Ending disease in Africa

Digitalization and its importance in a resource-constrained environment: Maximizing the potential

Navigating Resource-Constrained Environments

Date: 25th February 2026

World Health Organization
African Region

Health Promotion/
Disease Prevention and
Control Cluster

From Simple Digitization to Digital Public Infrastructure

Digital Public Infrastructure (DPI)

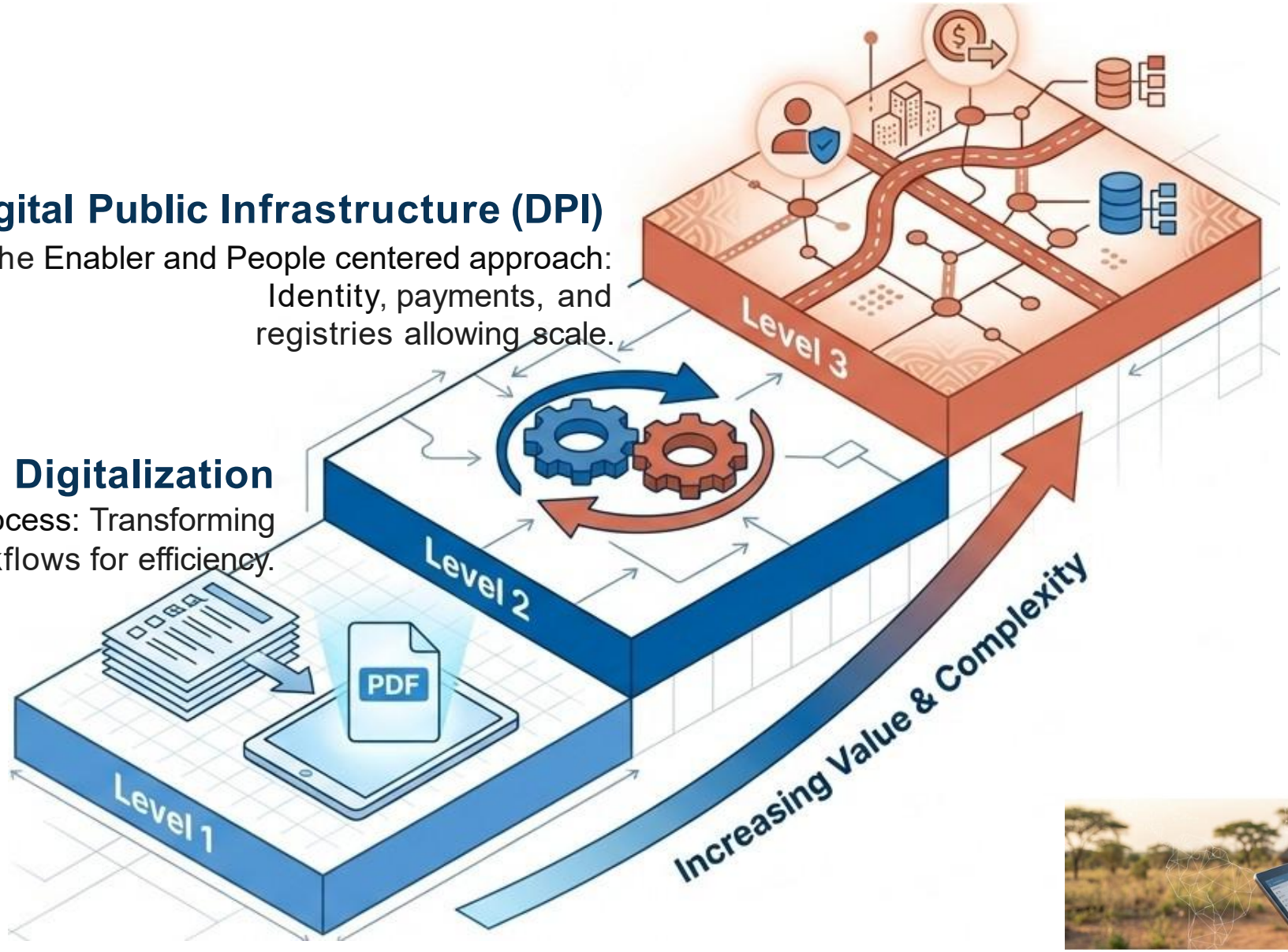
The Enabler and People centered approach: Identity, payments, and registries allowing scale.

