AI, compute, and power: The new political economy of global health

Dr Eric Remera, Director, National Health Intelligence Center (NHIC)
Ministry of Health / Rwanda Biomedical Center, Rwanda

AI and HIV: Who owns the future of public health?

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From substitution to self-reliance — what global health reform means for self-care?

01 Move routine care out of the facility.
Self-testing, self-injection, multi-month and multi-year supply, self-monitoring — the parts of the cascade that no longer need external funding.

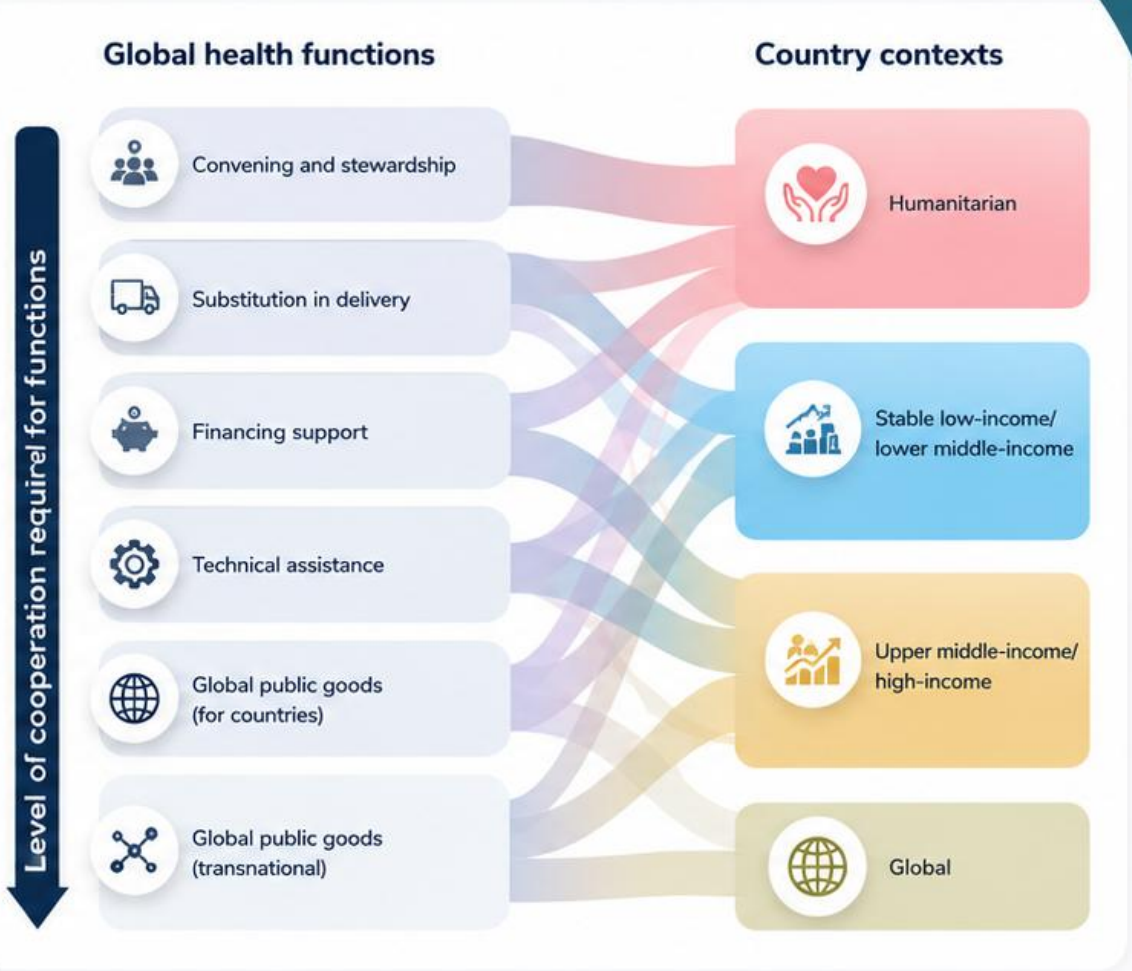
02 Reset the terms of partnership.
Data residency, model access, exit clauses, and no paying a subscription to analyse your own data. Partner with anyone; be captured by no one.

