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EQUITABLE ACCESS TO DIAGNOSTICS: LESSONS FROM COVID-19 AND FUTURE DIRECTIONS

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This is Rajesh, a 65 year-old farmer from rural India. A couple of years ago he developed a high fever and a relentless cough

The nearest health clinic, a 4-hour motorbike ride away on muddy roads, had no way to test him. Rajesh couldn't afford the journey or the lost wages to seek testing in a distant city.

His family watched him grow weaker. Weeks passed before they could confirm it was drug-resistant TB

Rajesh's story isn't unique. It's the daily reality for nearly half the world's population who have little to no access to basic diagnostics

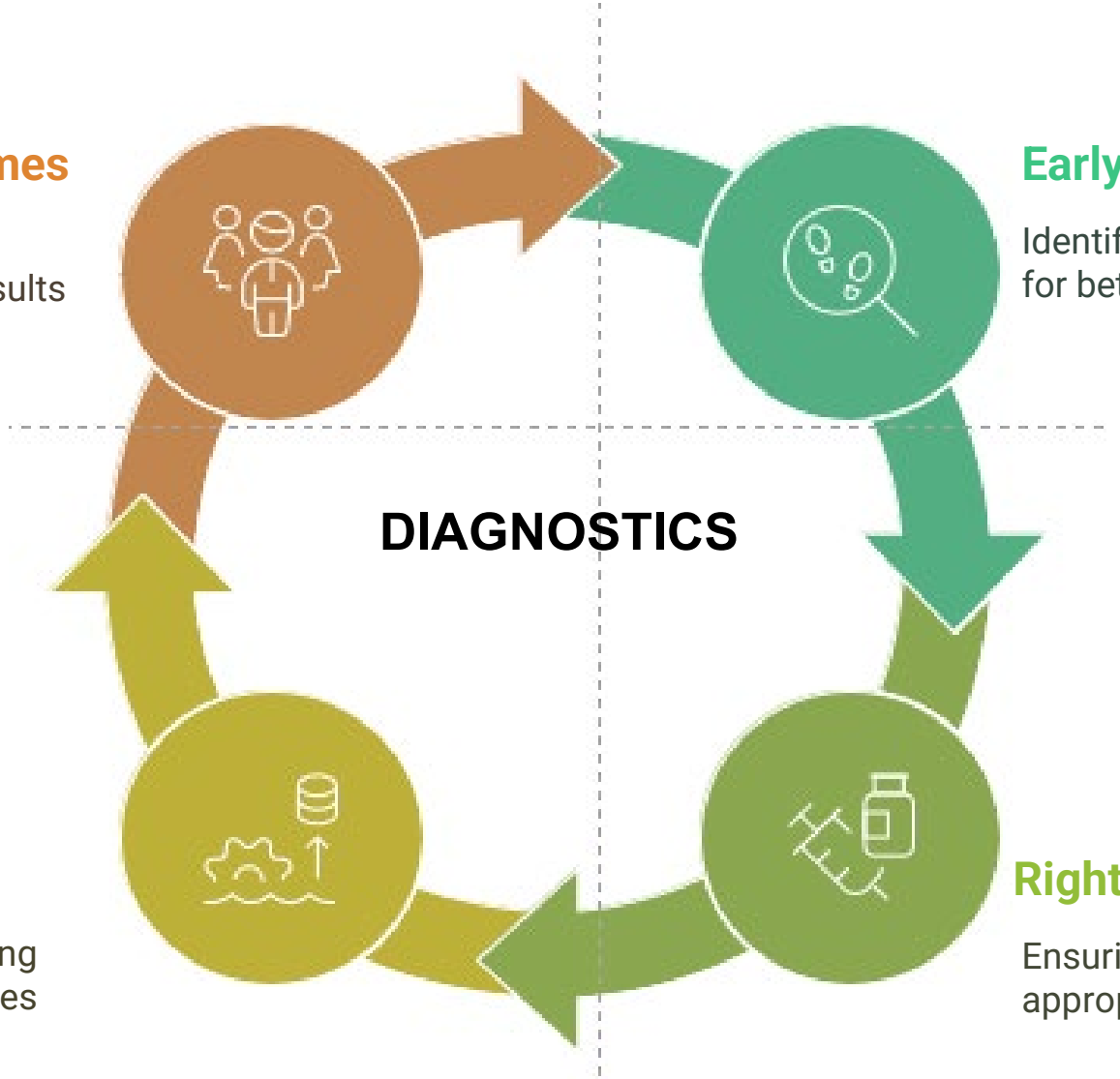
WHY ARE DIAGNOSTICS THE ENGINE OF THE HEALTH SYSTEMS?

