

Workshop on Smart Citizen

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Content: Collected

Presentation Outline

1. Background of terminology “Smart”
2. Smart Template and Smart Technologies
3. Smart City Definitions, Criteria and Examples
4. Who are Smart Citizens?
5. How to make Citizens act Smartly?
6. Citizen’s Engagement with examples
7. Challenges of Citizens involvement
8. How Smart Citizen is defined in Smart Bangladesh Initiative?
9. How to make functional Smart Citizen in building Smart Bangladesh in comparison to Global Context?
10. Beginning of the workshop

Background

Urbanization

UN 2015

- 50% of today's world population live in urban areas (3.5 Billion)
- By 2030 this is predicted to rise to 60%
- 60% then now will be much different to 60% today
- 1 in 8 currently live in one of the worlds 28 "Mega Cities"
- By 2050 it is predicted that 64% of the developing world and 86% of the developed world will be "urbanized"
- 95% of Urban Growth by 2050 is expected to take place in developing countries



Developing World Mobility

Next year 32 people an hour will be moving into Shanghai,
39 into Kinshasa and Jakarta, 42 into Mumbai and Karachi,
50 into Dhaka and 58 into Lagos.

Challenges and Opportunities



Challenges



- Greater demand for natural resources – e.g. water and energy
- Demands on services – Education, healthcare, waste management etc.
- Increasing pollution and impacts on biodiversity
- Climate change impact – cities take up 2% of Earth's land but account for 80% energy use and 75% carbon emissions (UN 2014)
- Pressure on housing and other resources can contribute to poverty and crime and other social problems
- Cities are at risk of climate change impacts such as flooding and weather events.

Challenges and Opportunities

Its not all bad..

Cities provide many opportunities including:

- Job and career opportunities
- Flow of ideas and business
- Ability to meet social aspirations of people
- Global connectivity and influence
- Incubators for new ideas, business and innovation
- Centres for education and learning

Rising to the Challenge

To meet these challenges cities are aiming to become:

SMART

But what does that mean??

S = Specific
M = Measurable
A = Achievable
R = Relevant
T = Time bound

Smart Template

Smart Tampere Ecosystem Themes

Six key themes are identified for the Smart Tampere Ecosystem. Each theme is a separate ecosystem.



Smart Industry

Smart Industry: create a new competitive edge by adopting the latest technology, develop smart industry systems



Smart Government & Citizen

Smart Government & Citizen: use the disruptive potential of technology and data to resolve and empower citizens



Smart Energy, Water, Waste

Smart Energy, Water & Waste: new techies open to better manage our scarce resources for a more sustainable world



Smart Health

Smart Health: centered around developing innovative health solutions to improve people's life



Smart Mobility

Smart Mobility: fostering faster, greener and cheaper transportation options by using disruptive technologies



Smart Buildings

Smart Buildings: engineered using the latest techies open provide better, more resourceful & sustainable spaces to live in



Smart City technologies

Domain	Example technologies
Government	<u>E-government systems</u> ; <u>online transactions</u> ; city operating systems; performance management systems; <u>urban dashboards</u>
Security and emergency services	<u>Centralised control rooms</u> ; <u>digital surveillance</u> ; predictive policing; coordinated emergency response
Transport	Intelligent transport systems; integrated ticketing; <u>smart travel cards</u> ; bikeshare; real-time passenger information; smart parking; logistics management; <u>transport apps</u>
Energy	Smart grids; <u>smart meters</u> ; <u>energy usage apps</u> ; smart lighting
Waste	Compactor bins and dynamic routing/collection
Environment	<u>Sensor networks</u> (e.g., pollution, noise, weather; land movement; flood management)
Buildings	Building management systems; sensor networks
Homes	Smart meters; <u>app controlled smart appliances</u>
Civic	Various apps; open data; volunteered data/hacks

Smart City: No single definition



City's View

- “Smart City as a high-tech intensive and advanced city that connects people, information and city elements using new technologies in order to create sustainable greener city, competitive and innovative commerce and an increase life quality with a straightforward administration and maintenance system of city” (Barcelona City Hall, 2011)
- “Amsterdam Smart City uses innovative technology and the willingness to change behavior related to energy consumption in order to tackle climate goals. Amsterdam Smart City is an universal approach for design and development of a sustainable, economically viable program that will reduce the city's carbon footprint” (Amsterdam Smart City, 2009)
- Dubai smart city's main aim is to provide better connections and increase cooperation between the emirate and its residents. It promotes the use of government facilities using the largest possible number of smart applications.

