



Connected Living



Mobile for Smart Energy

Svetlana Grant, Director, Smart Cities, GSMA
Metering Europe, 10 October 2012

What is GSMA



- Founded in 1987 by 15 operators committed to the joint development of a cross border digital system for mobile communications
- In 24 years GSMA membership has grown to nearly **800 of the world's mobile operators** and **over 200 companies in the broader mobile ecosystem**, from 219 countries
- Innovating, incubating and creating new opportunities for its members, to drive the growth of the global mobile communications industry
- GSMA represents over 5 billion connections around the world



GSMA Connected Living Programme



Smart Energy & Utilities is the main pillar of the GSMA Smart City work stream



Mobile for Smart Energy – Connected Devices



Connected Objects

- Connectivity for M2M devices:
 - Smart meters and smart grid hubs;
 - Home and building energy management hubs;
 - Connected plugs/thermostats/heating systems;
 - ...any many other smart home/grid devices



The Screen

- Smartphone apps
- Tablets
- Notebooks
- IHDs



The Actuator

- Remotely managing and controlling connected “things”
- Payment device (SMS, mobile wallet, NFC)



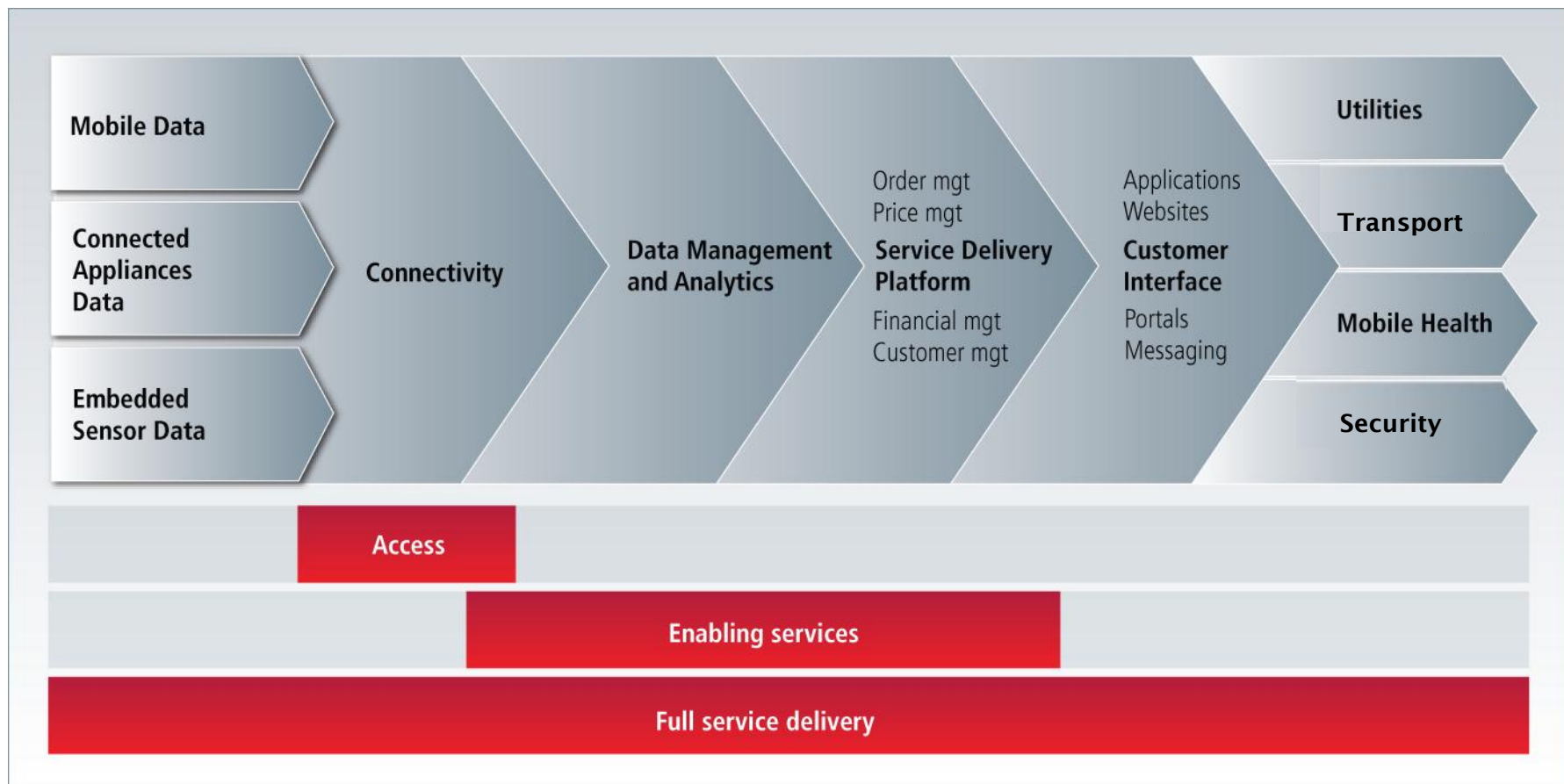
The Sensor

- Mobile phone as a sensor



