

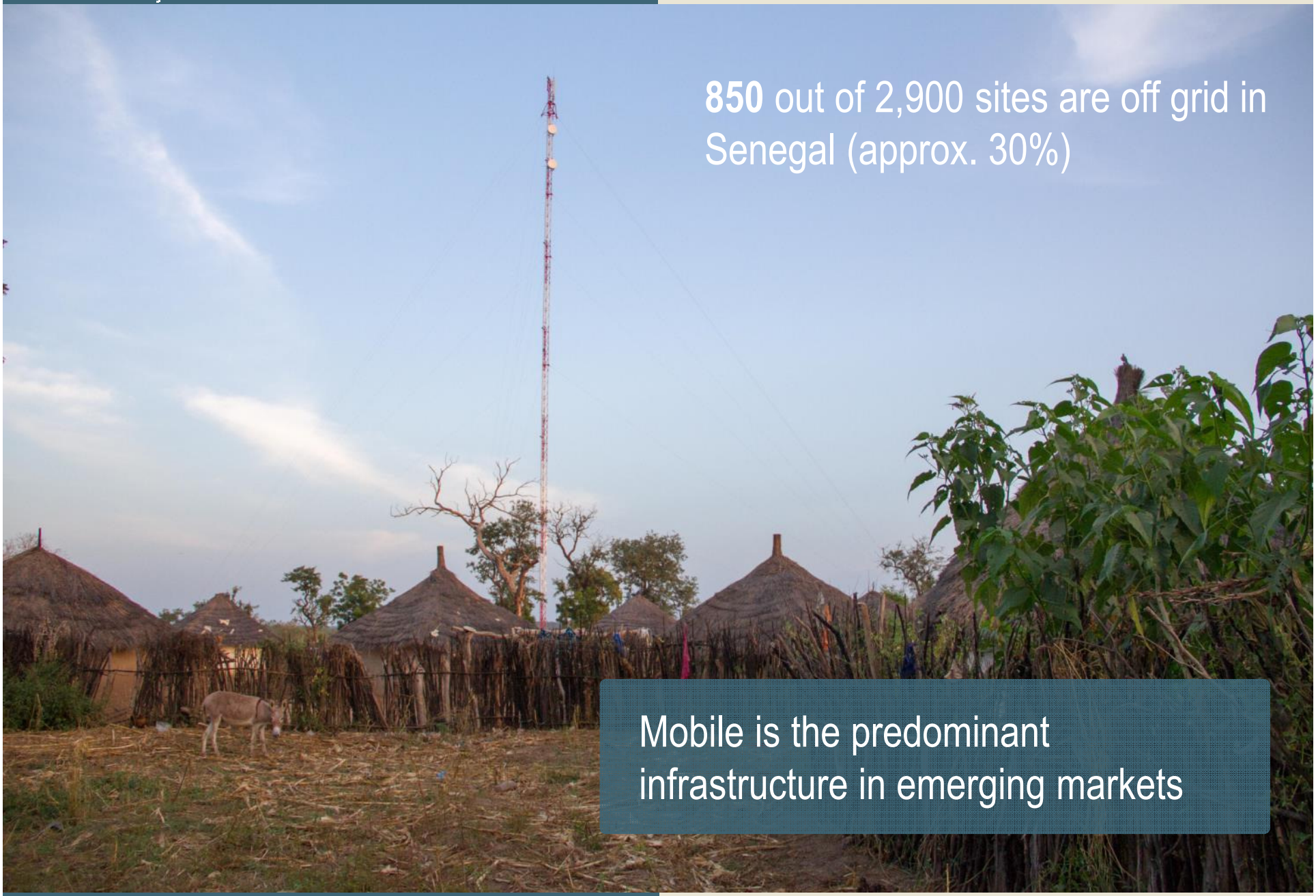
Mobile Enabled
Community Services

# MECS Programme
## Energy Access in rural communities

November 8, 2013

# Agenda

- The Case for MECS
  - The reality – Ubiquity of mobile infrastructure
  - Access to energy
- GSMA MECS Programme
  - GSMA M4D
  - MECS Programme Activities
  - MECS Innovation Fund and Round 1 Grantees
- Examples of Off Grid Solutions in Sub Saharan Africa
  - mKopa – Mobile Money and operator distribution network
  - Sew Saw/Manobi – Mobile Apps for access to clean water
  - Pamoja Cleantech – micro grid in East Africa

