Review Article

Smart City: A Path Of Growth Of India

Rahul Mishra
Research Scholar, DDU Gorakhpur University, Gorakhpur, UP.

Abstract

Large-scale urbanization causes some problems that will be accelerated by population growth. As more than half of the world's population lives in cities, the burden of energy, transport, water, buildings and public spaces increases, as does the need for a 'smart city' solution that can be efficient, sustainable and economically prosperous, Social well-being. Some of the key facts discussed below demonstrate the severity of the problem in India.

Keywords: Smart City, Urbanization, Growth And Development, Economy

INTRODUCTION

A city is a system of systems set up in a unique history and a specific environmental and social context. To make this city flourish, all major urban elements must work together to harness all resources, overcome challenges and identify opportunities for the city. (1)

The 'cleverness' of the city describes its ability to achieve its goals effectively and smoothly and to gather all means to achieve its goals. It explains how different city systems, each city system and how each city system, people, organization, finances, facilities and infrastructure work together. (2)

• You must act in an integrated manner in an integrated way to create synergies, enable cities to function globally and promote innovation and growth.

Traffic volume: Traffic congestion costs amount to $ 10 billion per year. Three of the ten best Indian cities in the worst traffic situation. 1% of the world's cars in India account for 10% of road accidents worldwide. (3)

Ability: India loses $ 68 billion in GDP as a result of electricity shortages. India is confronted daily with a power outage of 30,000 MW. More than 300 million citizens can not use electricity.
**Water:** in India 40-50% of the water is lost in the domestic distribution system. Twenty-two of the 32 metropolises in India are facing a water crisis. 170 million people in urban areas cannot use safe drinking water in India.(4)

**Healthcare:** 1 doctor per 1,700 people. In India there are one or more deaths per 4 newborns. Only about 5% of Indians are covered by health insurance.

---

**Smart City Concept**

Various concepts have been put forth for smart cities. Some of them have been highlighted below.(5)

Smart City is characterized and defined by various factors, including sustainability, economic development and high quality of life. These factors can be achieved via infrastructure (physical capital), human capital, social capital and/or ICT infrastructure.(6)

A smart city is a series of processes that enable cities to live better and become more resilient and respond more quickly to new challenges. Smart cities should therefore be able to participate in all public and private services in a way that best meets their needs.

CITIES that follow and integrate all major infrastructures, from roads, bridges, tunnels, railways, subways, airports, ports, communications, water, electricity and even large buildings, can plan resources to optimize and prevent preventative maintenance. You can monitor security aspects while maximizing.(7)

Smart City is a state-of-the-art, that uses new technologies to connect people, information and urban elements to realize sustainable green cities, competitive and innovative commerce and quality of life through the direct management and maintenance system of the city.
From the point of view of an executor, Smart Cities can use traditional (e.g., water supply) and modern (e.g., ICT) realizers to promote sustainable economic development, improve quality of life and manage natural resources more efficiently. (8)

The city can be defined as 'smart' when it invests in human and social capital, tradition (transport) and modern communication infrastructure, together with the sensible management of natural resources through participatory actions and participation, to increase sustainable economic development and quality of life. (9)

**Smart City Framework**

The Smart City Framework is a simple decision-making method that enables both the public and the private sector to better plan and implement Smart City initiatives. Most cities go through this process in an intuitive way, not in a clearly structured way. Structured methods not only increase the efficiency of urban infrastructure, but also reflect transparency in the way cities work. The integrated smart city framework consists of the following main elements: (10)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Explanation</th>
<th>Toolkit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Governance</td>
<td>Stakeholder involvement in policy making and implementation, leveraging technology to facilitate the process; better transparency and accountability.</td>
<td>Revenue Management Administration Grievance Management Policy</td>
</tr>
<tr>
<td>Smart Living</td>
<td>Better access to city facilities and services like housing, utilities, etc. and thus improved quality of life.</td>
<td>Sewerage &amp; Sanitation Water Supply, Electricity Storm Water Drainage Housing, Citizen Safety</td>
</tr>
<tr>
<td>Smart People</td>
<td>Better educational levels and skill building, health, lifelong learning and higher participation at community level.</td>
<td>Education Participation in public life Participation of communities/ Advocacy, Health Inclusive Development</td>
</tr>
<tr>
<td>Smart Mobility</td>
<td>Optimum movement of people, goods and information.</td>
<td>Transport, ICT</td>
</tr>
<tr>
<td>Smart Environment</td>
<td>Sustainable development, natural resource utilization, optimal use of water resources and energy, balance between built and green areas.</td>
<td>Pollution, Sustainable resource management</td>
</tr>
<tr>
<td>Smart Economy</td>
<td>Economic development, higher employment, more investments.</td>
<td>Income levels Labour market Poverty level</td>
</tr>
</tbody>
</table>

