Smart Cities in Indian Scenario

Dr. Pradeep Kumar Yemula

Outline of Presentation

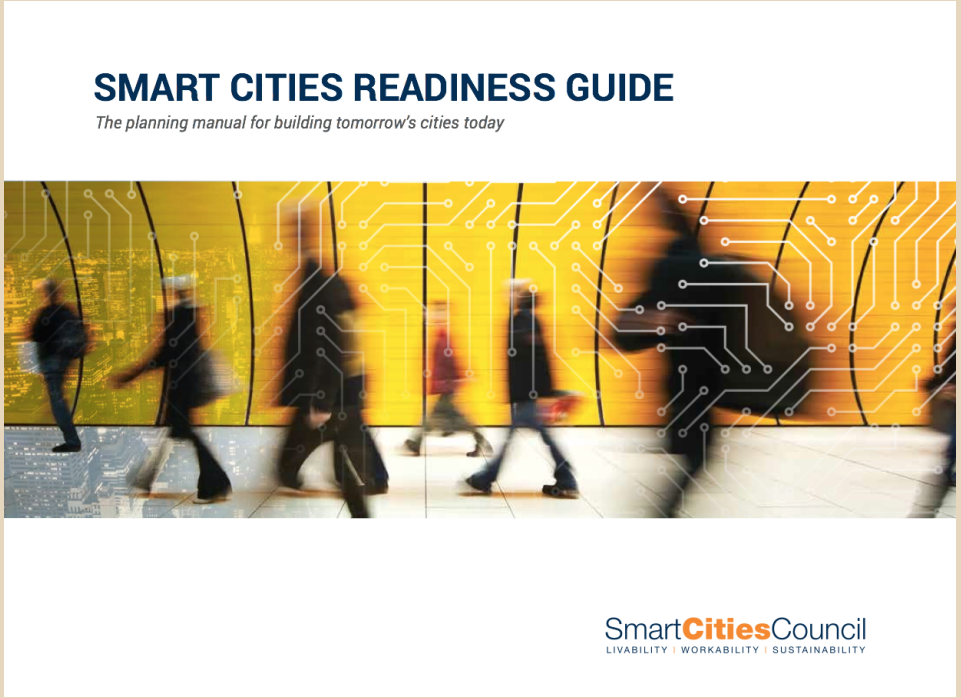
1. Smart City Framework

   by Smart Cities Council

2. Smart Cities in Indian Scenario

Smart City Definition

- ➔ Livability
- ➔ Workability
- ➔ Sustainability



http://smartcitiescouncil.com

Core Functions of Smart City

1. **Collect**
   information about current conditions across all responsibility areas (power, water, traffic, weather, buildings, etc.).

2. **Communicate**
   information, sometimes to other devices, sometimes to a control center and sometimes to servers running powerful software.

3. **Crunch**
   data, analyzing it to present information, to perfect (optimize) operations and to predict what might happen next.

