

Leveraging Mobile for Water and Energy Access

Mobile Enabled Community Services

August 26th
Dhaka

Objectives of Workshop

Mobile Enabled Community Services

- Networking and stimulating partnerships
- Sharing experiences and learning
- Take the pulse of a fast moving industry
- Understanding the barriers for growth and the role for MECS

Workshop Agenda

Mobile Enabled Community Services

- The MECS Programme and Bangladesh Context
- Lessons from Application Pipeline
- Energy Solutions in Bangladesh
  - IDCOL's Renewable Energy Initiatives
  - M-KOPA: An Overview
  - Energy Services: An MNO's Perspective
- Adopting Mobile Financial Services
- Mobile Applications for Water
  - Sarvajal: Technology Enabled Community Water Solutions
  - Mobile Application Based Programme Management Information System
  - Using Mobile for Project Monitoring



Mobile Enabled Community Services

Predicting the Future of Mobile Enabled Community Services

Programme Overview

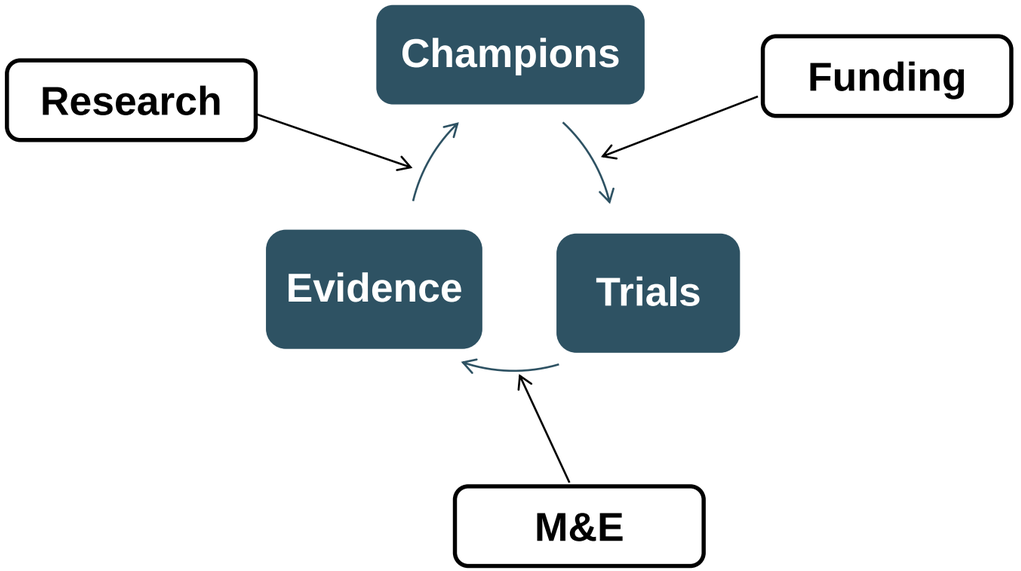
The GSMA Mobile Enabled Community Services (MECS) programme leverages mobile technology & infrastructure to improve access to basic energy and water services

Funding & Timeframe:

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

Programme Activities:

- Knowledge Sharing and Convening
- Technical Assistance
- Innovation Fund
- Market Building



Objectives

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Share Insights of our work from 2013, and provide a foundation for discussing the future of mobile enabled community services

- Presentation of findings
  - The MECS Market Opportunity
  - The MECS Innovation Fund: An Idea Factory
    - Creating a pipeline of opportunities
    - MECS Grantees
    - The role and opportunity for MNOs
  - Pipeline Analysis
    - Regional Spread
    - Prevalence of Mobile Channels
    - Lead Organisation
    - Business models



