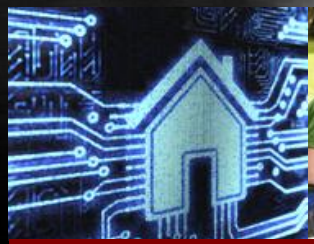
Connected Living



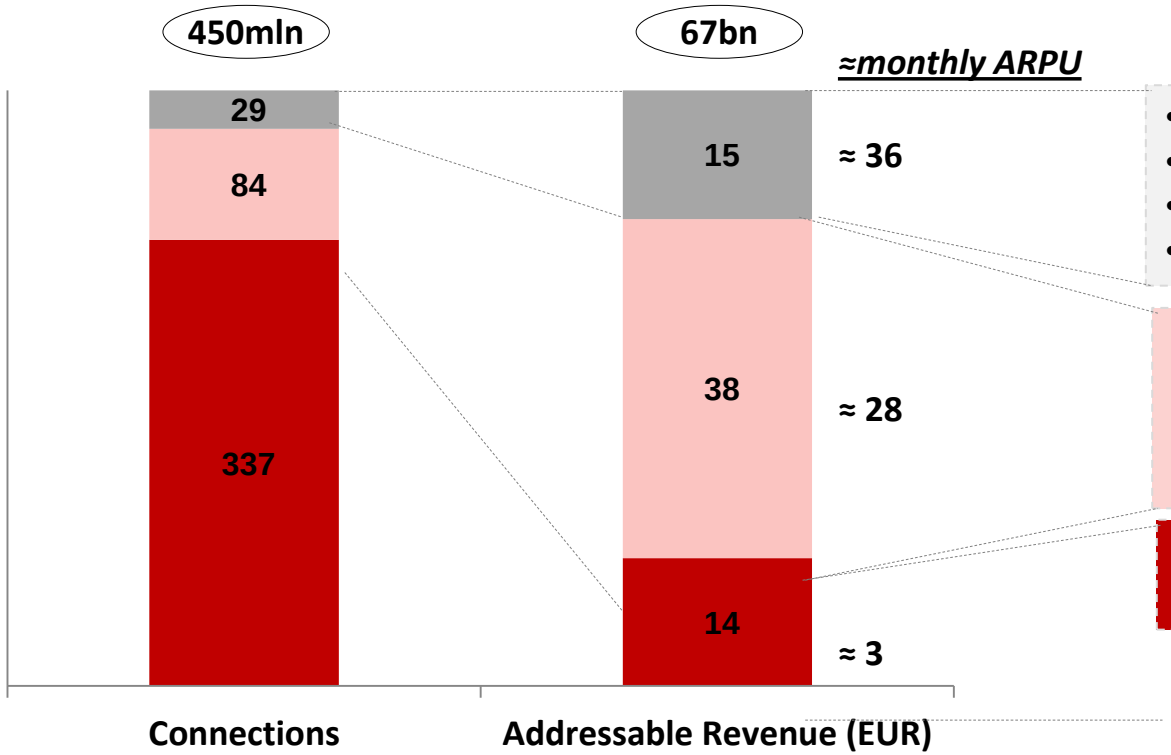
Connected Living -- Smart Cities

The Impact of Big Data for Smart Cities

Smart Cities Forum, Brussels, 6 Sept 2013

Smart city mobile opportunity of USD 67bn by 2020

Smart Cities market opportunity by 2020



Service categories

- Public space advertising
- Environment and public safety
- Public transport
- Traffic management

- Building automation
- LAN equipment
- Micro-generation
- Security

- Electric vehicle charging
- Smart metering

Wireless WAN connections (2G, 3G, 4G) and Mobile addressable revenue (USD)

