

Results of an Assessment

Estimating age, gender and disease profiles at Community Health Centers
and Primary Health Clinics in South Africa

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Background



The institutionalization of NHA started in SA in 2014

- Includes all expenditure on health according to international classification
 - ▶ Separate current and capital expenditures (Econ class)
- Activities in cooperation with provinces:
 - ▶ Mapped BAS into providers, district for all provinces
 - ▶ Created code books mapping of Responsibility lowest level to a provider type as in DHIS
 - ▶ All Item lowest level into factors of provision
- Currently mapping private sector expenditures

Example: Gauteng BAS

| Programme_Level_5 | Sub_Programme_Level_6 | Objective_Lowest_Level | Responsibility_Lowest_Level | HP |
|---------------------------|----------------------------------|----------------------------------|----------------------------------|--|
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | ANN LATSKY NURSING COLLEGE | HP.8.9 Other industries n.e.c |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CAP & HEALTH TECH PORTFOLIO | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CHAR MAX JHB FOLATENG ADMIN-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CHARLOTTE MAXEKE ADMIN-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | HPTD GRANT TERTIARY HOSPITAL | CHARLOTTE MAXEKE CLINICAL SUPP-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CHARLOTTE MAXEKE HOSP PHARMACY-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | HPTD GRANT TERTIARY HOSPITAL | CHARLOTTE MAXEKE HOSPITAL-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CHARLOTTE MAXEKE MEDICAL-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | SECURITY TERTIARY HOSP | CHARLOTTE MAXEKE SURGERY-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CHRIS HANI BARA PHARMACY-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | CHRIS HANI BARAGWANATH HOSP-A | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | CONTROL RESP.(POST) | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | CULLINAN CARE & REHAB CENTRE-C | HP.2.2.1 Public mental health and substance abuse facilities |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | DIR: COMMUNICATION & PR | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | DIR: PUBLIC HEALTH&CHRON DIS | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | DIR: SUP CHAIN MANAGEMENT | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | DIR:HUMAN RESOURCE DEVELOPMENT | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | DIR:ORAL HEALTH & SPECIALISED PR | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | DR GEORGE MUKHARI ADMIN-C | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | DR GEORGE MUKHARI HOSPITAL-C | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | DR GEORGE MUKHARI PHARMACY-C | HP.1.1.1.1 Central Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | GENERAL SURGERY TERTIARY HOSP | EDENVALE HOSPITAL-A | HP.1.1.1.3 Regional Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | ENVIRONMENT AND PORT HEALTH | HP.6.1 Public Providers of preventative care |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | FAR EAST RAND HOSPITAL-B | HP.1.1.1.3 Regional Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | MANAGEMENT TERTIARY HOSP | FOLATENG HELEN JOSEPH-A | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | HEAD: HEALTH | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | HEIDELBERG HOSPITAL-B | HP.1.1.1.4 District Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | NTS GRANT TERTIARY HOSPITAL | HELEN JOSEPH HOSPITAL-A | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | HUMAN RES TERTIARY HOSP | KALAFONG HOSPITAL-C | HP.1.1.1.2 Tertiary Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | KOOKRUS CLINIC-B | HP.3.4.9.1.4 Clinic |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | KOPANONG HOSPITAL-B | HP.1.1.1.4 District Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | GENERAL SURGERY TERTIARY HOSP | LERATONG HOSPITAL-A | HP.1.1.1.3 Regional Hospitals |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | MASAKHANE LAUNDRY | Split across Central, Regional, District, Psychiatric Hospitals and clinics. |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | MIDVAAL CHC-B | HP.3.4.9.1.6 Community Health Centre |
| CENTRAL HOSPITAL SERVICES | PROVINCIAL TERTIARY HOSPITAL SER | BUDGET/EXPENDITURE TERTIARY HOSP | NATALSPRUIT HOSPITAL-B | HP.1.1.1.3 Regional Hospitals |

For the public sector

- Total expenditures by DHIS provider types (central, tertiary, provincial... hospitals; clinics, CHCs...) in each district
 - ▶ Split among non-negotiables
 - ▶ Split into factors of provision (salaries, drugs, investment)
 - Limited information on AGE / GENDER / DISEASE
- => **BroadReach** was contracted

Project Overview

i. Project Statement



Problem Statement

GOAL: *Compile a methodology to estimate expenditures in Clinics and CHCs by age/gender/disease based on the available information.*



The methodology must combine existing information from existing sources such as DHIS and Tier.Net.

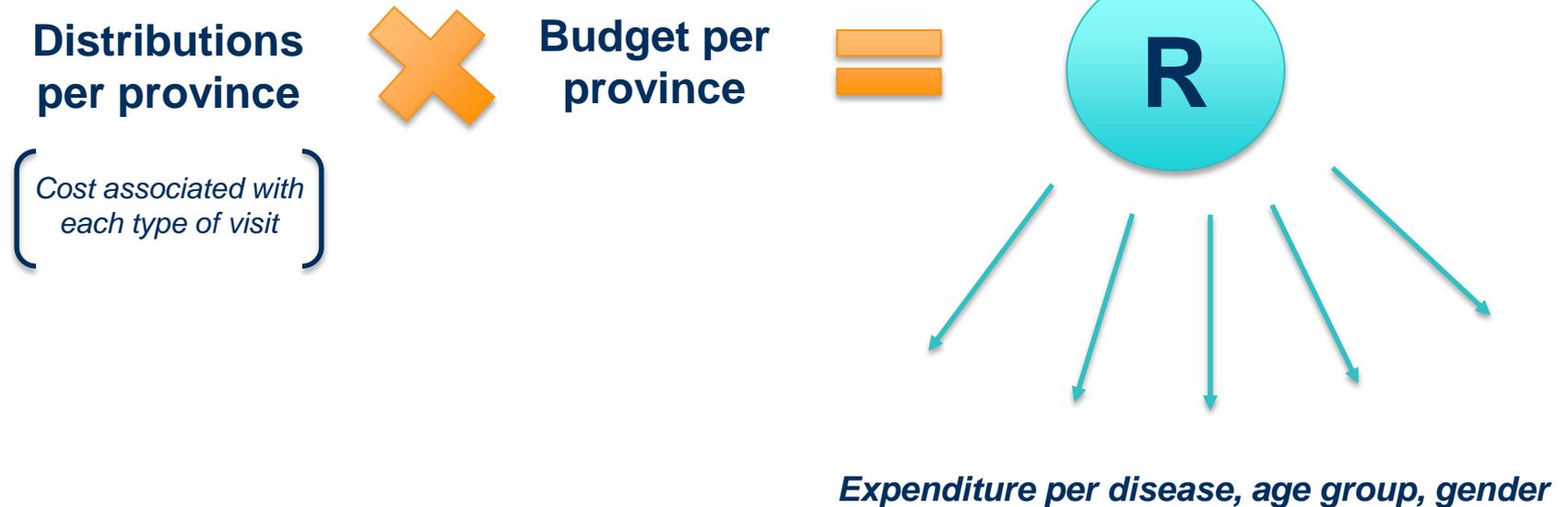


In cases where existing data is not sufficiently granular (e.g. DHIS), it must be combined with patient level information



Problem Statement cont.

