

Scaling Up Fluoride Removal Technology – Challenges & Opportunities

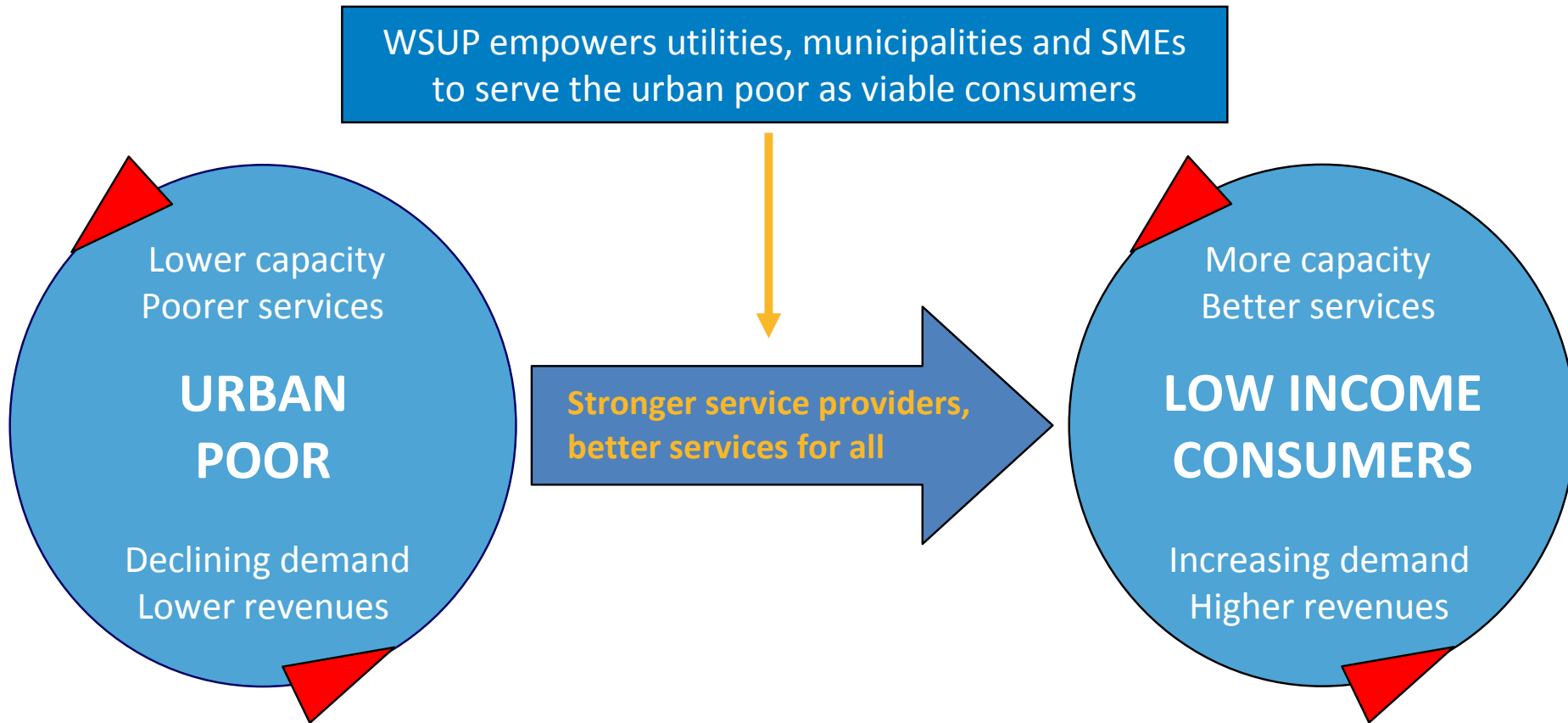
GeoGen 2013 Conference

Addis Ababa, 5th - 7th February 2013

Kariuki MUGO
Kenya Country Manager



Urban poor to low income consumer



