

SATRC Web Dialogue on Smart Cities and Societies

Mobile Operator Strategies in the Smart City Agenda

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GSMA Digital Utilities

Programme overview

Who we are

The GSMA represents the interests of **mobile operators worldwide**.

The **GSMA Mobile for Development** team drives innovation in digital technology to reduce inequalities in our world. Singularly positioned at the intersection of the mobile ecosystem and the development sector, we stimulate digital innovation to deliver both sustainable business and large-scale socio-economic impact for the underserved.

Programme mission

The Digital Utilities programme supports urban resilience in low- and middle-income countries by enabling access to essential utility services through digital solutions and innovative partnerships.

Inclusive utility services, such as **energy, water, sanitation, waste management and transport support urban resilience**, which allows cities in low-and-middle-income countries to better withstand challenges related to population growth, climate change, and inequality.



The GSMA Digital Utilities programme is funded by the UK Foreign, Commonwealth & Development Office (FCDO), and supported by the GSMA and its members.

GSMA Digital Utilities

What we do

Funding to innovators



Provide grants to private sector innovators to test and demonstrate the role of digital urban service solutions.

Research and insights



Generate rigorous evidence on innovative solutions to essential service provision by gathering insights from Innovation Fund grantees, conducting research with partner organisations with deep expertise in utility service provision.

Partnership facilitation



Drive replication and scale through convenings and leveraging our own networks (particularly mobile operators) as well as those of key partners that work to enable similar solutions.

Technical advice



Provide advice on the role of digital innovation for improved utility service provision and insights on how to achieve multi-stakeholder partnerships.

Why mobile operators should care about the growing smart cities solutions market

- Two thirds of the global population will live in cities by 2050 (up from 50% currently)
- Cities across Africa and Asia will account for 90% of this increase, contributing 900 million and 1.1 billion urban residents respectively
- Billions of people lack access to reliable, affordable, and sustainable urban services such as energy, water, sanitation, waste management, and transport
- Digital technologies have not only enabled innovative service models that increase access to essential utility services, but have also helped cities absorb, adapt and anticipate current and future challenges related to climate change.
- Connectivity is clearly at the core of many smart city solutions
- MNOs need to reposition themselves to capture more of the value chain of digital services

Smart city market profiles of operators

Connectivity provider

- Providing connectivity as requested.
- Not actively pursuing smart city as a business line.
- Part of the enterprise offer.

Connectivity specialist

- Usually a dedicated smart city offer, under IoT solutions and part of the enterprise offer.
- Offer is focussed on connectivity services and connectivity management.

Solution provider

- Dedicated smart city offer, under the IoT solutions portfolio.
- Offer includes connectivity and smart city platform services.

The opportunity

The expansion of mobile connectivity has enabled the emergence of digital solutions that are making essential urban utility services more accessible, affordable, reliable, safe, and sustainable. These solutions are set to play a vital role in making cities more resilient to the challenges of population growth, climate change, and persistent inequality.

How digital solutions are uniquely positioned to improve urban service delivery

Mobile technology bridges gaps in service delivery for sustainable, inclusive services:

Service Gaps



Unaffordable

Pay-as-you-go (PAYG) can make services affordable for low-income consumers; and

Mobile money can reduce the cost of operations and improve revenue collection.



Unconnected

Geographic Information Systems (GIS) can generate granular data to geographically pinpoint service needs as well as coordinate service delivery across complex value chains.



Unreliable & Unaccountable

Smart monitoring and smart metering can improve operation efficiency; and

The Internet of Things (IoT) can automate management of service delivery and consumption.



Unplanned

Big data derived from mobile phones, geospatial data sets, and other innovative data sources

can complement traditional data to improve urban service provision.



Unsafe

Sensors can be used to monitor compliance with minimum safety and quality standards; and

Support reliability of regulated services that are safer than alternatives.

Digital Solutions

GSMA Innovation Fund Case Study: Sri Lanka

Grant overview: In 2015, Dialog Axiata (in partnership with LECO) received a grant from the GSMA Innovation Fund to deploy smart metering and improve power distribution network monitoring capability. The solution was developed by the Dialog-University of Moratuwa Mobile Communications Research Laboratory and Dialog Axiata and is manufactured locally.

Impact: Currently collecting data from over 3,200 smart meters and 150 network monitoring devices, the solution is enabling LECO to analyse electricity usage and isolate any faults in its grid. To allow LECO to quickly respond to power interruptions, the network monitoring devices track the low voltage power distribution network in real-time, while providing detailed power quality measurements, such as voltage sags, swells and interrupt information. This enables the utility to have a good insight into the behaviour of its distribution network.

Looking ahead: This project has already scaled up and helped LECO to launch fully integrated, prepaid electricity metering - a longtime goal for Sri Lankan utilities, to provide a pay-as-you-go option for its customers.



Digital Urban Utilities Forum on Advancing Smart Metering in Delhi

Summary

The forum brought together a distinguished group of stakeholders, including telecom operators, government officials, utilities, and innovators, to explore the opportunities and challenges of scaling smart metering in India. The forum underscored the importance of cross-sector collaboration in achieving India's vision to install 250 million smart meters by 2026, along with the goal of creating a smart energy grid that can integrate renewable energy solutions, accommodate energy efficiency and trading, while taking advantage of India's rapid transition to e-mobility.

- **Three key Insights from the forum include:**

- **Collaboration and Standardisation:** Industry-wide collaboration is essential to overcome operational challenges, improve interoperability, and accommodate network upgrades. Energy sector professionals and regulators need to become digital experts and must understand the requirements of energy utilities.
- **Global and Local Successes:** International case studies illustrate the importance of regulation, standardisation, and strong customer engagement in successful smart meter deployments. Progress across some states in India highlighted opportunities to learn from the challenges encountered.
- **Opportunities for Innovation:** The data generated by smart meters opens opportunities for start-ups and DISCOMs to create new business models, enhance operational efficiency, and develop revenue streams. It is a good time to build links with the growing smart city ecosystem across India, and collaborate on use cases such as EV charging, municipal services, and electric appliances.

Looking Forward: supporting partnerships, developing recommendations, sharing best practice (through our upcoming study on the role of MNOs in smart cities), and a more in-depth scope of start-ups providing smart grid solutions.



Call to Action



Mobile operators are essential partners in building smart cities



Digital tools like IoT, mobile payments, and smart meters improve efficiency and accessibility



Collaboration between the telecom sector, governments and regulators and industries, is crucial to scaling solutions

Ongoing GSMA Intelligence Study: Mobile operator Strategies in the Smart City Agenda

- Research builds on recent Digital Utilities program work on IoT deployments across SSA, South Asia, and Southeast Asia that shows IoT connections will 2x in these regions – with utilities verticals accounting for ~30%
- New research will assess mobile operator strategies in Smart City solutions and their positioning → will calculate TAM under a scenario analysis from only connectivity provider to solutions provider (i.e. providing applications, services, and engagement on hardware)
- Research aims to identify operator's role in partnering with municipalities and solution providers to accelerate adoption
- Focus will be across SSA, South Asia, and Southeast Asia
- Interested in participating? **Reach out to gbauer@gsma.com**

Thank you

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