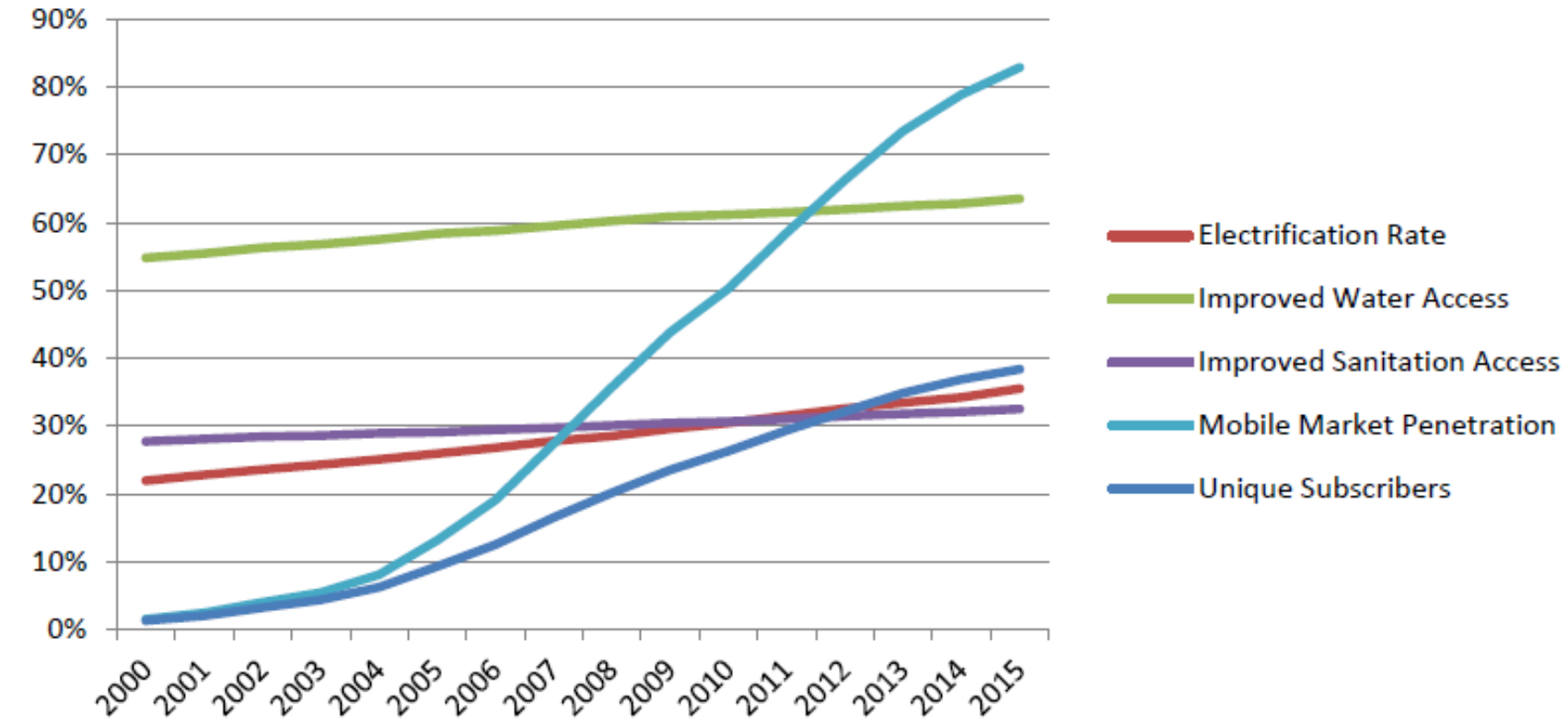

**850** out of 2,900 sites are off grid in Senegal (approx. 30%)
Mobile is the predominant infrastructure in emerging markets