Project Location - Naivasha



Project Location



Choice of Technology & Level of Service

Scale-Up

Implementation

Piloting

Feasibility study

Scoping study

Project Identification

Bone Char Filtration

+

**Contact
Precipitation
(Decentralized/Kiosk)**

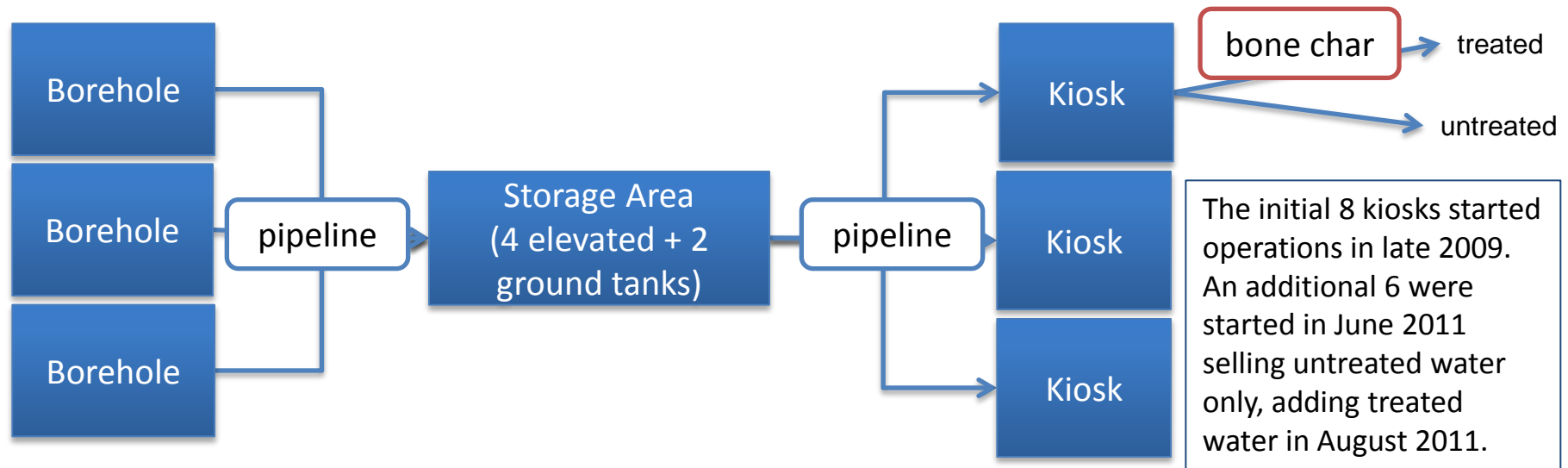
**Nalgonda Technique
(Centralized)**

**Nalgonda Technique
Reverse Osmosis
Activated Alumina
Bone Char Filtration**

The Model

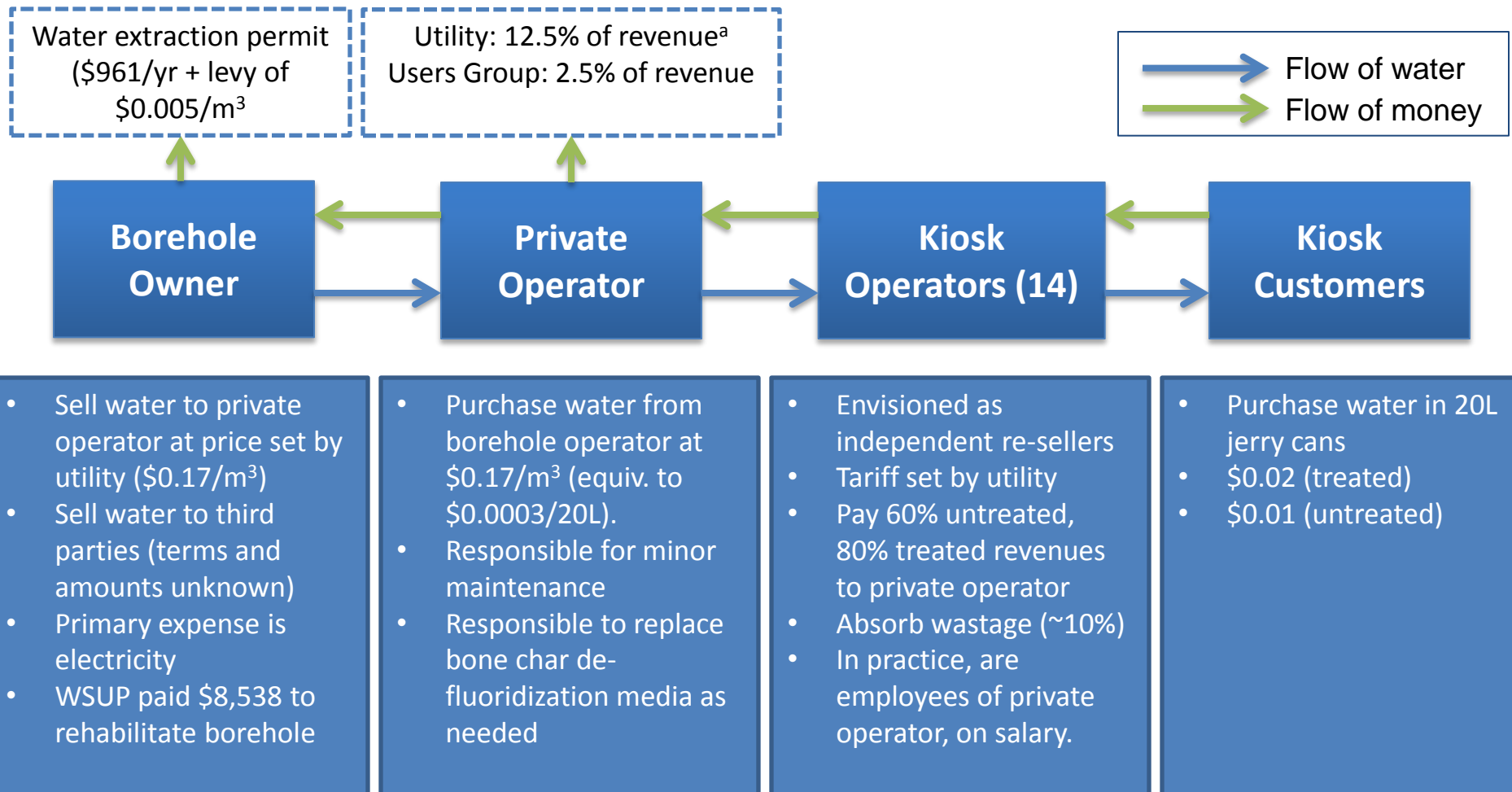


NAIVASHA Distribution Model



