



6<sup>th</sup> International Symposium on

Knowledge and Capacity for the Water Sector  
**FROM CAPACITY DEVELOPMENT  
TO IMPLEMENTATION SCIENCE**

27-29 May 2020 | Delft, the Netherlands

# SMART Centres

A promising approach to reach WASH related SDGs

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The  
**SMART**  
Centre  
Group



BILL & MELINDA  
GATES foundation





## *Content*

1. Challenges
2. SMART Centre actions
3. Innovative technologies, SMARTechs
4. Innovative approaches
5. Conclusion, Suggestions, Questions



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## Challenges

### 1. Reach SDG6

in remote, small rural communities where machine drilled wells, imported pumps are too expensive

### 2. Reach water related SDGs

SDG1(Poverty), SDG2(Food), SDG8(Employment)

# **SMART Centres**

Training the local private sector in

**Simple, Marketbased, Affordable, Repairable Technologies**

## **Focus on**

### **1 Reducing cost**

Innovative technologies, local production

### **2 Building supply chains, business development**

Training private sector in technical & business skills

### **3 Innovative approaches**

Household water treatment, Self-supply, Farm wells, Family Based Management, Well clubs, Faith&water

# SMART Centres

**Now in:** Tanzania, Zambia, Malawi, Mozambique.

**Start in:** Ethiopia, South Sudan, Kenya, Niger, Nicaragua

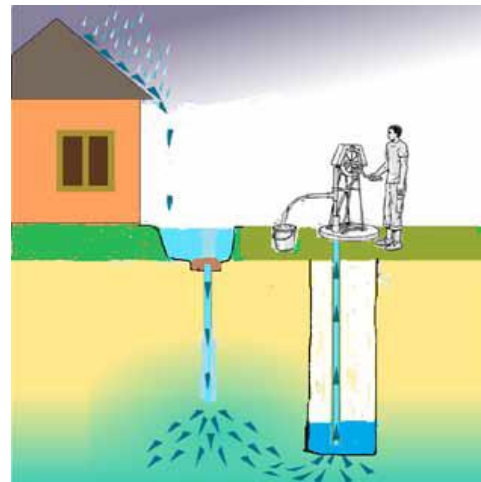
## Results

- 50 drill & pump companies. Go on after the training,  
“Profit based sustainability”
- > 1 million people use SMARTechs
- > 12000 rope pumps, 60% family paid (self supply)
- Start cooperation  
with CAWST, EMAS



# Innovative technologies, SMARTechs

- **Manual well drilling.** SHIPO drill, EMAS,..  
Wells to 60 metre deep. Cost \$100 - \$1200
- **Local produced handpumps.** EMAS, Rope pump  
Pump 5 to 40 metre deep. Cost \$40 - \$120
- **Groundwater tube recharge.** Avoid dry wells  
Store 100-500m<sup>3</sup>/yr. Cost materials \$10
- **Household water filters.** Cost \$20 - \$40
- **Corbelled, SaTopan latrines.** Cost \$5 - \$15





# SMARTechs, Hygiene

## Zaluso handwash station

Foot powered, no contact with tap.

Cost; \$50

## Wash buckets & liquid soap

Metal stand, liquid soap made of soap bar

Cost; \$15

## Tippy Tap, Dip Tap

Washing hands with 0.25 liter

Made by families

Cost; \$ 0



# Innovative approaches

- **Household water filters**

Most cost effective option for safe water. \$1-\$2 cap/year

- **Self supply**

Household wells/ pumps = Convenience, more hygiene,  
Water for life stock, irrigation = Income, food

- **Family Based Management**

Family ownership = pump functionality > 95% (Zambia)

1 pump serves 50 people. Family owned = community served

- **Well clubs**

Trained families drill own well. Cost well + pump \$150 -\$ 500

- **Faith & Water.**

Trained Faith leaders bring awareness & local affordable solutions to (remote) communities



# Impact of SMART approach

- **Reach SGD6**

The “last mile”, rural areas where other options are not possible, too expensive

- **High pump functionality.**

Local production; spares available & affordable

- **Profit based sustainability**

Companies sell products, go on after training

- **Reach SDG 6 + SDG 1, SDG 2, and SDG 8**

Water at households, farms = income & food.

Producing pumps; irrigation = employment

# Conclusion. Suggestions

SMART approach has much potential to contribute to reaching water related SDGs

## Suggestions

- Focus on 3 Ts; Training, Training, Training
- Kind of “Marshall plan for WASH capacity building”?
- Train **technicians** in production drill sets, pumps etc.
- Train **entrepreneurs** in business skills
- Include knowledge in TVETs, vocational education





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## Thank you for your attention

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Booklet; Smart Hygiene Solutions in times of Corona  
Manuals papers, videos,..  
[www.smartcentregroup.com](http://www.smartcentregroup.com)

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# Questions

- If SMARTechs are so good, why are there not many more in Africa?
- How do SMART Centres generate funds for activities?
- So large scale capacity building of affordable WASH technologies is important but who should organise, and fund such capacity building?
- How can we start our own SMART Centre and become member of the SMART Centre Group?