

TOWARDS THE SMART CITY

***Infrastructure and system
implementation in existing cities.
What about Seoul?***

Guillermo Solana / Advanced Urban Design / SNU / Fall 2018

BARCELONA AS A CASE STUDY

TOWARDS THE SMART CITY

***Infrastructure and system
implementation in existing cities.
Barcelona as a case study***

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TARGET



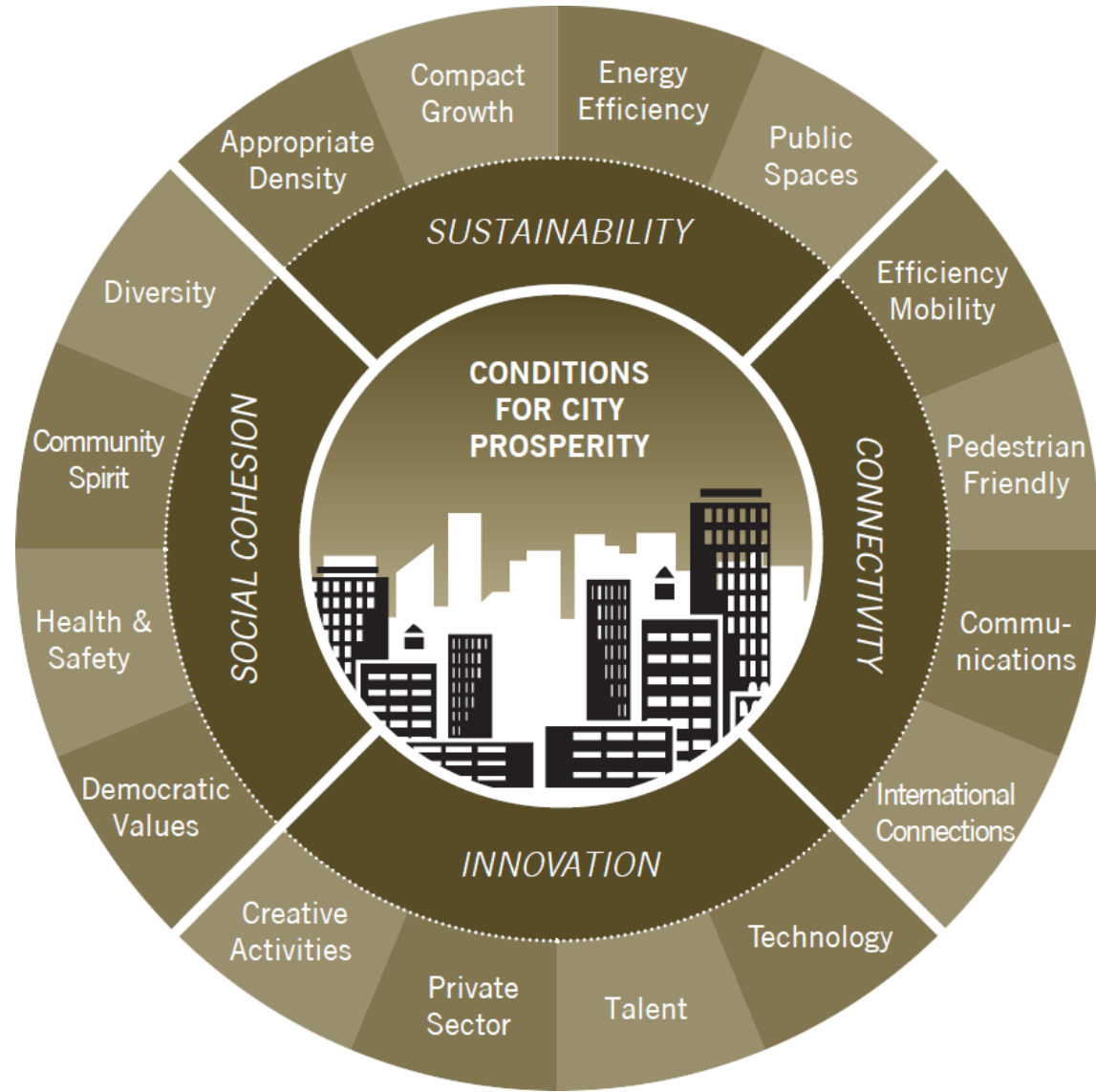
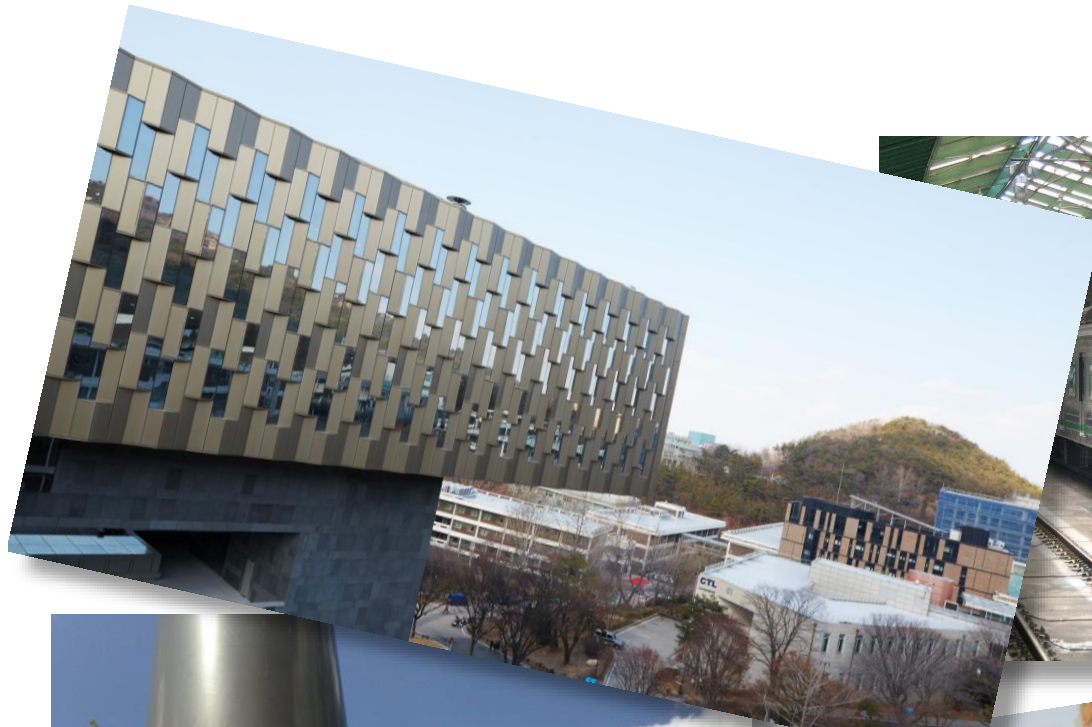