03 Build on national digital public infrastructure, not another vertical platform.
EMRs, ID, payments and supply chain already exist and are country-owned; programme-specific systems rebuild dependency.

04 Let self-generated data land somewhere.
Self-test results, self-reported outcomes and home readings held by the patient, flowing on national rails, under national law.

05 Change the rules, not just the pilot.
Scope of practice, pharmacy access and de-scheduling, device and AI oversight — regulation is the binding constraint on self-care, and it is entirely country-owned.

06 Ask the global system for public goods only —
standards, validated tools, interoperability, quality assurance, pooled procurement — and not for delivery.



Source: https://www.nature.com/articles/s41591-025-03936-9

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"In Africa, we are no longer satisfied to be* passive consumers *of technology.
We want to* build and deploy *that technology at scale as well."

PRESIDENT PAUL KAGAME

Republic of Rwanda · AI for Good Global Summit 2026, Geneva

AI in HIV is a contest over structural control, resources, and ecosystem value. The real question isn't whether AI works. It's on:

- *Whose terms ?*
- *Who controls the compute ?*
- *Who benefits economically ?*
- *Who sets the rules ?*

THE RISK

Digital dependency, wearing the language of innovation

If we do nothing to shape this, the familiar pattern repeats.

Health systems become end-users of tools designed elsewhere — trained on data that leaves the continent, generating value that accrues elsewhere.

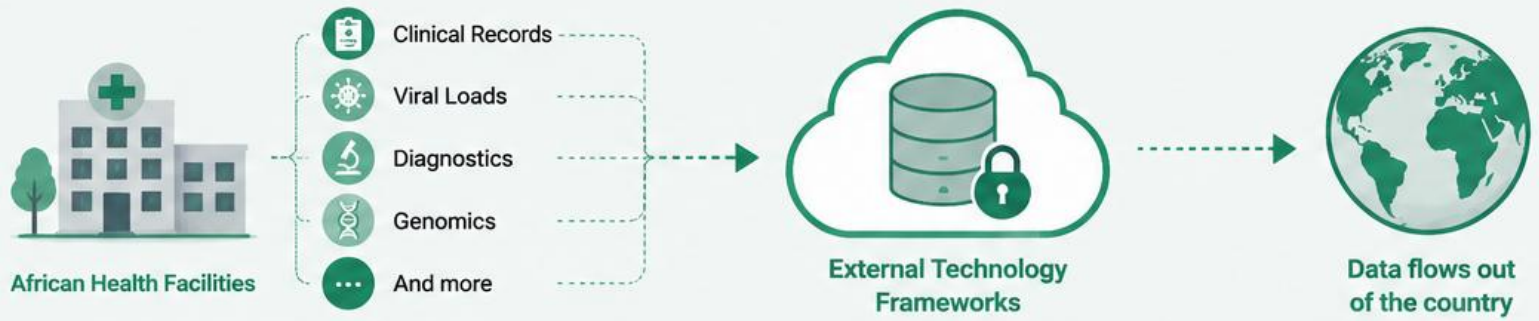
That is not innovation. That is dependency by another name.

DATA COLONIALISM

The Extractive Default

01 HARVESTED DOMESTICALLY

External technology frameworks gather structured clinical records — viral loads, diagnostics, genomics — directly from African health facilities.



02 LOCKED GLOBALLY

Derived algorithms, clinical IP, and research insights are locked off-continent inside overseas servers — inaccessible to source nations.

03 SOLD BACK TO SOURCE

Health ministries pay external vendors subscription fees to analyze their own clinical records — a cycle of structural dependency.

