LEVERAGING TECHNOLOGY TO ENHANCE CITIES’ RESILIENCE

Measures cities are taking to become "smarter" in managing risks
Smart Cities

Songdo, Korea
Smart Cities
Singapore
worldbank.org/ICT
Smart Cities
Masdar

worldbank.org/ICT
Disruptive Innovation

- Wikipedia surpasses Encyclopedia Brittanica in 2004
- Android introduced in 2005
- Facebook launched in 2001
- Twitter starts in 2006
- mPesa conducts 70% of all Kenyan transactions in 2010
- PLANET LABS in 2009
- Google SELF-DRIVING CAR in 2013
- 2017
Technology

New Distribution Channels

- **1bn** mobile phone users
- **1bn** Internet users
- **1bn** smartphone users
- **1bn** Facebook users

- Wikipedia surpasses Encyclopedia Brittanica in 2004
- mPesa conducts 70% of all Kenyan transactions in 2010

World Bank Group ICT Strategies

worldbank.org/ICT
The new smart city – from hi-tech sensors to social innovation

The business model for smart cities has been around management, energy efficiency and mobility, but is it the right approach?

At last week’s Smart City World Expo in Barcelona, Jong-Sung Hwang, former CIO of the Seoul metropolitan government, informed of the city’s attempt to capture real-time traffic data. For years the city invested millions of dollars in sensors embedded into the road infrastructure.

“But we failed again and again,” said Hwang. “It cost a lot … but the traffic information was not correct so could not be used.” In 2012, however, the city’s 25,000 taxis introduced a touchcard payment system using GPS technology, effectively giving Seoul the real-time traffic information it had long craved at a fraction of the cost. “A smart city can now use smart technology and solve problems without changing the city infrastructure”, said Hwang.
Mission Control, Built for Cities
I.B.M. Takes ‘Smarter Cities’ Concept to Rio de Janeiro

The I.B.M. executive Guru Banavar in the command center that the company designed for the city of Rio de Janeiro. The center gathers data from 30 agencies, helping the city coordinate their work.

By NATASHA SINGER
Published: March 3, 2012
The catalyst for the center was a 2010 storm and resulting landslides. At the time, Rio lacked a predetermined location for overseeing its efforts.
Smart City

Rio
Brazil erupts in protest: more than a million on the streets
Demonstrators accuse police after clashes in Rio and several other cities

Jonathan Watts in Rio de Janeiro
theguardian.com, Friday 21 June 2013 05.35 BST
In an analogue world, policy dictates delivery. In a digital world, delivery informs policy.

Mike Bracken
Technology Consumerisation

Innovation adoption

Time

Rest of the world

Governments

worldbank.org/ICT
Mobile Monitors, Well Done
<US$50

Riffle Temp, Quality & Flow Sensors, MIT
<US$100

Aerial Imaging, Open Public Lab
US$95

Open Source Analytics
Free
Top Down

- Urban Management Systems
- Property Management Systems
- Urban Planning Systems
- Emergency Management Information Systems and Services
- Land Titling, Registries, Cadastral Systems
- Transport Information Systems and GPS Applications

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Government-as-a-Platform

GOVT AS SERVICE

GOVT AS PLATFORM

Rest of the world

Governments

Innovation

Time

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Bottom-up

- Open Data
- Participatory Decision Making
- Complaints Handling / Open 311
- Community-Based Information Systems and Services
- Participatory Monitoring
- Crowdsourcing and Citizen Data

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Critical Infrastructure
Honolulu

You agree to listen for the siren test and report any problems.

Email address

- I haven’t signed up yet
- I’ve already signed up

Name (visible to others)

Organization (visible to others)

Goodale has been adopted
by Jamie Rego
Sign in to adopt this Siren

sirens.honolulu.gov
Sign up to Adopt a Storm Drain

Your efforts to monitor and keep your local drain clear is a big help to you, your neighbors and the quality of life we all come to expect living in the Emerald City. Thanks for doing your part.
Takes data from Buenos Aires’ environmental authority about industrial contamination and maps it over polygons of the city’s slums. Reveals that greatest industrial contamination concentrated near poverty. Explicitly directs users to gov’t authority to report complaints.
Mobile app developed in partnership with Mexico City environmental authority. Teachers take children on field trips to catalog, map, and "adopt" trees in their neighborhoods. iOS, Android, Java.
Morning traffic report for urban cyclists in Lima, Peru. Also draws attention to main obstacles that prevent cyclists from safely/easily reaching certain parts of the city.
TANZANIA

CO-CREATION

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CITIZEN DATA
THANK YOU!

Edward Anderson
@edwardcanderson
UNDERSTANDING THE EXISTING ECOSYSTEM

[Diagram showing the interactions between Government, Information, Feedback, Academia, R&D, Urban Living Lab, Private Sector, Business Opportunities, Civil Society, and Citizens.]