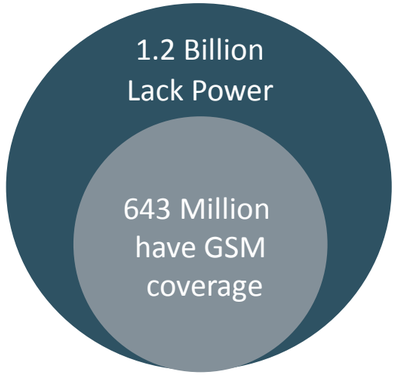
Mobile Enabled
Community Services

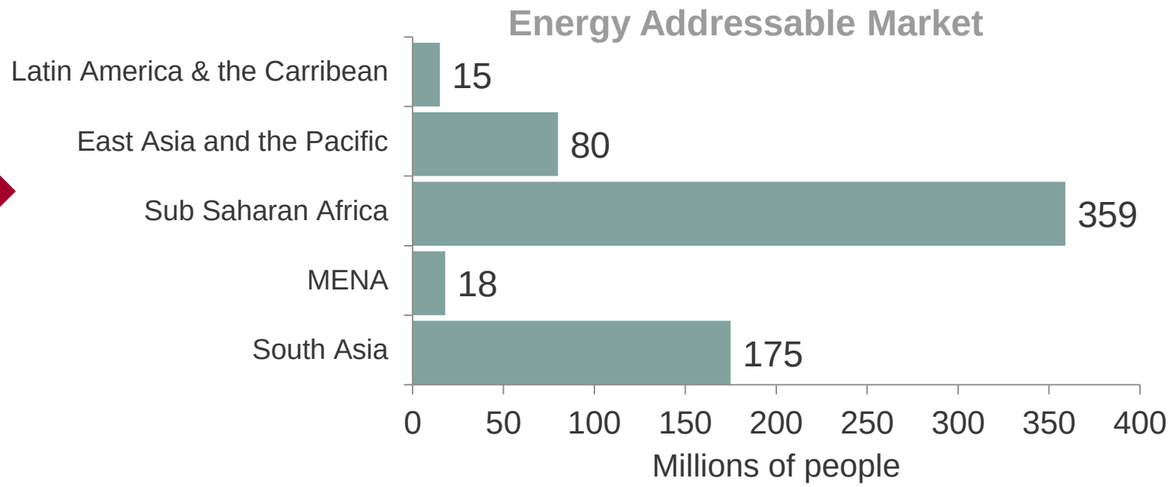
The MECS Market Opportunity

The size of the opportunity

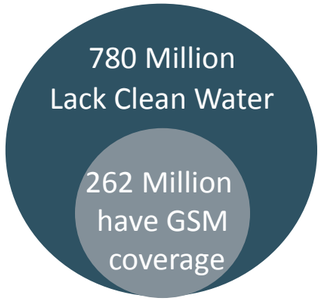
Mobile Enabled Community Services

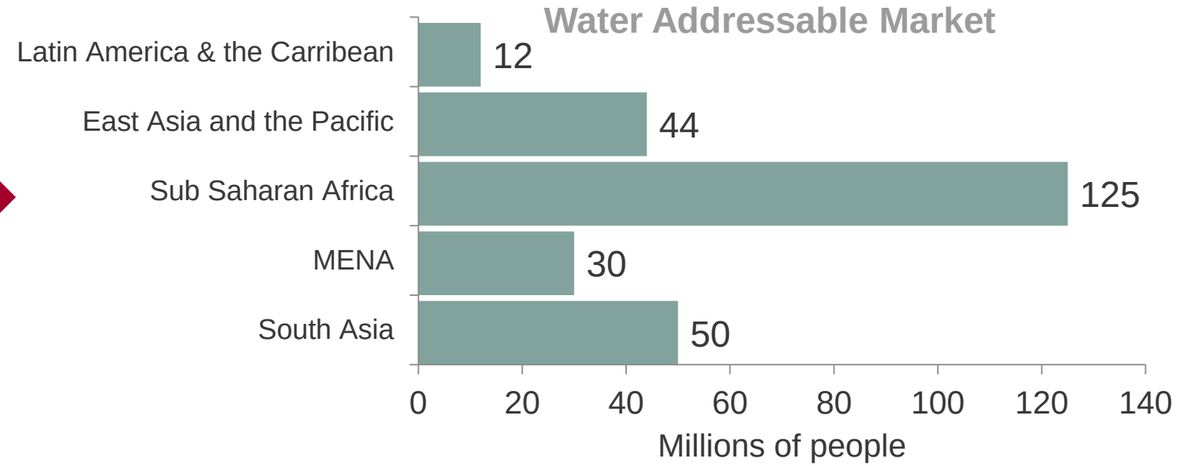
Energy





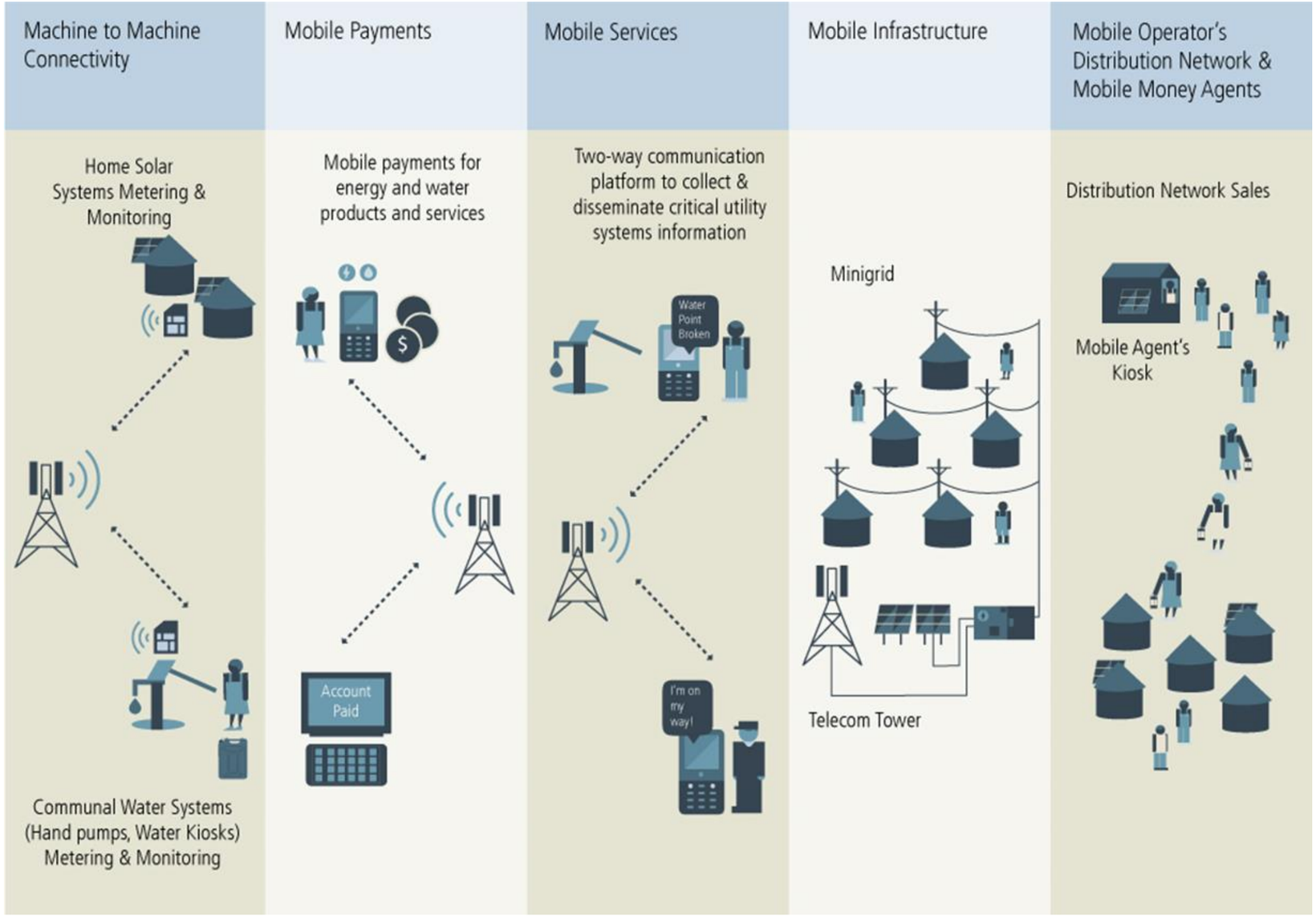
Water



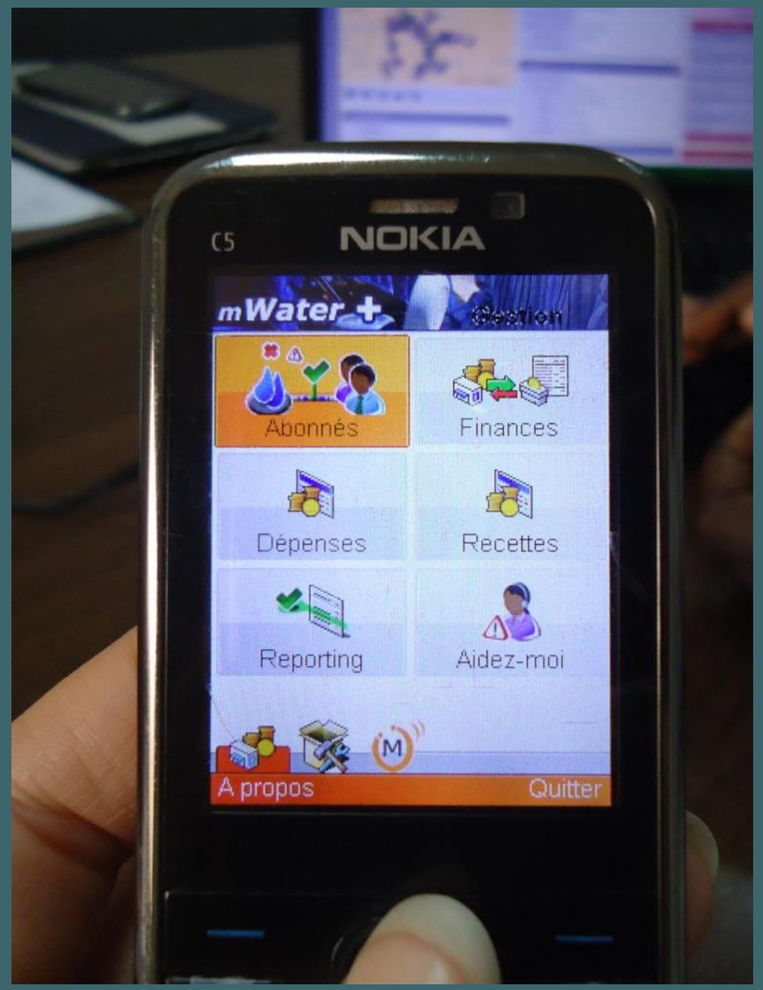


Accelerating the MECS ecosystem

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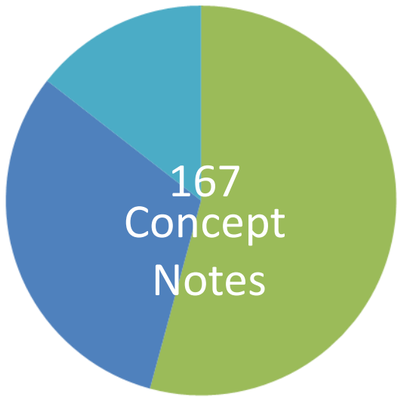


An Idea Factory:
The MECS Innovation Fund

Pipeline of Opportunities

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2- stage, competitive process delivering insights in the future of the sector



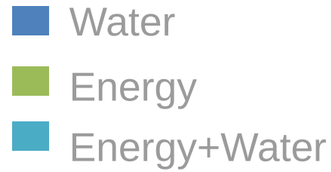
Asia 65, Africa 89, Latin America 7, Other 6