Equity & Outcomes

Achieving fair and improved health results

Early Detection

Identifying diseases early for better outcomes



Resource Optimization

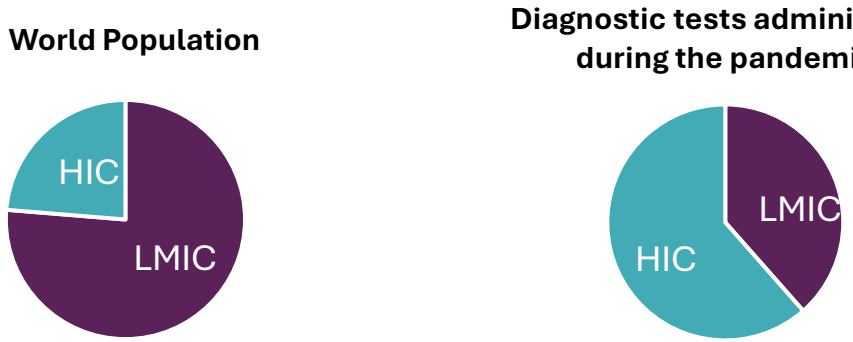
Efficiently managing healthcare resources

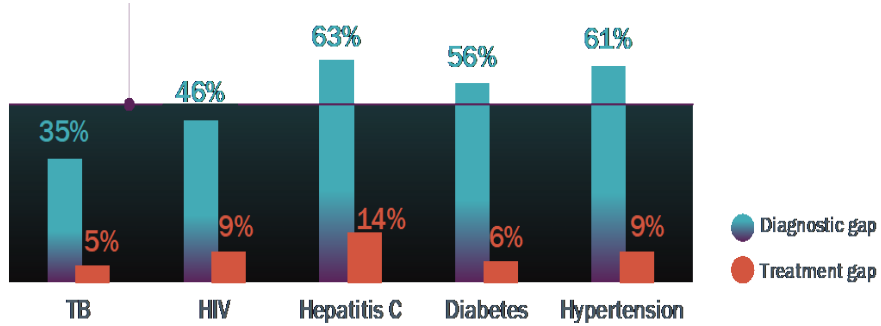
Right Treatment

Ensuring patients receive appropriate care

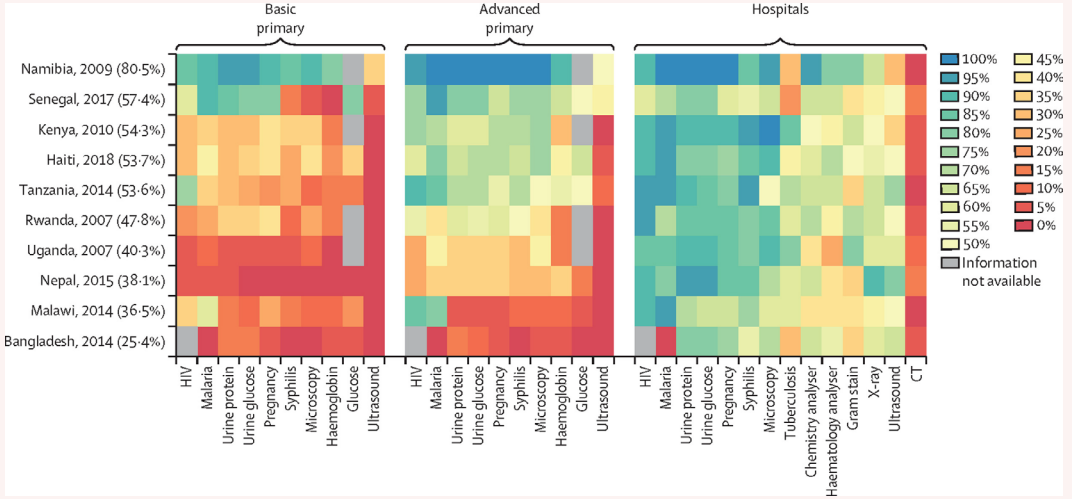
DIAGNOSTIC GAP

THE STARK REALITY





- **47% of the global population has little to no access to diagnostics**
- **Diagnostics are central and fundamental to quality health care-** this notion is **under-recognised**, leading to **underfunding and inadequate resources** at all levels
- **The primary health care is the diagnostic last mile** and affects poor, rural, and marginalised communities globally- **appropriate access is essential for equity and social justice**



Availability of basic diagnostics by tier in ten LMICs 2007–18

The Lancet Commission on diagnostics: transforming access to diagnostics, 2021

WHAT DID COVID-19 REVEAL ABOUT THE TRUE POWER OF DIAGNOSTICS?

