SMART COMMUNITY LIFE CENTERS

Universal Health Coverage

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	SUSTAINABLE DEVELOPMENT GOALS

The story begins with the Sustainable Development Goals.

A set of **goals drafted by the United Nations** to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda

Alexander De Croo

Belgian Minister of Development
Cooperation and Digital Agenda

Andrus Ansip

European Commissioner for
Digital Single Market

Stefan Manservisi

International Cooperation and
Development – DG-DEVCO

DIGITAL FOR DEVELOPMENT (D4D)

Alexander De Croo drafted a **strategic policy note** in which he explains how to **use digitization and (new) technologies as a lever for development cooperation**.
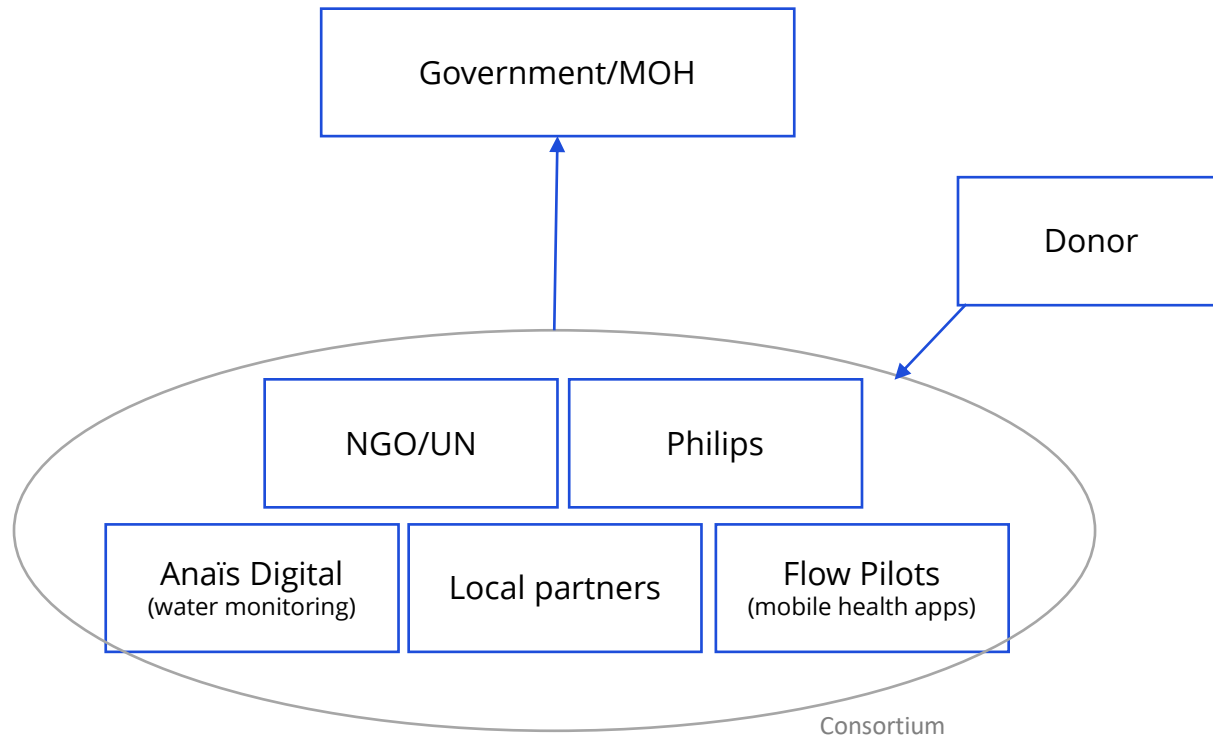
D4D is about **creating sustainable business models**.

De Croo presented his note for the European Union, more precise to DG-DEVCO and they took a positive view of interest.

Cooperative

Business model

The donor, the (local) NGOs and the private partners step into consortium.

The consortium goes to the local government together and operates the project collaboratively.