> "When national healthcare data is processed solely as an export commodity, it reproduces historical patterns of **raw material extraction**. Modern sovereignty demands domestic data processing infrastructure."
>
> PER THE LANCET & FT COMMISSION (KICKBUSCH ET AL., 2021)

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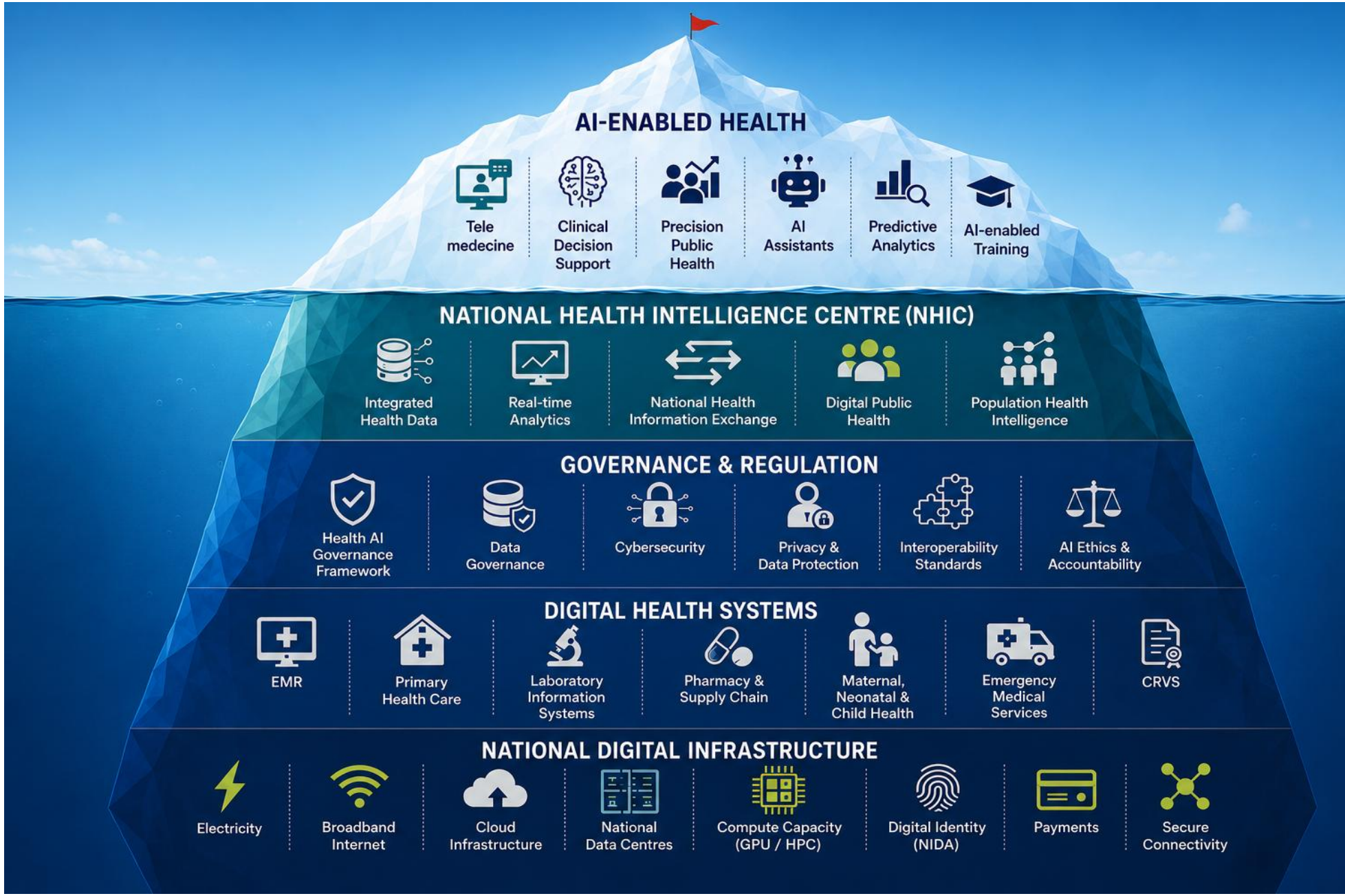
Building the Foundations for AI in Health



The institutional answer: NHIC

Rwanda's National Health Intelligence Center

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THE MANDATE

Turn health data into real-time intelligence for decisions — at every level

From the policymaker to the frontline facility.
AI is not a project bolted on the side. It is layered onto a public mandate — so the technology serves our priorities, not the reverse.