Practitioner's view

- “The use of Smart Computing technologies to make the critical infrastructure components and services of a city —which include city administration, education, healthcare, public safety, real estate, transportation, and utilities — more intelligent, interconnected, and efficient.” (Forrester, 2011)
- “A smart city is based on intelligent exchanges of information that flow between its many different subsystems. This flow of information is analyzed and translated into citizen and commercial services. The city will act on this information flow to make its wider ecosystem more resource-efficient and sustainable. The information exchange is based on a smart governance operating framework designed for cities sustainable.” (Gartner, 2011)

Smart City

BSI 2014 one of many definitions

‘the effective integration of physical, digital and human system in the built environment to deliver sustainable, prosperous and inclusive future for its citizens’ (BSI, 2014).

”A Smart City is a city seeking to address public issues via ICT-based solutions on the basis of a multi-stakeholder, municipally based partnership.”

- European Parliament, 2014

Smart City

Eco friendly; energy saving; high efficient city,
which is sustainable.

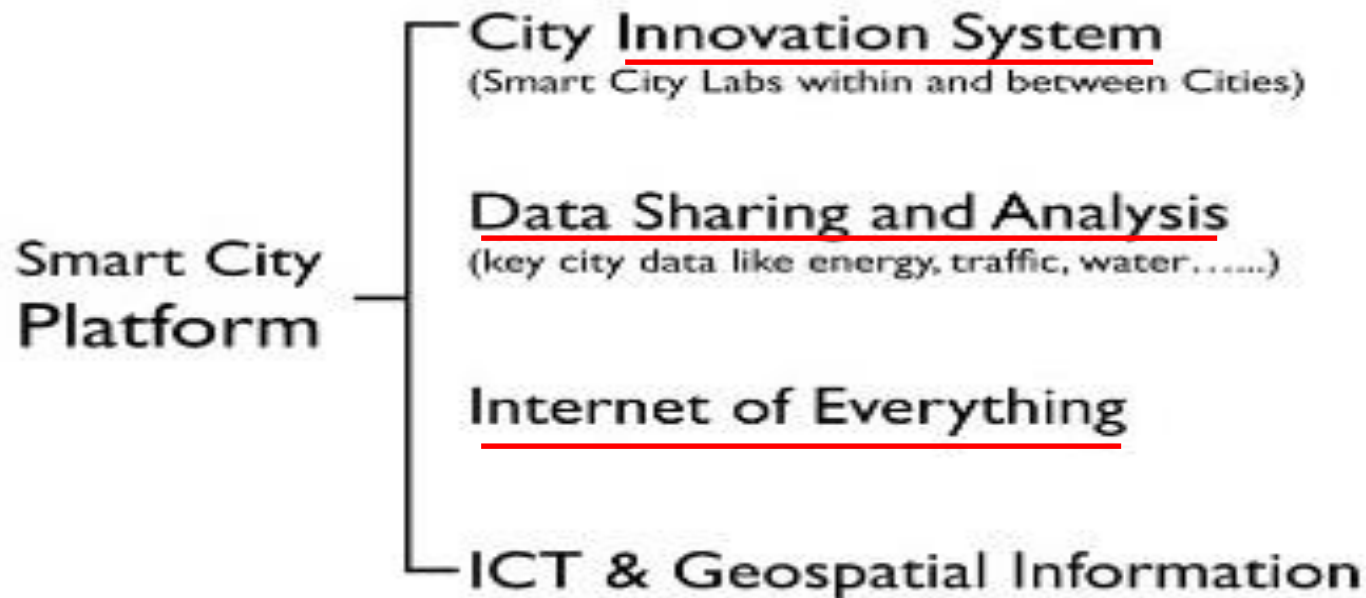
ICT profit; innovation in technology and
convenient in administration

A Smart City is a city that functions
as a platform on top of which citizens and businesses
may build communal and business activities,
utilising data, technology, innovations, and
services in a smart and sustainable way.