Government/MOH

Donor

NGO/UN

Philips

Anaïs Digital
(water monitoring)

Local partners

Flow Pilots
(mobile health apps)

Consortium

PHILIPS SMART COMMUNITY LIFE CENTERS (SCLC)

Smart Community Life Centers want to **strengthen local community life and primary care** in developing countries.

The SCLC is a combination of **infrastructure, digital technology and services** to deliver **a modular, scalable** and **sustainable** solution.

It is designed to **be embedded in the existing ecosystem** of the local community, healthcare workers, NGOs and government. It will lead to **actionable and predictive insights**.

Services

Digital tools

Infrastructure

THE SCLC
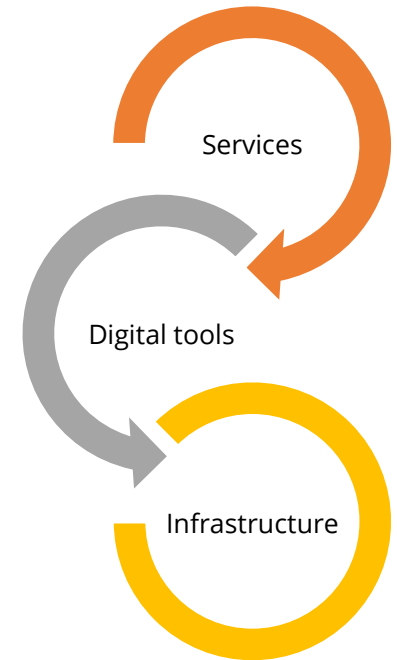
SCOPE

Infrastructure:

- Based on mini CLC (approx. 6-10k people)

- 1 x medical and 1 x social and micro-economic space

- Solar power, water and waste management

Digital tools:

- Digital outreach kit

- Remote monitoring of water quality (5 capture points included)

- Mobile health apps (incl. mother and child care and vaccination)

- Centralised data capture and reporting

Services:

- Infrastructure deployment (in collaboration with NGO and local partners)

- Training of local personnel

- Long-term maintenance for infrastructure and digital tools

Typically 4 to 6 CLCs linked to a district hospital
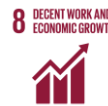
THE SCLC

INFRASTRUCTURE

Each SCLC is powered by **solar panels**. There is electricity and light throughout the whole center. There is also an **internet connection** provided.

The SCLC provides **clean water storage and pumping.** Philips also makes sure **waste management** happens.

Each SCLC is equipped with **primary health services, a maternity and a communal space**. It aims to **enable social, educational, sport and micro-economic activities**.
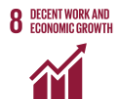
TRAINING AND OPERATIONS

Philips **trains people locally together with local NGOs** in **project management and design** and **facility management**. They also reinforce the knowledge of **clinical applications**.

Philips supports the optimization of **patient referral**.

They also provide **maintenance support service & warranty**. Contract lengths may vary anywhere between 5 and 30 years.