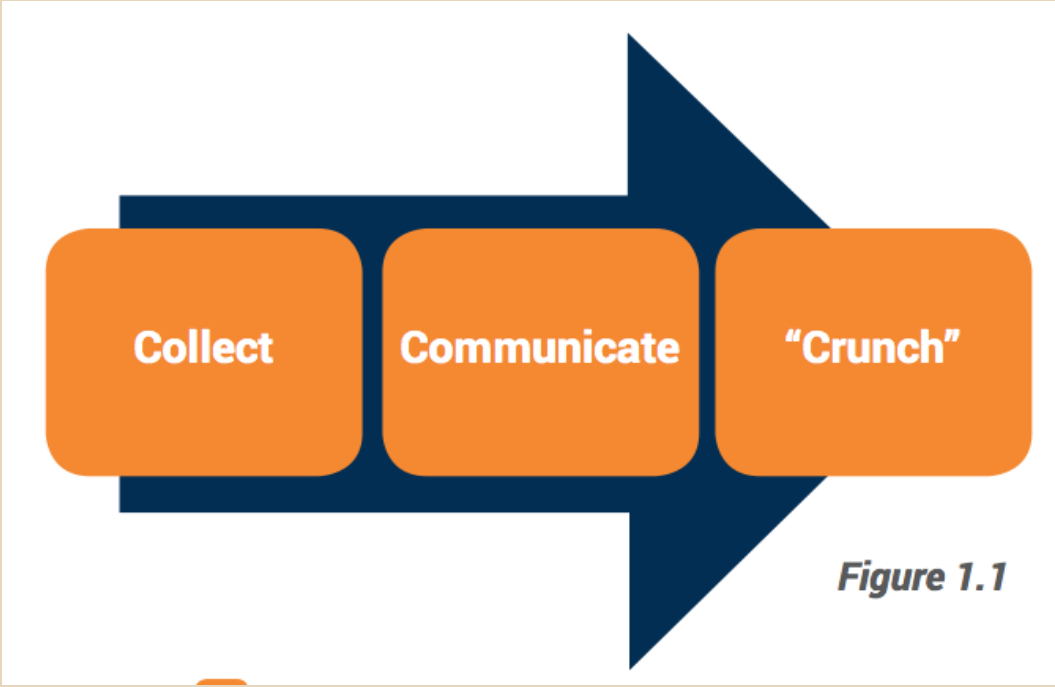
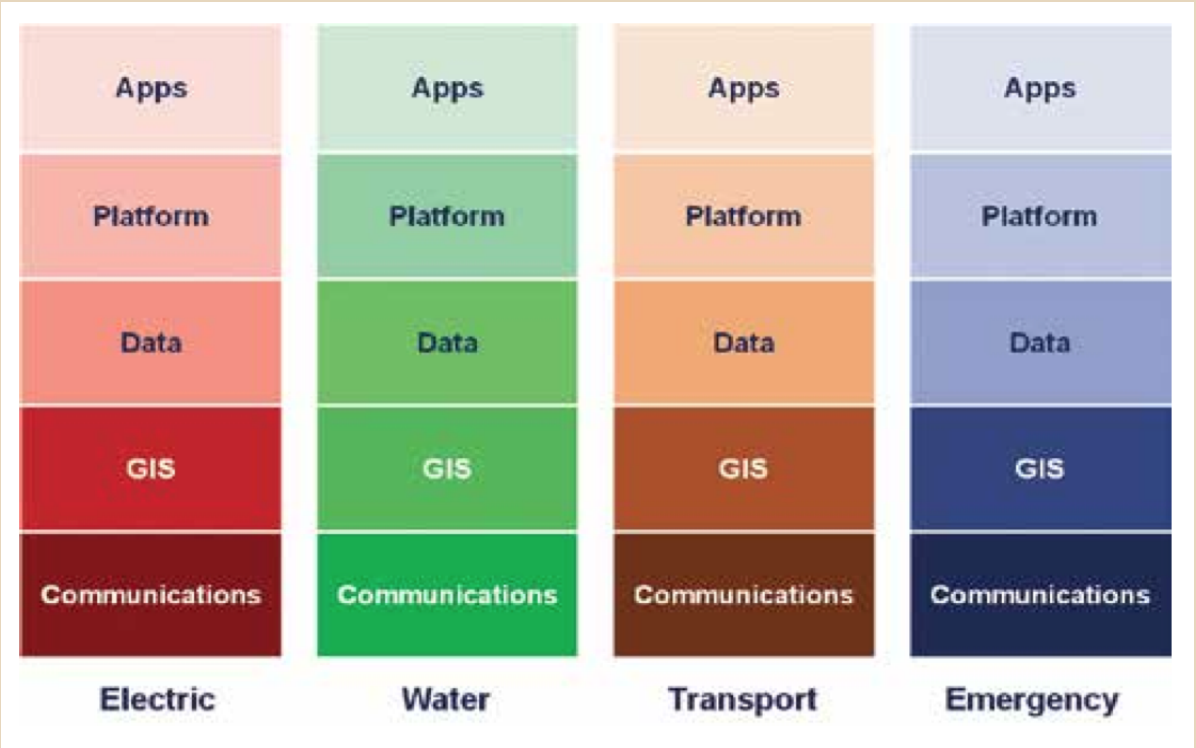


Figure 1.1

Source: Smart Cities Readiness Guide V1.5, http://smartcitiescouncil.com

Barriers for Smart City



Effects:

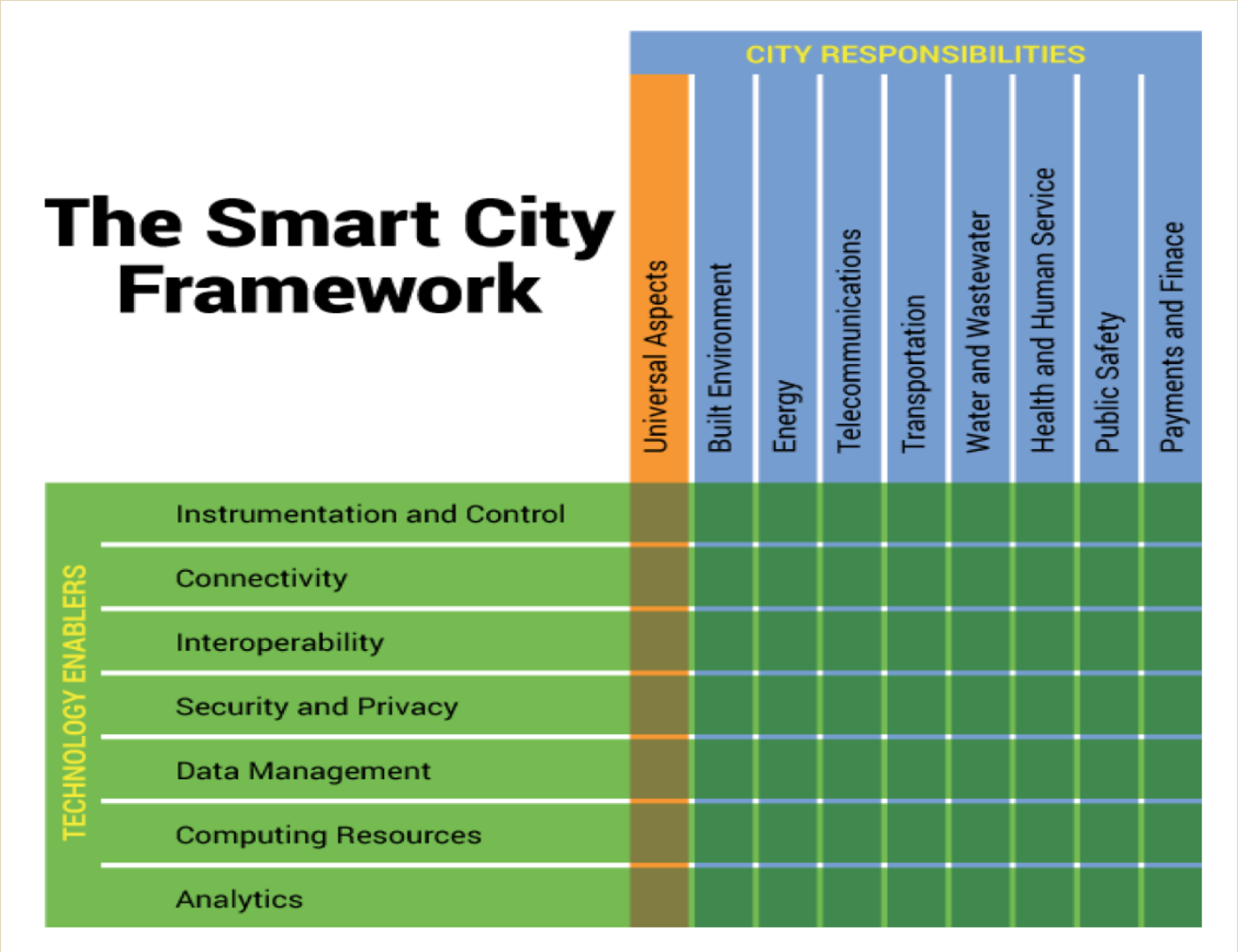
- Expensive redundancies
- siloed implementations
- complex co-ordination

AT A GLANCE: TRADITIONAL CITIES VS SMART CITIES

	The Problem	The Smart City Solution
Planning	• Ad hoc and decentralized • Cost savings aren't realized • Limited potential for scalability of investment	• Coordinated and holistic • Resources are shared • Cost savings are fully realized • Investments are scalable • Improved city planning and forecasting
Infrastructure	• Runs inefficiently • Costs more money and resources to run	• Optimized with cutting-edge technology • Saves money and resources • Improved service-level agreements
System operators	• Guess at infrastructure conditions • React to problems • Can't deploy resources efficiently to address problems	• Enjoy real-time reporting on infrastructure conditions • Predict and prevent problems • Deploy resources more efficiently • Automate maintenance • Save money
ICT investments	• Piecemeal and siloed • Deliver suboptimal benefit • Don't realize economies of scale	• Centrally planned • Deployed across city departments and projects • Deliver optimal benefit • Provide maximum value and savings
Citizen engagement	• Limited, scattered online connection to citizens • Citizens can't make optimal use of city services (or easily find them)	• Complete and singular online presence • Citizens can easily find and use services • Citizens can participate in smart city initiatives • Two-way communications between government and people • Specialized services focused on the individual citizen • Citizens can both contribute to and access real-time intelligent city data
Sharing data	• Departments and functions are siloed • Departments rarely share data and collaborate on initiatives	• Departments and functions are integrated and/or shared • Data is shared between departments and better correlated with other data services • Results are improved • Costs are cut