Smart City is

“ a City as a Platform”

Enabling citizen to create new services and to do the right things



How would be a Smart City look like?



The Smart City Ideal

Many see the perfect smart city to be one where renewable energy systems, effective transport networks and digital infrastructures all align to create a super-efficient sustainable environment for everyone.

Innovations for City

NIA



Smart City Examples

Masdar City – A brand new sustainable City

World's First Zero Carbon City in **Abu Dhabi**



Smart City Examples



Rio – An existing city adopting Smart technologies

Rio de Janeiro, Brazil





Coming of Smart Cities

2008

20

143

2012

Rough Number of Smart City Projects Worldwide

Who are Smart Citizens?

Smart Citizens

- Will take responsibility for the place they live, work and love;
- Value access over ownership, contribution over power;
- Will ask forgiveness, not permission;
- Know where they can get the tools, knowledge and support;
- Value empathy, dialogue and trust;
- Appropriate technology, rather than accept it as is;
- Will help the people that struggle with smart stuff;
- Ask questions, before they come up with answers;
- Take part in design efforts to come up with better solutions;
- Work agile, prototype early, test quickly, start all over;
- Will not stop in the face of huge barriers;
- Continuously share their knowledge and their learning.

How to make Citizens act Smartly?



The 10 Principles for citizen engagement

1. Simple: Aim to facilitate understanding and usage
2. Reciprocal: 'Give for getting' to create fair and lasting relationships
3. Participative, balanced with representative: Understand benefits and limits of approaches
4. Inclusiveness: Ensure solutions that are representative of the whole population
5. Push approach not pull: Go where people are instead of assuming they will come to you
6. Online – Offline balanced interventions: Understand benefits and limits of different settings
7. Conscious of privacy and rights: Build trust from the start
8. Conscious of citizens' emotions: Understand the feelings that flow on or under the surface
9. Change-enablers with city stakeholders: Make the municipality a partner
10. Wallet-savvy: Use citizens' own funds in smart ways that benefit citizens

2.2 The move from one-way information sharing to active participation and engagement of citizen





Citizen engagement is more than just a user friendly municipal website.

1.1 Launching e-Services is not the last goal

Launching e-Services will not automatically result
in effective use and in value creation

e-Services easy to create by
Government but without real
value- impact on citizen's daily
life

Lack of access

Lack of technical and
organizational interoperability

Citizen Engagement and Education

Smart Citizens

How to engage and educate?

- Community Platforms such as Smart Citizen
- Projects aimed at all age groups and sectors of society
- Project Engagement – Waag Society
- Hackathons
- Soliciting feedback/surveys
- Information Security Awareness Campaigns
- Engagement events

Make it **easy** for
everybody to
participate



LET ALL CITIZENS BE THE CITY'S "EYES"



CROWDSOURCING

HELP TO IDENTIFY **FLOOD AREAS**



CitiAct



Available on the
App Store



ANDROID APP ON
Google play

SMART CITY

#bettercitybetterworld

FLASH FLOOD

THE DANGERS OF UNKNOWN



CROWDSOURCING



CitiAct



Available on the
App Store

ANDROID APP ON
Google play

HELP TO IDENTIFY

CRIME AREAS

CATCH THE ACT OF VANDALISM

DESTRUCTION OF PUBLIC AND PRIVATE PROPERTY

SMART CITY

#bettercitybetterworld

CitiAct



Available on the
App Store

ANDROID APP ON
Google play

SAVES TIME TO REPORT
A PICTURE IS WORTH A 1000 WORDS



REPORT AN ISSUE
BUT NOT FEEL LIKE A COMPLAINT



BUT NOT FEEL LIKE A COMPLAINT

WHAT-IF?