PRIMARY HEALTHCARE

Healthcare is very difficult to provide. Often people have to travel an enormous distance to see a health care worker.
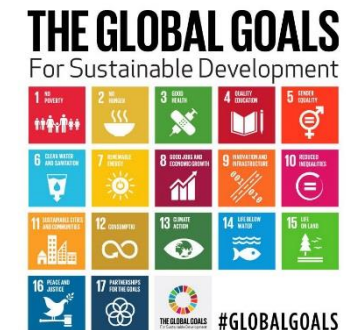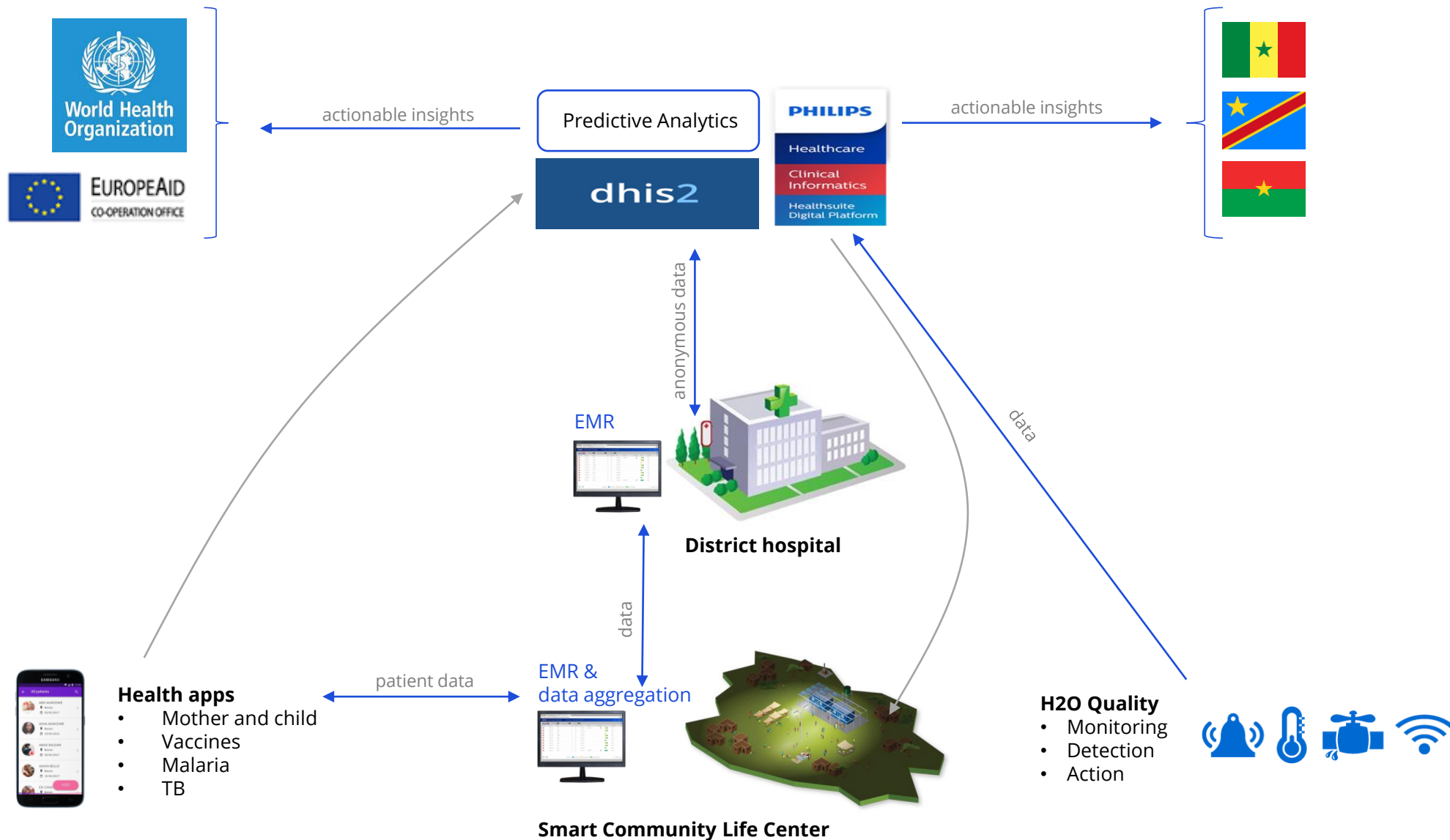
The SCLC supports community health workers with lightweight equipment to travel to the villages and give women and their children the help they deserve.

Together with NGOs **Philips trains people locally or reinforce local medic** teams for a short period.

The CLC is the home base for **Community Health Workers (CHW)** that visit nearby villages. They are equipped with **the SCLC Outreach kit**, a **mobile unit including medical equipment and smart devices with mHealth applications.**

SOLUTION ARCHITECTURE

THE SCLC OUTREACH KIT

The outreach kit, that the Community Health Workers use, **provides medical equipment, training and connectivity.**

It contains tools to support **diagnosis and referral aimed at CHW for registration and triage of people** in the community and to facilitate referrals.

The SCLC would be the owner of the outreach kit, and also the hub for training, maintenance, storage and security, recharging of equipment, and referral and connectivity with the main health care infrastructure.