INTELLIGENCE, DELIVERED TO THREE LEVELS

Policy makers
Decisions once waiting weeks for a report — now informed in the moment

Technical directors
Programme steering grounded in current, system-wide evidence

Operational leads
District & facility staff act on live intelligence, not lagging indicators

The Sovereign Alternative

UNAIDS 95-95-95 ACHIEVEMENT Target: 95% each pillar Rwanda exceeds all three targets

96%

DIAGNOSED

UNAIDS target: 95% +1% ↑

People living with HIV who know their status

98%

ON TREATMENT

UNAIDS target: 95% +3% ↑

Diagnosed patients receiving antiretroviral therapy

98%

SUPPRESSED

UNAIDS target: 95% +3% ↑

Patients on treatment achieving viral suppression

80%

of Health facilities fully digitalised
— Sovereign backbone

230,000

Active patient longitudinal records
secured domestically — state-owned

OpenMRS

Open-source clinical platform
no commercial vendor dependency

Sovereignty is not an ideological luxury — Rwanda's domestically managed clinical data infrastructure enables real-time laboratory coordination and treatment decisions, proving that data sovereignty is an absolute clinical necessity for sustained epidemic response.

Foundational systems that make ownership real

The basic building blocks that let NHIC ingest, process, analyze and use evidence for decisions

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THE DATA LAYER

Digital health systems

Systems that generate the data — built and run in-country:

- Electronic Medical Records (EMR) in 78% of all health facilities
- Civil Registration & Vital Statistics (CRVS)
- Health workforce management
- Drug & commodity supply chain
- Ambulance fleet management
- Health insurance claims management

THE PHYSICAL LAYER

Infrastructure

Power, connectivity, and compute — from facility to national:

- Electrified, connected facilities & CHWs
- National compute capacity & servers (GPUs, AWS)
- Irembo — digital government services
- Rwanda Space Agency
- National Data Center (with AOS)

THE RULES LAYER

Governance & regulation

The rules that keep the system sovereign:

- Data Protection & Privacy Law
- Health-sector Data Governance Policy
- Health AI governance framework
- Multi-year AI-in-Health strategy
- NCSA / DPO oversight & accountability

These foundations are what enable NHIC to:

Ingest › **Process** › **Analyze** › **Use for decisions**

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Three use cases — ownership in practice

AI layered onto the NHIC mandate, built on existing public infrastructure

1 Instant intelligence for decisions

Anthropic · Gates Foundation

AI-assisted analysis put directly in the hands of policy makers, technical directors and operational leads — down to district and facility level.

For HIV: see who is falling out of care before it surfaces in an annual report. Data stays in our systems; we define the questions.

2 Quality & standards at the point of care

Horizon-1000 · Gates Foundation

AI-enabled clinical decision support in primary facilities, helping providers deliver care consistent with national guidelines.

For HIV: fewer missed opportunities and more equal quality of care — wherever a patient walks in.

3 Patient empowerment

Irembo · MoH–NHIC (piloting)

A patient-facing tool for counseling and self-triage — helping people understand symptoms, know when and where to seek care, and get linked to services.

For HIV: moving power toward the patient matters where stigma still shapes care-seeking.

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SO — WHO OWNS THE FUTURE OF PUBLIC HEALTH?

Not destiny. A design choice.

The Commission is right that AI could become the next frontier of digital dependency. But governed by strong, sovereign public institutions — with clear terms and equity at the centre — AI becomes a genuine public good.

THE VARIABLE THAT DECIDES

Country leadership.

Not who signs the MoU — who sets its terms.

RWANDA'S CHOICE

We are choosing to lead.

Partner with anyone. Be captured by no one.