CRIME AREAS

FLASH FLOODS

NOISE LEVEL

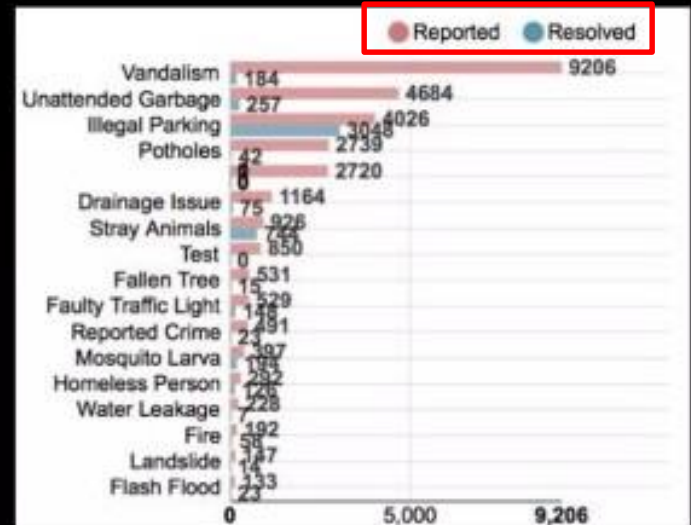
ROAD QUALITY

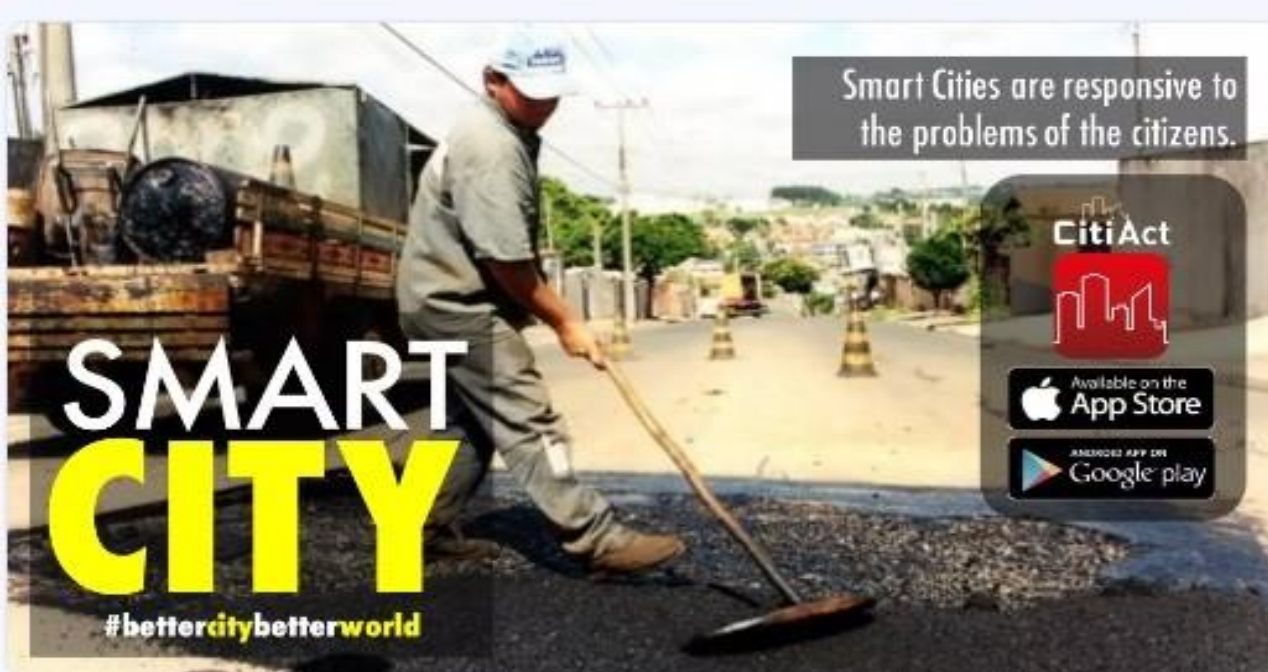
PROFILING OUR CITIES

GAINING INSIGHTS • OPTIMISING RESOURCES



TOP CITIZENS' PAIN POINTS





SMART PARKING



Smart Parking
With Sensors



Location of
Parking
Availability



Parking
Utilization



Tiered Pricing
Parking

SMART STREET LIGHTING



Prevent Crime with Proper Lighting

Challenges of Citizens involvement

Element	Issues
Citizens	Trust, accessibility, ease of use, top down/bottom up, co-creation
Leadership and Strategy	Strategy, effective leadership, inclusive decision making, stakeholder engagement, partnerships
Innovation and Enterprise	Ecosystems, data economy, finance business models
Infrastructure, technology, and data	Future proofing, resilience, sensors, data, <u>privacy, security and ethics</u>
Measurement and learning	City performance, metrics and indicators, ideas sharing



Citizens?

- But how are citizens framed within and treated by smart city programmes and technologies?
- Initial critique of smart cities was that their framing and operation was top-down, technocratic, instrumental
- Aimed at controlling and disciplining citizens, as well as producing and reinforcing neoliberal logics of urban management
- That is, the smart city serves the interests of states and corporations more than it does citizens
- The response was to reframe smart cities as 'citizen-centric' or 'citizen-focused'
- But what does that mean in practice?

A close-up photograph of a human eye. The iris is a light blue color, and within its structure, a reflection of a city skyline is visible. The eye is looking slightly to the right. The skin around the eye is a natural skin tone.

SMART CITY

BETTER CITY • BETTER WORLD

#bettercitybetterworld

Build cities through the eyes of the **CITIZENS**



Different Cities – Different Solutions

In seeking new models, organisations such as Shell have recognised that global challenges require local solutions - but different city types can also adopt similar approaches to improving efficiency.

Smart Bangladesh Initiative