Asia 19, Africa 24, Latin America 3



Asia 5, Africa 8

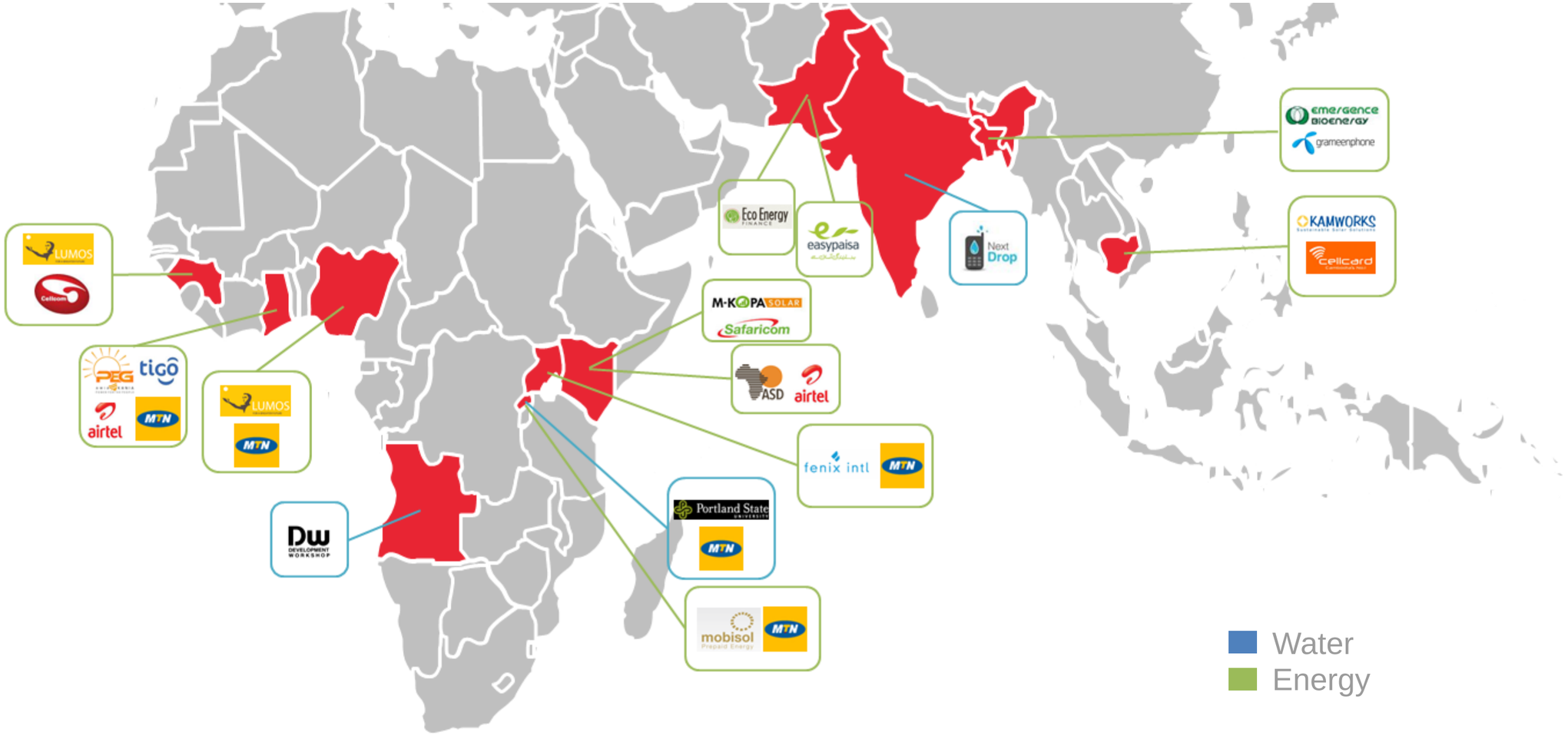


Key Trends:

- Mobile Operator Partnerships:
  - Concept Notes: 36% proposed partnerships with operators
  - Grants: 77% of grantees have partnerships with operators
- 44% of concept notes proposed to use Mobile Payments
- 35% of concept notes proposed to Machine-to-Machine technology
- Differing business models for different context
- Nascent water business models

MECS Grantees

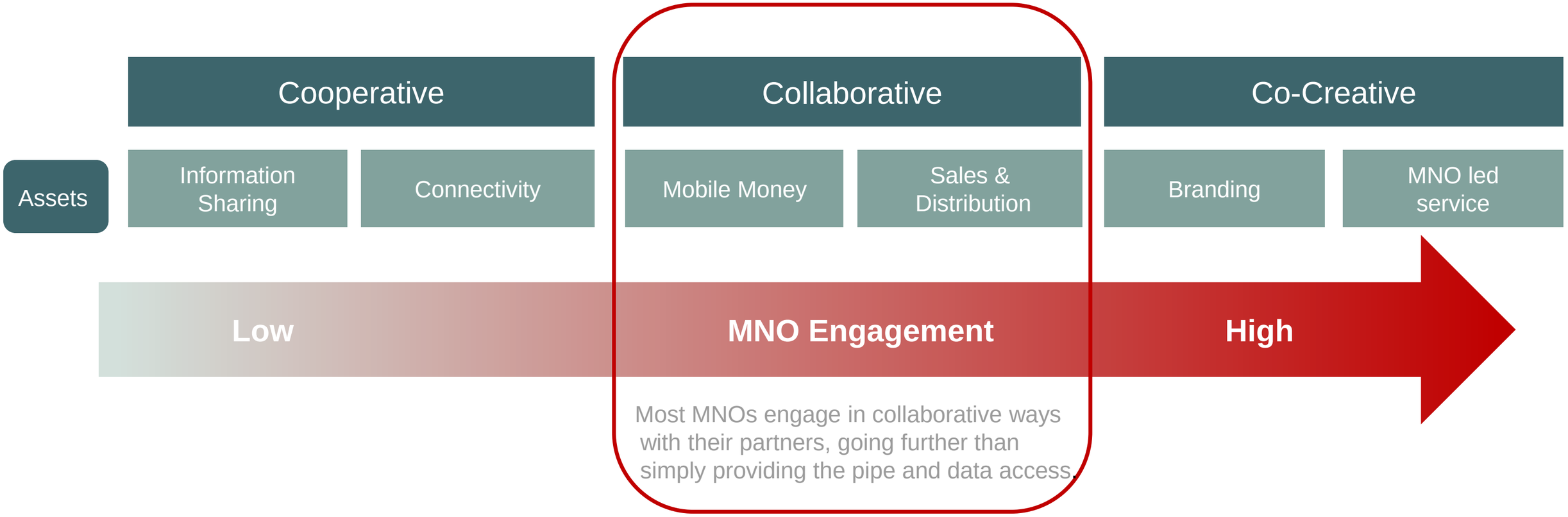
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MNO Engagement Spectrum

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We reviewed the 25 MECS Innovation Fund applications, which included MNOs as partners or lead applicants, as well as their detailed partnership plans. This analysis allowed us to build a spectrum of MNO engagement when partnering with third party providers.