Figure 1.14

Source: Smart Cities Readiness Guide V1.5, http://smartcitiescouncil.com



Source: Smart Cities Readiness Guide V1.5, http://smartcitiescouncil.com

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Smart Cities work in India

- In 2014, Government Announced building of 100 smart cities in India
- Ministry of Urban Development, Government of India has circulated a “Concept note on Smart Cities”
- www.indiansmartcities.in
- Smart Cities Concept Note
  - http://indiansmartcities.in/downloads/CONCEPT_NOTE_-3.12.2014__REVISED_AND_LATEST_.pdf
- Smart Hyderabad
  - http://smtcty.com

Urbanization Trend

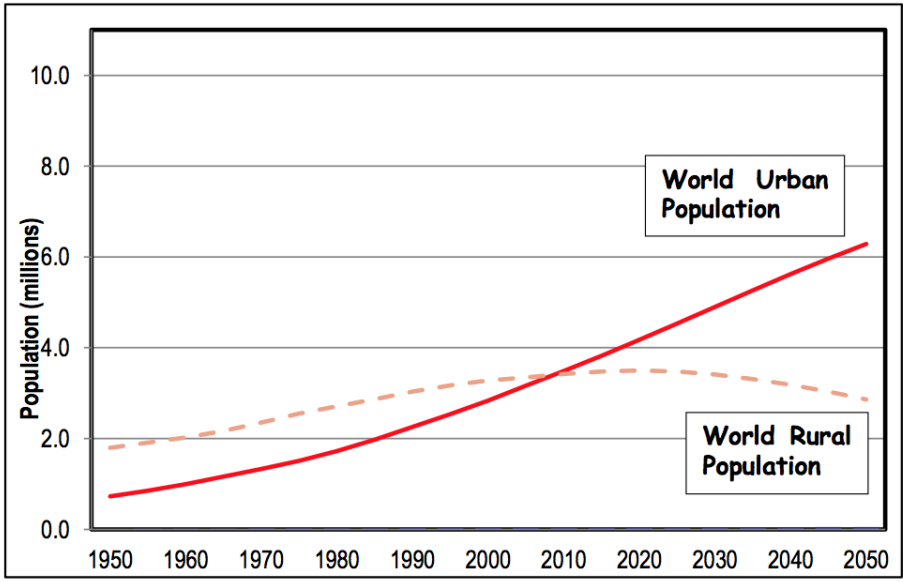


Figure 1: Urbanization Trends

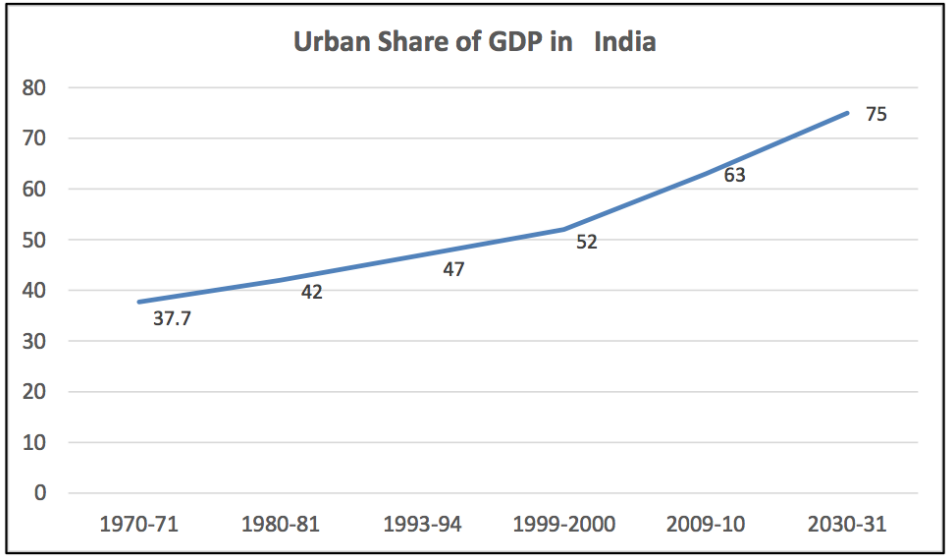
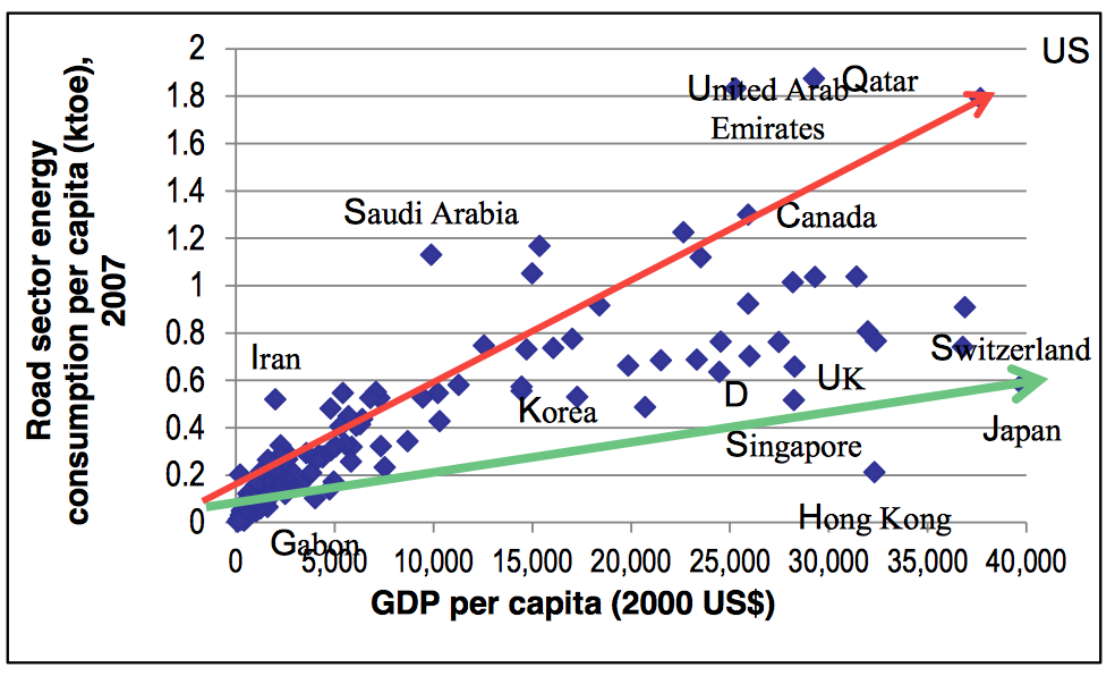