Mobile Enabled Community Services




262 Million people have access to the mobile network before they have access to clean water

# Mobile phone penetration versus Energy, Water and Sanitation Access in Sub Saharan Africa




Source: GSMA, World Bank, IEA 2012

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# Introducing the GSMA and Mobile For Development

- The GSMA represents the interests of mobile operators worldwide.
- Our members span more than 220 countries and we unite nearly 800 of the world's mobile operators

Mobile for Development

- GSMA Mobile for Development brings together our mobile operator members, the wider mobile industry and the development community to drive commercial mobile services for underserved people in emerging markets
- We identify opportunities for social, economic and environmental impact and stimulate the development of scalable, life-enhancing mobile services

Mobile Enabled Community Services

# The GSMA Mobile Enabled Community Services (MECS) programme leverages mobile technology & infrastructure to improve access to basic energy and water services



Focus Areas:

- Advisory services to mobile operators
- Deploying £2.4M fund to support innovation and trials (minimum of 9 grants)
- Research & knowledge sharing:
  - Case Studies
  - Working Groups
  - Primary Research

Funding & Timeframe:

- £4.1M in funding (including £2.4M grant fund) from DFID's Climate & Environment Team to be deployed in 2013-2014

# How does mobile help improve energy and water access in underserved communities?

1. **Infrastructure - the ESCO model**

MNO outsources power solutions to an energy service company (ESCO) who, with the economic benefits of having an anchor client, sells community energy services.

2. **MNOs' Distribution Networks**

Access to services from product and airtime networks use the extensive rural sales dealer/ retail network for the supply or sale of energy devices.

3. **Payment Technologies**

Scratch cards and mobile money for domestic & small business use provides an opportunity to extend consumer financing for assets through pre-paid models. Personal Near Field Communication (NFC) cards and unique customer codes are also used for transferring pre-paid credit data

4. **Metering and Monitoring Technologies**

Machine-to-machine (M2M) communication technology using embedded SIM chips to transmit real-time service usage and quality to a central management system

5. **Voice, SMS and Apps**

Voice, text messages and apps can be used by communities to support on-going operation & maintenance of decentralised solutions

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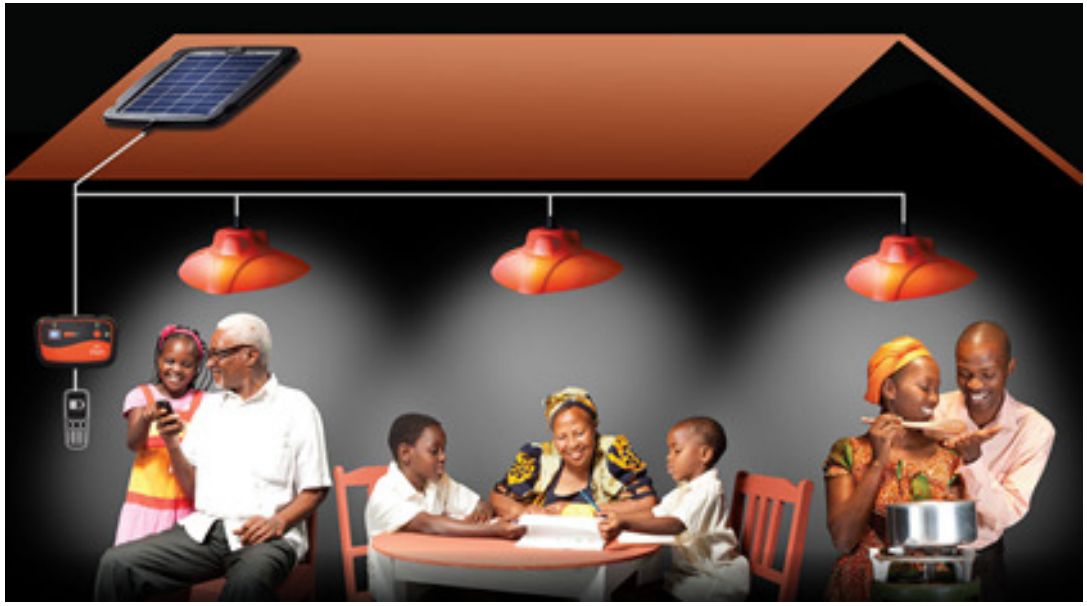
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# Mobile money, distribution and M2M channels for Household solar services