Capture *patient level data* of a *representative sample of patients* from a *representative sample of facilities* across South Africa

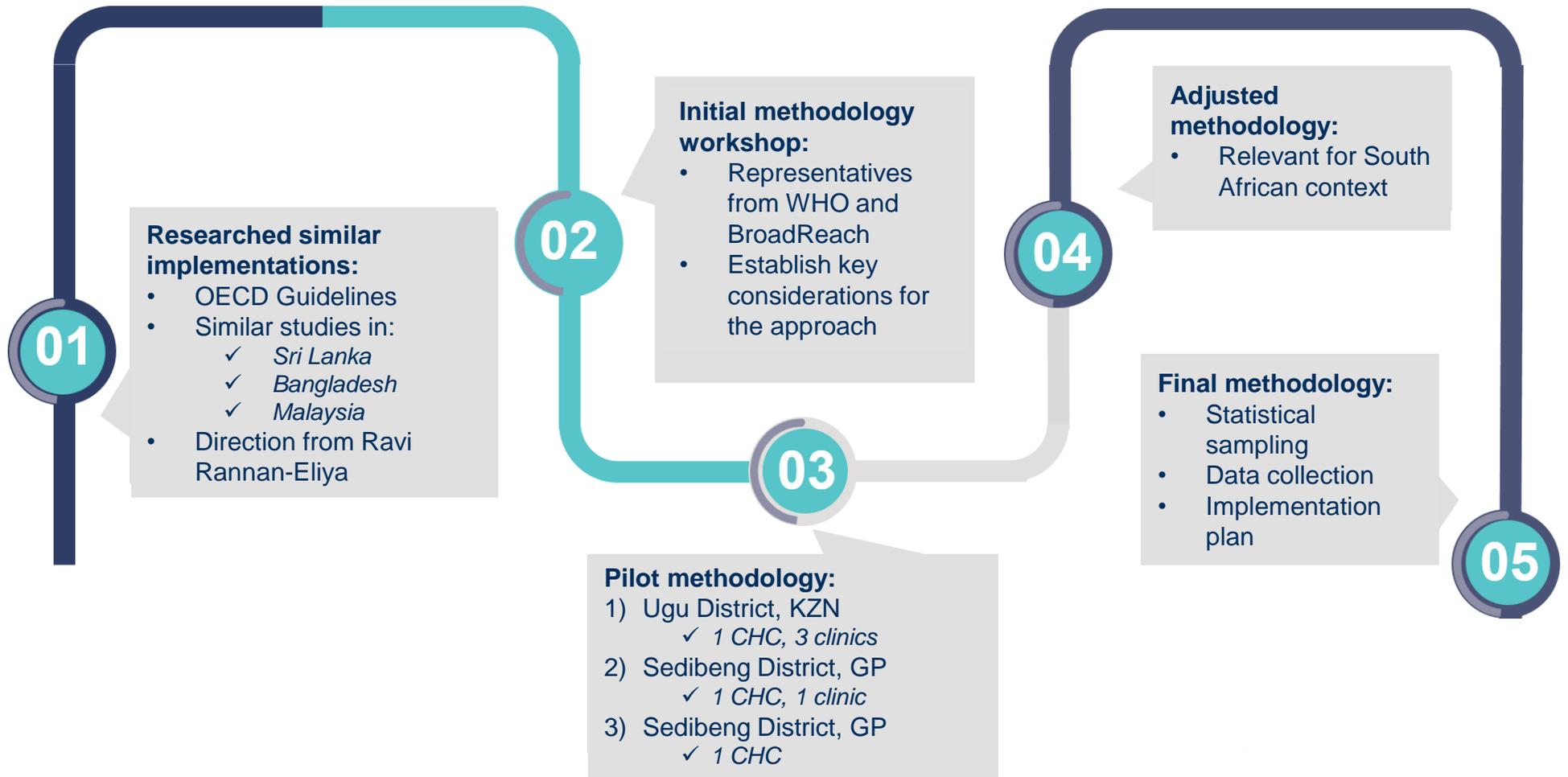


Project Overview

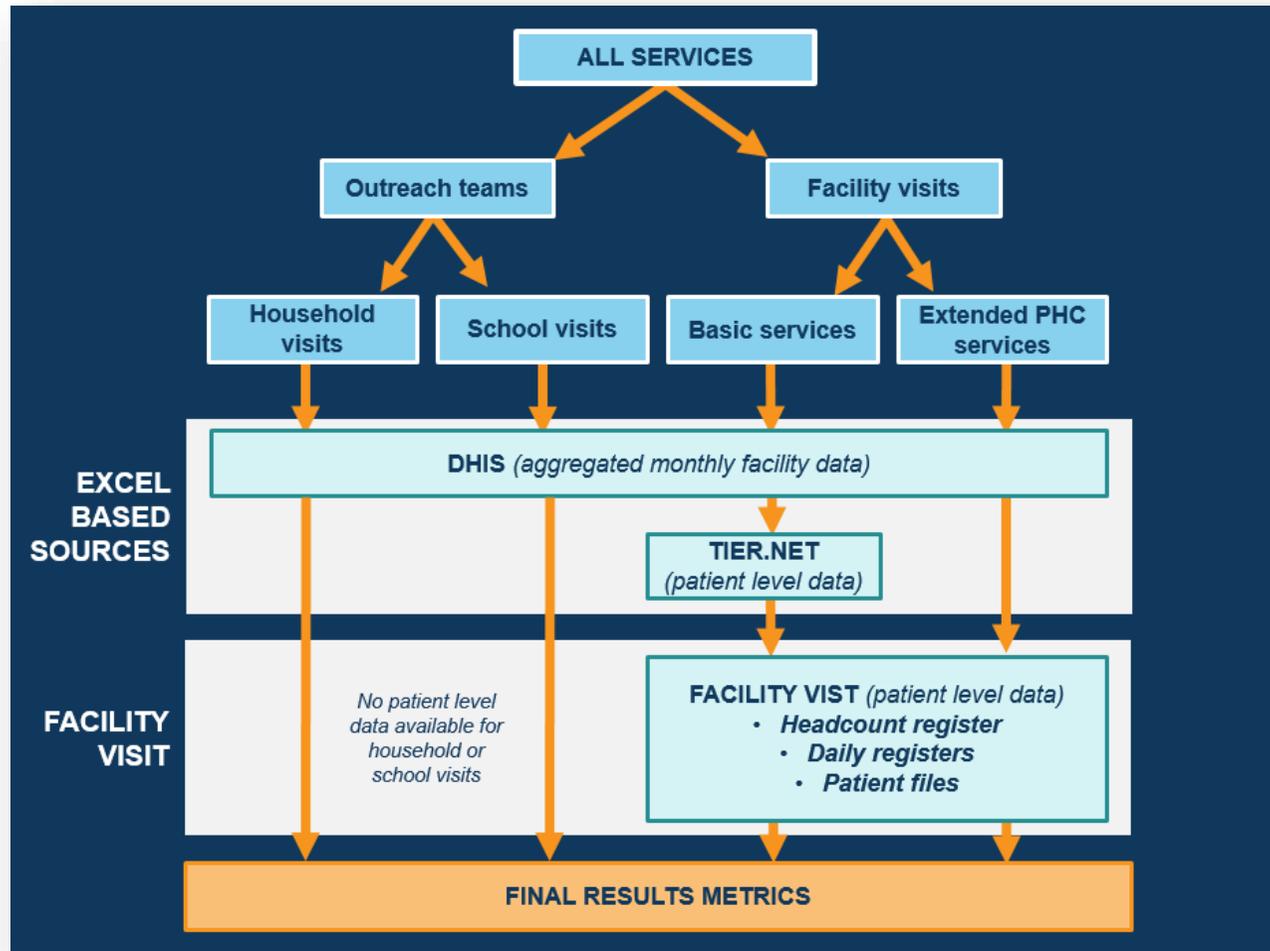
ii. Approach



5-Step Approach



Final methodology



Facility Sampling: Three Tier Stratification

STRATIFICATION BY:

- 1 Province**
to ensure representation of South Africa's nine provinces and account for the regional variation in disease profiles;
- 2 Type of facility**
to address the different range of services provided in the two types of facilities;
- 3 Population density**
to address the variation in disease distribution between urban and rural areas.

| | | TYPE OF CLINIC | |
|---------|-------|----------------|----------------|
| | | CHC | CLINIC |
| DENSITY | URBAN | CHC & URBAN | CLINIC & URBAN |
| | RURAL | CHC & RURAL | CLINIC & RURAL |

Facility Visit Level of Effort

$$N = (9 \text{ provinces}) \times (2 \text{ types of facilities}) \times (2 \text{ density areas}) \times (3 \text{ facilities per stratum})$$
$$= \mathbf{108 \text{ facilities}}$$



| RESOURCE | NOTE |
|----------------|--|
| Team lead | Project coordinator – responsible for performing administrative duties, arranging field visits and managing the collected data |
| Clinician | 1 Clinician required per team per facility visit |
| Data capturers | 1 Data capturer per team per facility visit |

Patient Sampling

10,000 patients across South Africa...

...proportionally distributed according to the *headcount of the sampled facility* relative to the *headcount of all sampled facilities*