NAIVASHA

Relationships Between Stakeholders



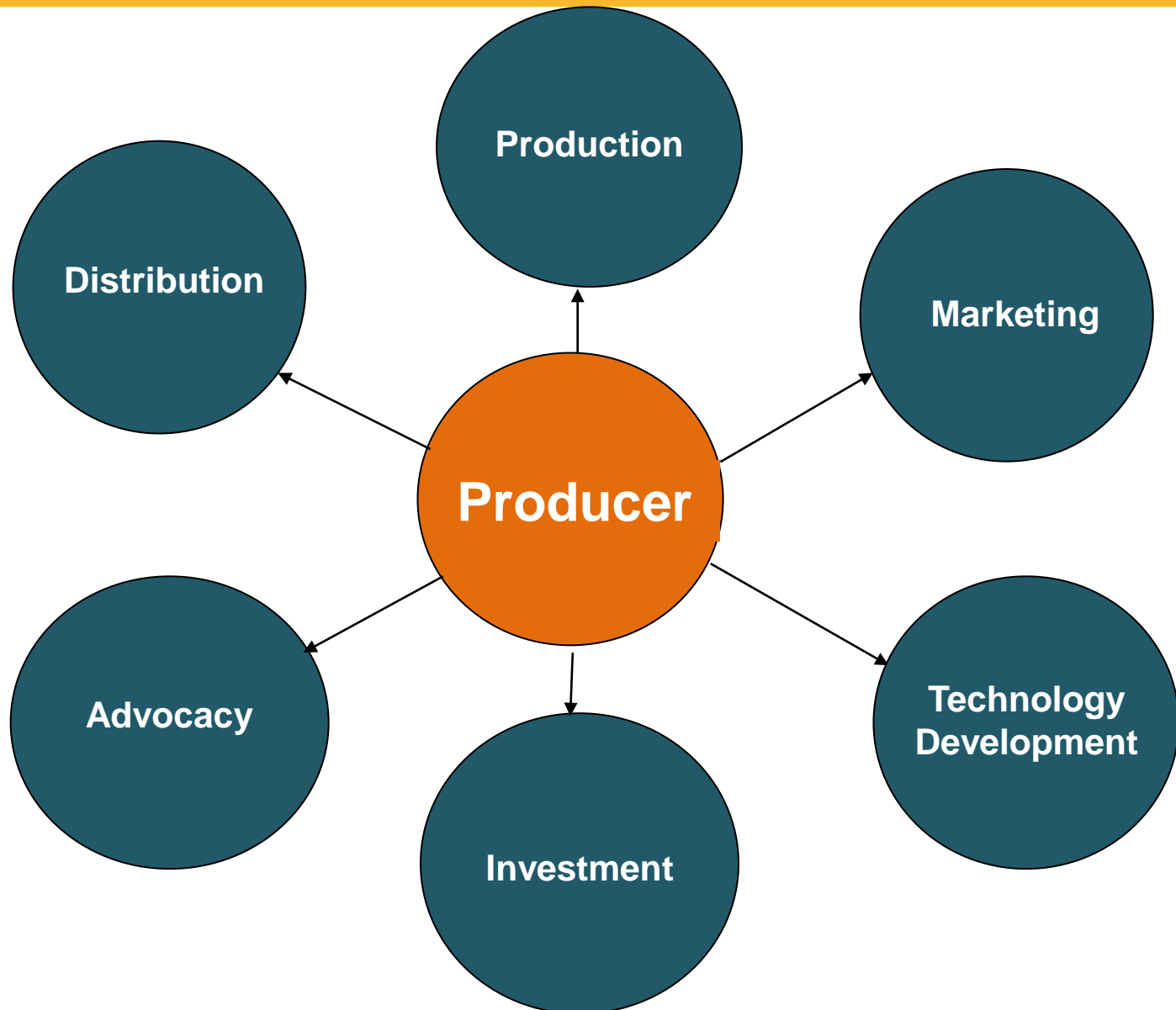
^aUtility in turn transfers 6% of its revenue to Rift Valley Water Services Board (the Asset Owner), which is responsible for major system maintenance



