



Internet
of Things

Maximising the Smart cities opportunity: recommendations to Asia-Pacific policymakers

Stefano Nicoletti
GSMA IoT programme – Policy and Regulation



AGENDA

- GSMA IoT programme
- Three macro areas of priority for Asia-Pacific cities
- Seven recommendations to maximise policies





Internet
of Things

GSMA Internet of Things Programme Initiatives

Mobile IoT

Accelerate availability of LPWA solutions in licensed spectrum



IoT Security

Help IoT ecosystem providers to protect themselves from cybersecurity threats



IoT Big Data

Establish harmonised data sets to simplify the development and encourage growth of IoT big data solutions



Remote SIM Provisioning

Implement a single, robust and interoperable global remote SIM specification for M2M devices



Industry engagement

Drive adoption in smart cities, connected transport and automotive



IoT Policy and Regulation

Enable operators to capture the Internet of Things opportunity, by fostering relevant, flexible and technology-neutral policies and regulation





Internet
of Things

GSMA and Sustainable Development Goals



Available for
download:



<http://www.gsma.com/betterfuture/2016SDGImpactReport/>



Internet
of Things

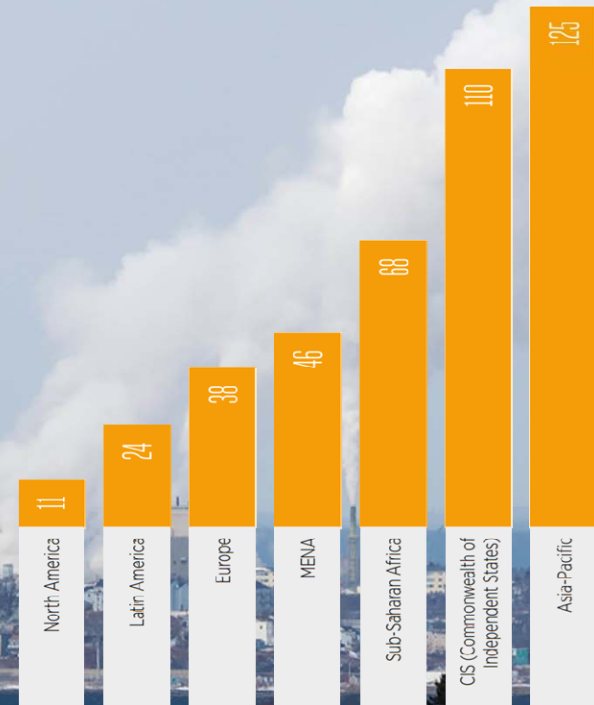
Asia-Pacific priorities for smart cities: Environment

→ Air pollution

- Pollution kills in Asia-Pacific more than anywhere else
- Most deaths in middle and low income countries
- Levels above guidelines for most cities in SE Asia
- It is getting worse: over 5% increase over last five years

→ Climate change natural disasters

- Extreme weather, flooding, heat and water stress
- Asia highly vulnerable - coastal population and economic activity



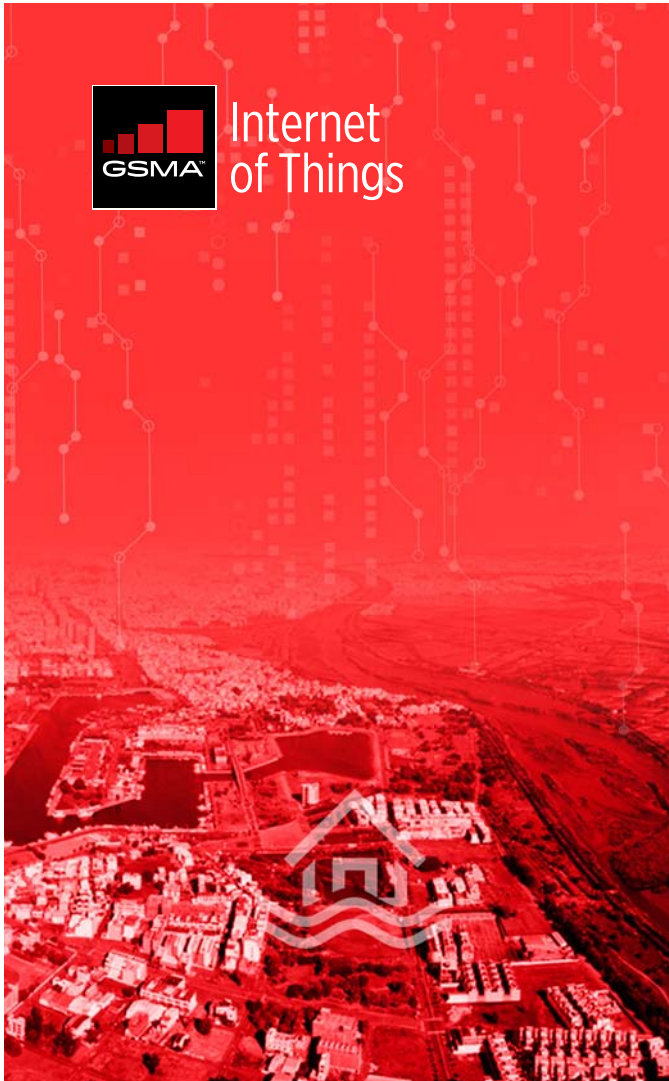
Source: UN, 2012 – Deaths per 100 thousands