TABLE 14. COMPARISON WITH OTHER INDEXES. TOP 10

Ranking City	ICIM 2017 (IESE)	Global Cities Index 2016 (A.T. Kearney)	Global Financial Centres Index 2017, GFCI (Z/Yen)	Global Power City Index 2017 (MMF)	Quality of Living City Ranking 2017 (Mercer)	Global Liveability Ranking 2017 (The Economist Intelligence Unit)	The Safe Cities Index 2017 (The Economist)	Sustainable Cities Index 2016 (Acardis)
1	New York	New York	London	London	Vienna	Melbourne	Tokyo	Zurich
2	London	London	New York	New York	Zurich	Vienna	Singapore	Singapore
3	Paris	Paris	Hong Kong	Tokyo	Auckland	Vancouver	Osaka	Stockholm
4	Tokyo	Tokyo	Singapore	Paris	Munich	Toronto	Toronto	Vienna
5	Reykjavik	Hong Kong	Tokyo	Singapore	Vancouver	Calgary	Melbourne	London
6	Singapore	Singapore	Shanghai	Seoul	Dusseldorf	Adelaide	Amsterdam	Frankfurt
7	Seoul	Chicago	Toronto	Amsterdam	Frankfurt	Perth	Sydney	Seoul
8	Toronto	Los Angeles	Sydney	Berlin	Geneva	Auckland	Stockholm	Hamburg
9	Hong Kong	Beijing	Zurich	Hong Kong	Copenhaguen	Helsinki	Hong Kong	Prague
10	Amsterdam	Washington	Beijing	Sydney	Basel	Hamburg	Zurich	Munich

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5	Reykjavik	Hong Kong	Tokyo	Singapore	Vancouver	Calgary	Melbourne	London
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10	Amsterdam	Washington	Beijing	Sydney	Basel	Hamburg	Zurich	Munich



**IS THERE ANYTHING ELSE THAT CAN BE
IMPROVED IN SEOUL?**

Strong economy + Human capital



IT R&D and implementation

Big Data usage

Public-Private partnerships

New cities and districts

Innovation capacity

Export of culture and ideas

Financial center

Research center

Strong economy + Human capital

v

Somehow, everything gets either invented or tested in Seoul



Seoul's urban development



1960's



1980's



2000's



THEN?

“Beyond the utopian vision promoted by smart city companies and local governments, the development of smart cities has thrown up concrete challenges to the realisation of privacy and human rights, from increased policing and surveillance to issues of exclusion and the reinforcement of social imbalances”.

Privacy International

The National Information Society Agency estimated in 2015 that there were about 8 million CCTV cameras installed across South Korea





“If a tree falls in a forest and no one is around to hear it, does it make a sound?”

George Berkeley, in *A Treatise Concerning the Principles of Human Knowledge* (1710)