**M-KOPA:**

- Provide pay-as-you-go access to solar systems using mobile money and M2M
- M2M technology allows :
  - MKOPA to communicate the customer's balance to the solar system and to the customer
  - The solar unit/control panel communicates information about performance and usage
- Reached 35,000 households in October 2013

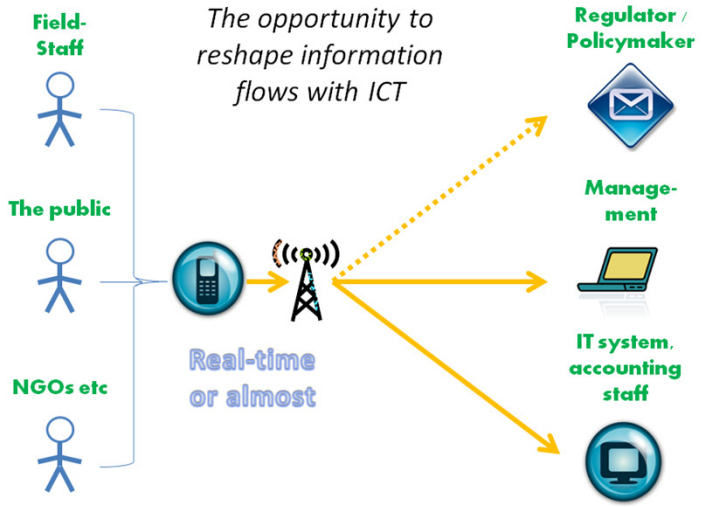
**Safaricom:** leverages Safaricom netowrk – using 750 M-PESA agents + trial underway in Uganda with Warid/Airtel



# Clean Water Access using App, Voice, SMS – See Saw and Manobi

**See Saw, Angola:**

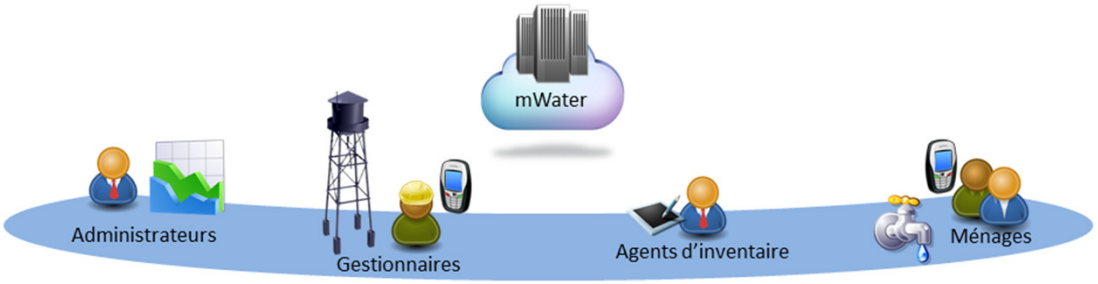
**Meter reading (data collection by agents using missed calls), fault reporting and customer feedback (data management through App – 3G and GPS). Also plan to incentivise usage through mobile credit using SMS campaignes.** Software that improves the effectiveness of peri-urban water delivery for the Luanda Water Company by: monitoring of performance and, in urban areas, strengthens revenue collection and reduces non-revenue water




**Manobi – Senegal**

Maintenance of rural water networks through mobile 2 internet solutions.

Agents download the Manobi software app and use SMS to send information to platform and keep track of water usage and good state of the water pipes in rural settings.



