



Facing the Challenge: Are Slums Forever?

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**69th Vakantiecurus,
TUDelft**

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Image © 2009 GeoEye

© 2009 Google

elev. 33 m

Aug 30, 2009

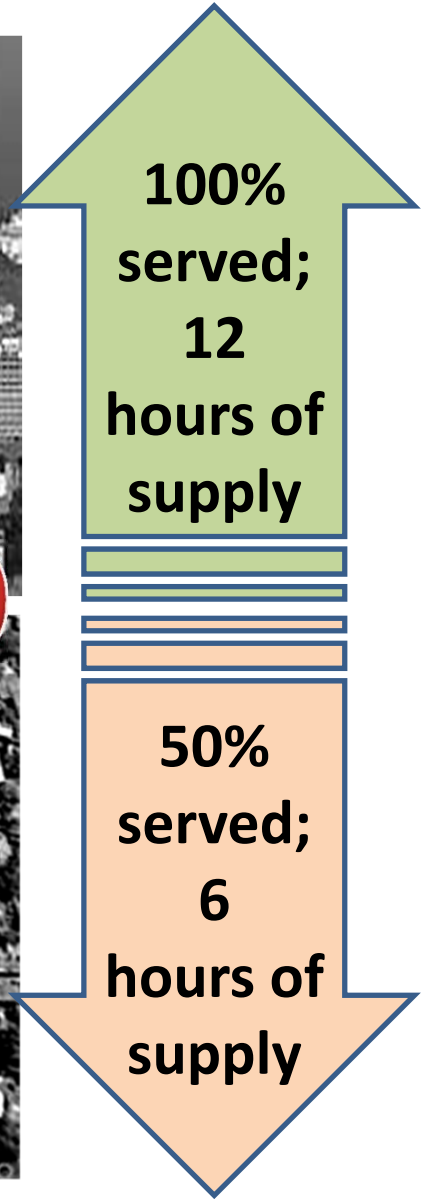
Google

Eye alt 340 m

194 m
25°56'07.61" S 32°34'01.67" E

THE CONTEXT

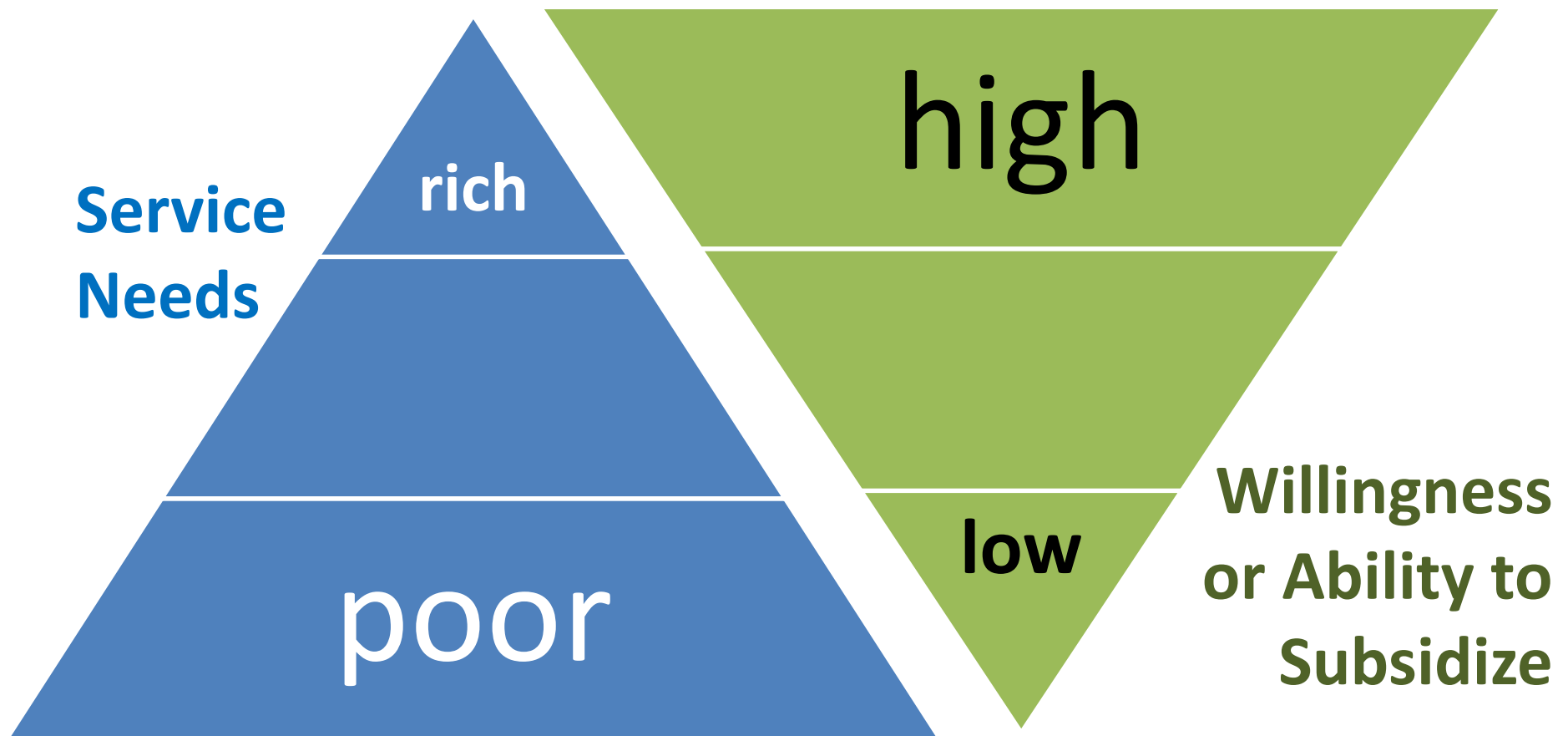
- **HIGH POVERTY;**
- **INEQUALITIES;**
- **“INFORMAL” LAND TENURE;**
- **NO STREET NUMBER AND NO HOUSE NUMBER;**
- **FAILURE ON PROVIDING SERVICES TO ALL;**
- **DEPENDENCE ON WATER VENDING AT HIGHER COST;**
- **CONSTRAINTS OF CONVENTIONAL INFRASTRUCTURE AND SERVICE MANAGEMENT APPROACHES;**
- **OTHER SOCIO-ECONOMIC BARRIERS.**



100%
served;
12
hours of
supply

50%
served;
6
hours of
supply

The Investment Perversion



- Investment to massively serve the poor will be largely dependent of self-funding through water tariffs.

**OVER 500 INFORMAL
PROVIDERS IN
GREATER MAPUTO**



**THIS IS A GIGANTIC TASK,
ALSO BECAUSE OF...**

- **WE DO NOT ACCEPT THAT OUR CONVENTIONAL APPROACHES AND TOOLS ARE FAILING;**
- **THINKING OF SLUMS AS JUST A TRANSITORY THING;**
- **PLANNING OF INFRASTRUCTURE AND SERVICE PROVISION ARE NOT SLUM-CENTRIC AND INCLUSIVE;**
- **LACK OF COMMITMENT AND POOR GOVERNANCE TO FIGHT POVERTY AND INEQUALITIES.**