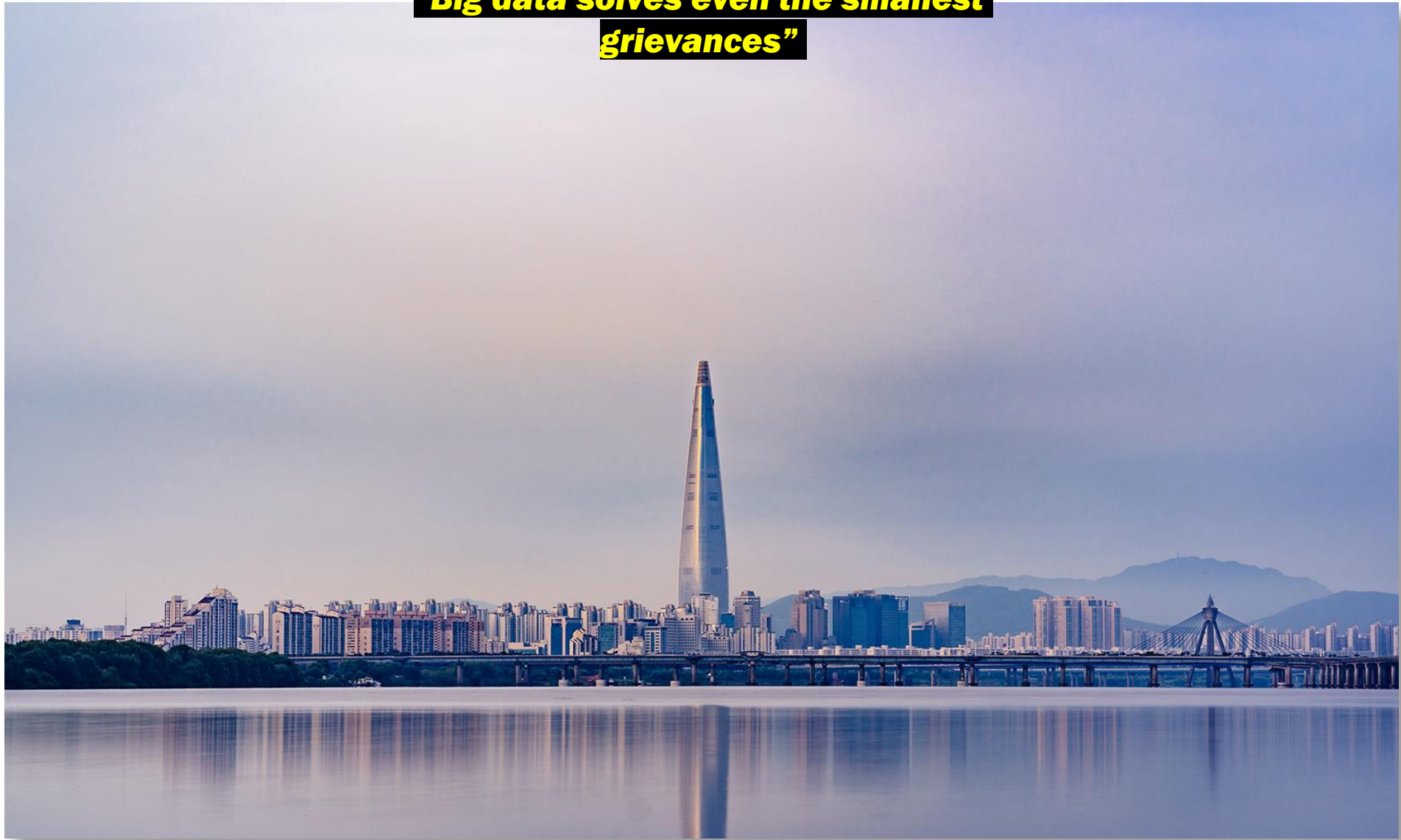
“If a camera watches a tree fall in the forest, does watching the footage later, at another time and location, mean that it actually happened?”

GEORGE ORWELL

1984

EIN UTOPISCHER ROMAN

“Big data solves even the smallest grievances”



WHAT TO DO

Rapidly implementing new technologies,
policies and strategies

WHAT TO DO

Rapidly implementing new technologies,
policies and strategies



HOW TO DO

Analyzing its implications for the sake of
transparency, fairness and equality



CASE STUDIES

1. JAKARTA, INDONESIA



1. JAKARTA, INDONESIA

“Qlue is an app set up by the Jakarta administration to accommodate all complaints and requests from Jakartans. Residents can report their complaints on traffic congestion, damaged roads, floods, garbage pile-ups, city hospital services or other public services through written or photo reports.

The reports are then digitally mapped and integrated with the smartcity.jakarta.go.id website”.

The Jakarta Post

1. JAKARTA, INDONESIA

qlue #BERANIBERUBAH

LAPOR BERANTAS NARKOBA

Download on the **Google play** | Available on the **App Store**

Login → **Join Kelurahan**

Ambil Foto → **Tekan & Tahan Qluebi ke ikon 'Permasalahan kota'**

Pilih Topik 'Narkoba' → **Buat Judul & Deskripsi Laporan**

POST

Logos of the Indonesian National Police and the Jakarta Metropolitan Police are shown at the bottom.

LANGKAH MUDAH UNTUK MELAPOR POTENSI TERORISME

Download 'Qlue - Smart City App' di Play Store

Foto objek dan lapor dengan label 'Potensi Terorisme'