Digitalization

The Process: Transforming workflows for efficiency.

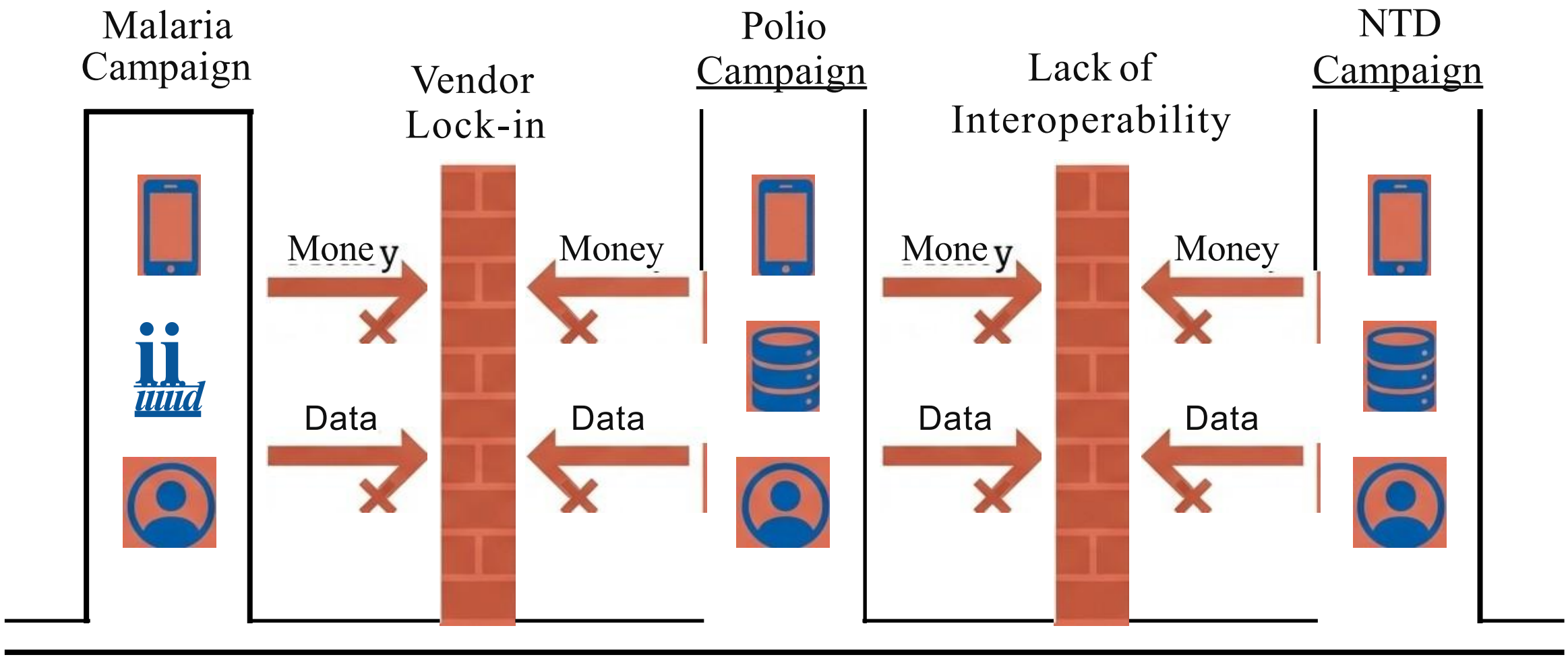
Digitization

The Act: Converting paper to digital.