Source: Machina, Utilities and Smart Cities reports

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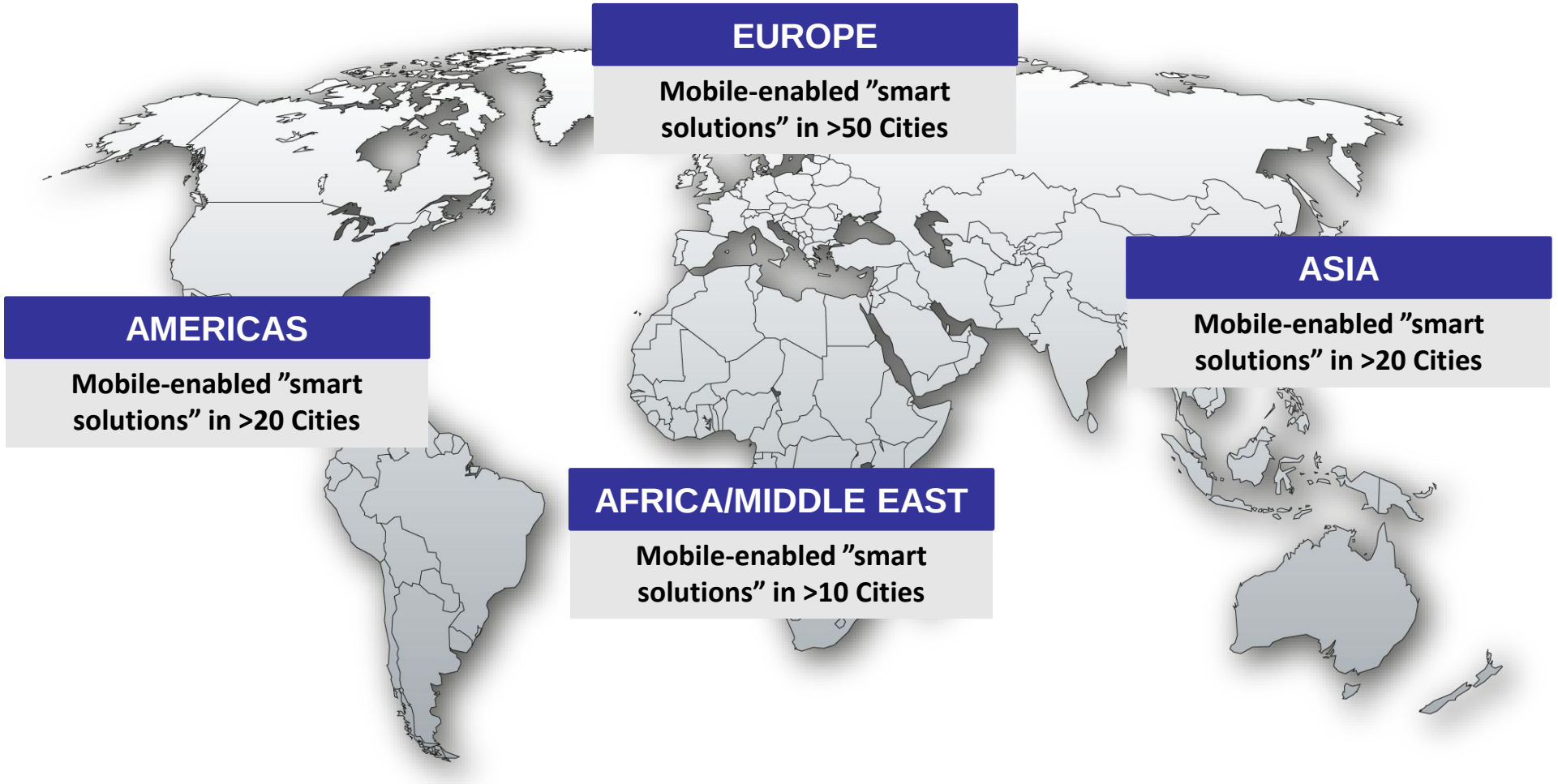
Mobile Smart Cities – Current Deployments



Source: Smart Cities Tracker, May 2013. http://gsmworld.com/connectedliving/tracker

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Smart City ICT – Mobile Indicator Components

Smart City ICT – Mobile Indicators measure, quantify and evaluate the impact of ICT – mobile solutions on smart cities, their economies, businesses and citizens

BUSINESS, ECONOMY & MOBILE CLUSTER

The impact of smart city projects on the local economy and employment

- Support for innovation and start-ups
- R&D
- Jobs

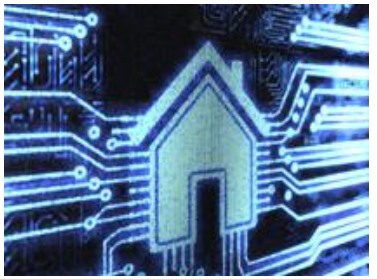
INFRASTRUCTURE

Quantifies the rollout and implementation of mobile infrastructure for smart city services.