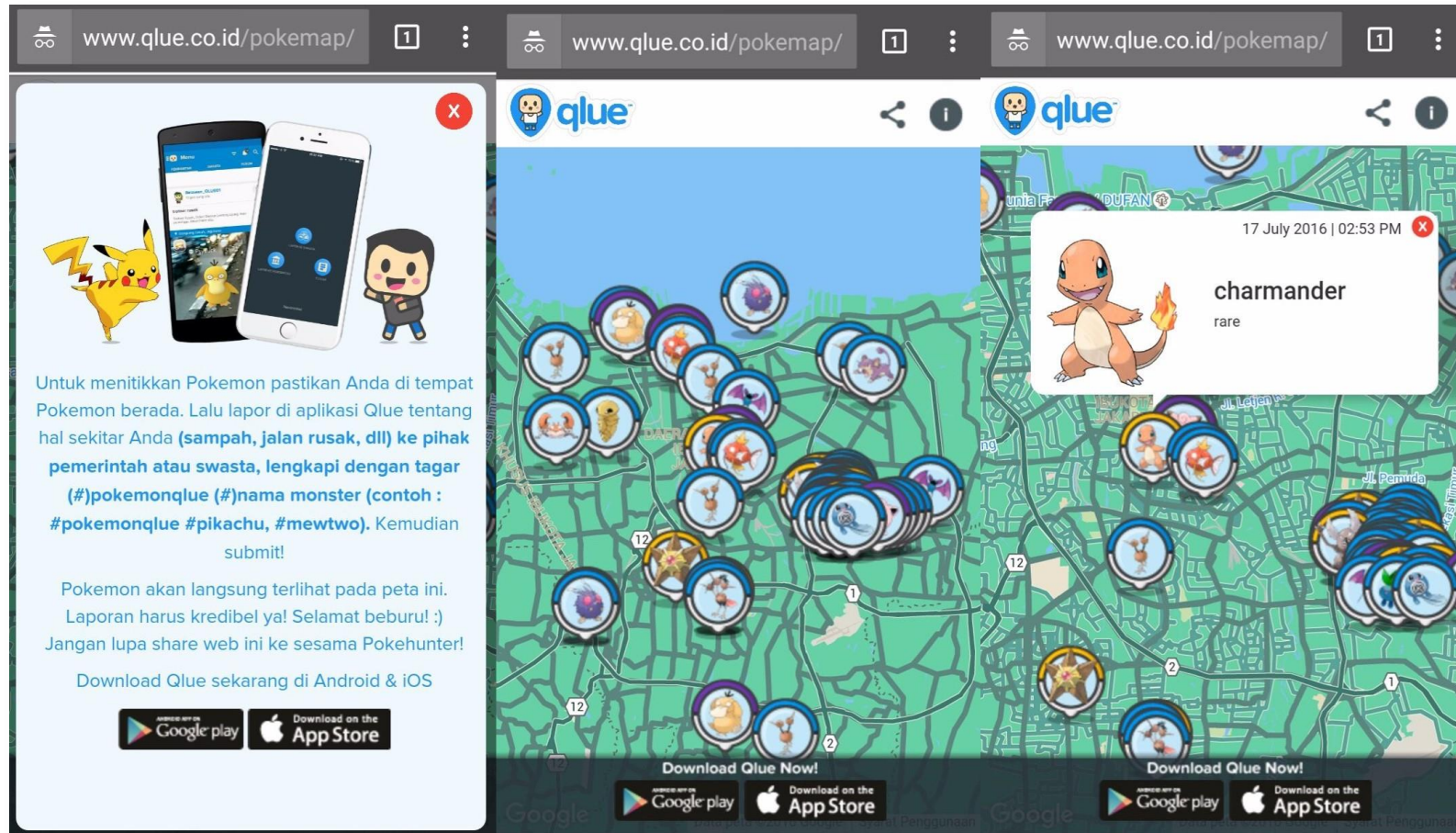
Laporanmu telah diterima dan dikoordinasikan dengan instansi berwenang

[@qluesmartcity](https://www.facebook.com/qluesmartcity) [@qluesmartcity](https://www.instagram.com/qluesmartcity) [@qluesmartcity](https://www.tiktok.com/@qluesmartcity) www.qlue.co.id

untuk pertanyaan lebih lanjut: info@qlue.id

#BERANI BERUBAH

1. JAKARTA, INDONESIA



The image shows a browser window with three tabs, all pointing to www.qlue.co.id/pokemap/. The main content area is a map of Jakarta, Indonesia, overlaid with numerous circular icons representing different Pokemon species. A popup window is open over the map, displaying a Charmander icon, the name "charmander", and the rarity "rare". The popup also shows the date and time: "17 July 2016 | 02:53 PM".

On the left side of the browser window, there is a sidebar with a light blue background. It features an illustration of Pikachu, a smartphone displaying the Qlue app interface, and a cartoon character. Below the illustration, there is text in Indonesian explaining how to use the app to report Pokemon sightings. At the bottom of the sidebar, there are buttons for downloading the app from Google Play and the App Store.

For menitikan Pokemon pastikan Anda di tempat Pokemon berada. Lalu lapor di aplikasi Qlue tentang hal sekitar Anda (**sampah, jalan rusak, dll**) ke pihak pemerintah atau swasta, lengkapi dengan tagar (#)pokemonqlue (#)nama monster (contoh : #pokemonqlue #pikachu, #mewtwo). Kemudian submit!

Pokemon akan langsung terlihat pada peta ini. Laporan harus kredibel ya! Selamat berburu :) Jangan lupa share web ini ke sesama Pokehunter!

Download Qlue sekarang di Android & iOS

Download on the Google play | Download on the App Store

Download Qlue Now! | Download Qlue Now!

Download on the Google play | Download on the App Store

2. DAVAO, PHILIPPINES



TECHINASIA NEWS JOBS COMPANIES EVENTS ABOUT ADVERTISE

CATEGORIES ▾ MARKETS ▾ WRITERS ▾

ASIA

 Phoebe Magdirila · 7 Jun 2013 · 2 min read

IBM Helps the Biggest City in the Philippines Transform to a Smart City

2. DAVAO, PHILIPPINES

“...today, the solution answers the city’s four main pillars of public safety which are: crime prevention, emergency response, threat prevention and response, and traffic management.

This is made possible by the varied tools that IBM has provided such as video analytics software, multi-channel unified communication (that includes an early-warning system for key risk indicators), and GPS location tracking.”.

www.techinasia.com

2. DAVAO, PHILIPPINES



2. DAVAO, PHILIPPINES



2. DAVAO, PHILIPPINES

The New York Times

Ex-Officer in Philippines Says He Led Death Squad at Duterte's Behest



A retired police officer, Arthur Lascañas, center, said at a news conference on Monday that he led a death squad on the orders of President Rodrigo Duterte, then the mayor of Davao City.