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Pipeline Analysis:
A look into the future

Dimensions of Analysis

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Each Concept Note was analysed across the following dimensions to identify key trends

Grant Type and Context

- Type of Grant
- Geography
- Sector: energy, water, etc..
- Setting: rural, urban, peri-urban

Partnerships

- Lead Applicant type
- # of Partners in Consortium
- Telecom Partner
- Implementation Partner

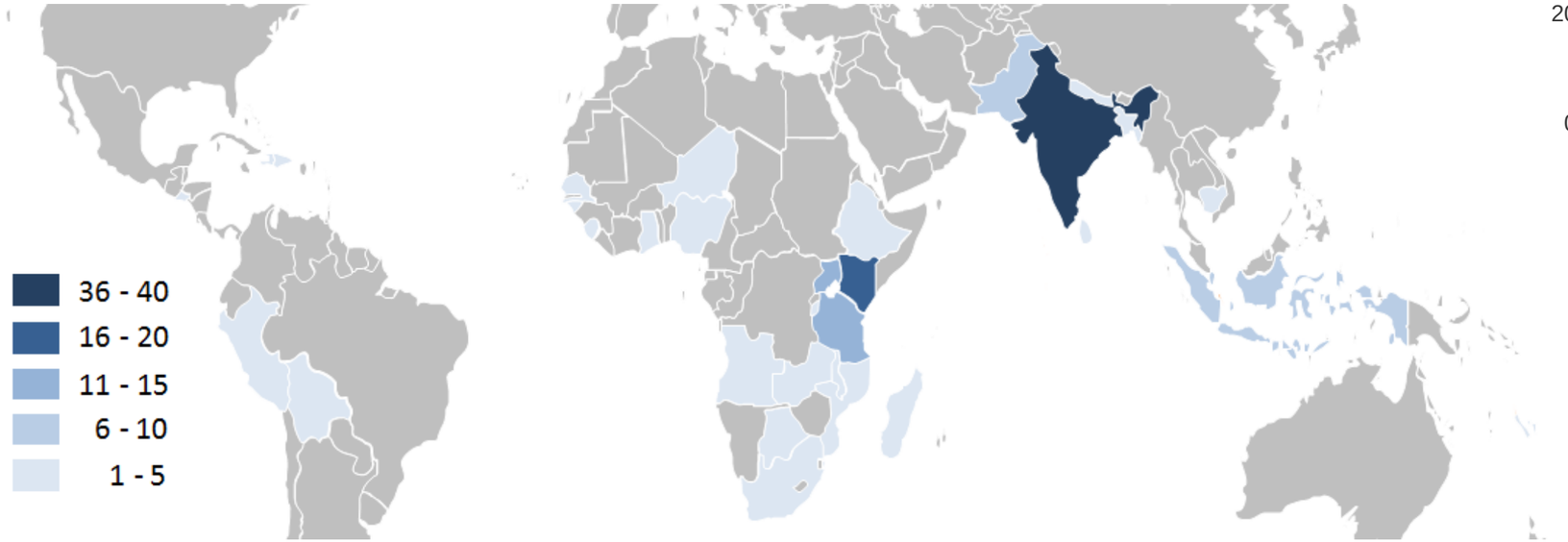
Business Proposal

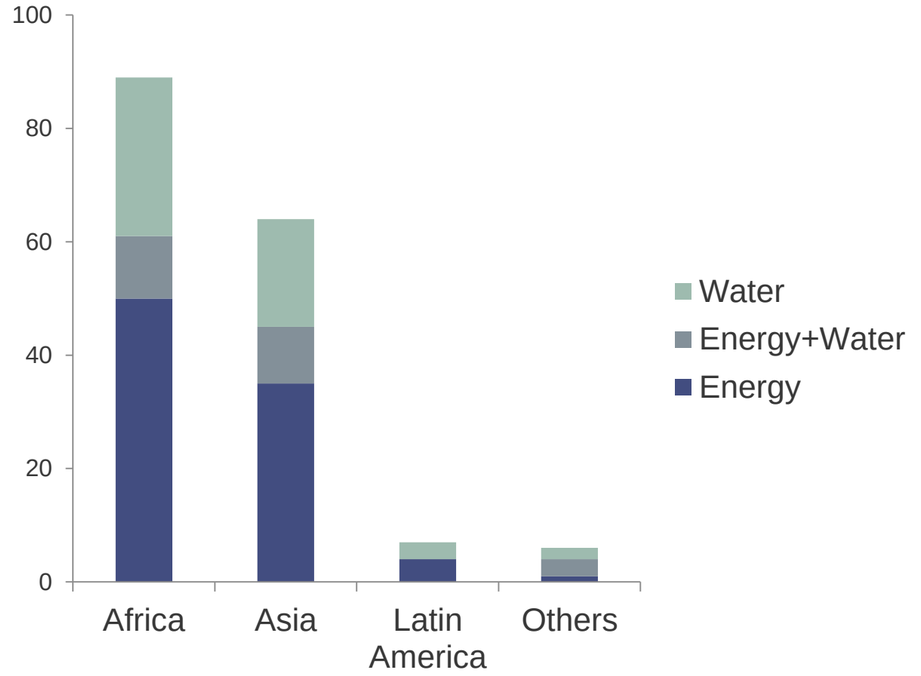
- Offering: Product, Service
- Mobile Channels
- Business Model
- Consumer Value Proposition
- Government as a Customer
- Payment currency: mobile money, physical

Regional Spread

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- 3 continents & 35 countries represented
- Activity is in line with addressable market
  - Africa is the most active continent
  - India is the most active country