Figure 2: Urban Share of GDP in India

Urbanization Strategy of India

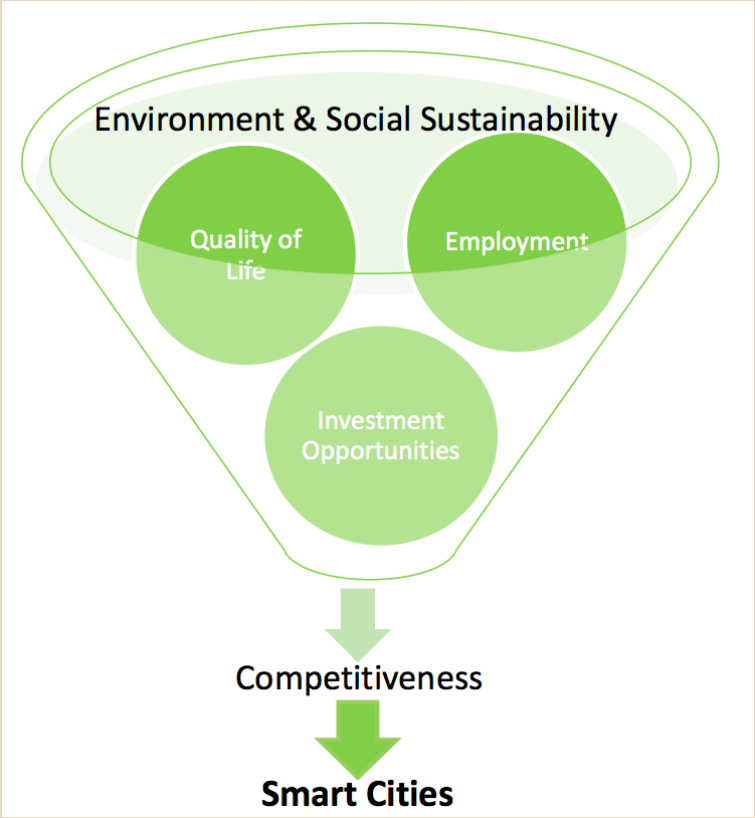


Strategy: Low energy intensity with use of information and communication technologies (ICT)

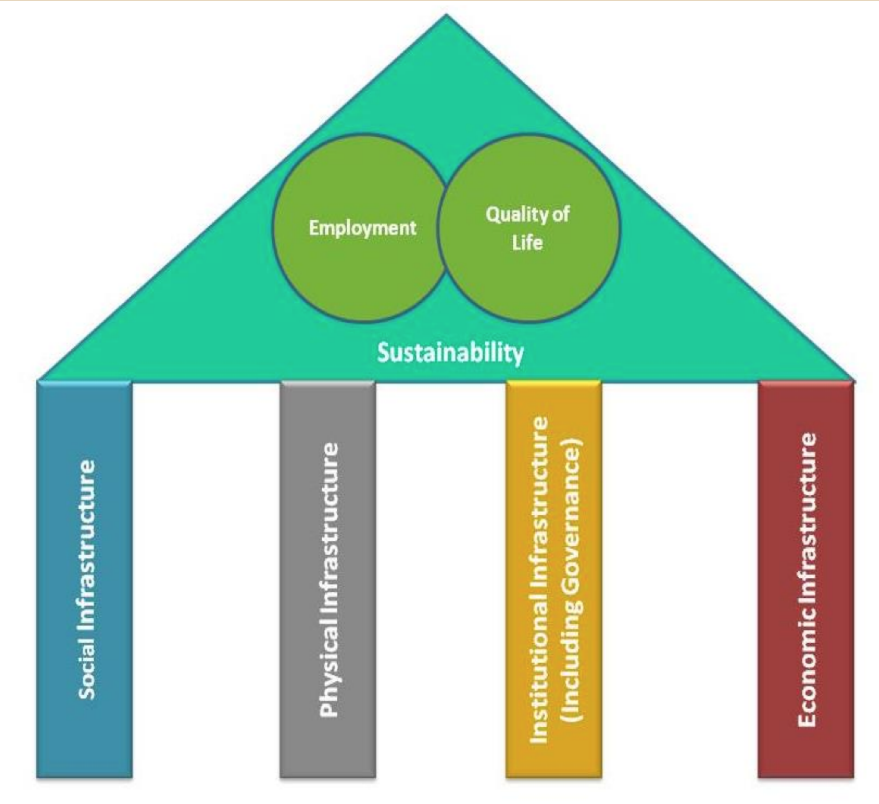
Motivation for Smart Cities

- As the global population continues to grow at a steady pace, more and more people are moving to cities every single day.
- Urban areas also contribute a higher share of GDP.
- In India, the urban population is currently 31% of the total population and it contributes over 60% of India's GDP.
- It is projected that urban India will contribute nearly 75% of the national GDP in the next 15 years.
- Cities are accordingly referred to as the engines of economic growth.
- There is need for the cities to get smarter
- To manage complexity, increase efficiency, reduce expenses, and improve quality of life