Bullit Marquez/Associated Press

3. PALAVA, INDIA

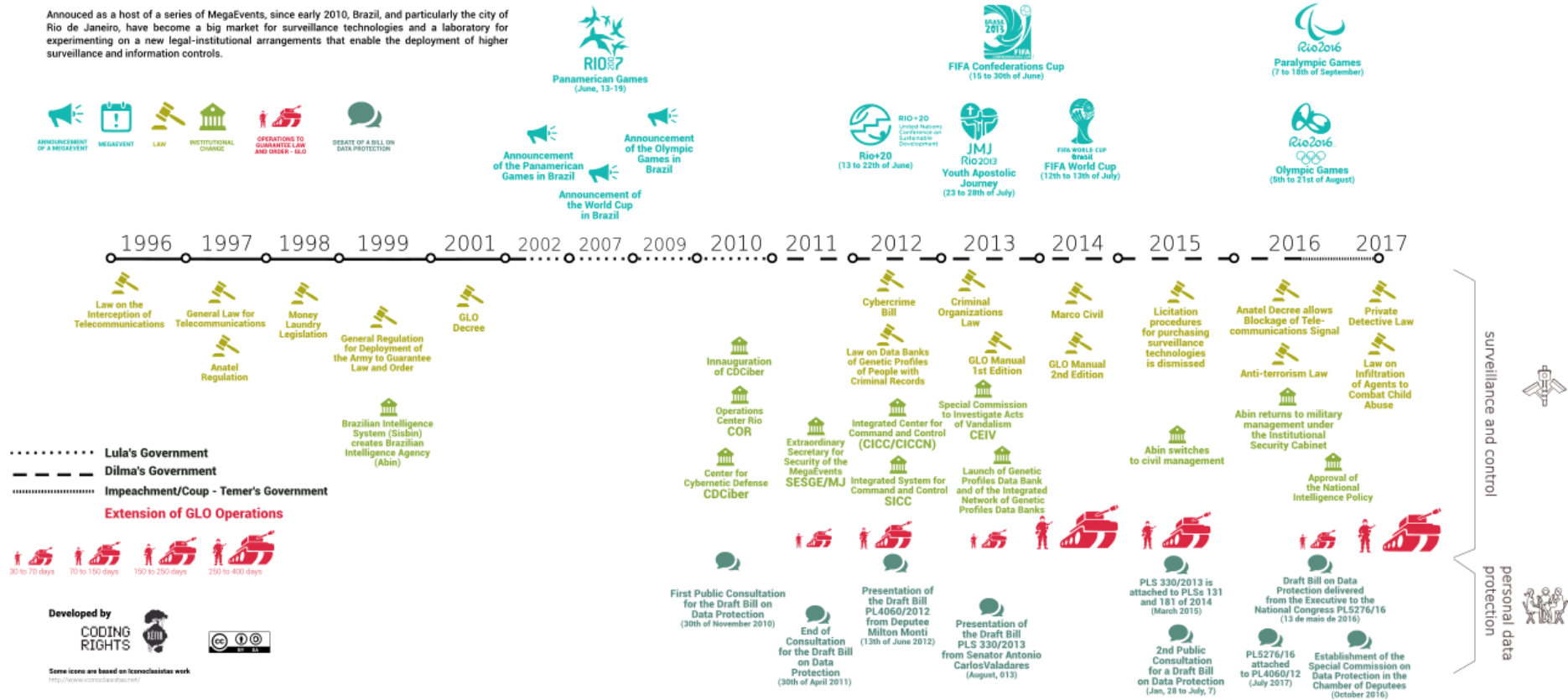


GUJARAT INTERNATIONAL FINANCE TEC-CITY (GIFT)



4. RIO DE JANEIRO, BRASIL

Announced as a host of a series of MegaEvents, since early 2010, Brazil, and particularly the city of Rio de Janeiro, have become a big market for surveillance technologies and a laboratory for experimenting on a new legal-institutional arrangements that enable the deployment of higher surveillance and information controls.



4. RIO DE JANEIRO, BRASIL

ABIN / SISBIN	  
FEDERAL POLICE (JUDICIAL POLICE)	     
CIVIL POLICE (JUDICIAL POLICE)	     
MILITARY POLICE	 
PUBLIC PROSECUTION	   
RECEITA FEDERAL	 
CPI	
ANATEL	
MILITARY FORCES	 



UNDERCOVER AGENTS



BREACH OF CONFIDENTIALITY OF STORED COMMUNICATIONS



STREET LEVEL SURVEILLANCE (DRONES, CAMERAS, SIGNAL JAMMERS IMSI CATCHERS)



ACCESS TO DATA



INTERCEPTION OF COMMUNICATIONS



OPEN-SOURCE INTELLIGENCE (OSINT)

5. SAUDI ARABIA

Saudi Arabia

Saudi Arabia criticised over text alerts tracking women's movements

Male 'guardians' receive text message whenever women leave country under new system