$$\text{Sample size (Ndwewdwe)} = \frac{184,559}{10,800,000} \times 10,000 = 170 \text{ patients}$$

Over specified 2-week period

Capture every n^{th} patient

Data Collection at Facilities

METHOD 1: Non-Rationalized registers

- **Step 1:** Electronic data: Tier.Net
- **Step 2:** All facility registers
 - ▶ Systematic Sampling Tool
 - ▶ Every n^{th} patient
 - ▶ Data:
 - Age
 - Gender
 - Symptoms (ICPC*)
 - Type of visit
 - Pharmaceuticals

The screenshot shows a software window titled "Disease List" with the following components:

- Patient Information:** Fields for "Age" and "Gender".
- Patient Diagnosis Details:**
 - ICPC Description:** Includes a "SEARCH:" field, a list of symptoms (Pain general/multiple sites, Chills, Fever, Weakness/tiredness general, Feeling ill, Fainting/syncope, Coma, Swelling), an "Add Disease" button, and a "Type of Visit" dropdown menu.
 - Medicines:** Includes a "SEARCH:" field, a list of medicines (Abacavir (Abc), Acetazolamide, Acetic Acid 2% In Alcohol, Topi, Aciclovir, Albendazole, Allopurinol, Amitriptyline, Amlodipine), an "Add Medicine" button, and fields for "Dosage amount" and "Frequency of Dosage".
- Diagnosis and Prescribed Medicine(s):** Two large empty text areas for recording patient data.
- Buttons:** "Add Patient" and "Cancel" buttons at the bottom right.

Data Collection at Facilities

METHOD 2: Rationalized registers

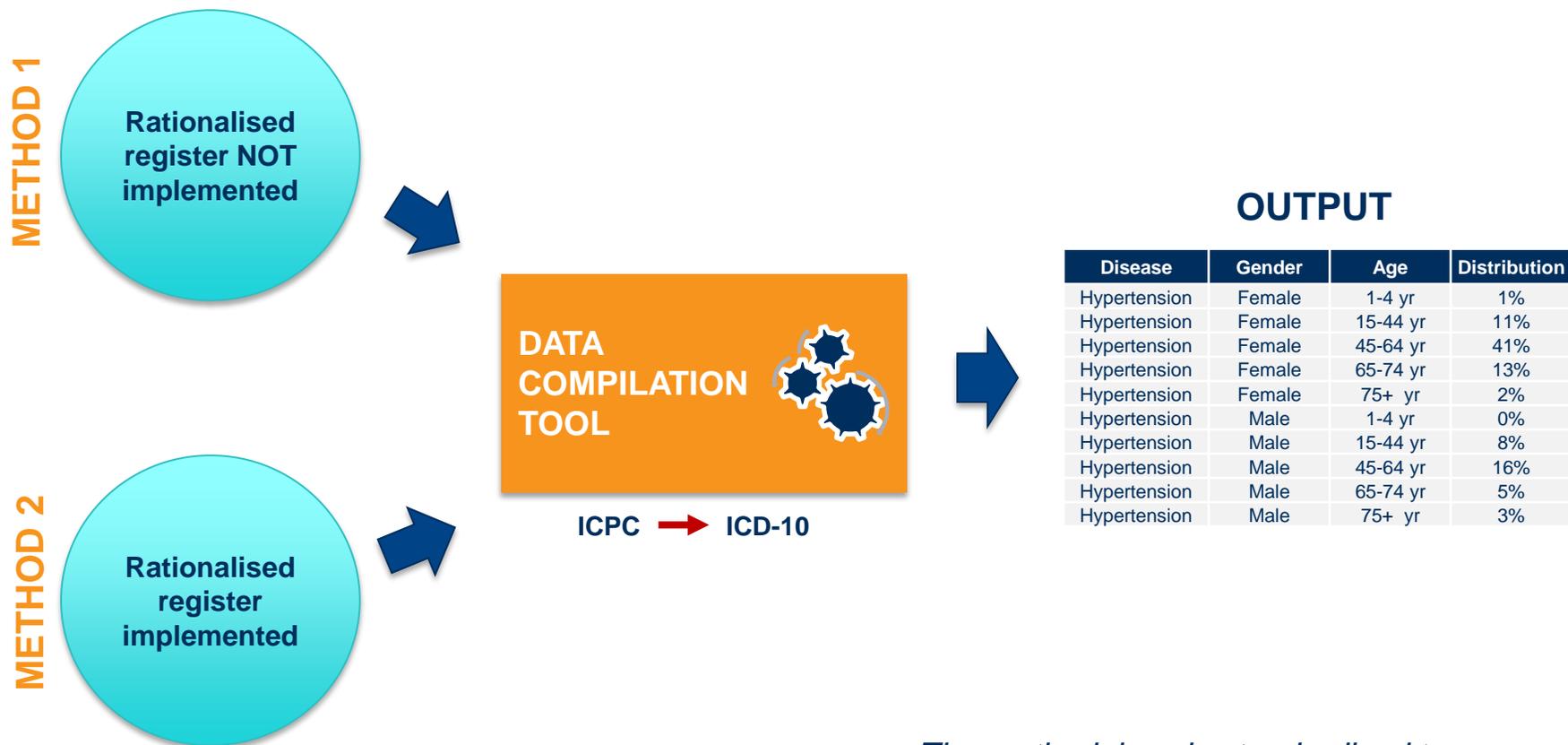
- **Step 1:** Electronic data: Tier.Net
- **Step 2:** Headcount register
 - ▶ Systematic Sampling Tool
 - ▶ Every n^{th} patient
- **Step 3:** Patient files
- **Step 4:** Tick register:
 - ▶ Maternal and Child Health data
 - ▶ Mental Health data