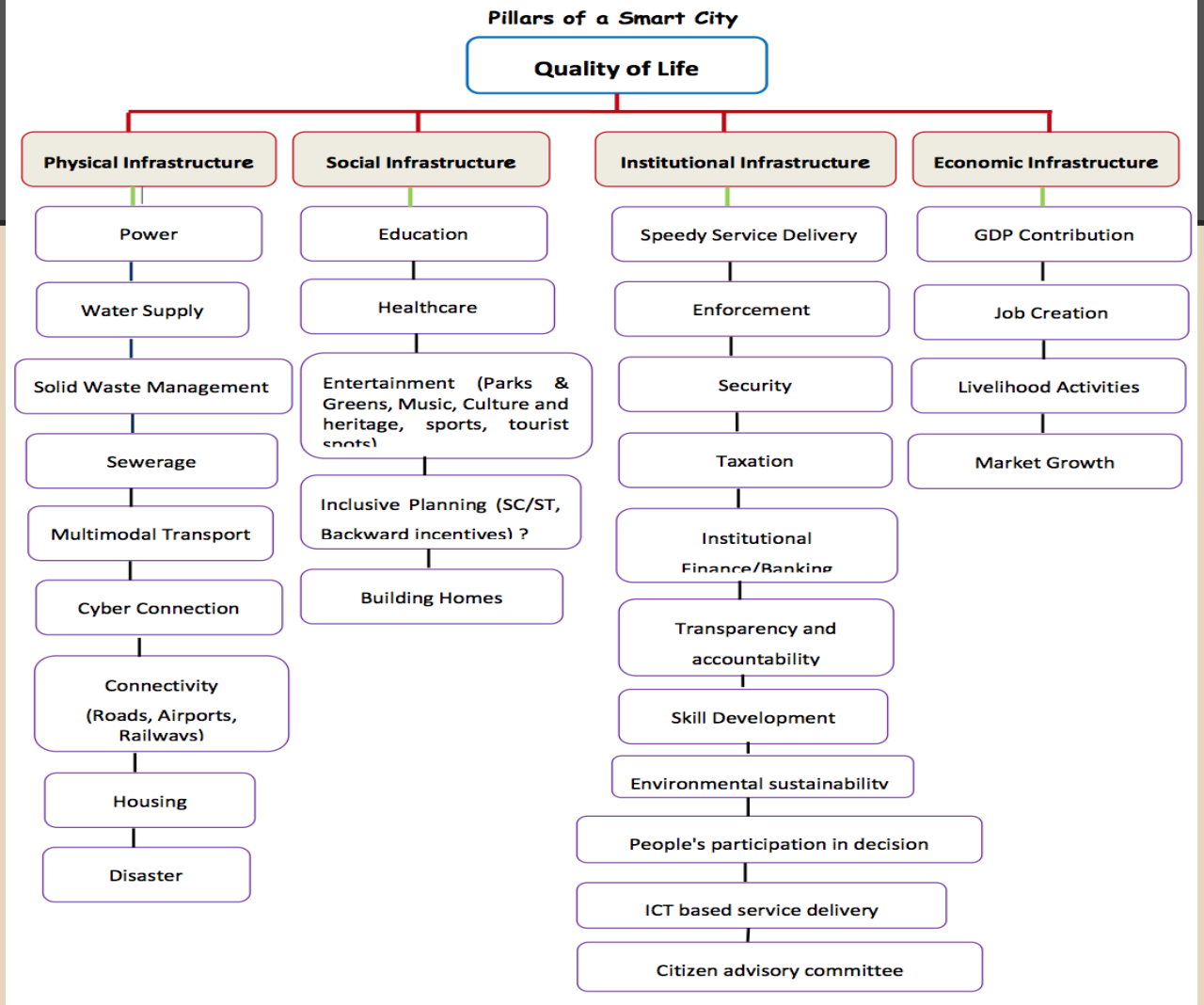
Features of Smart City



Pillars of Smart City



- Institutional Infrastructure
  - planning, e-governance, transparency
- Physical Infrastructure
  - urban mobility, housing, water, sewerage, waste management
- Social
  - education, health, entertainment
- Economic
  - financial centers, Industrial parks, skill development, etc


Pillars of a Smart City
Quality of Life
Physical Infrastructure
Social Infrastructure
Institutional Infrastructure
Economic Infrastructure
Power
Water Supply
Solid Waste Management
Sewerage
Multimodal Transport
Cyber Connection
Connectivity (Roads, Airports, Railways)
Housing
Disaster
Education
Healthcare
Entertainment (Parks & Greens, Music, Culture and heritage, sports, tourist spots)
Inclusive Planning (SC/ST, Backward incentives) ?
Building Homes
Speedy Service Delivery
Enforcement
Security
Taxation
Institutional Finance/Banking
Transparency and accountability
Skill Development
Environmental sustainability
People's participation in decision
ICT based service delivery
Citizen advisory committee
GDP Contribution
Job Creation
Livelihood Activities
Market Growth

Thank You…!

Further Reading

- www.indiansmartcities.in
- Smart Cities Concept Note
  - http://indiansmartcities.in/downloads/CONCEPT_NOTE_-3.12.2014__REVISED_AND_LATEST_.pdf

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