Our Lessons

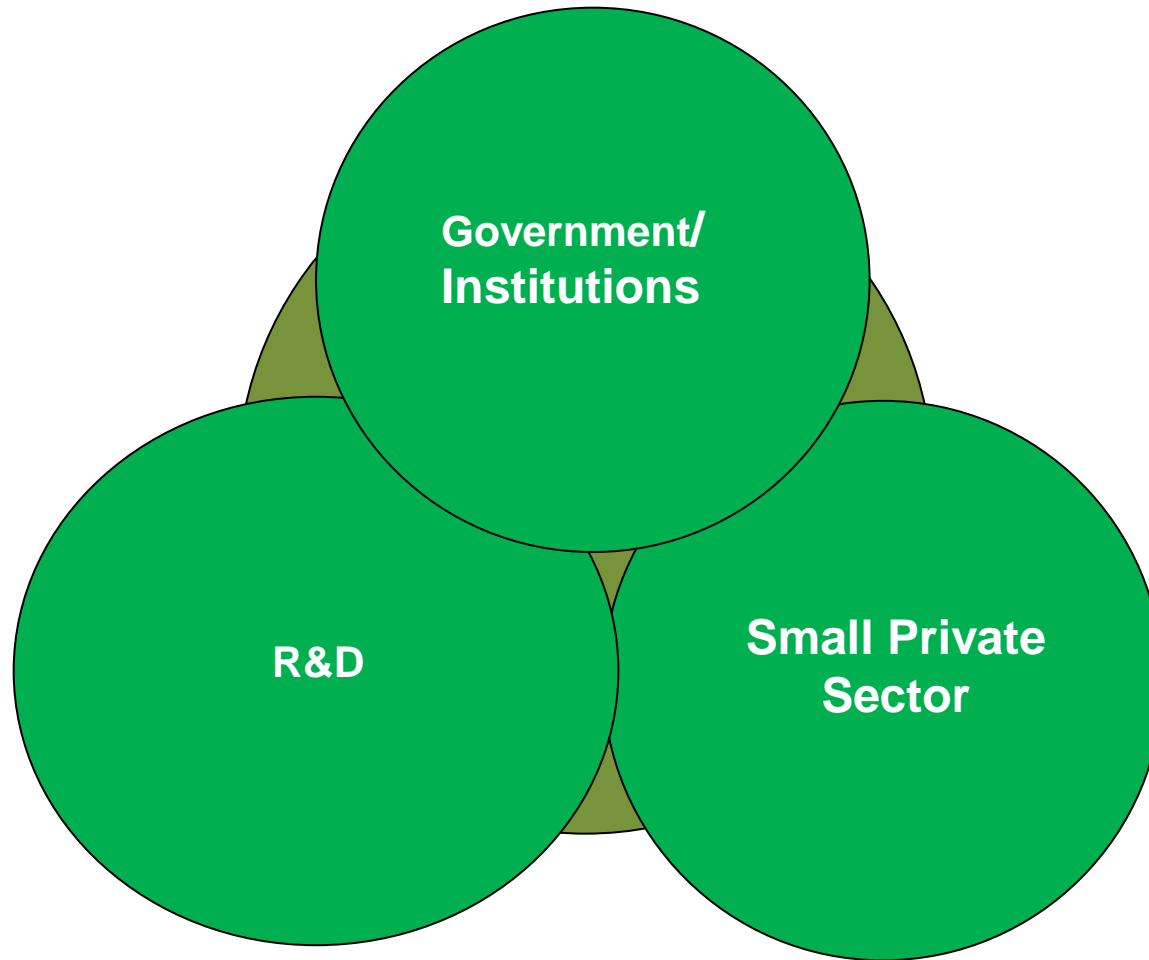


The Current Business Model



- **Commercial** - limited production, unmet/limited demand, supply chain challenges, high cost of investment
- **Institutional** – limited acceptability, policy influence, scalability
- **Technological** – balancing innovation/R&D vs commercialization, level of service limitation, monitoring
- **Social** – high tariff, maintenance, social barriers, investment capital

The Opportunity



The Opportunity



R&D

**Technology
Development**

Advocacy

**Technical
Support**



**Government/
Institutions**

Investment

**Behaviour
Change**

**Regulation &
Compliance**



**S&M
Private
Sector**

**Production &
Distribution**

Marketing

**Maintenance
Contracts**

- **Commercial** – increased investment, economies of scale, robust supply chain, financial & related products
- **Institutional** – public investment, favourable policy, regulatory & compliance support
- **Technological** – increased innovation, local/meso-level capacity
- **Social** – affordable tariff, social acceptability, investment capital



THANK YOU!

MERCI!

ASANTE!