The screenshot shows a software window titled "Disease List" with the following components:

- Patient Information:** Fields for "Age" and "Gender".
- Patient Diagnosis Details:**
 - ICPC Description:** A search field, a list of symptoms (Pain general/multiple sites, Chills, Fever, Weakness/tiredness general, Feeling ill, Fainting/syncope, Coma, Swelling), an "Add Disease" button, and a "Type of Visit" dropdown.
 - Medicines:** A search field, a list of medicines (Abacavir (Abc), Acetazolamide, Acetic Acid 2% In Alcohol, Topi, Aciclovir, Albendazole, Allopurinol, Amitriptyline, Amlodipine), an "Add Medicine" button, and fields for "Dosage amount" and "Frequency of Dosage".
- Diagnosis and Prescribed Medicine(s):** Two large empty text areas.
- Buttons:** "Add Patient" and "Cancel" buttons at the bottom right.

*note: International Classification Primary Care

Data Collation



The methodology is standardised to accommodate both rationalised and non-rationalised systems

Project Overview

iii. Results



Results Format

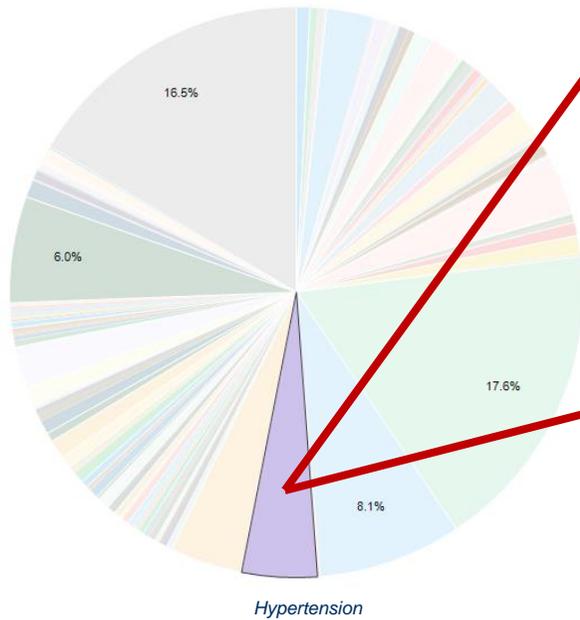
| # | Gender | Age Group | Disease | ICD10 | % |
|----|--------|-----------|----------------------------|-------|------|
| 1 | Female | 0 | Hypertension uncomplicated | I10 | 0.3% |
| 2 | Female | 1-4 | Hypertension uncomplicated | I10 | 1.1% |
| 3 | Female | 5-9 | Hypertension uncomplicated | I10 | 1.1% |
| 4 | Female | 10-14 | Hypertension uncomplicated | I10 | 2.8% |
| 5 | Female | 15-19 | Hypertension uncomplicated | I10 | 1.7% |
| 6 | Female | 20-24 | Hypertension uncomplicated | I10 | 0.8% |
| 7 | Female | 25-29 | Hypertension uncomplicated | I10 | 0.3% |
| 8 | Female | 30-34 | Hypertension uncomplicated | I10 | 3.0% |
| 9 | Female | 35-39 | Hypertension uncomplicated | I10 | 2.7% |
| 10 | Female | 40-44 | Hypertension uncomplicated | I10 | 0.8% |
| 11 | Female | 45-49 | Hypertension uncomplicated | I10 | 1.5% |

- 1) AGGREGATED (SAS, Stata, R)
- 2) REWEIGHTED (headcounts from DHIS)