- Mobile broadband &WiFi
- Connected Transport
- Smart Energy
- Sensor networks

SERVICES

How the cities use mobile technologies to improve a range of “smart” services for its citizens



- Payment
- Feedback mechanisms
- Public safety
- mGovernment
- Mobile smart city apps

CITIZENS

Tracks how connected and engaged the citizens and communities are

- BB access
- Mobile access
- Citizen engagement
- mLearning

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Mobile Smart Cities – GSMA's case studies

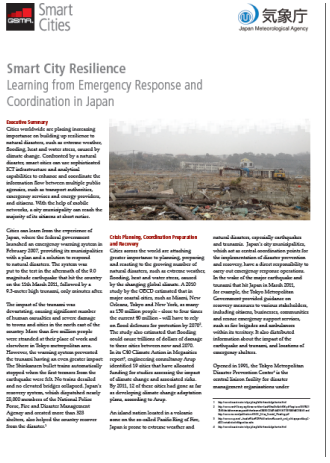
The GSMA published 6 case studies with deep dives on particular smart city projects, describing both the operation set-up and innovative technologies

Published in Sept-March 2013

Jeju Island Smart Grid Test-Bed

Busan Green u-City

Japan: Smart City Resilience



Germany: T-City Friedrichshafen

Finland: Forum Virium Helsinki

USA: Envision Charlotte, NC

http://www.gsma.com/connectedliving/resources/?project=Smart_Cities

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What are the challenges for Smart City projects?

Challenges facing Smart City projects and points for discussion

Funding of projects	• The tough economic environment creates challenges in obtaining financing • Only projects with a robust business and economic efficiencies will be adopted • Who and how should smart city projects be financed?
Retrofitting existing cities	• Standalone , brownfield projects create fragmentation between service verticals (e.g. one card seldom pays for all) • How can models be set up to integrate services across the city?
Lack of central governance	• Lack of centralized ICT strategy in the municipalities creates many inefficiencies • How can private and public bodies make sure that maximum capabilities of resources are used?
Open standards are critical	• Many different legacy systems exist across the M2M platforms and solutions • How can we foster innovation and create common APIs for M2M?
Data privacy	• Companies come under scrutiny for collecting private data in cities (e.g. Google cars) • What security measures need or should be enforced to address such challenges?

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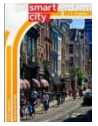
Mobile Smart Cities - Types of Collaboration

We believe that there are 3 general operating models for Smart Cities, they can be privately or publicly lead, or be a partnership between the two

	Description	Examples
1 **Private-Public Partnerships**	• Set-up jointly between the city and private companies to share access to information and develop complex projects jointly between various organizations	 • **Amsterdam Smart City** – partnership between businesses, public authorities, research institutions and citizens • **Busan Green u-City** - a collaboration between the local government, the global technology supplier, Cisco, and South Korea's largest telco, KT.
2 **Private Lead**	• Led by one main organization (not excluding partners), usually involving several different types of projects and services being developed	T-City Friedrichshafen We're living the future. IBM • **T-City Friedrichshafen** – project run by Deutsche Telekom with the aim of developing new technologies to improve the quality of life in the city • **IBM Smarter Cities challenge grant recipients** –e.g. Nanjing China, Singapore Jurong Lake District, Ahmedabad India, New Taipei City Taiwan
3 **City Lead**	• Set-up by the city to develop specific services or to promote and incubate private companies launching smart city projects • Advisory board representing both city and private companies	FORUM VIRIUM HELSINKI SHANGHAI • **Forum Virium** – subsidiary of the City of Helsinki develops digital services by cooperating with the City, other public bodies and residents. • Numerous **Smart City projects globally** led by municipalities – for example, Wireless cities – Smart Cities in China