- **Capacity** is directly proportional to **Response**
- **1,000+ Tests Developed-** Rapid innovation
- **"4As" Challenge-** Accuracy, Access, Affordability, Actionability
- **Persistent Gaps:** Political will, consumable shortages, high costs, and inequitable access across settings

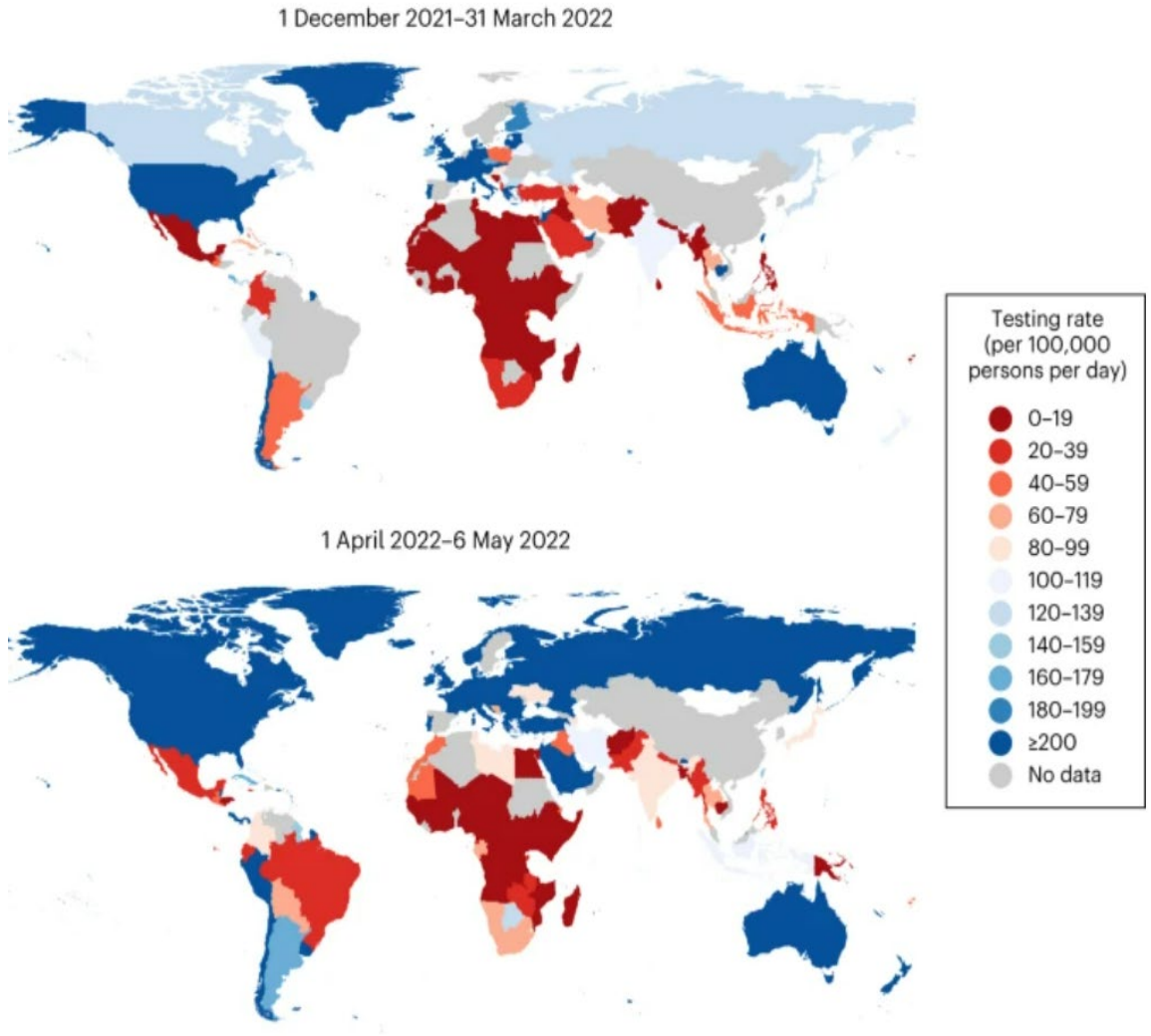
The COVID-19 pandemic has emphasised the crucial role of diagnostics in health care and that without access to diagnostics, delivery of universal health coverage, antimicrobial resistance mitigation, and pandemic preparedness cannot be achieved.