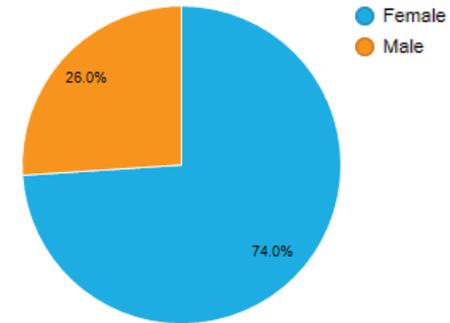
| | | | | | |
|----|--------|-------|----------------------------|-----|------|
| | | | Hypertension uncomplicated | I10 | 1.9% |
| | | | Hypertension uncomplicated | I10 | 1.9% |
| | | | Hypertension uncomplicated | I10 | 0.5% |
| | | | Hypertension uncomplicated | I10 | 1.7% |
| | | | Hypertension uncomplicated | I10 | 2.2% |
| 17 | Female | 75-79 | Hypertension uncomplicated | I10 | 2.1% |
| 18 | Female | 80-84 | Hypertension uncomplicated | I10 | 0.4% |
| 19 | Female | 85-89 | Hypertension uncomplicated | I10 | 1.8% |
| 20 | Female | 90-84 | Hypertension uncomplicated | I10 | 2.1% |
| 21 | Female | 95+ | Hypertension uncomplicated | I10 | 1.3% |
| 22 | Male | 0 | Hypertension uncomplicated | I10 | 2.1% |
| 23 | Male | 1-4 | Hypertension uncomplicated | I10 | 2.5% |
| 24 | Male | 5-9 | Hypertension uncomplicated | I10 | 1.9% |
| 25 | Male | 10-14 | Hypertension uncomplicated | I10 | 1.8% |
| 26 | Male | 15-19 | Hypertension uncomplicated | I10 | 1.1% |
| 27 | Male | 20-24 | Hypertension uncomplicated | I10 | 1.9% |
| 28 | Male | 25-29 | Hypertension uncomplicated | I10 | 1.9% |
| 29 | Male | 30-34 | Hypertension uncomplicated | I10 | 1.1% |
| 30 | Male | 35-39 | Hypertension uncomplicated | I10 | 0.2% |
| 31 | Male | 40-44 | Hypertension uncomplicated | I10 | 0.2% |
| 32 | Male | 45-49 | Hypertension uncomplicated | I10 | 0.6% |
| 33 | Male | 50-54 | Hypertension uncomplicated | I10 | 2.9% |
| 34 | Male | 55-59 | Hypertension uncomplicated | I10 | 0.8% |
| 35 | Male | 60-64 | Hypertension uncomplicated | I10 | 0.2% |
| 36 | Male | 65-69 | Hypertension uncomplicated | I10 | 1.1% |
| 37 | Male | 70-74 | Hypertension uncomplicated | I10 | 2.8% |
| 38 | Male | 75-79 | Hypertension uncomplicated | I10 | 0.7% |
| 39 | Male | 80-84 | Hypertension uncomplicated | I10 | 0.3% |
| 40 | Male | 85-89 | Hypertension uncomplicated | I10 | 0.3% |
| 41 | Male | 90-84 | Hypertension uncomplicated | I10 | 0.5% |
| 42 | Male | 95+ | Hypertension uncomplicated | I10 | 0.3% |

Example from Pilot: Hypertension

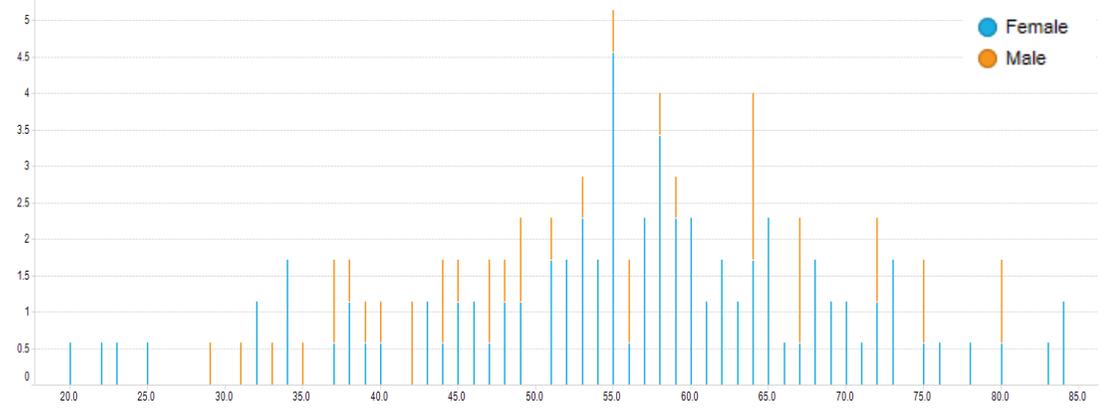
Disease distribution of all visits



Gender distribution of hypertension patients



Age distribution of hypertension patients

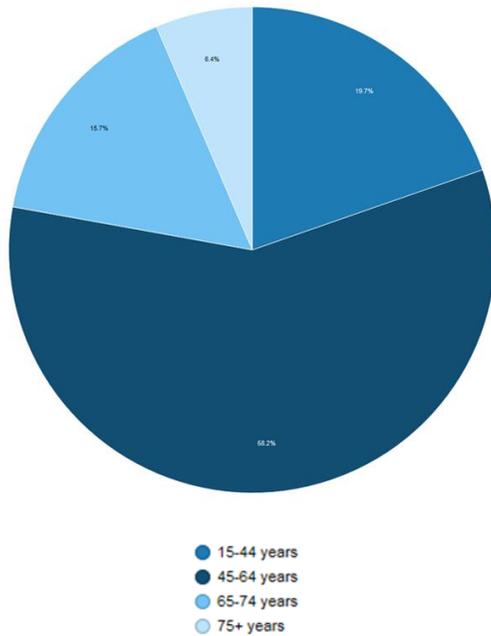


Raw data is available in Excel format

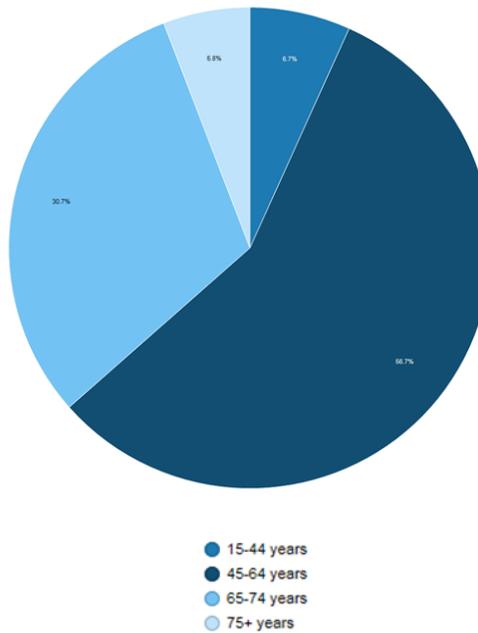
Example from Pilot: Hypertension

Age distribution of hypertension patients at selected clinics and CHC's

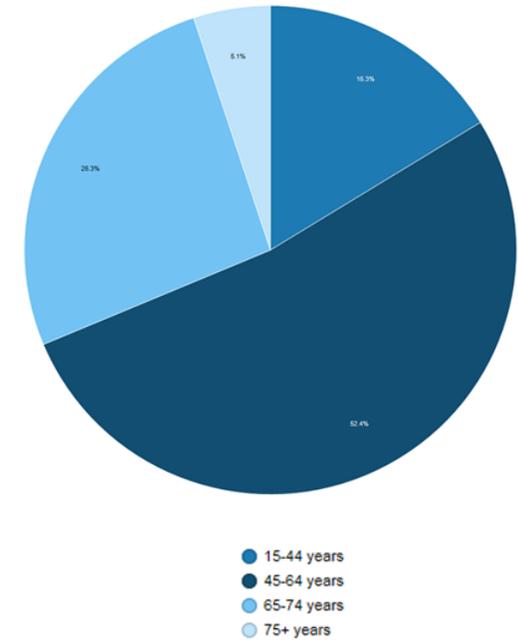
Braemar Clinic



South Port Clinic



Turton CHC



Raw data is available in Excel format

Linking Utilization with Expenditure (example)

