



# SMART CITY

## From Dream to Reality

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# Agenda

**Definition , vision and policy**

**Area of development**

**Best practices and business cases**

**Considerations and challenges**

**Recommendations and Conclusion**



# Smart City Definition

Let us agree on one definition



- Academic** ))) The amount of IP (Intellectual Property) a City produced to enhance the City lifestyle compared to other cities globally.
- Provider** ))) The amount of data traffic a citizen can generate or receive per second in MB. This is also called CyberCity
- ICT** ))) Diversity of different technologies intelligently integrated to provide seamless smart applications and services on different access networks.
- Citizen** ))) Service, Care, Price, Quality, Availability and Speed



# Characteristics

## What characterizes a Smart City?

- **A Smart City provides advanced applications and services to the community through a cutting edge ICT technology, thus, delivering a better way of living by making services available to everyone anywhere at anytime**
- **These services are used in fields such as Safety, Health, Education or Utility management**
- **Smart cities include a broadband infrastructure that is widely available and affordable to all, in developed and underdeveloped areas**
- **Communities are connected to each other through an integrated service architecture which allows for a state of the art information sharing**
- **A platform for innovation is in place which promotes the development of new applications and services and the involvement of citizens**





## Vision & Policy

“Improve quality of life in the cities and catalyze economic development through ubiquitous broadband connectivity and compelling ICT services, supported by a true collaboration between the public and private sectors”



## Vision and Policy

- **Vision: Maximize the city brand by using state of the art technology and services thus creating unique values for:**
  - Investor
  - Developer
  - Operator
  - Government
  - End-user
- **To ensure that the vision of Smart City is pertained, the below policies should be applied:**
  - Community value and financial gain have equal priorities
  - A fair pricing for all services provided thus making it affordable for all the community segments
  - The government acts as a catalyst as well as a facility provider



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**Definition of a smart city**

**Smart City: areas of development**

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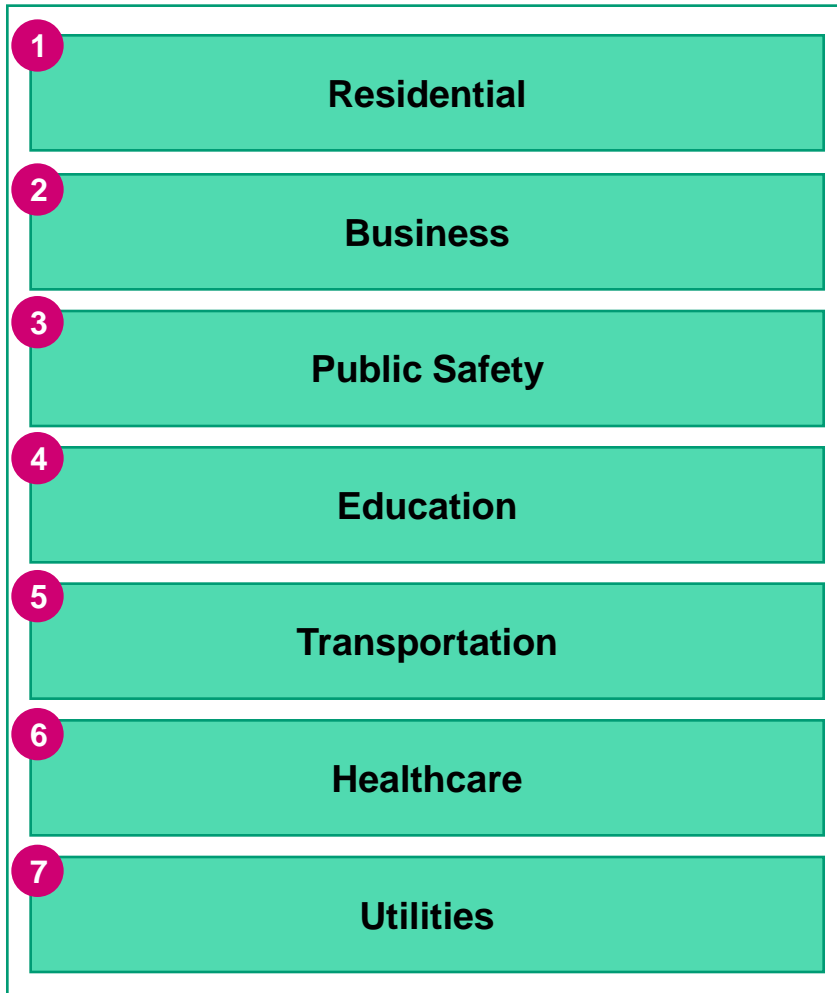
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# Areas of Development