The Lancet Commission on diagnostics: transforming access to diagnostics, 2021

GLOBAL COVID-19 TESTING DISPARITIES

WIDE VARIABILITY IN TESTING GLOBALLY

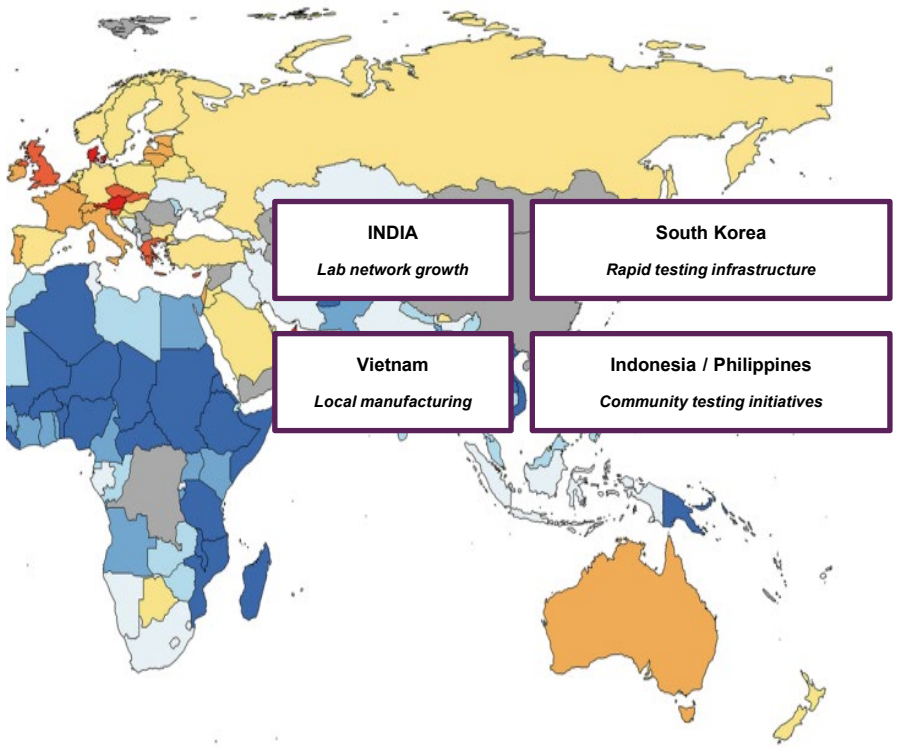
- **Massive Disparity**: HICs vs. LMICs.
  - HICs performed up to 2,700× more tests per 1,000 people than LMICs
  - ACT-Accelerator's goal of 1 test/1,000 people/day in LMICs largely unmet
- **Wide intra-Asia variability** on daily COVID-19 test rates:
  - > 7 tests/1,000 people/day in South Korea to <0.25 tests/1,000/people/day in Bangladesh and Pakistan
- **Principal barriers**
  - Limited supply and affordability
  - Limited testing sites and prioritization



ISLANDS OF EXCELLENCE

ASIAN RESPONSES: FACILITATORS AND BARRIERS?