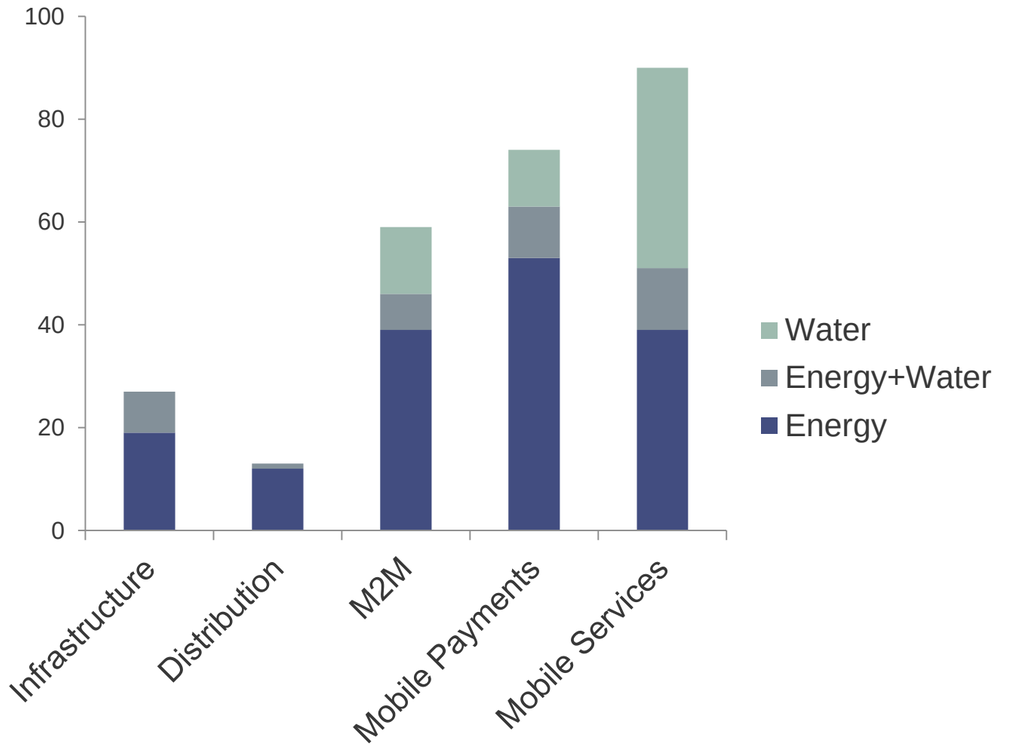
- Interest in Latin America, despite lack of active marketing
- Others: multiple continents and outliers

Mobile Channels

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Mobile Services, M2M and Mobile Payments are most popular

- Most popular channels require light touch MNO partnership
  - 54% Mobile Services
  - 44% Mobile Payments
  - 35% M2M
- Infrastructure and Distribution channels leverage core MNO assets, therefore most difficult to develop
- Use of multiple mobile channels: Average number of mobile channels for Energy (1.80) > Water (1.21)

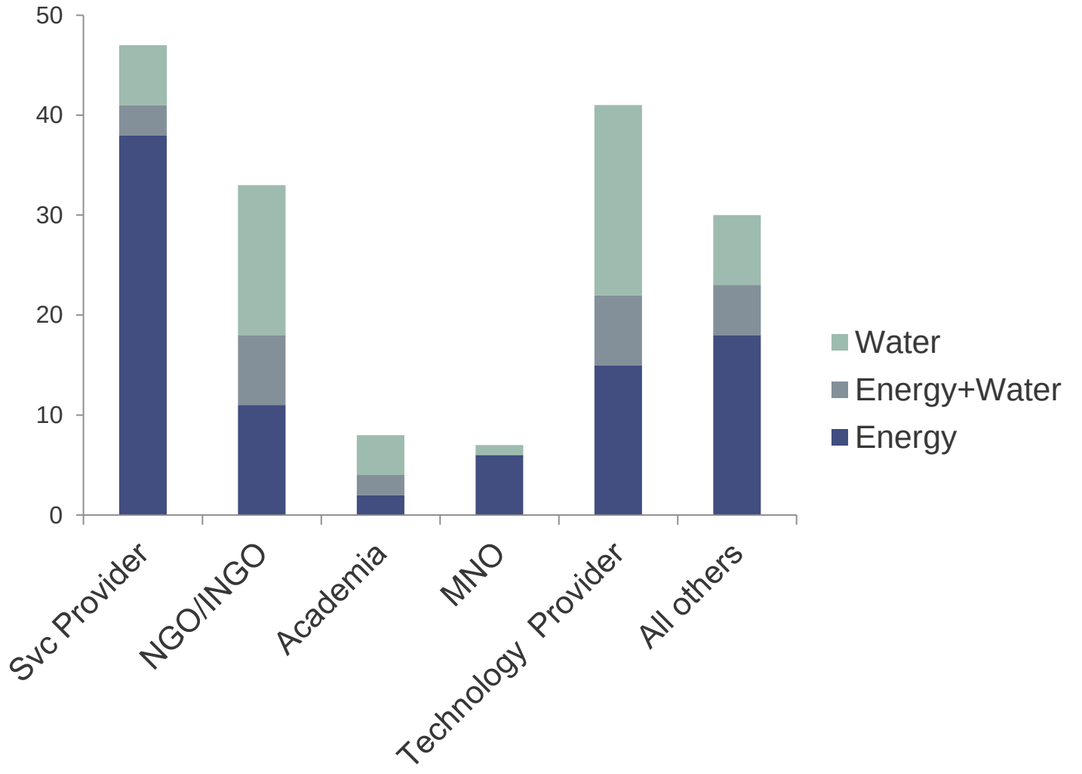


Lead Organisation

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Lead organisation indicates relative maturity of energy business models

- **Energy-only ideas:** service providers led 40%
- **Water-only ideas:** technology providers led 36%; academia and NGOs together led another 36%
- Water just beginning to adopt mobile, most often to improve delivery and gather/spread information
- More needs to be done to educate water service providers about the capabilities of mobile





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Pipeline Analysis: Business Model Trends

Use cases from Rural to Urban

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Rural Underserved Community

- **Energy access:** Poor, inconvenient and very expensive. Sources are unhealthy
- **Water access:** Improved sources are often unreliable, alternative sources are often unsafe and inaccessible

Urban Underserved Community

- **Energy access:** Grid energy is cheap and available even if unreliable.
- **Water access:** Generally intermittent and expensive to buy in small quantities