Luke Harding, *and agencies in Riyadh*

Fri 23 Nov 2012 16.53 GMT



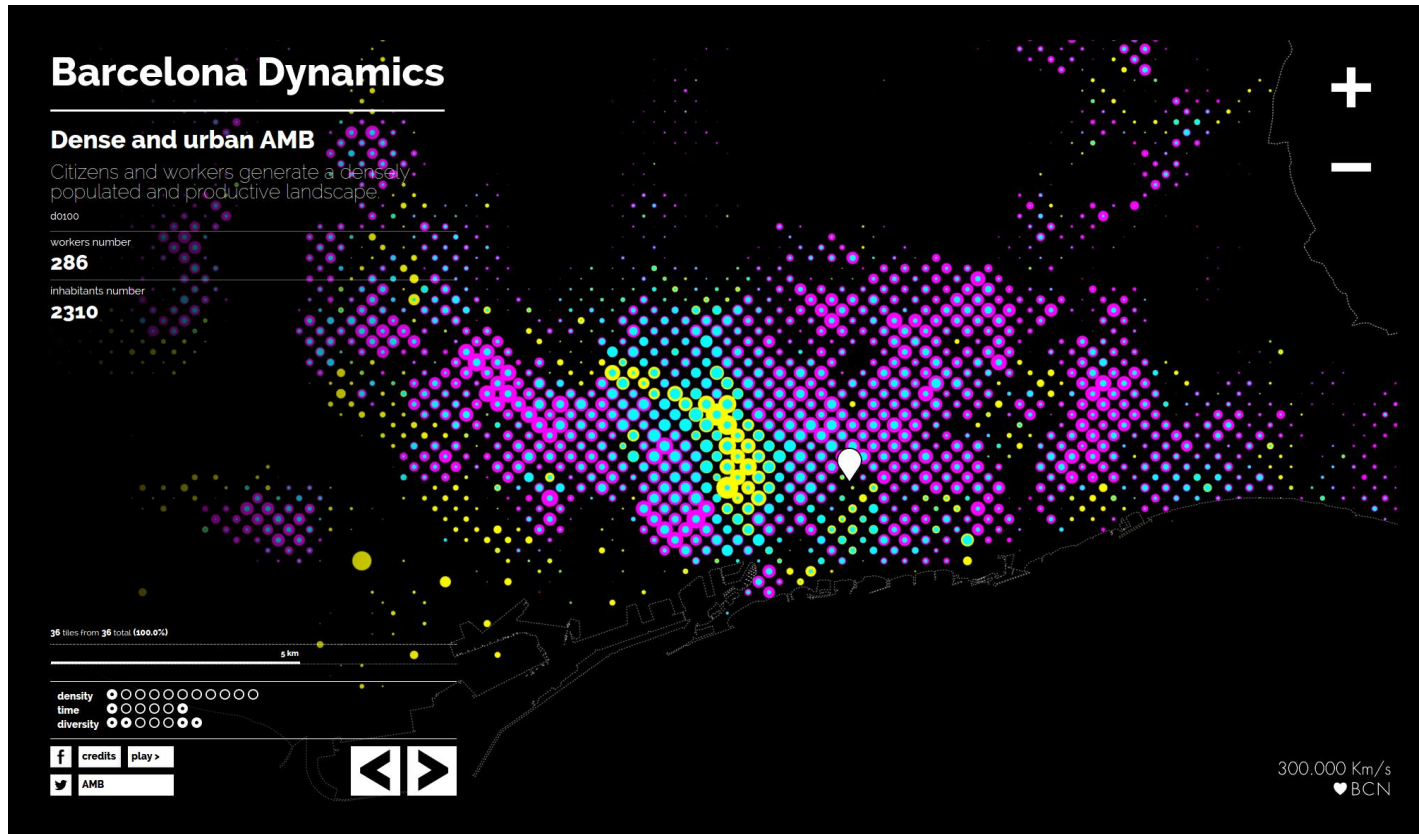
42

This article is over 6 years old



▲ Saudi women must have the permission of their male 'guardian' to go abroad. Photograph: Fayeze Nureldine/AFP /Getty Images

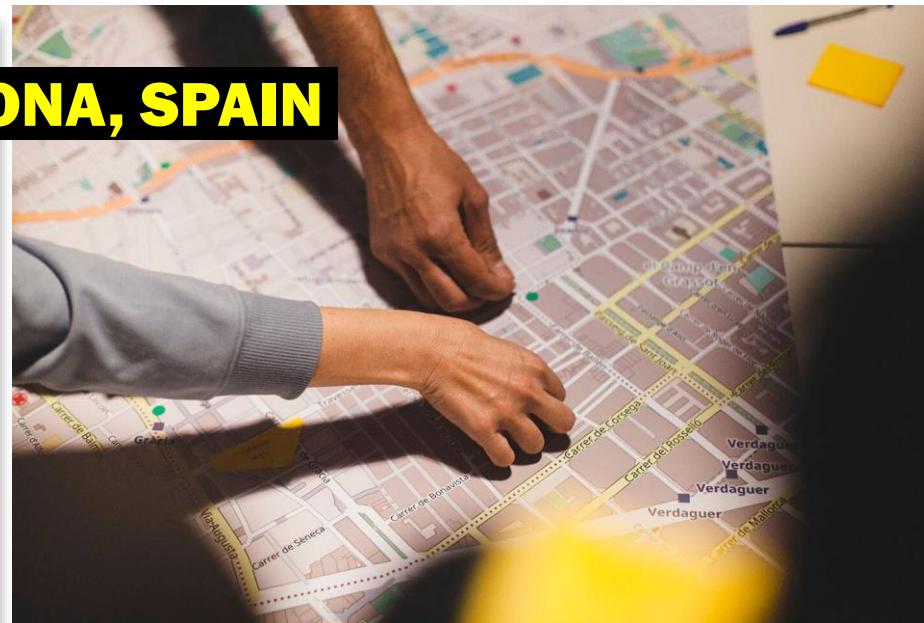
6. BARCELONA, SPAIN



...
s
l
...
ja dormir
...
ers from very high noise pollution. In
...
bad the problem really is.