# Infrastructure channel – Mini grids

- Hybrid energy system that combines solar PV and biomass gasification technologies
- 4 gasification gensets producing 10-40 kW of electricity for rural community power and small industrial applications
- Sells electricity directly to the BTS and cut Tower Cos' cost by up to 50%

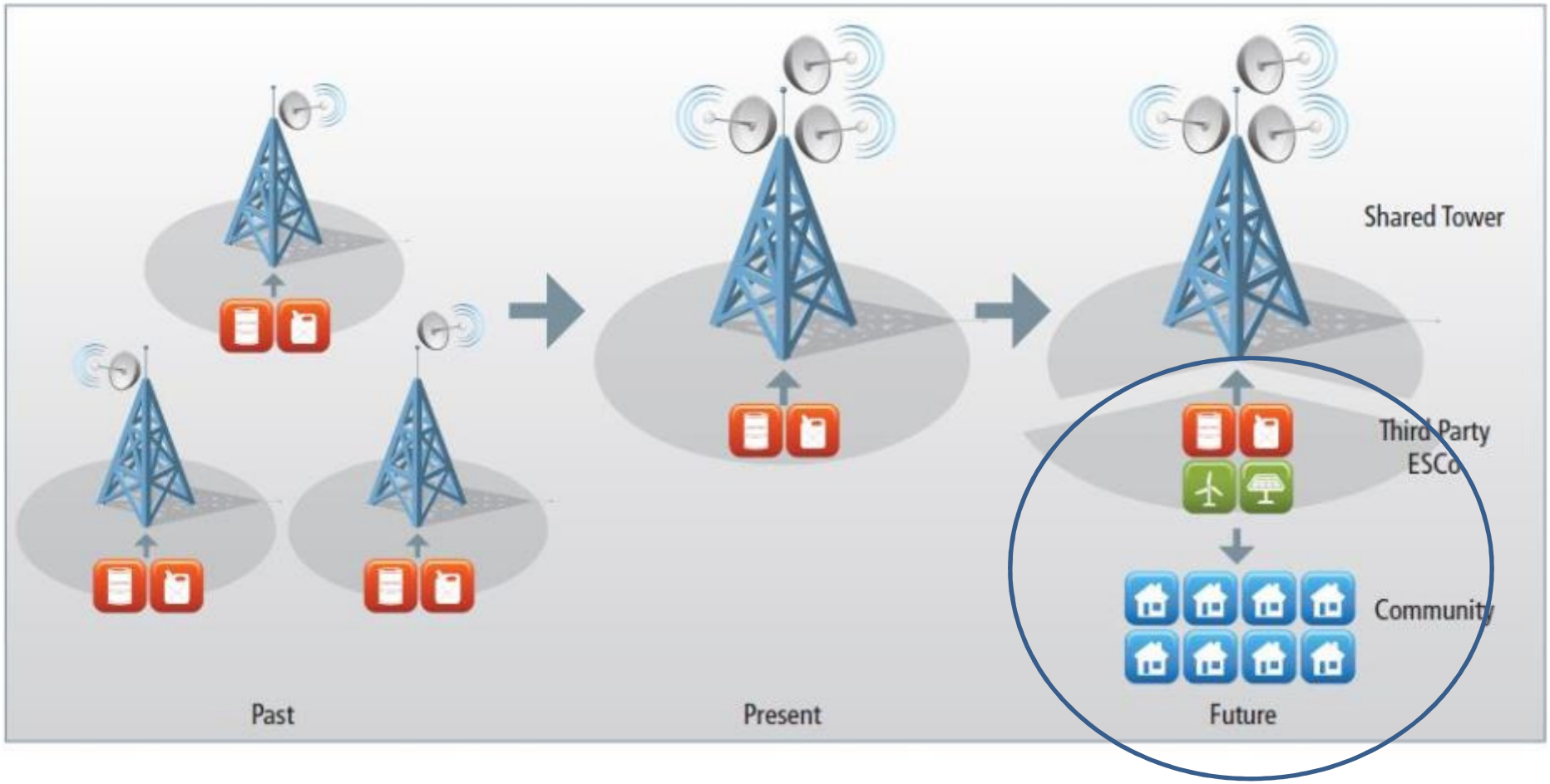
"Before small farmers either had to transport crops to urban areas for additional revenues or had to sell them cheap to middle-men due to small volumes.

Now, with decentralized electricity, farmers can capture this additional revenue from their crops."



Implementation of this inclusive energy system in Uganda is supported by the World Bank- Millenium Science Initiative and the SIDA's Innovations Against Poverty program.

# Where GPM and MECS meet



# For more information:

http://www.gsma.com/mobilefordevelopment/programmes/mobile-enabled-community-services

## Thank You!