# DNO Objectives, Definition and Key Principles and Approach

The diagnostic network optimization is an exercise that aims to redesign the diagnostic network set-up in order to increase access, maximize impact, and generate efficiencies.

It aligns testing demand and capacity in the most cost-effective way by defining the optimal instruments mix, identifying the most appropriate locations where instruments should be placed, and designing the referral network linkages across that revised network.

## **DNO Objectives**

#### **DNO** aims to:

- Increase access to testing, and generate greater public health impact, as improved device placement and integrated specimen referral network aim to bring capacity where it lacks, and shorten TAT
- Increase network efficiencies, through the implementation of integrated supporting systems, such as sample transportation, results delivery and data management
- Decrease total cost per test, as the increase in instrument utilization reduces the contribution of fixed costs over the total cost per test
- Create greater visibility leading to more effective allocation of funding, increasing the value of money spent by the range of donors supporting diagnostics services in country
- Unlock MoH capability to generate continuous improvement, as long-term visibility into lab network improves and supporting systems are strengthened
- Create a more competitive and dynamic marketplace, as data visibility and increased competition increase bargaining leverage with suppliers

Direct impact

Indirect impact

### **DNO Guiding Principles**

#### **DNO should:**

Be Led by Ministry of Health

The Ministry of Health is actively engaged throughout the DNO process, and supported by partners to drive optimization, to make final decision on optimal new network and lead implementation

Be Patient-centric and Achieve Improved Public Health Impact **DNO** must be centred around patients, and lead to greater public health impact. It should help MoH more efficiently and effectively deliver its diagnostics services, so more health is achieved for every \$ spent

**Be Comprehensive** 

National is better than regional, and including multiple assays - based on MoH's priorities - is preferable, so DNO becomes an integrated national exercise that leads to impact ad cost improvements across disease areas

Lead to a Sustainable
Network

MoH should be able to sustain diagnostics services provided by the new network over time, under funding available, and in spite of potential demand peaks. Systems should be in place to enable continuous improvement through iterative network optimization exercises

Build Accountability

Clear targets must be set, and a robust M&E process established to ensure DNO leads to positive change once implemented, informing continuous improvements

Not penalize any disease area in scope

No disease program in scope of a DNO exercise should land in a worse scenario than the baseline, in terms of access, impact and/or cost, and all disease programs should benefit overall.

Be Collaborative and Transparent **All key stakeholders act together,** in a close and coordinated partnership, sharing resources and expertise, and communicating with transparency

# DNO is a four-step process that starts at a strategic level looking at impact targets against funding constraints, before aligning with operational feasibility

- Define Scope and Reach
  Stakeholder Alignment
  - Inform key stakeholders on DNO process, and, under MoH leadership, define DNO objectives, approach and fit within relevant national policy and strategies
- Map out DNO scope and estimate resources required to support the exercise.
- Develop plan, mobilize funding and create platform for DNO discussions and decisions to take place. All key stakeholders should be part of the platform and funding and activity plan development, to ensure continuous collaborative process.

- Collect Data and Validate
  Baseline
- Collect, compile and clean data
- Document assumptions and methodology to fill potential data gaps
- Clean, validate and input collected data into optimization software
- Validate baseline model with local stakeholders
- Visualize existing lab network and map gaps between expected testing volumes and requirements, and available capacity

- Build and Select
  Optimization Scenario
- Develop optimized scenarios to address identified gaps, accounting for testing requirements and constraints defined in the previous phase, and for inputs received by partners and national program experts.
- Estimate cost, impact, and feasibility of proposed scenarios, and reach consensus on final scenario(s) to implement.

- Implement and Monitor
  Impact
  - Map optimal capabilities required to sustain improved lab network, across the following pillars: policies and guidelines, HR, Data Management, Operations, Infrastructure), and assess gaps between current and optimal capabilities
  - Estimate funding required to transform and sustain network, and prioritize activities based on available budget and expected impact.
  - Develop detailed implementation plan, along with stakeholder responsibility matrix
  - Support implementation of new lab network, including M&E process

- Outputs becoming inputs
- Aligned objectives and approach, agreed upon by all stakeholders
- Activity roadmap with responsibility matrix

- Validated data, and assumptions for missing data elements
- High-level estimation on testing volumes to be allocated to instrument types
- Scenario selected informing new device placements, device redeployments, and referral linkages
- New network is implemented and monitoring process/systems are in place