UTILIZATION

| Disease | Gender | Age | Distribution |
|--------------|--------|----------|--------------|
| Hypertension | Female | 1-4 yr | 1% |
| Hypertension | Female | 15-44 yr | 11% |
| Hypertension | Female | 45-64 yr | 41% |
| Hypertension | Female | 65-74 yr | 13% |
| Hypertension | Female | 75+ yr | 2% |
| Hypertension | Male | 1-4 yr | 0% |
| Hypertension | Male | 15-44 yr | 8% |
| Hypertension | Male | 45-64 yr | 16% |
| Hypertension | Male | 65-74 yr | 5% |
| Hypertension | Male | 75+ yr | 3% |

*Output generated from
the proposed methodology*



EXPENDITURE:
Consultations
Pharmaceuticals
dispensed, etc

*Utilization data applied to
existing expenditure data*



RESULTS

Costs associated with
hypertension
per gender
per age group

*Final costs per
disease/gender/age*

Once a representative sample of data is collected, utilization rates will be applied to expenditure data to estimate costs

Questions



Visit BroadReach at
www.broadreachcorporation.com

Thank you

Park Lane Office Park, Block B, Lobby 1, First Floor, cnr Alexandra Road & Park Lane
Pinelands, 7405, Cape Town, South Africa

Appendix



About BroadReach: Company Mission

BroadReach is profoundly focused on improving the health and wellbeing of underserved populations around the globe.

We power the governments, donor groups, NGOs and private companies who invest \$200 billion annually in the developing world with intelligent systems and solutions to operate more efficiently and improve outcomes for people in need.



Problem: Underperforming Development Efforts

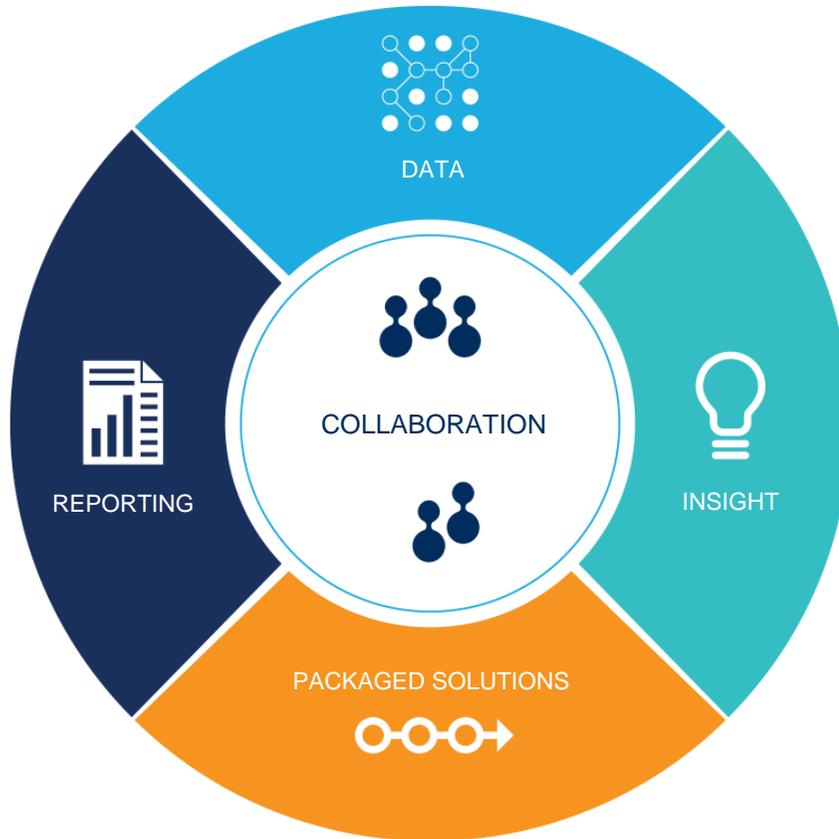
Working with our clients it became clear that the ROI of development investments was severely limited by sub-optimal decision making and system-wide inefficiencies. Root causes include:

- Fragmented and incomplete data
- Lack of evidence-based insight to direct strategic planning and program development
- No standards or best practices to guide teams and deliver programs in the field
- Arduous reporting requirements



BroadReach Insight + Solutions Platform

BroadReach IS is the only enterprise platform created for the unique needs of the developing world — originally conceived to improve the efficiencies and the outcomes of our own work, today we are marketing the platform to key stakeholders across the \$200 billion development industry.



Single Data Hub

- Collection
- Aggregation
- Integration
- Public & Private Sources

Powerful Analytics Engine

- Tracking Console— Performance Monitoring, Data Visualization, Scorecards & Alerts
- Advanced Analytics — Predictive Modeling, What-if Scenarios & Supply Chain Intelligence

Turnkey Workflow Applications

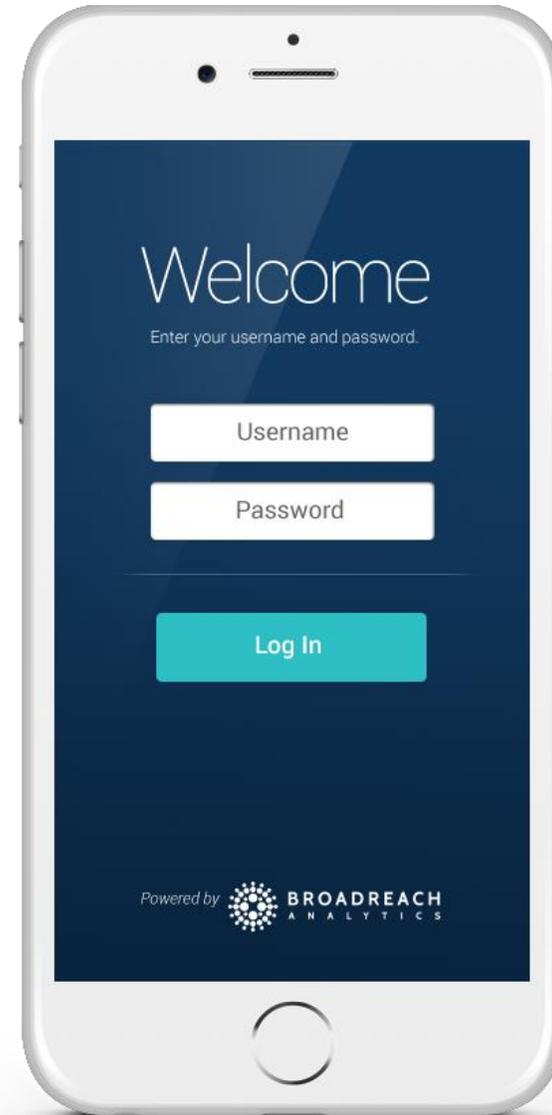
- Testing
- Adherence
- Operational Excellence
- Clinical Excellence
- In-facility Supply Chain Management