Smart Bangladesh is an initiative led by the Government of Bangladesh aiming to transform Bangladesh into a technologically advanced and sustainable society. Building on the foundation of the Digital Bangladesh initiative, Smart Bangladesh envisions the development of smart cities, smart agriculture, smart healthcare, smart education, smart energy, smart governance and smart institutions with the ultimate goal of creating a more prosperous, equitable, and sustainable future for the people of Bangladesh.^{[1][2][3]} The inauguration of the nation's elevated expressway marked a milestone toward the realization of a 'Smart Bangladesh'.^[4] Initiatives such as community and mobile clinics have been established to extend healthcare access, particularly in rural areas, with a focus on maternal health.^[5]

4 (Four) Pillars of Smart Bangladesh

The "Smart Bangladesh" ecosystem will stand on four key pillars – "Smart Citizen", "Smart Government", "Smart Society" and "Smart Economy".

Pillar 1: Smart Citizen

The "Smart Citizen" goal will be to empower citizens of Bangladesh with a "digital first" mindset driving campaigns and implementing widespread digital literacy programmes. These citizens will use digital technologies, such as mobile and internet, to access information.

Note: 1. **77.36 million** internet user
2. **188.6 million** cellular mobile user

Pillar 2: Smart Government

The "Smart Government" should implement 100 per cent paperless offices and hyper personalised service platforms across priority areas like healthcare, education, agriculture, revenue management and public security. Although Bangladesh made a good start of digitalising government services by automating over 2,000 government service, a serious jump is still needed in order to achieve the target of 2041.

Pillar 3: Smart Society

"Smart Society" refers to a civilisation that uses technology and innovation to raise the standards of living for its people. Citizens will adopt digital tolerance, ethics and values. A cashless payment ecosystem, "Smart City" and "Smart Grid" will be integral components.

Pillar 4: Smart Economy

"Smart Economy" is significant considering that Bangladesh plans to make ICT one of its revenue-generating pillars by 2041. It is estimated that by 2041, the overall ICT economy's will be of \$50 billion and at least 50 unicorn startups will be dominant in Bangladesh's market.

Key Questions

How to make functional Smart Citizen in building Smart Bangladesh in comparison to Global Context?

Let's Start our Workshop on “Smart Citizen”



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Questions????????



THANKS for listening.....