Internet
of Things

Tainan Flood Control

- Tainan is the cultural capital of Taiwan and a large tourist destination.
- The city sits in a zone prone to typhoons, and suffers from regular flooding
- Tainan has been working with local operator Far EasTone to put new flood control measures in place.
- New flood control centre, 4G connected pumping stations, flood monitoring and distributed back-up





Internet
of Things

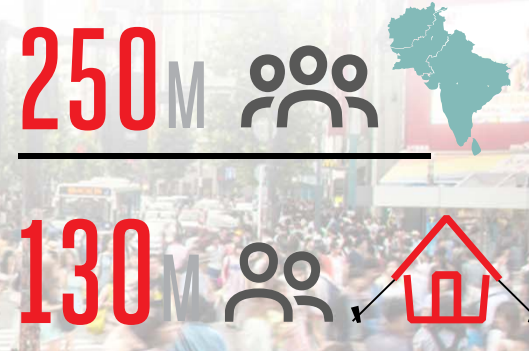
Asia-Pacific priorities for smart cities: Economy

→ A high and accelerating urbanisation trend in Asia

- 250 million more people are expected to live in cities in South Asia over the next 15 years
- 130 Million (a pop the size of Mexico) of South Asian live in informal settlements
- World fastest growing cities are located in Asia

→ Congested cities demand for energy, transportation and healthcare rises

- Technology has the potential to bring in fuel, energy savings, reduce commuting time





Asia-Pacific priorities for smart cities: Communities

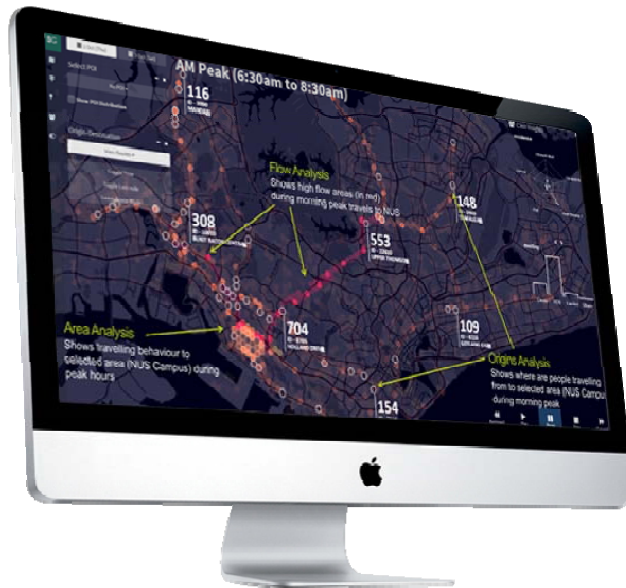
- Cities increasingly at the heart of economic global and regional growth
- Effectively compete with each other for businesses and highly skilled individuals
- Important to guarantee communities a high quality of living standards
 - Human capital attractiveness
 - Crime and safety
 - Well functioning public services