Streamlined Reporting

- Standard & Ad Hoc

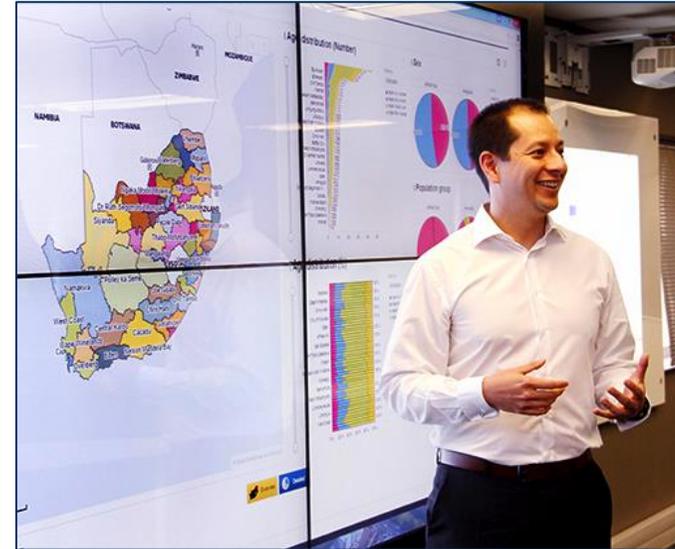
BroadReach IS Benefits

- **A complete picture** of complex challenges with a single hub for integrating disparate data sets to inform key decisions
- **Clarity** with key performance indicators, syndicated expert knowledge and new insights at your fingertips
- **Real-time networking & communications** among leaders and constellation partners who have joint stakes in a common outcome
- **Resource optimization & cost savings** with insights that direct dollars to the highest-impact priorities
- **Better outcomes & team capacity-building** with turnkey tools that automate workflow, guide best-practice implementation, and improve management & accountability
- **Efficient reporting** with decreased costs and increased transparency
- **Easy to adopt and use** with a cloud-based model and intuitive UX across desktop and mobile devices