DIGITAL TOOLS FOR THE OUTREACH KIT

The current version of the outreach kit contains a mobile application to support primary care in two domains: mother and childcare and vaccination programmes.

The app **supports the community health worker** in his/her **patient follow up**. It uses **patient info to determine the context and required** info.

It is designed completely **patient centered**.

Support non-experts with instructional information. A learn-how section will be provided.
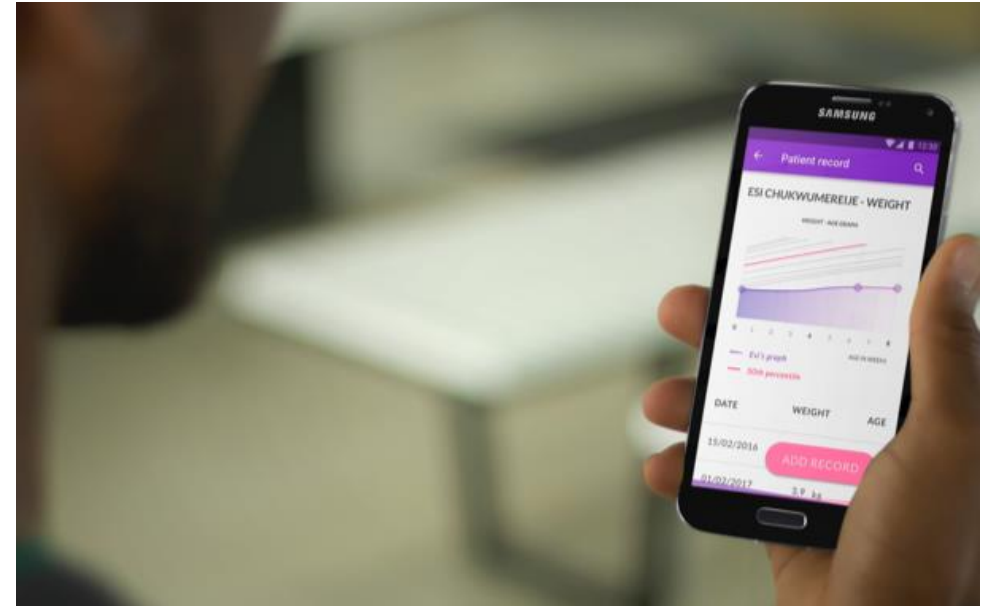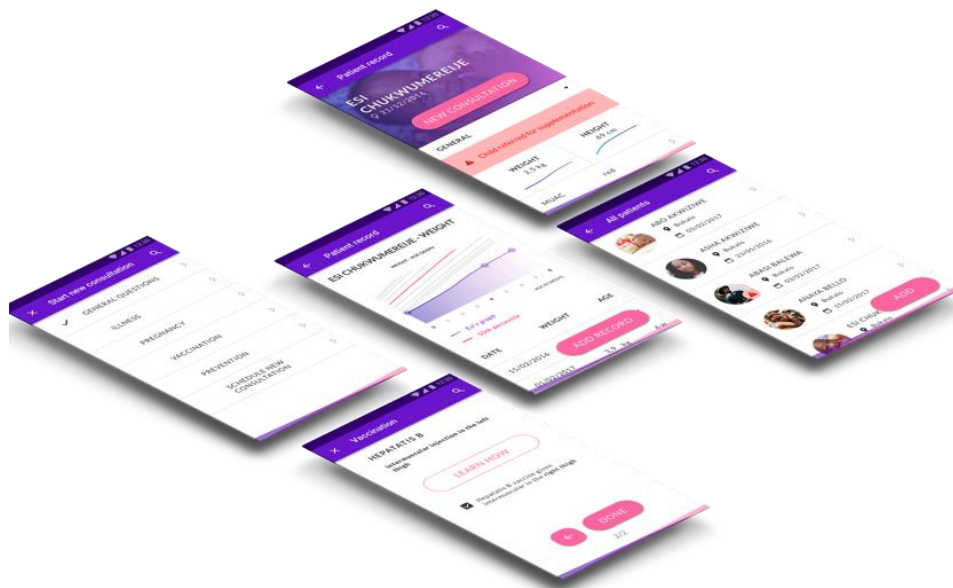
MODULAR & SCALABLE

The mobile app is designed as a flexible platform to design and deploy new services in the future (such as **epidemic control or awareness campaigns)**

The digital tools can be **easily updated remotely** and don't suffer the same logistical challenges as physical deployments.