**BUT WE HAVE TO
START CHANGING THIS !**

NETWORK NIGHTMARE

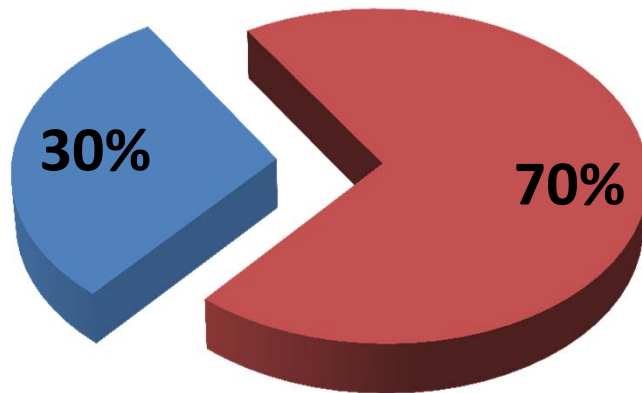


THE MORE WE SERVE, THE LESS WE ARE ABLE TO CROSS-SUBSIDIZE

Maputo Consumer Groups

■ ≤ 10 m³/month ■ > 10 m³/month

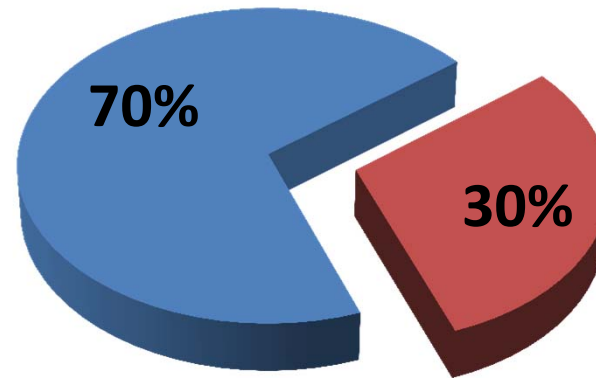
2005



Connections: 90.000

Tariff Cross-Subsidy: 30%

2015



Connections: 230.000

Tariff Cross-Subsidy: 10%

**2010: Change of Tariff Structure
and Connection Charge Lowered**

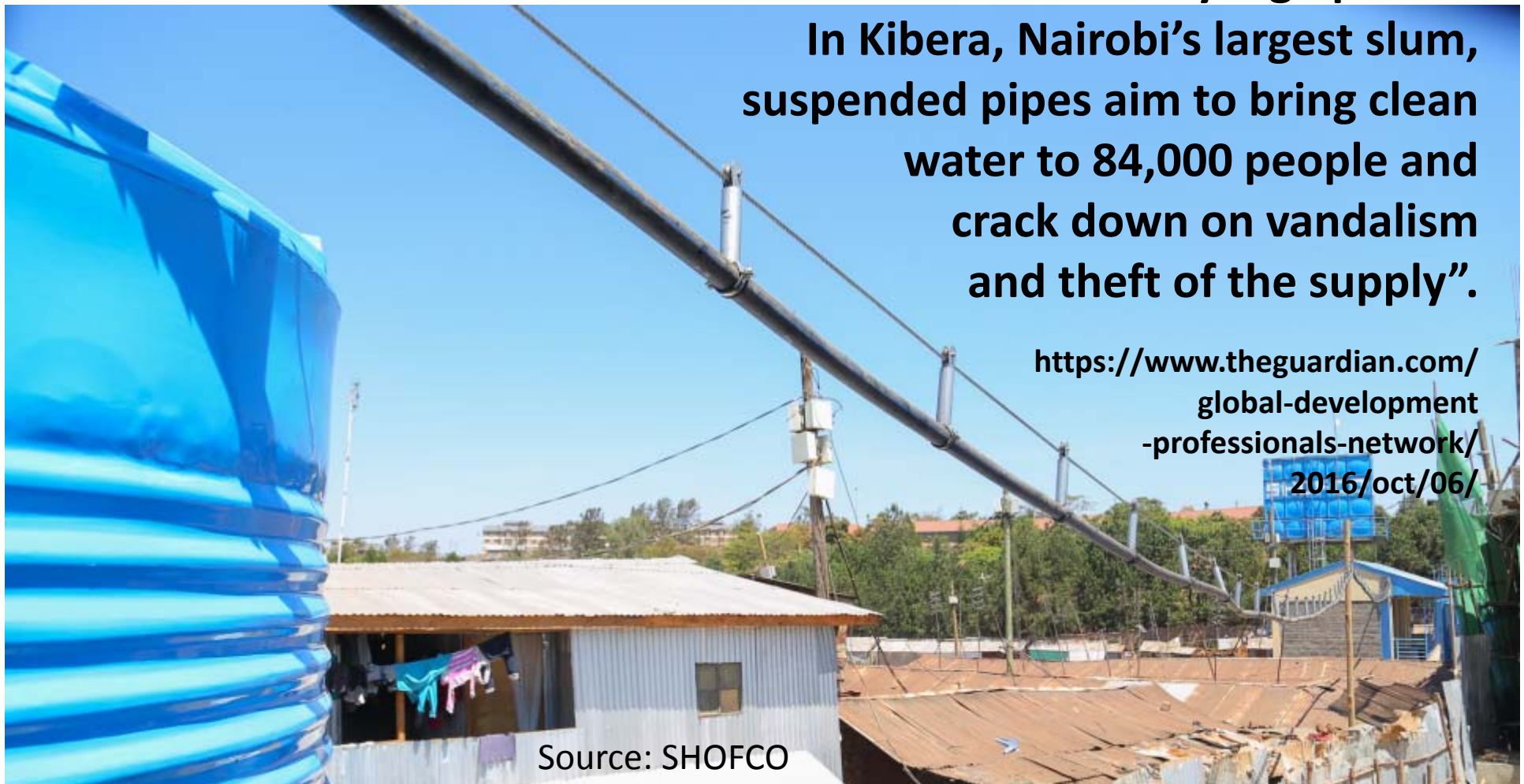
FACING IT!