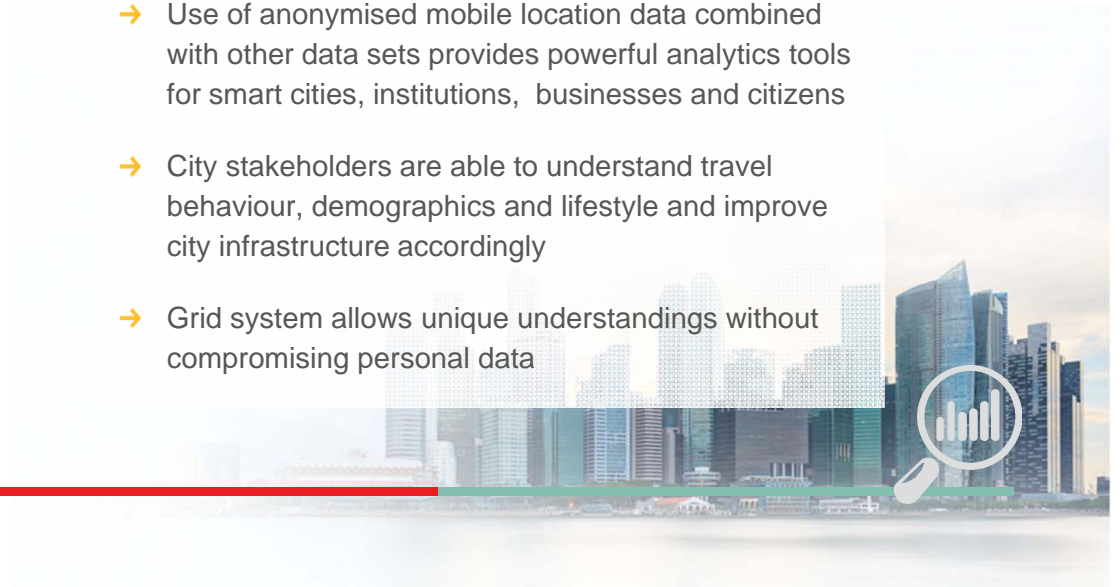


Internet
of Things

Singapore Travel Analytics



- Starhub in Singapore have developed a powerful analytics tool for the city
- Use of anonymised mobile location data combined with other data sets provides powerful analytics tools for smart cities, institutions, businesses and citizens
- City stakeholders are able to understand travel behaviour, demographics and lifestyle and improve city infrastructure accordingly
- Grid system allows unique understandings without compromising personal data





Internet
of Things

Seven recommendations for **effective smart city policies**



Internet
of Things

1. Identify the right institutional framework and governance

→ Agile

- ↘ Reacts in a timely manner to project needs and changes

→ Independent

- ↘ Handles procurements, consultants and finance independently;
- ↘ Facilitates communication with traditional city departments

→ Durable

- ↘ Supports the project throughout the entire duration

→ Accountable

- ↘ Reports activity to a governance board where city institutions are represented



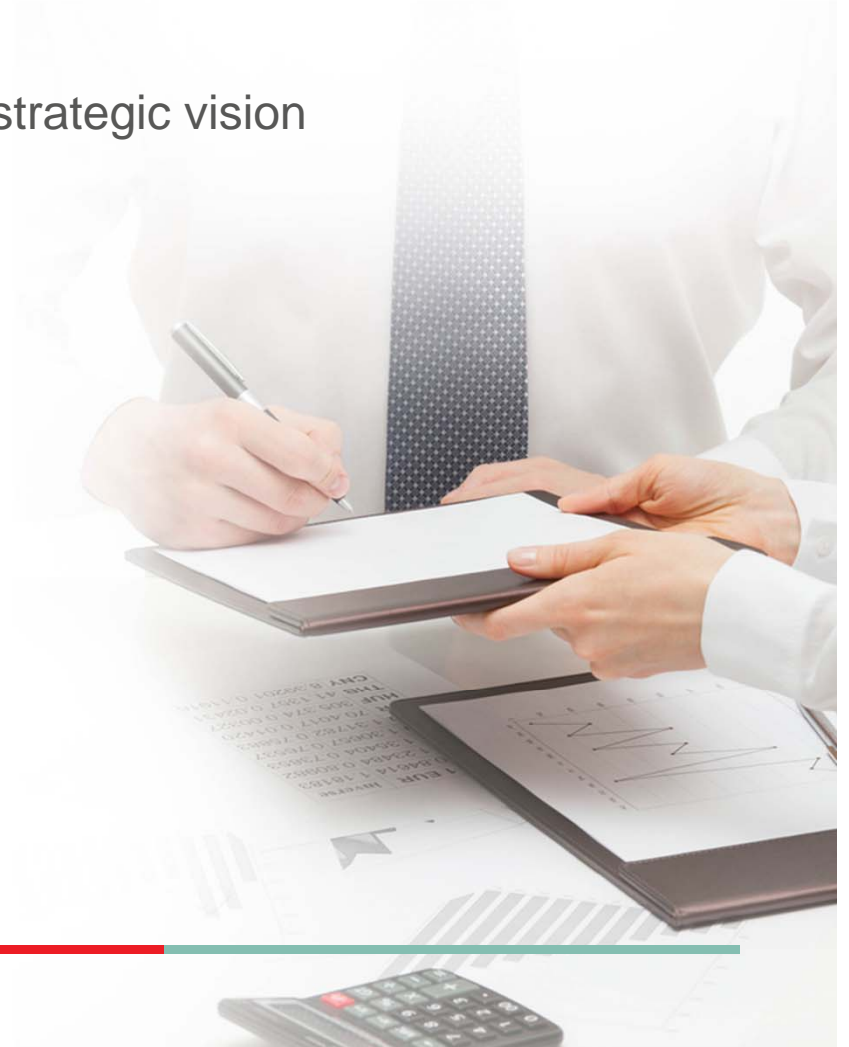


Internet
of Things

2. Appoint a CIO with a strategic vision

The key attributes of a successful CIO

- Has a long term strategy to roll out services
 - Understands city and citizens needs and how they are likely to evolve
 - Understands technology options BUT does not focus on the technology solution
 - Can act independently and is targeted with concrete objectives (i.e. amount of energy savings in a year)
 - Promotes co-operation across departments and wins resistance to changes innovation
-