The app also **captures data**. This data can play an important role in the prediction of disease outbreaks or determining why there might be a certain peak of child deaths in a specific region.

**DIGITAL TOOLS – FLOW PILOTS**

REMOTE MONITORING OF WATER QUALITY

Autonomous water quality sensors continuously measure the quality of water around the CLC and upload their data centrally via their wireless connection.

Monitoring data are automatically analysed to **detect water quality issues** and **send alerts** (locally, to the CLC, ...) allowing immediate curative & preventive actions.

Data history central storage allows **trend analysis** & **forecasting** for root cause analysis, better prevention action planning and resource optimization (medical resource allocation, investments, polluter detection, ...)

Primary Focus : drinking water quality ! But the system can easily be extended to monitor waste & agriculture water quality with related intelligence & impact.
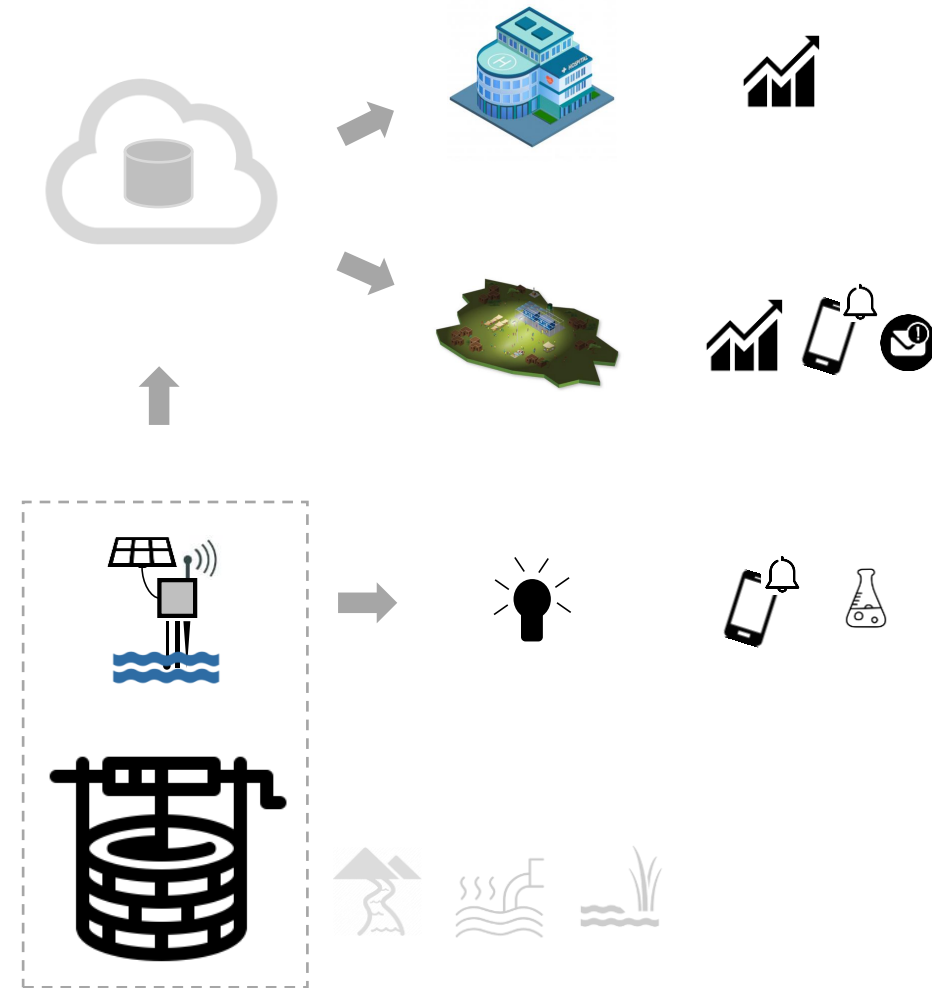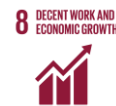
EXAMPLE OF A SCLC: TADU VILLAGE

First smart community life center installed in the Democratic Republic of Congo.