Smart City concept targets all the community's areas needed to ensure a better living



## Comments

- The ultimate aim of a Smart City is to allow all its verticals to communicate with each other thus providing the citizens a better and easier way of living
- Seamless Interface
- Green technology, Natural resources and Environment friendly
- Automated houses and business for better utilization of energy and resources





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## Smart City best practices

The healthy interaction between the different stake holders in the City directly promotes the achievement of it goals

### Goals of Smart Cities

- Promote economic and human development
- Diversify the economy
- Create employment opportunities
- Upgrade competitiveness by promoting human development

### Stake holders

- **The public sector:**
  - Contributes to strategy definition, planning, investment and implementation
  - Utilizes Smart City infrastructure to optimize efficiency by offering e-government services
- **The private sector:**
  - Contributes to planning, investment & implementation
  - Utilizes infrastructure to thrive offer services
- **The end user** who enjoys state of the art products and services and who can directly develop applications to contribute to the development of the community services

### Best practices

- Make the products and services accessible to all citizens through facilitating accessibility to the technology
- Have a strong involvement and coordination between the public and private sector consistent with a set vision
- Commercialize an innovative and comprehensive product and service offering
- Provide training for all citizens to allow access to the products and services
- Provide high quality interactive customer care to the end user
- Provide feedback to the service provider



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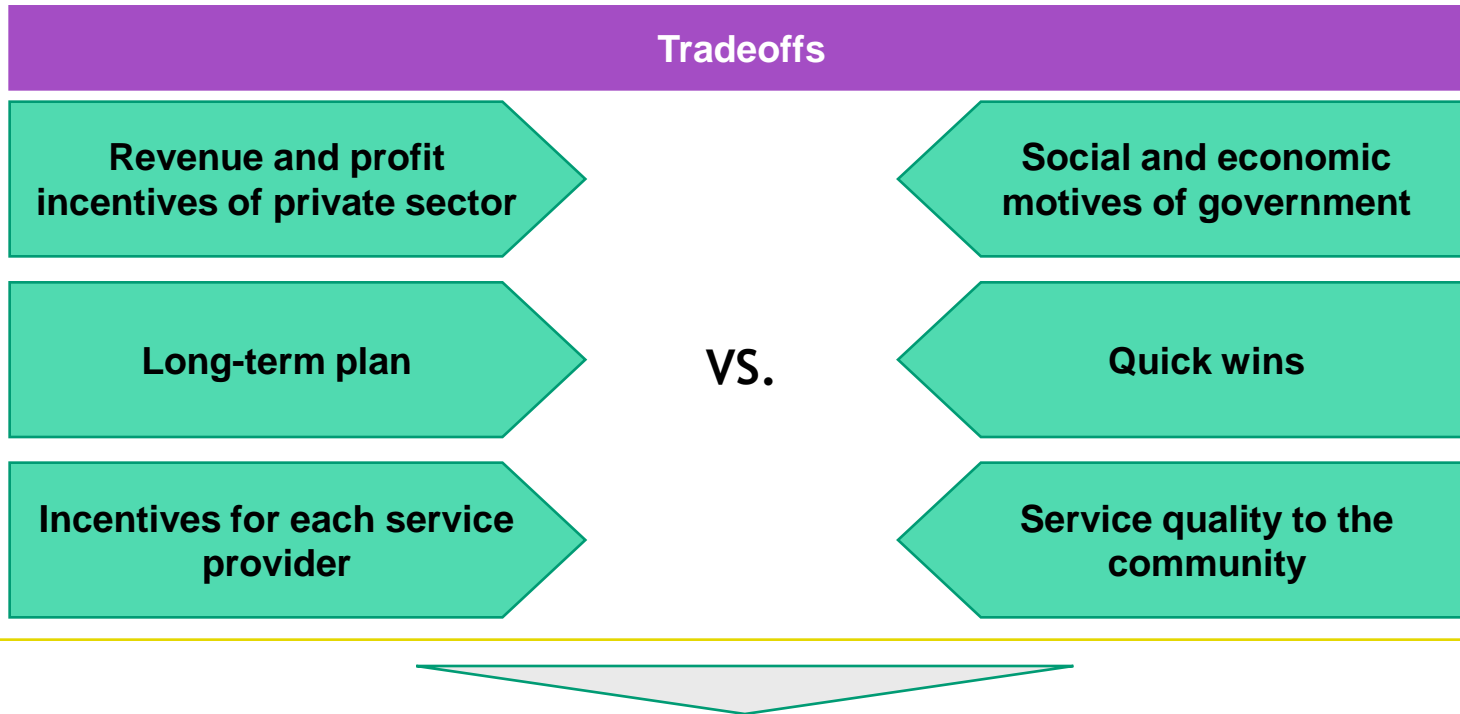
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## Considerations