Internet
of Things

3. Communicate objectives, benefits and challenges

→ Important to involve relevant stakeholders in all steps

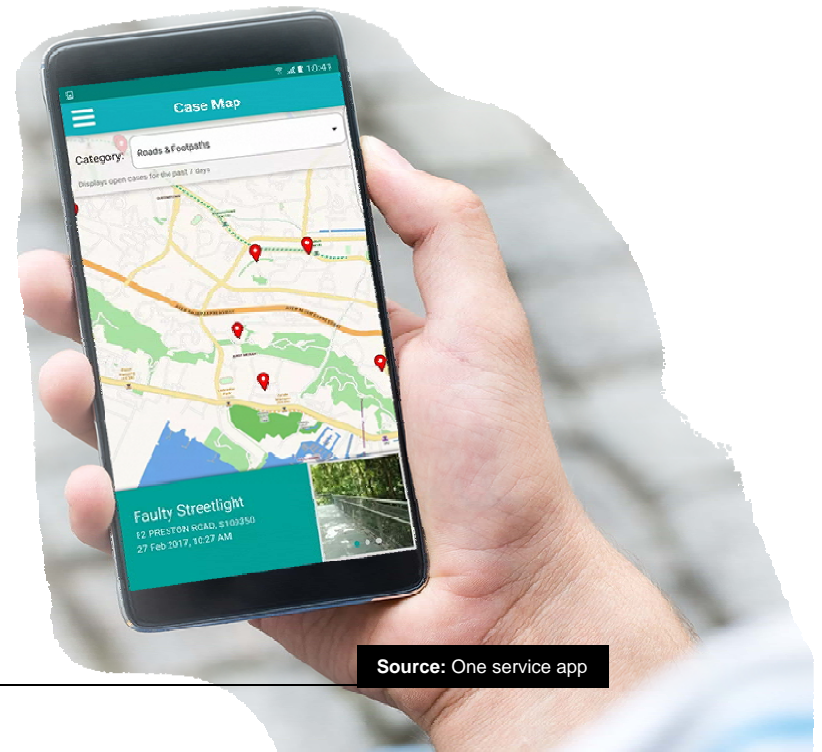
- Design stage
- Feedback on service functionality
- Communicate effective benefits

→ Many stakeholders likely to be relevant

- Citizens, local companies, utilities, hospitals, schools

→ Digital media makes it easier:

- Picture Adelaide 2040
- Bhubaneswar's portal
- One Service app - in Singapore



Source: One service app



Internet
of Things

4. Promote technology investment in open scalable systems

- Avoid proprietary technology that tie to a single provider
- Standard based solutions are more flexible in the long-term
- And protect against risk key vendor runs into financial or technical problems
- Promote scalable platforms
- Consider potential to share costs with multiple services





Internet
of Things

Street lighting and Digital Infrastructure

- AT&T have partnered with GE Current to provide smart streetlighting solutions
- Using GE's IoT platform, AT&T can use streetlighting to create a city-wide digital infrastructure
- This allows the city to measure traffic flow, air quality and parking availability
- The new infrastructure is currently being deployed in San Diego and Atlanta as part of AT&T's smart city services programme





5. Privacy and security are best addressed following industry practice

- People will adopt smart city services only if they trust the way their private data will be used
- GSMA and its members take security and privacy very seriously
 - Privacy initiatives
 - Security for IoT
- Follow industry best practice and national rules
- Avoid temptation to define privacy and security standards for specific city services





Internet
of Things

6. Make city data available to promote transparency and stimulate innovation



→ Sharing data:

- Is the foundation upon which a smart city should be built
- Creates value by catalysing app developers.

→ Data city portals:

- Singapore, Copenhagen, Melbourne, London

→ Data sharing principles:

- Released in a timely manner
- Accessible and machine-readable format
- As raw as possible
- Available for open use





Internet
of Things

7. Explore innovative funding mechanisms

→ Key issues:

- Infrastructure investment gap
- Long pay back period

→ Public Private Partnerships model

→ Other funding mechanism

- Vendor financing
- Municipal bonds
- Development banks funds





Internet
of Things

To find out more visit: www.gsma.com/loT
To contact us email: loT@gsma.com