Mobile for Smart City – Beyond Devices

Mobile technology and networks are used across the entire value chain

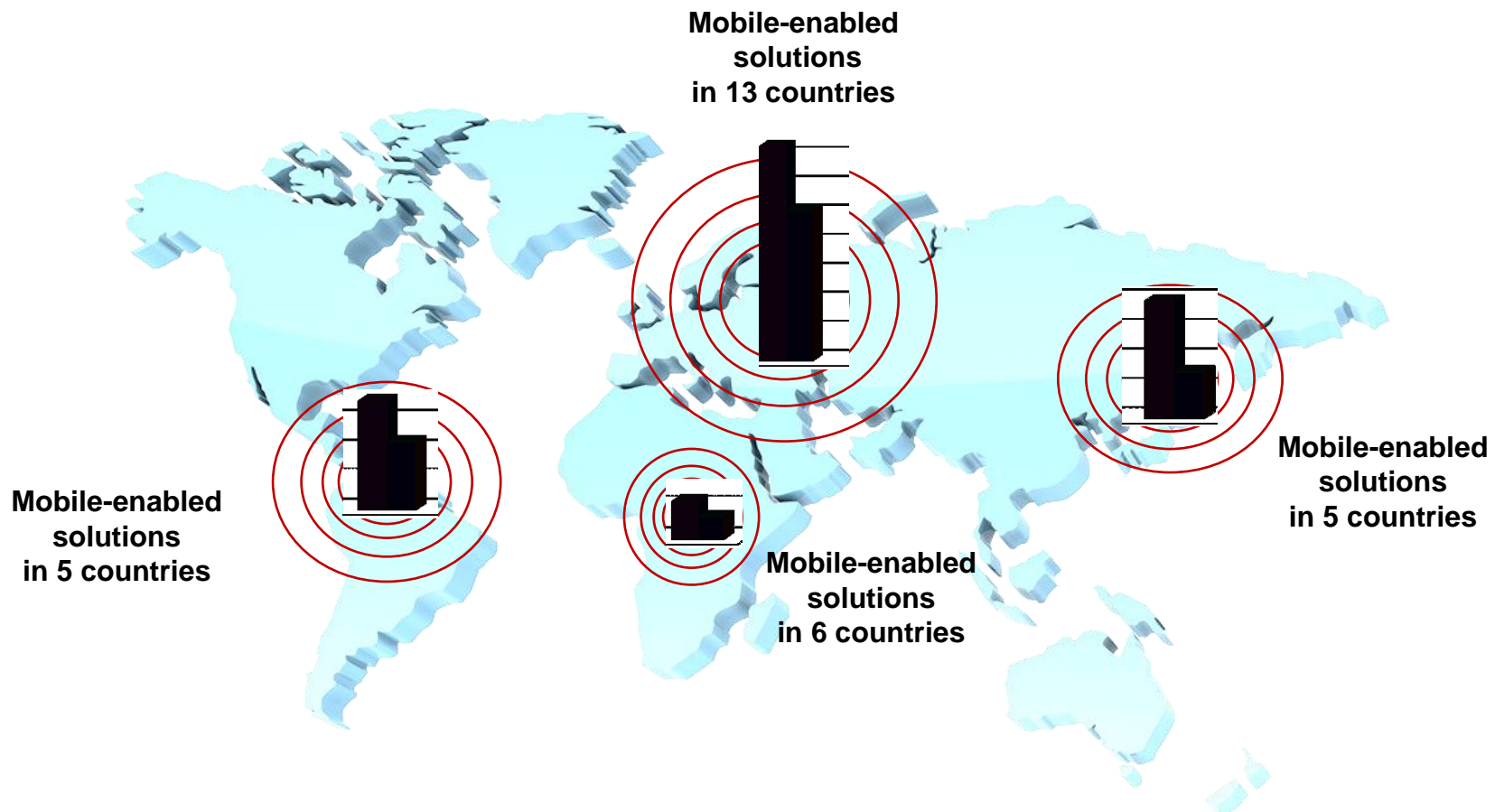


Source: Accenture, Smart Mobile Cities report, 2011

Mobile smart cities – Real-World Deployments



Mobile smart metering, smart grid and smart home solutions **beyond** smart phone apps are deployed in 30 countries. Half of these are located in Europe.



Source: GSMA Smart Cities Tracker, Sept'12

<http://www.gsma.com/connectedliving/tracker>

Smart Grid Test – Beds/Pilots



Europe:

Trials and pilots with the involvement of mobile operators in at least 8 markets, including Belgium, Bulgaria, Czech R, Germany, Ireland, Netherlands, Sweden, UK

USA: Envision Charlotte (NC):

PPP (Duke Energy, Verizon, Cisco, municipality) to reduce energy consumption by smart energy and water solutions

Asia:

S.Korea Jeju Island Smart Grid Test Bed

A test bed for ~6,000 households, including monitoring, managing and controlling energy usage for homes and buildings; and supporting smart grid

Japan Minato Mirai 21 in Yokohama

EV charging and Smart Grid urban model; deploying a range of CO2 reducing initiatives

ROLE OF MOBILE

- **Managed connectivity**
- **Real-time monitoring and management of millions of widely distributed managed objects** and devices, including meters, feeder automation devices, and distributed generation assets;
- Provide analytical tools to deal with large amounts of data in real-time, and be able to **bill and invoice customers for large volumes of transactions.**
- Supporting **Open Service Platform**, with 3rd party services through open APIs



Smart Metering/Grid -- Deployments



- Over 30 smart metering partnerships between utilities, municipalities and mobile operators in Europe;
- In addition to managed connectivity for concentrators, millions of end-meters are connected via mobile by such operators as Vodafone, Verizon, AT&T, DT/T-Mobile, Orange, Telefonica;
- Demand for mobile-based energy solutions is growing in smart cities;
- Smart metering as a service / as a platform solutions are being developed, tested and deployed.

LESSONS LEARNED

- Citizen participation and support of “smart” programmes are key
- Need to continue testing new revenue sharing models (e.g. Verizon water metering; Orange – Veolia JV)
- Need to share best practices in managing data and traffic across both mobile and utilities industries
- Need to speed up development of such long-anticipated technical solutions include Embedded SIM (work ongoing in GSMA)



Smart solutions are possible everywhere...