6. BARCELONA, SPAIN



7. MADRID, SPAIN

**Eres una pieza clave
para construir Madrid**

**Regístrate, participa y apoya
decidemadrid.es**



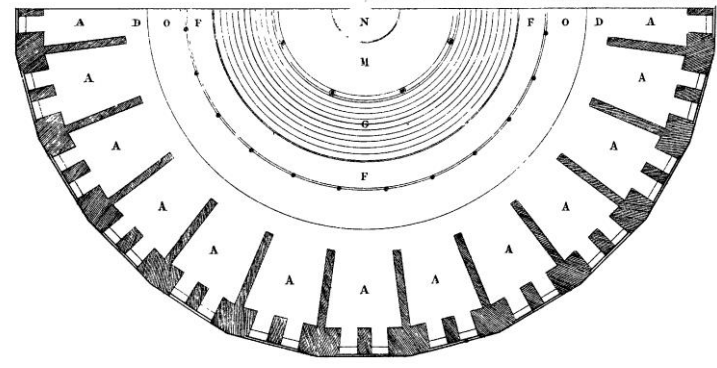
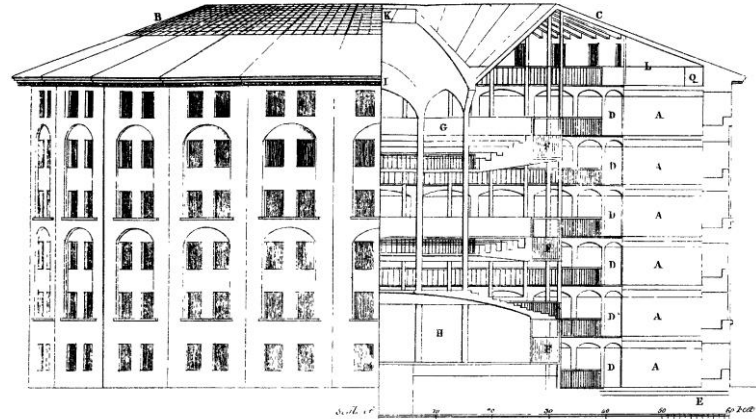
DECIDE
MADRID

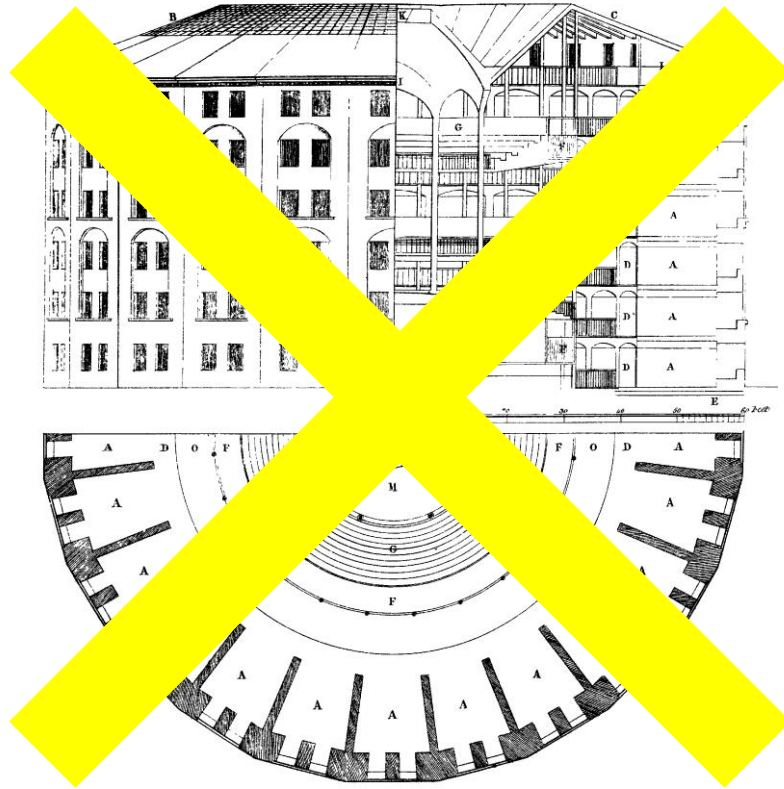
“Collection of data does not systematically improve cities. It is time for city planners to think of ways to improve our cities that do not impact our right to privacy (...). Citizens should be made aware of the data that is collected about them and how it will be used. They should be entitled to have it corrected and deleted”.

Privacy International



WHAT TO LEARN





DATA PRINCIPLES

1. PERSONAL

Individuals must have rights over their data. This must include rights over their personal data, as well as data that is derived, inferred or predicted from their data, selves, actions, and behaviour.

2. RESPONSIBLE

Data should not be generated, collected, analysed, retained, transmitted or aggregated excessively.

3. VERIFIABLE

Individuals must be able to ascertain their data footprint.

4. INCLUSIVE

Security and privacy must be shared without discrimination, designed into systems to protect everyone, everywhere.