The Challenge: The Cost of Fragmentation

Result: Redundant investments and fragmented data.



Research Evidence: The Persistence of Silos

Examples of Existing Literature

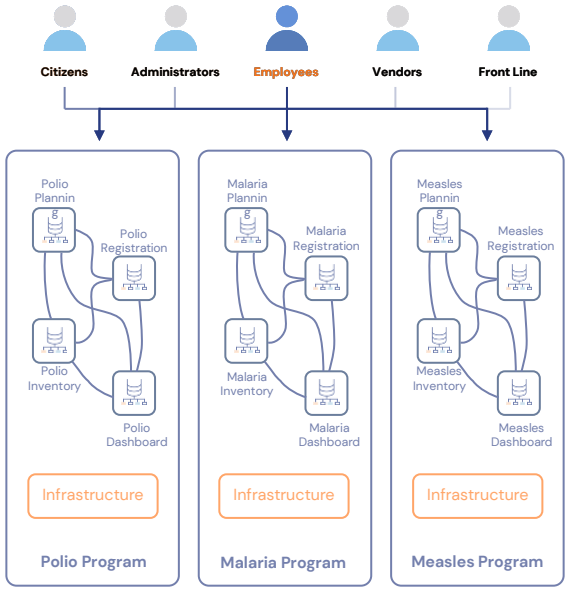
- ✓ **Iyamu I, Xu T, Gómez-Ramírez O, et al. (2021).** "Defining digital public health and the role of digitization, digitalization, and digital transformation: Scoping review." ***JMIR Public Health and Surveillance***, 7(11), e33716..
- ✓ **Bazant E, McPhillips-Tangum C, Shrestha SD, et al. (2022).** "Promising practices for the collaborative planning of integrated health campaigns from a synthesis of case studies." ***BMJ Global Health***, 7, e010321..
- ✓ **Collins J, Westerveld R, Nelson KA, et al. (2021).** "Learn from the lessons and don't forget them: identifying transferable lessons for COVID-19 from meningitis A, yellow fever and Ebola virus disease vaccination health campaigns." ***BMJ Global Health***, 6, e006951..
- ✓ **McConnell M, Struthers P, Mahmood S, et al. (2022).** "How are health workers paid and does it matter? Conceptualising the potential implications of digitising health worker payments." ***BMJ Global Health***, 7(1), e007344..
- ✓ **Hamani A, et al. (2023).** "Mobile money and the importance of timely, complete payments to frontline health campaign workers in the fight to eradicate polio: pilot experience from a World Health Organization digital payment platform in Africa." ***BMC Health Services Research***, 23, 16..
- ✓ **Dougherty L, et al. (2019).** "From paper maps to digital maps: enhancing routine immunisation microplanning in northern Nigeria." ***BMJ Global Health***, 4(Suppl 5), e001606..
- ✓ **Rocha T. A. H., et al. (2021).** "Microplanning for designing vaccination campaigns in low-resource settings: a geospatial artificial intelligence-based framework." ***Vaccine***, 39(42), 6276–6282..
- ✓ **Ismail A, et al. (2017).** "Micro-planning in a wide age range measles rubella (MR) campaign using mobile phone app, a case of Kenya, 2016." ***Pan African Medical Journal***, 27 (Supp 3), Article 16..
- ✓ **Uddin J, et al. (2016).** "Use of mobile phones for improving vaccination coverage among children living in rural hard-to-reach areas and urban streets of Bangladesh." ***Vaccine***, 34(2), 276-283.

- ✓ Evidence remain largely from observational studies
- ✓ Vertical (90% of studies) single disease area rather than integrated systems
- ✓ >80°/o focus on health worker capacity (e.g., training, adherence) and program performance metrics (e.g., cure rates, patient numbers)
- ✓ Lack of focus on broad impact on health systems and person outcomes
- ✓ Systemic lack of measurement on health system impact/PHC.