Keeping the right balance between the government, private sector and the end user is the biggest social challenge for a Smart City as well as coping with the technological evolution



- Private sectors are in general driven by the profit they make while governments seek solutions that serve the community. Finding an intersection point between the two would be driven by rules and regulations that depict the community service schema while allowing the private sector to be profitable
- A Smart City with a well defined vision should have a clear long term plan . Nevertheless, its short term quick wins resulting in socio-geographic evolution should be aligned with the longer term vision of the city
- Service providers should be given the right grounds in order for them to invest their time money and resources in order to improve the status of the city. However, fair competition should be controlled by the authorities in order to induce a better service quality for the citizens



# Smart City challenges

Smart cities face various challenges ranging from technical to accessibility

## Technical

- Integration with global systems
  - Smart cities are limited zones within nations, and need to be integrated
- Upgrade and migration
  - Evolving technology requires very expensive infrastructure to be extremely flexible
- Privacy & Security
  - As networks evolve and expand, privacy and security issues arise
- Cost
  - Smart Cities incur heavy capital and operating costs
- International backhaul
  - Smart Cities offer products and services that require a very high bandwidth in the international backhaul

## Sustainability

- Power management
  - Active equipment requires heavy use of energy and backup equipment
  - Global warming and depletion of natural resources are becoming more serious issues leading to the definition of new regulations
  - Renewable energy resources are not developed enough yet to meet the demand of a large active network
- Waste management / Recycling
  - Substantial amount of waste consisting mostly of faulty equipment is produced in a Smart City
  - Large amounts of solid and liquid waste are produced during the manufacturing phase of technological equipment
  - A large percentage of this waste may not be recyclable

## Accessibility

- Financial accessibility
  - The equipment and devices required need to be priced in a way to be accessible to all citizens
  - All products and services in a Smart City need to be financially accessible to all citizens
- Awareness
  - All citizens need to be aware of the technology and trained to use it
  - As products and services evolve in terms of technology, they also evolve in complexity, which requires a continuing coaching and training effort



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# Recommendations

## General

- One definition of Smart Cities agreed by all stakeholders
- Government (Regulator) needs to drive the vision. Stakeholders have to follow.
- Education and training
- Intelligence measured by the amount of ideas citizens produce in a city

## Technology

- Unified Customer Care solution. CRM is a key success factor
- Unified infrastructure that can be shared with multiple operators
- Multi-service Integration (convergence)
- Environmentally friendly solutions
- Applications and Speed

## Business

- Business Model
- Sustainability
- CSR should be part of Business. Pay back to community
- Break the rules if they don't make sense
- Government dream driven by Private sector

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# Conclusion

- **Smart Cities represent an innovative way to achieve better interaction between the city stakeholders**
- **The citizen can also interact directly with the government and hence contribute to the development and renewal of ideas to the benefit of the community**
- **ICT players have an essential role here: They support the whole infrastructure and platform of applications while ubiquitously connecting the stakeholders in the city**
- **Nevertheless, Smart Cities face key challenges with technical and social considerations to make for a successful Smart City serving all its citizens**



Thank you

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