It consists of two prefabricated buildings, **a medical building and a social area**

Catchment area 40,000 people

THE SCLC

Outside there is **1000 m² of LED lighting that enables social and commercial activities**.

Philips monitors the site, evaluates the outcome and ensures support service or warranty.

THE MEDICAL BUILDING

Philips provides medical equipment for diagnosis triage and referral. The patient referral or transport is linked to existing healthcare infrastructure.

A mobile network will connect medical staff with the wider world.

Training and support services ensure long-term sustainability.

Local doctors, nurses and technicians can develop their skills and collect data. Some of them will find jobs at the center.
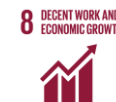
THE SOCIAL AREA

Tables, chairs, TV/DVD and a laptop enable connectivity at the center. The devices are for education and entertainment.

Phillips also provides training for all aspects - clinical, application and technical.

Locals can rent a small area to start their own business

SCLC IN KAIMBU COUNTY GOVERNMENT KENYA

Within **18 months** the center in Kiambu saw:

the number of **outpatients visiting per moth increase from 900 to 4080**

the number of **women attending at least 4 antenatal care visits** grew **from 6 to 94 each month**

the number **of children being treated quadrupled** from 533 to 2370

Micro-economic activity generated an annual revenue of around €13k, or the equivalent of **about 27 times the average annual income**
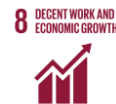
3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

INVESTMENT AND TIMELINE

	One off	Annually
Cluster (setup cost)	**900**	**135**
Data layer and connectivity	300	
Mobile apps	300	60
Water quality monitoring software	300	60
Maintenance and ICT support		15
Cost per CLC	**425**	**80**
Infrastructure and outreach kit (+ deployment)	400	80
5 water quality capture points (+deployment)	25	

all in k€

3-5 months	5-10 days	

Contract signature — Assessment & preparation — Deployment & handover — Operations
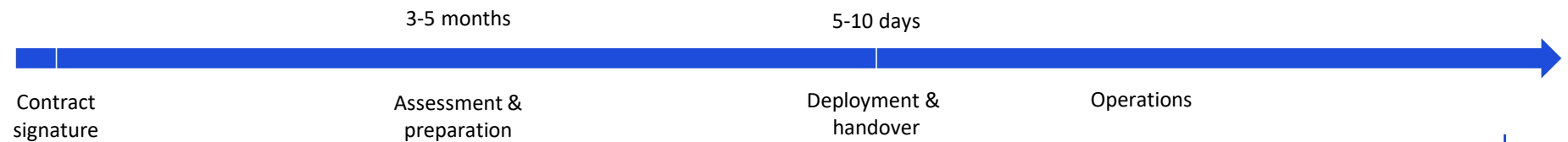
BUSINESS CASE AND EIRR