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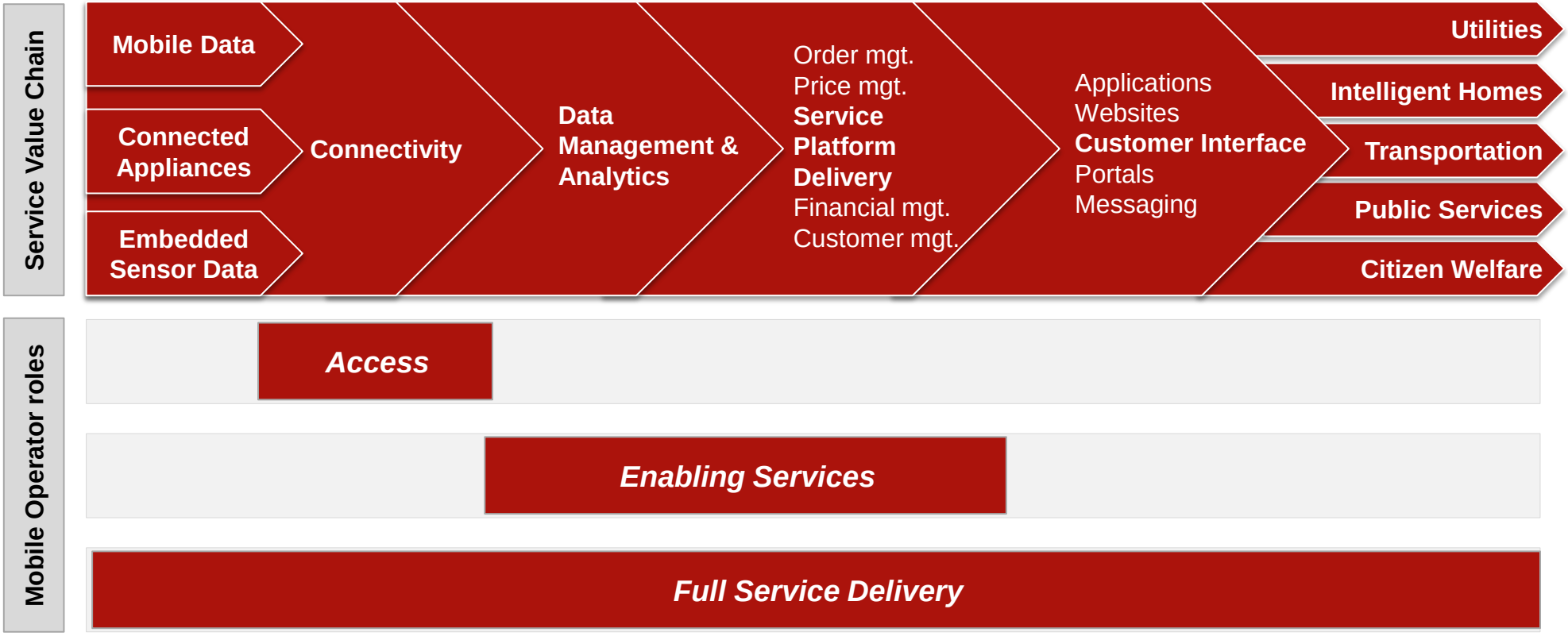
Mobile for Smart City – Beyond Devices



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Big Data for Smart Cities – some questions

Who Contributes to creating Big Data in Smart Cities?

Who owns Big Data and who will be the Guardian?

TRUST – how can we build it to allow value to be built?

Will Data ever be secure?

Big Data Mean Big Analytics

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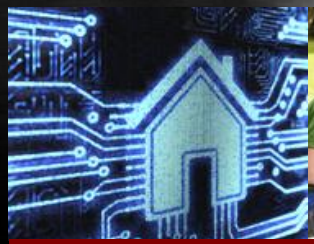

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http://www.gsma.com/connectedliving/smart-cities