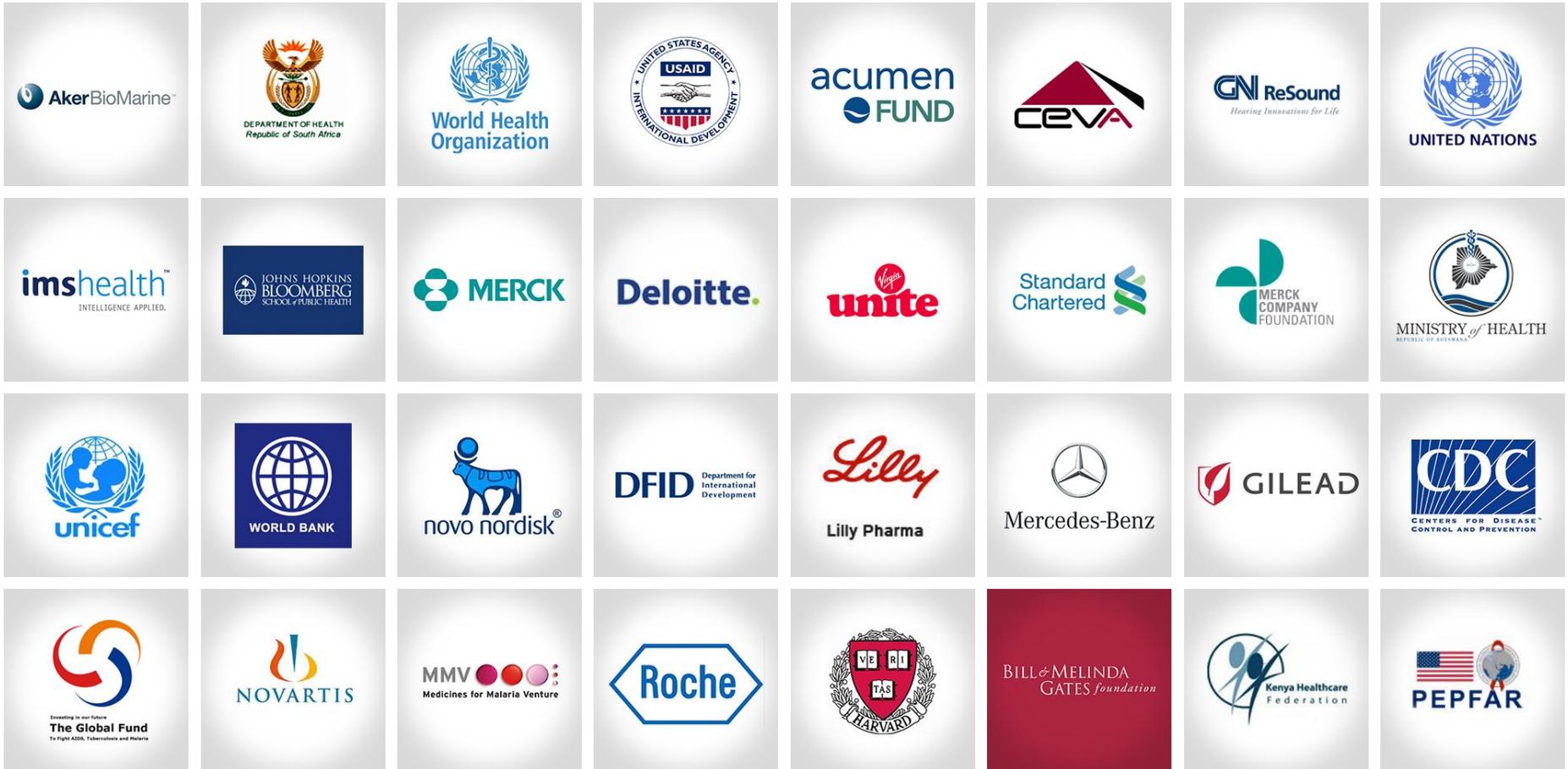


Services to Ensure Customer Success

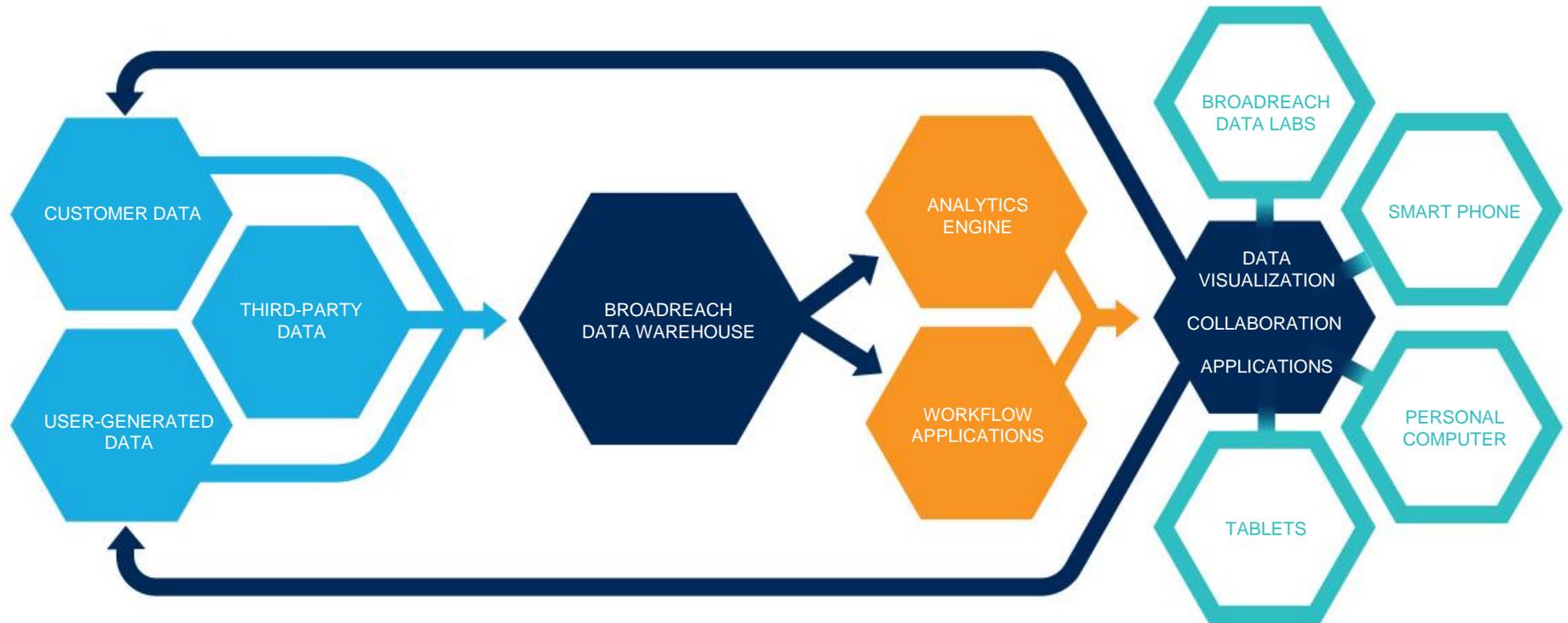
- BroadReach Data Labs: State-of-the-art workspace designed for team inspiration and collaboration. Today, two operational Data Labs in place to work with customers and support:
 - Strategic planning
 - Leadership development
 - Training of key stakeholders
 - Determine service-delivery requirements
 - Needs & map resources
 - Launch products & services into new markets
- Platform configuration and installation
- Operational support & training



Select Customers



BroadReach IS Architecture



Our cloud-based platform enables easy access to data-driven insight and packaged solutions from any device, and collaboration tools allow for communication between key stakeholders in addition to real-time data collection.

Customers

BroadReach provides its market-leading solutions to governments, multi-lateral development organizations, international donor groups, NGOs and blue chip private sector companies.

Selected User Base:

- Presidents and Premiers
- CEO's, CFO's and other C-suite officials
- Physicians, field facilitators, leading health professionals
- Leading pharmaceutical companies



Pain Points of Target Segments

Governments

- **National & Provincial** – Unable to understand service needs and demands resulting in ineffective budgets & strategy; can't monitor performance or identify the root cause of problems
- **District** – Can't monitor performance & service needs leading to ineffective interventions. Program development and service delivery hampered by team capacity and skill level.

Donors, NGOs & Multi-Lateral Organizations

- **Donors** – Unable to understand service needs and demands resulting in ineffective budgets & programs; can't monitor performance effectively
- **NGOs** – Don't have best information to inform programmatic activities and prioritization; can't monitor performance effectively and inefficient reporting systems waste time. Inconsistent service delivery standards.

Life Sciences & Distribution Network

- **Pharmaceutical Companies** – Can't adequately forecast thus impacting supply availability; no market intelligence to assist in new investments & initiatives
- **Distribution Companies** – Can't monitor clinic stock levels to prevent stock-outs

Providers

- **District & Clinic** – Doesn't have right resources and performance monitoring system to improve service delivery and don't have the right solutions to identify the root cause of problems
- **Doctors/Nurses** – Don't have appropriate training or resources

Stakeholders do not get the right information at the right time & cannot collaborate to “connect the dots”

ROI severely limited by lack of data-driven decision making and system-wide inefficiencies

BroadReach Sectors Focus

Healthcare

- Today, leading strategic and operational advisor to healthcare systems in Africa
- Opportunity to fully leverage position and relationships to drive adoption of *BroadReach IS* platform as the new standard
- Considered a healthcare thought leader in the developing world
- Initial target customers
 - ▶ Government health systems
 - ▶ Healthcare-focused NGOs
 - ▶ Donor groups, first in sub-Saharan Africa

Government

- At request of current customers, use *BroadReach IS* to improve effectiveness and efficiencies of service delivery to citizens including healthcare, education, economic development and infrastructure initiatives
- Increase transparency and accountability for dollars spent
- Currently working with the Office of the Presidency in South Africa to implement “Government on a Touchscreen” to improve performance across all levels of government
- Initial target customers— African continent

Note: Funding Trends in Foreign Aid, Devex

What is a National Health Account (NHA)?

- Countries “*cannot manage what they cannot measure*”
- NHA is a process through which countries *monitor* the *flow of money* in their health sector
- NHA is a system which aims to institutionalize a harmonized country *platform* for annual and timely collection of *health expenditure data*

What do NHAs do for countries?

- 1) Health accounts deliver means to:
 - *learn retrospectively* from past expenditure
 - improving planning and allocation of *resources*
 - increasing *systems accountability*

- 2) This aims to help member states protect its people from:
 - catastrophic *health bills*
 - reduce *inequities* in health
 - make definitive strides towards universal *health coverage*

Who implements an NHA in a country?

- Each country is responsible for data collection which feeds into the NHA
- The [World Health Organisation](#) has been coordinating efforts at the global level to produce those estimates for each country.
- WHO provides countries with the accounting framework [System of Health Accounts](#), tools and technical support to institutionalize and set up the platform for the for collection of health expenditure data.

Which component of the NHA for RSA is being presented now?

- Systematic data collection for an NHA has not been established yet in South Africa
- A key WHO focus within NHA is the *distribution of expenditure by disease*
- WHO requested BroadReach to develop an approach to collect data related to disease distribution data at CHC's and clinics by age and gender

ACCOUNTING FRAMEWORK OF SHA - 2011