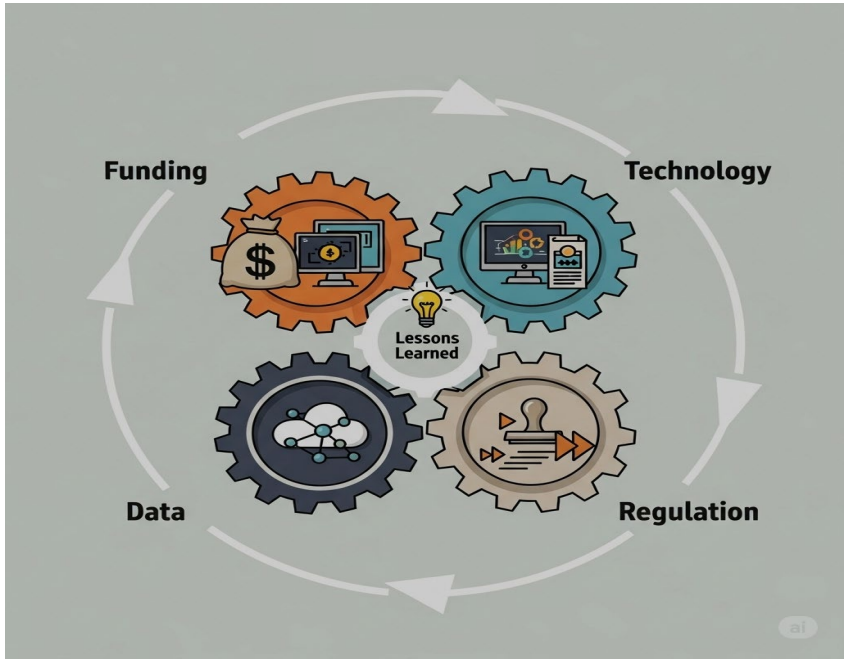
- Rapid lab expansion:
  - India: 14 → 1,596 labs in 6 months
- Rapid efforts in testing
  - Intensive contact tracing in South Korea
- Agile tech adoption
  - PCR & Rapid antigen deployment
- Local production drive:
  - Boosting domestic capacity (e.g., India, Vietnam)
- Public-Private synergy



- Geographic Disparities:
  - Rural clinics in Cambodia had **21-day delays** in test results vs. 48 hours in cities
- Socioeconomic Barriers:
  - Poorest quintile in India: **3x less likely** to be tested than wealthiest
- Gender & Disability:
  - Women with disabilities in Philippines: **34% less access** to testing

WHAT INNOVATIONS EMERGED FROM THE PANDEMIC?

- **Sustainable financing models** combining public funds with R&D partnerships
- **Rapid development and deployment** of vaccines, therapeutics and diagnostics
- **Real-time data-** Integrated LIS & surveillance systems accelerated response.
- **Regulatory agility-** Expedited approvals and early variant response mechanisms



- **Vaccine development, evaluation and deployment was unprecedented**
  - **~9 mths vs decades for other diseases**
  - **It showed that if there is adequate political will and funding anything is possible**
- **Diagnostic development suffers as similar commitment and funding is missing**
  - **Could we replicate the vaccine story for diagnostics??**

100 DAYS MISSION

CRITICAL NEED FOR A QUICKER DIAGNOSTIC RESPONSE

30 January — WHO declares PHEIC

3 April — **64 days**: First real-time **PCR** test granted WHO EUL

4 April — **65 days: WHO reports 1 million confirmed COVID-19 cases**

9 May — **100 days**

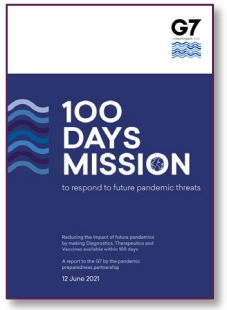
2 September — **216 days:** WHO approves dexamethasone as the **first COVID-19 therapeutic**

22 September — **236 days**: First **rapid diagnostic test** granted WHO EUL

25 November — **300 days**

31 December — **336 days** WHO issued its **first EUL for a COVID-19 vaccine**

WHO declares Public Health Emergency of International Concern (PHEIC)



- Accurate and approved **molecular tests and RDTs**
- An initial regimen of **therapeutics**
- **Vaccines** ready to be produced at scale

G7 100 Days Mission to respond to future pandemic threats.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/992762/100_Days_Mission_to_respond_to_future_pandemic_threats__3_.pdf

WHAT NEEDS TO HAPPEN?

DIAGNOSTIC R&D AGENDA

Day: <0 | 30 | 60 | 90 | 100

Pre-Pandemic

- **Development of prototype diagnostic libraries** for molecular tests and RDTs
- **Sharing of pathogen material** through global biobanking and material transfer agreements
- **Validation and routine use of pathogen tests in surveillance** of regional priority pathogens

Validate, Produce, and Distribute

- **Analytical validation of tests** in real time
- **Evidence generation** in relevant populations supported by pre-established clinical trial frameworks and global trial network
- **Rapid and transparent sharing of test data** with public and private sector decision makers to enable targeted pandemic response
- **Rapid regional production** at established regional manufacturing hubs on a global basis
- **Genomic surveillance** of pathogen evolution / variants