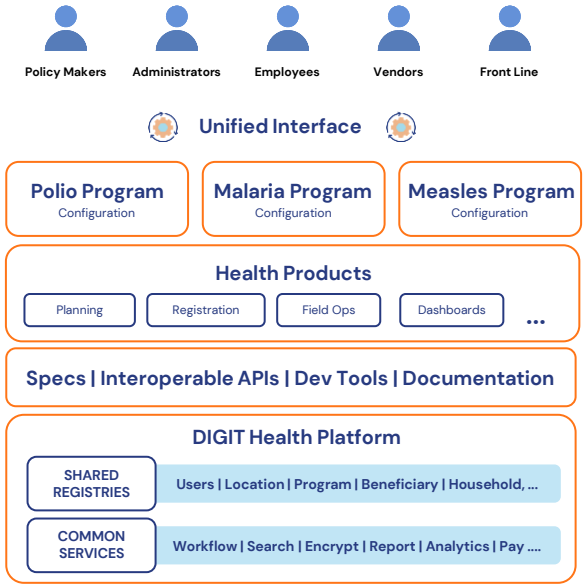
Based on Scoping Review of studies.

With DIGIT, digital transformation of public health and enabling countries to do more with less becomes a reality

Traditional Approach



DPI Approach

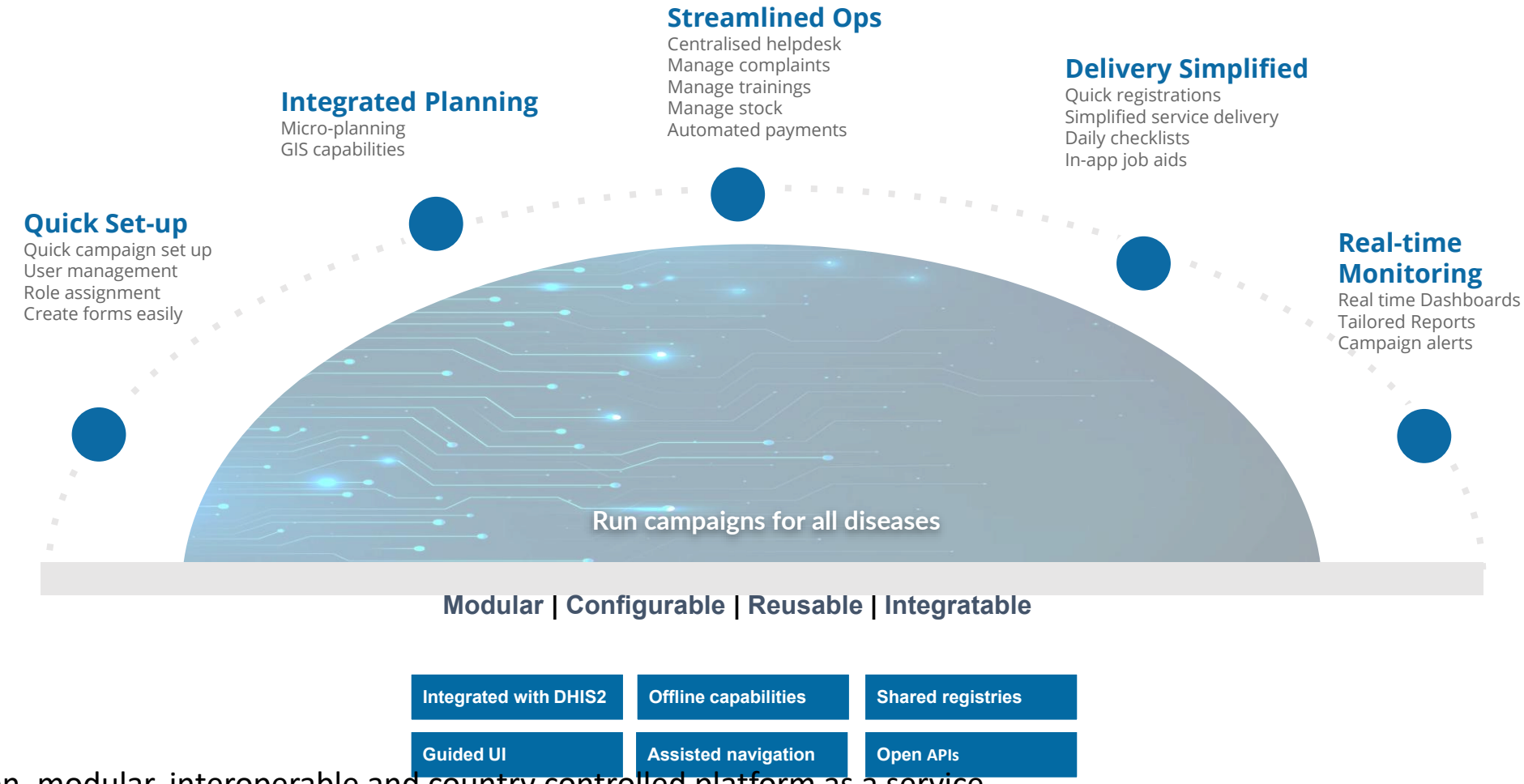


- Single source of data that is reused across programs
- Improved data availability and observability that aids data driven decision making and intervention
- Country ownership and reduced dependency on proprietary tools
- Faster innovation by ecosystem

WHO AFRO will leverage the capabilities of DIGIT to build Health Campaign Management (HCM) solutions to support integrated campaigns delivery

The DIGIT Health Campaign Management (HCM):

An integrated solution to support immunization service delivery in the African Region



DIGIT HCM:

- A scalable, open, modular, interoperable and country controlled platform as a service
- Deployments in campaigns may lead to ***improved service delivery***, ***increased accountability***, ***reduced costs*** and ***better health outcomes***

Country highlights Digitalization: Emerging themes

Feature	Manual / Paper-Based	Digitalized Systems
Operational Costs	Variable, but lacks long-term "reuse" savings	Initial high setup; costs drop with reuse, variable settings.
Data Quality	Prone to error and slow to compile, difficult to use data during campaigns (data-to-decision)	High precision; can be real-time, enable data use, metadata capture,