Business Models

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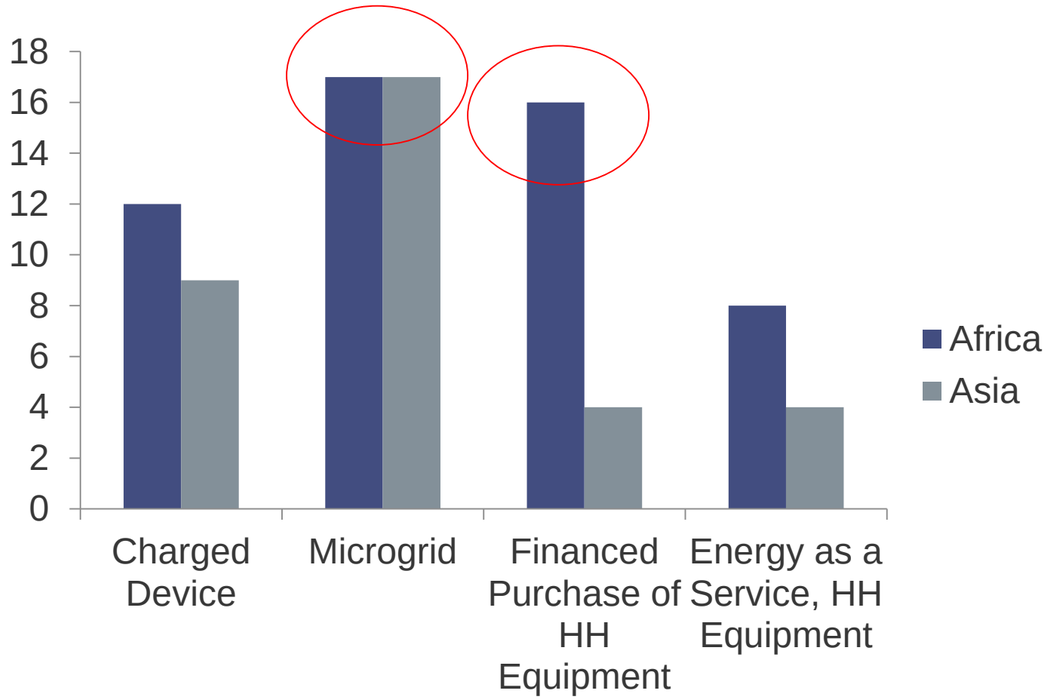
- 55% of all water & energy proposals included Pay-As-You-Go (PAYG) business models
- Energy sector is maturing
  - PAYG made up ~70% of all proposals, indicating financial flexibility a major driver
  - 4 models
    - Micro-Grid
    - Charged Device
    - Financed Purchase of household solar system
    - Energy as a service for household equipment
  - Many proposals included multiple PAYG business models

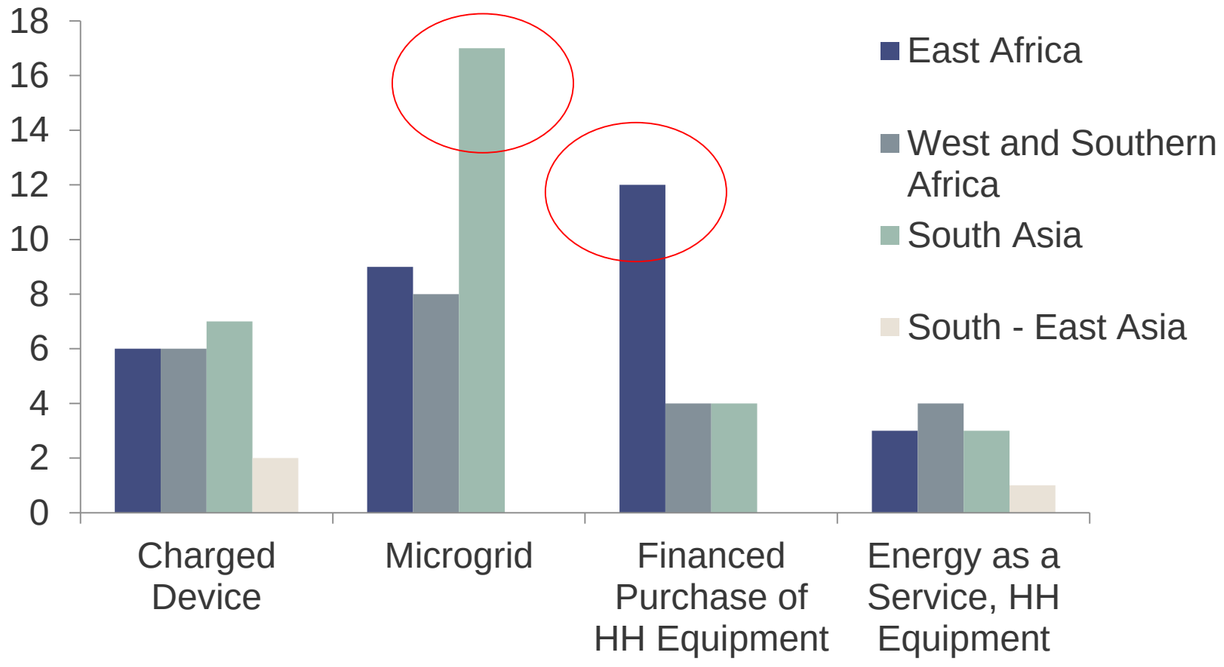
- Water sector is more nascent and complex
  - PAYG made up ~25%, most proposals (~60%) focussed on information exchange to improve water service delivery
  - More experimentation and proof points are required to reach the sectors potential

PAYG Energy: Regional Variances

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- Microgrids similarly popular across Asian and African continent
  - Yet microgrids dominant in South Asia potentially due to high population density
- Financed purchase of energy equipment more popular in Africa
  - Potentially driven by popularity of home solar systems and maturity of mobile money in East Africa