- **A new paradigm is in need, through**
 - **social,**
 - **management and**
 - **technological innovation.**
- **THE ROLE OF TECHNOLOGY – How technological innovation may ease the social, economic and management barriers?**
- **Social change, poverty eradication are not solved just by smart technologies.**

THE ROLE OF TECHNOLOGY ON A NEW WATER MANAGEMENT AGENDA FOR SLUMS!

**“Can Africa's first aerial water network
beat the cartels' sky high prices?
In Kibera, Nairobi’s largest slum,
suspended pipes aim to bring clean
water to 84,000 people and
crack down on vandalism
and theft of the supply”.**

[https://www.theguardian.com/
global-development
-professionals-network/
2016/oct/06/](https://www.theguardian.com/global-development-professionals-network/2016/oct/06/)



Source: SHOFCO

TECHNOLOGY FOR SLUMS! - IDEAS

- GPS INSTANT NETWORK **MAPPING** WITH **CLIENT ID**/PHOTO;
- ALTERNATIVES TO MONTHLY **BILLING** AND USE OF CELLPHONES AND/OR LOW COST “PAY-PER-USE” **METERS**;
- MOBILE CONSUMER SERVICE **MONITORING AND COMPLAINT HANDLING**;
- MOBILE **MANAGEMENT FACILITY** FOR LOCALIZED OUTSOURCED PROVIDERS;
- **TYPE OF PIPE** TO USE TO COPE WITH STREET EROSION;
- **NETWORK DESIGN** AND MANAGEMENT MODELS FOR INTERMITTENT BUT MORE EQUITABLE SUPPLY;



**Meter
stealth
solution!**



ENABLING AGENDA FOR SLUMS

- **PLAN FOR SLUMS – DATA SUPPORT FACILITY;**
- **DECENTRALIZED/FLEXIBLE SOLUTIONS;**
- **LOCALIZED SERVICE PROVISION (OUTSOURCING);**
- **EMPOWERMENT OF LOCAL ENTREPRENEURS;**
- **INNOVATION, FOR MASSIVE SCALE UP!
(NOT AN “ASTERIX VILLAGE”!)**
- **COMMUNITY BASED OVERSIGHT, EMPOWERED
BY REGULATOR.**

“Meeting this challenge will require new thinking and innovations in service delivery... There is also an important role for better urban planning and management to anticipate the influx of new city residents and their needs.”

Source: **Slums and Service Delivery for the Urban Poor: Challenge Profile**

<http://strikingpoverty.worldbank.org/conversations/slums-and-service-delivery-urban-poor>

The image is a screenshot of the TU Delft website. At the top left is the TU Delft logo with the text 'Delft University of Technology'. At the top right are links for 'TU Delft Studentenportal' and 'TU Delft Medewerkers'. Below the logo is a large image of a man and a woman's faces. A navigation bar contains buttons for 'Studeren', 'Onderzoek', and 'Zakelijk'. On the left side, there is a sidebar with 'TU Delft | Global Initiative' and links for 'News' and 'Agenda'. In the center, there is a breadcrumb trail: 'TU Delft > Onderzoek > Thematische samenwerking > Delft Delft | Global Initiative'. Below this, the text 'TU Delft | Global Initiative' is highlighted in yellow.



Thank you