Monitoring	Post-hoc review after campaigns for example (too late/difficult to correct/call-backs)	Real-time monitoring for immediate course correction/decision making.
Equity	Hard-to-reach areas often missed	Geospatial microplanning ensures no community is excluded.

Togo
Benin
Nigeria
Ethiopia

Documented examples and cost savings of Digitalization

The Value Proposition: Why the Shift?

- ✓ **Reduce Fragmentation:** Eliminate siloed, non-interoperable campaign tools.
- ✓ **National Sovereignty:** Countries own their data and infrastructure.
- ✓ **Cost Efficiency:** Reuse assets across Malaria, Polio, Nutrition, NTDs and other programs.
- ✓ **WHO Endorsed:** Aligned with regional digital transformation strategy.

Aligning with the Global Strategy

Vision: Improve health for everyone, everywhere by accelerating the adoption of appropriate digital health solutions.

2025–2028

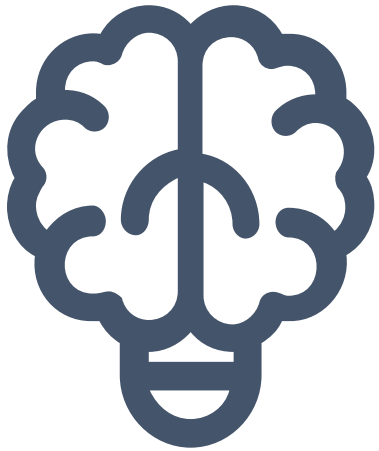
Global Strategy on Digital Health

2030

SDGs & Universal Health Coverage

2028–2033

Future Strategy: AI & Long-term Sustainability



The Long-Term Vision: Everyone, Everywhere

An integrated digital infrastructure that serves the health worker, the patient, and the policymaker equally.

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THANK YOU

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