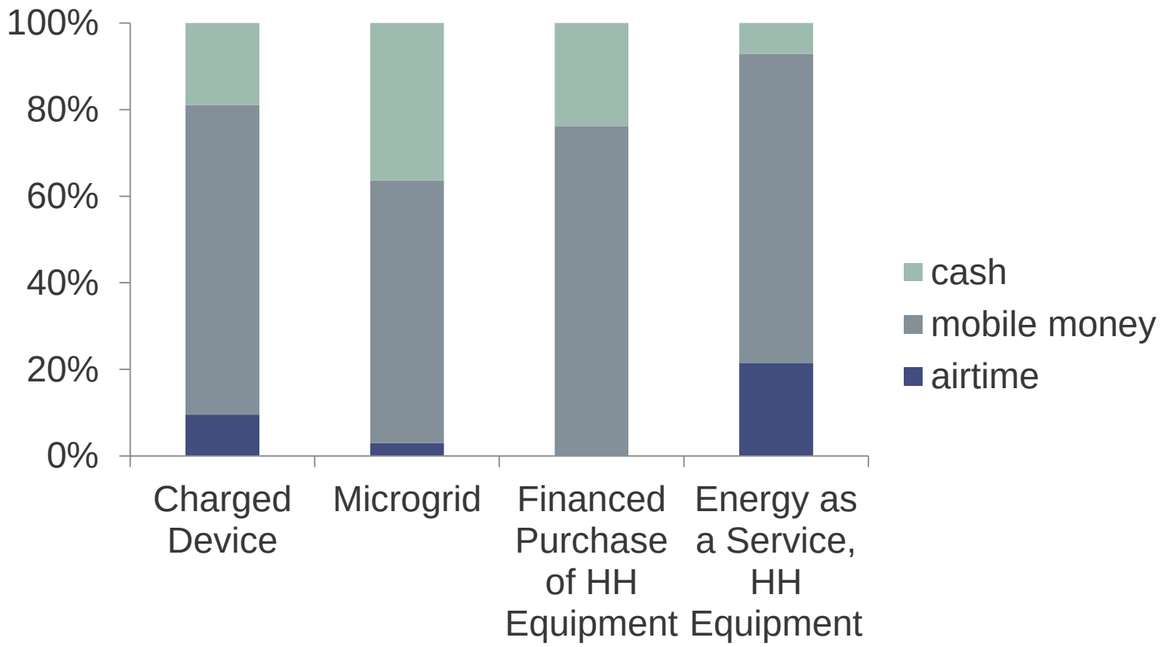


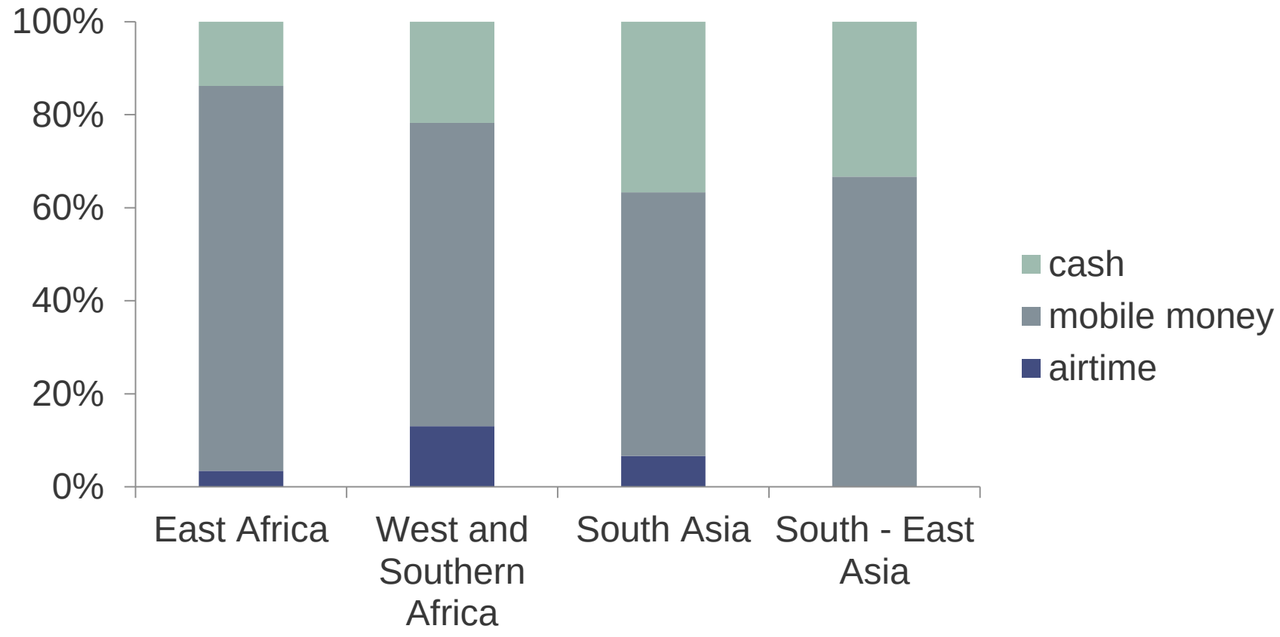


PAYG Energy: Currency choices

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- Mobile money: digital currency of choice; dominant in mature East African markets
- Airtime: 3 of 4 proposals were in less mature mobile money markets[1]
- Cash: Greatest reliance in South Asia where mobile money penetration is lower[2]





1) Countries where airtime proposed: Guinea, Nigeria, Kenya, Botswana, India
2) Countries in South Asia where cash used: 8 India, 2 Nepal, 1 Bangladesh

Water Service Challenges

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- **Multiple dimensions of water services require multidimensional solutions**
  - Water is infrastructure-intensive
  - Quality of water, reliability of service delivery, affordability

  →Information collection and exchange for real time monitoring and accountability

- **Financial non-sustainability requires consideration of cost recovery**
  - Limited achievement of operational cost recovery
  - Subsidised by government and donors

  →Need to carefully consider who pays to sustain service, mobile payment and billing

- **Complex institutional responsibilities require multi-stakeholder engagement**
  - Numerous stakeholders: local and national governments, NGOs, consumers, service providers

  →Govt engagement necessary but difficult: only 13% of proposals suggested govt client

  →Water service provider may not lead, but most familiar with service challenges