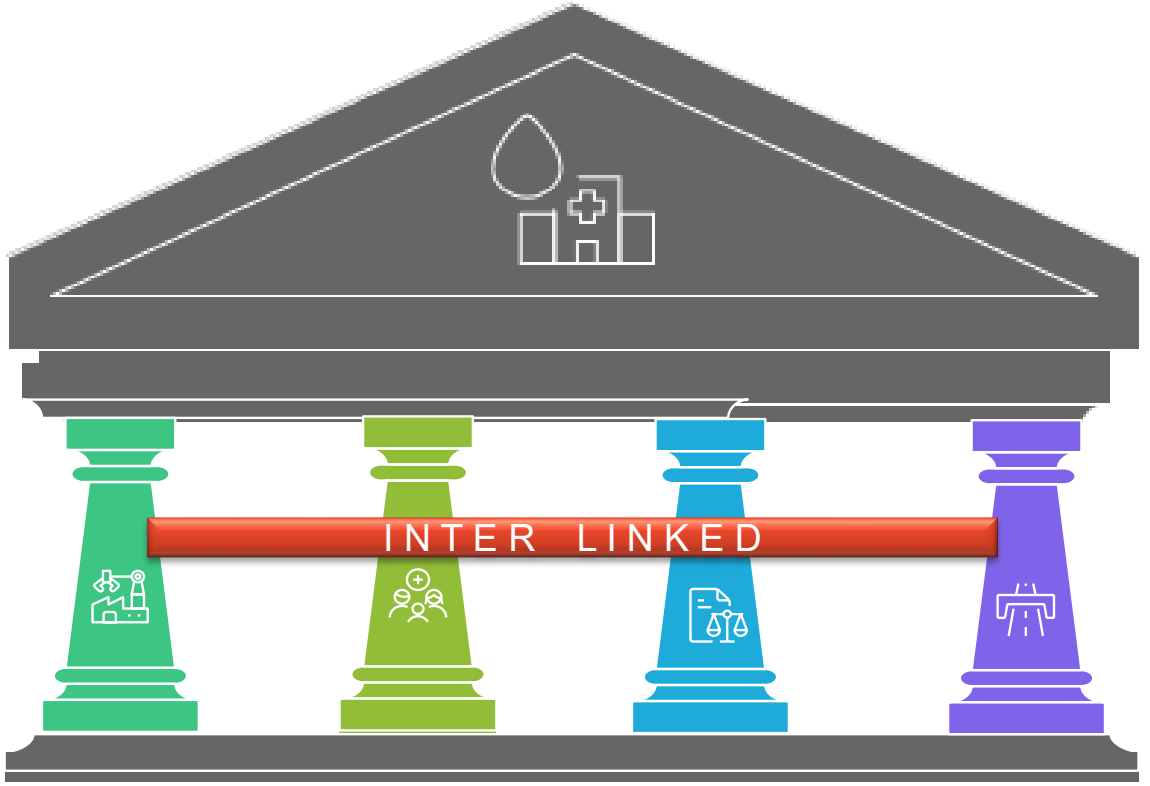
Scale

- **Collaborative registration process** across SRAs and regional and national regulatory agencies
- **Activation of strategic contracting vehicles** with reliable mechanisms to ensure **equitable access**
- **Scaled, regional manufacturing**

- **Continuous pathogen surveillance**, reporting, and insight generation via regional surveillance hubs

HOW TO BUILD RESILIENT DIAGNOSTIC SYSTEMS FOR THE FUTURE?

- **Short-term Actions:**
  - Establish regional regulatory harmonization framework
  - Create emergency procurement mechanisms
  - Strengthen laboratory quality assurance
  - Develop rapid response protocols
- **Medium-term Goals:**
  - Strengthen regional manufacturing capacity
  - Implement sustainable financing mechanisms
  - Integrate digital health platforms
  - Expand point-of-care testing networks
- **Long-term Vision:**
  - Achieve regional self-sufficiency
  - Establish AI-powered diagnostic systems
  - Create seamless regional health data sharing



Foundations of Health Resilience

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DRIVING DIAGNOSTIC EQUITY—WHAT CAN PARTNERS DO NEXT?

- **For Development Partners and donors:**
  - Invest in regional capacity building
  - Support regulatory harmonization
  - Fund sustainable financing mechanisms
- **For Governments:**
  - Commit to regional cooperation
  - Strengthen national health systems
  - Invest in local manufacturing
- **For Private Sector:**
  - Develop affordable, accessible products
  - Transfer technology to regional manufacturers
  - Engage in public-private partnerships
- **For Civil Society:**
  - Advocate for equitable access
  - Support community engagement
  - Monitor implementation progress

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Thank you