identify consent-related gaps across specific locations, guiding community distributors to revisit affected households and resolve issues efficiently.

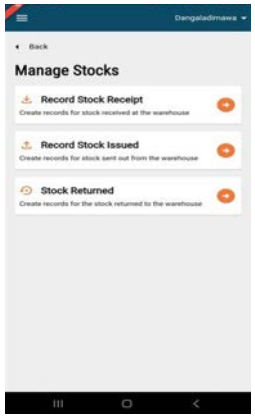
Real-time commodity management

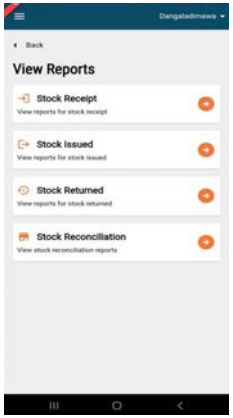
- Real-time commodity tracking on the dashboard provided visibility across supply chain indicators, such as quantity supplied, quantity issued and quantity used.
- Commodity reconciliation, such as wastage, excesses, losses and unused, was accounted for through the use of custom reports and dashboards at all levels.
- The platform provides end-to-end accountability of commodity management.

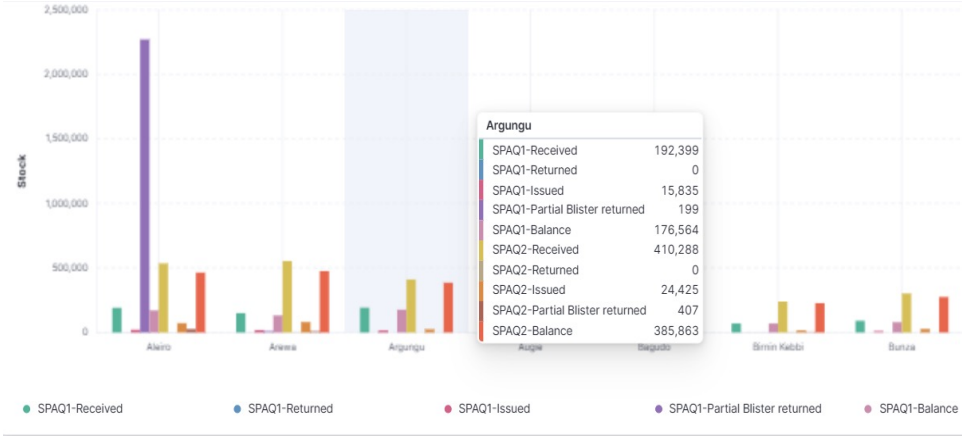
Targeted action: Logisticians leveraged real-time dashboard insights and custom reports to conduct commodity reconciliation, flag anomalies such as wastage or excesses, and implement timely stock adjustments to prevent service disruptions.

Impact: Real-time visibility via the dashboard enabled early detection of stock issues, ensuring consistent stock availability and improved supply chain efficiency.

"It helped for easy commodity data accountability "
Community distributor supervisor







Data use challenges

Data completeness: Many community distributors were reluctant to synchronise data on an ongoing basis (possibly trying to reduce their data usage). This impacted the completeness of data at various level for decision-making.

Reporting timeliness: Significant concerns regarding internet connectivity in some LGAs impacted on timely data synchronisation.

Underused dashboard and reports: Inconsistent use of the dashboard was noted in some locations, impacting informed decision-making during the campaign.

Key lessons learnt

Conduct network assessments: Perform detailed network availability assessments across all LGAs to optimise deployment strategies and plans for alternative methods, ensuring timely data synchronisation to drive timeliness and completeness of data for decision-making.

Enhance training programmes: Ensure all campaign implementers are trained in effective data use — covering dashboards, geospatial maps interpretation, custom report generation and data interpretation to drive data-informed decision-making.

Enhance feedback and communication mechanisms: Establish a structured system that ensures timely, consistent data sharing across all levels. This will improve issue reporting, promote data-driven responses and strengthen real-time decision-making during campaigns.

Continuous enhancements to DIGIT's capabilities: Empower programme teams to update KPIs and tailor dashboards to meet specific needs beyond default configurations by introducing low-code dashboard customisation.

Key recommendations

Strong leadership and government engagement is paramount and promotes **data ownership and efficient data use.**

Effective partnerships, coordination and communication between stakeholders is critical for: ensuring **shared vision on data access** at various levels; facilitating **effective collaboration on data use**; and timely escalation and **resolution of issues.**

Sustainable campaign digitalisation approaches require multi-stakeholder partnerships and collaborations.

Inclusive training is essential — all relevant stakeholders across the campaign chain should be trained to use the dashboard and reports to enable effective data-driven decision-making.

Structured data review meetings improve outcomes — having a clear format and focus during daily review meetings ensures coordination and attention to key campaign priorities.

Data reuse: Continuing to reuse existing data registries for future campaigns will allow us to build on previous enumeration data, reducing data redundancy across multiple campaigns and providing robust data for informed decision-making.

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Thank you

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