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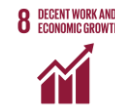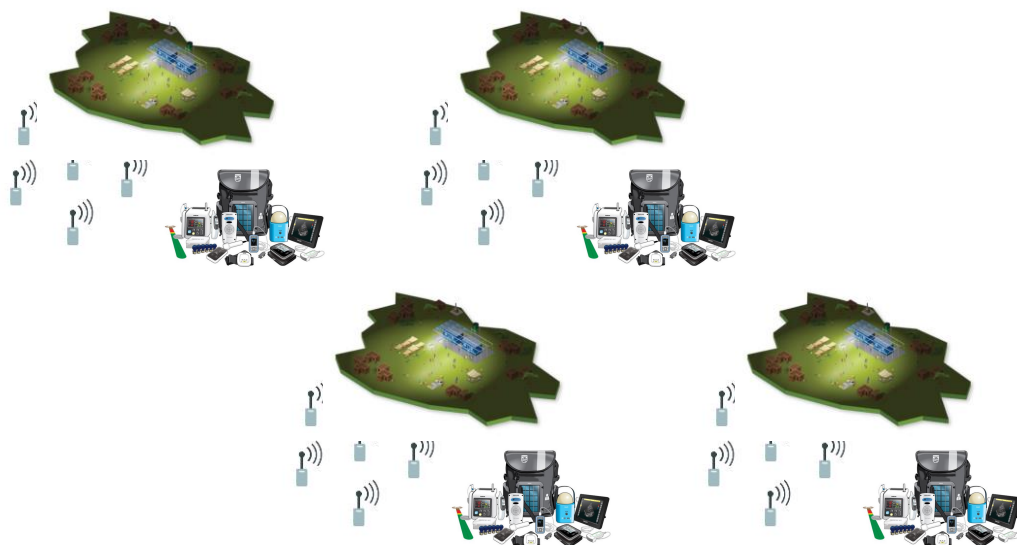
INVESTMENT (sample)

Cluster with **4 CLCs**

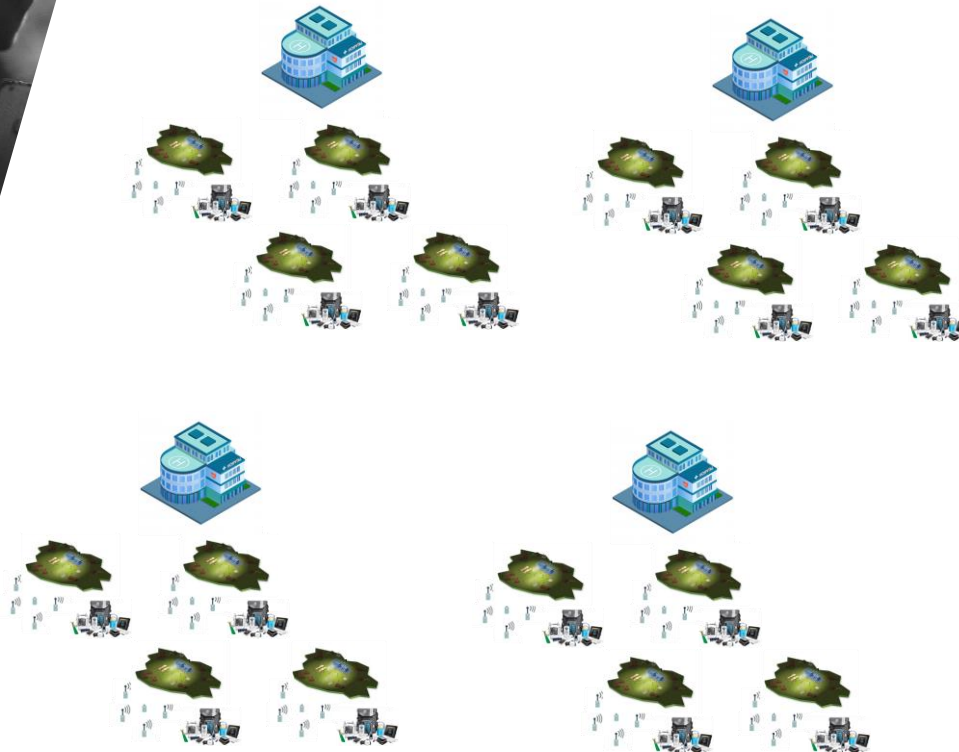• Catchment area approx 40.000 people

Investment	2.600 k€
Annual maintenance	455 k€
Project span	10 years
Project TCO	7.150 k€
Cost/year/CLC	179 k€

INVESTMENT (sample)

Cluster with **16 CLCs**

- Catchment area approx 160.000 people

Investment	7.700 k€
Annual maintenance	1.415 k€
Project span	10 years
Project TCO	21.850 k€
Cost/year/CLC	137 k€

Contact

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