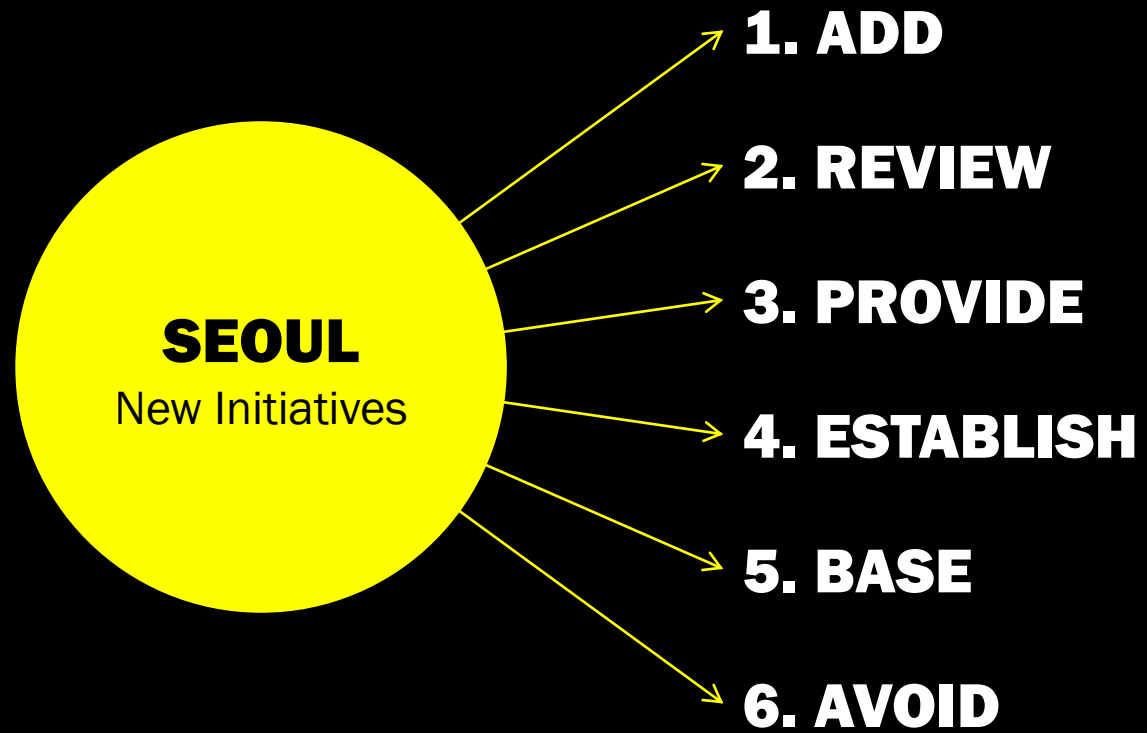


SOLUTIONS



SEOUL

New Initiatives





ADD new parts to the decision-making process:

- ✓ Inclusive and gender-sensitive assessment (groups at risk of discrimination, vulnerability, marginalisation...)
- ✓ Data protection impact assessment
- ✓ Cost-benefit assessment
- ✓ Environmental assessment
- ✓ etc.

2.

REVIEW the impact assessments at regular intervals during the design and implementation stages, and ensure that any emerging developments are acted upon.

3.

PROVIDE citizens with the choices to opt-in and opt-out of "smart city projects" they are developing, either in whole or in part.

4.

ESTABLISH the obligations of private companies through legally binding mechanisms, to ensure they are subject to agreed principles.

5.

BASE their recommendations, policies and projects on unbiased, inclusive, independent, accurate and relevant research.

6.

AVOID technological or economic reductionisms, and address the issue from a multidisciplinary perspective.



Women taking part in a safety audit of nearby streets and public spaces

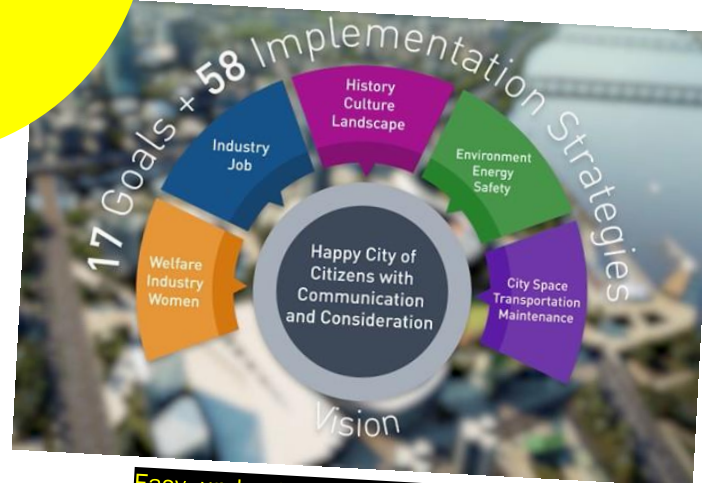


Public participation (Suwon International EcoMobility Festival)

SEOUL New Initiatives



Public Engagement



Easy, understandable city (2030 Seoul Master Plan)

2030 SEOUL PLAN

01_Plans by Issues

The Plan, composed of 5 core issues directly connected to the lives of

Welfare, Education, Women	Industry, job	History, Culture, Landscape	Environment, Energy, Safety	Space, Transit, Renewal
Together Without Discrimination People-centered City	Global city with a Strong job market	Vibrant Cultural & Historic City	Lively & Safe City	Community-oriented City with stable housing & easy transport
5 goals 22 strategies	3 goals 10 strategies	3 goals 11 strategies	3 goals 11 strategies	3 goals 9 strategies
City where citizens' Rights are innately secured	Where job opportunities Are available to anyone & economic entities & areas Develop together	Where one can Find Seoulness in Our Everyday lives	Where everyone Can be safe and Feel safe in life	Where there is little Concern over commute, & where there is an active community

consideration," the Plan respects the City's ... to strengthen competitiveness & pursue communication & mutual development.

Main Center	<ul style="list-style-type: none"> Gangnam : Int'l business center Yeongdeungpo, Yeouido : Int'l Financial Center
7 Regional Center	<ul style="list-style-type: none"> Yongsan, Cheongyangli-Wangshipli Changdong, Sanggye, Sangam, Susan Magok, Gasan, Daelim, Jamsil
12 Local Center	<ul style="list-style-type: none"> Dongdaemun, Seongsu, Mangwoo, Mia Yeonshinnae, Bulgwang, Shincheon Mapo, Gongdeok, Mokdong, Bongcheon Sadang, Iseo, Sooseo, Moonjeong Cheonho, Gildong

- 재생/발전속
- 3도심 연계속
- 국제적 중심지 (3도심)
- 광역적 중심지 (7광역중심)
- 지역의 중심지 (12지역 중심)
- ▲ 외사산
- ▲ 내사산
- 한강 및 지선
- 한양도성 (상역)



Citizen Participation Model for Seoul's Master Plan

2030 SEUL PLAN

2030 Seoul Plan(Draft)

A. HUMAN RIGHTS

Focusing on the impact of new policies on issues like non-discrimination, freedom of movement, privacy, assembly, or freedom of expression.

B. EXTERNAL INPUTS

Evidence-based approach. Open and transparent decision-making processes involving different actors:

- _Citizens and community groups
- _Security and technology experts
- _Private sector
- _Academia