Renewables + mobile + innovation =
Sustainable “smart” renewable solutions in Africa



* Source IEA - 2011

**Source World Resources Institute - The Next 4 Billion Report 2008

... so surely we can find new models for Europe

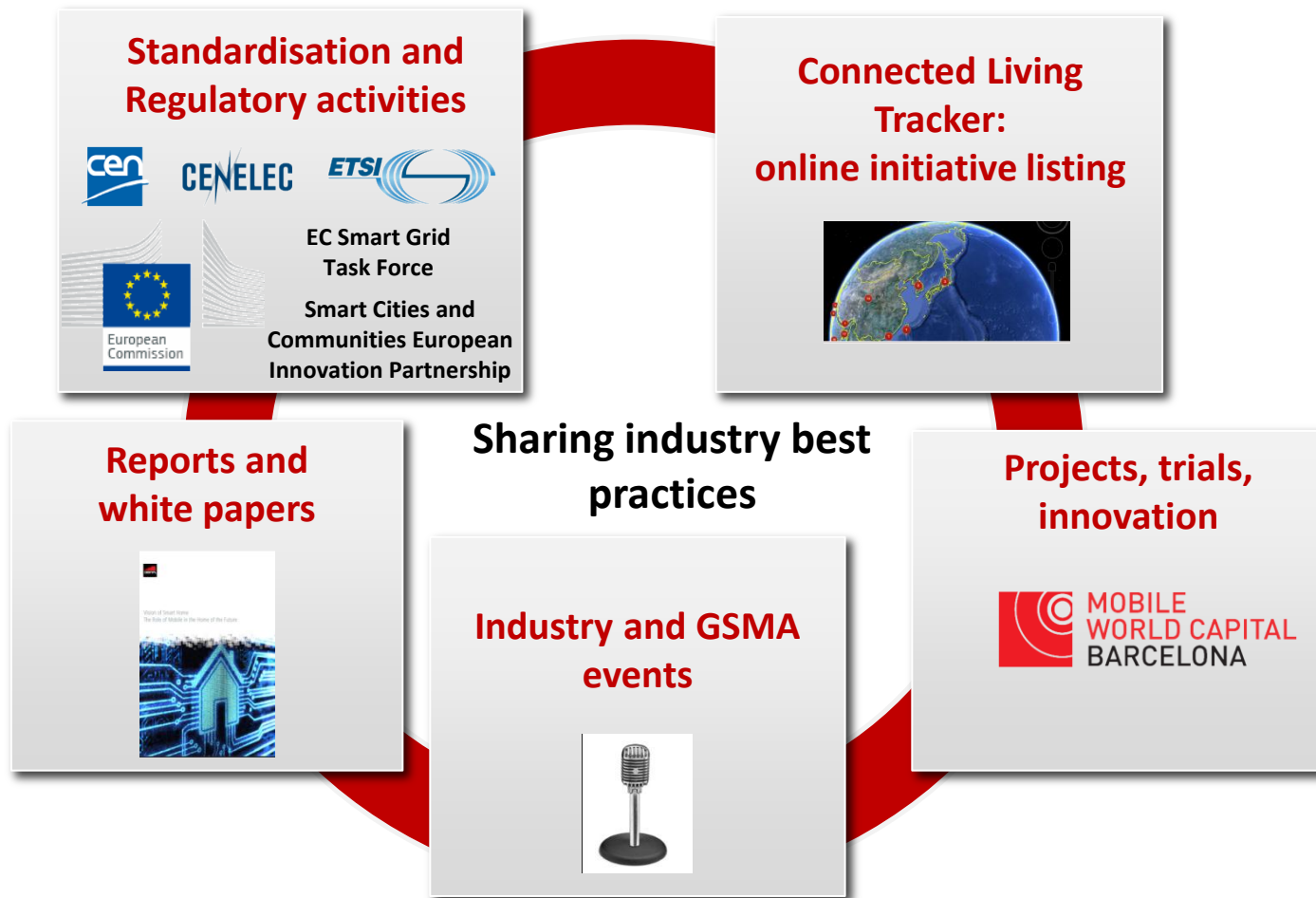
- Pay as you go smart energy solutions from
 - Eight 19
 - DT Power
 - Shared Solar
 - Simpa Networks
 - mKopa
- .. integrated with mobile banking solutions from MPESA, GCash, etc



Source DT Power



GSMA's Smart Energy Work, 2011/13



<http://www.gsma.com/connectedliving/smart-cities>

<http://www.gsma.com/connectedliving/utilities/>



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