**SMART CITY FEATURES**
Some typical features of extensive development in Smart City are described below.(11)
1. Facilitating complex land use in regional development - planning for 'unplanned areas' involving a large number of activities and land use to make land use more efficient. The state has some flexibility in land use and will formulate additional rules to adapt to changes.

2. Housing and inclusiveness - expanding living options for everyone;

3. Create a good walking area - reduce congestion, air pollution and depletion of resources, revitalize the local economy, promote interaction and ensure safety. Road networks are created or renovated for pedestrians and cyclists, but also for vehicles and public transport, and the necessary administrative services are offered on pedestrian or bicycle roads.

4. Store and develop open spaces such as parks, playgrounds and recreational areas to improve the quality of life of citizens, reduce local heat effects in the region and promote the ecological balance in general.

5. Last mile paratransport Connectivity - Transit-oriented development (TOD)

6. Make governance citizen-friendly and cost-effective - more and more dependent on increasing accountability and transparency in online services. Especially if you do not go to municipalities, use mobile phones to reduce service costs and provide services. Listen to people, get feedback and organize electronic groups that use online monitoring of programs and activities through on-site cyber tours.

7. Give the city an identity - based on important economic activities such as local cuisine, health, education, arts and crafts, culture, sporting goods, furniture, socks, textiles and dairy products.

8. Improved by applying intelligent solutions to the infrastructure and services of area-based development. For example, it makes the region less vulnerable to disasters, uses fewer resources and offers affordable services.

**Smart City benefits(12)**
The government can benefit from long-term benefits by investing in smart cities. -

- **Cost savings:**
technological innovation introduces smarter concepts to save costs, such as transport, energy, water and security. Schneider Electric's smart solution reduces energy consumption by 40% and water loss by 15% due to LED-type traffic lights.

- **Monetization:**
gets huge foreign direct investment and high GDP. 100% foreign direct investment (FD) and easy-to-follow investor-friendly policy will increase foreign direct investment by building smart cities. On the other hand, the tourism industry contributes to the contribution of smart cities to GDP as a result of the expansion of industries / companies. The Sagarmala project, with at least 12 smart cities, can boost Indian GDP growth by 2%.

- **Sustainability:**
sustainability, high employment and extensive training are important results for smart cities. Smart environment, health, transport, waste management and energy will contribute to a better life. Smart City
projects increase employment by 10-15%. More jobs are created in IT professionals, data analysis, consulting, system integration and Internet of Things (IoT). Learning smart through distance learning can help you expand your education.

So a smart city(13)

- Providing better and more convenient services to citizens.
- Better urban governance;
- Better living environment;
- More modern industry, more environmentally friendly, more people-friendly Smart and intelligent infrastructure; and
- A dynamic and innovative economy.

India's aspirations for smart cities(14)

Currently, 30% of the Indian population lives in urban areas, while these centers contribute around 65% of national GDP. Over the next 15-20 years, India is expected to contribute about 75% of the country's GDP, and it is expected that 300 million people in the existing 300 million people will live in the center of India. The pace of urbanization will put enormous pressure on urban infrastructure, urban financing, natural resources and the quality of urban life. In order to manage this urbanization at a high level, governments must rely on smart concepts and smart solutions. Government. India has decided to develop 100 smart cities in India, as highlighted by its Minister of Finance in its July 2014 financial speech. To achieve this goal, MoUD will set standards and developments to develop potential smart cities.

Main features are:
- Operational procedures, including the development of civil reference agencies, smart urban development plans and plans for environmental sustainability.
- Smart city selection:
  - Satellite cities with a population of more than 4 million
  - Cities in the population range from 1 million to 4 million
  - All main / state titles
  - cities of tourism / religious / economic interest not mentioned above; and
- A city with a population of between 0.2-1 million.
- Using tools to enable smart cities such as energy efficiency, demand management, improved access to information, environmental sustainability, use of clean technologies, ICT use, private sector participation, citizen participation and smart governance

Conditions prior to smart urban development, commitment to tripartite agreement ULB, between the state and MoUD; E-governance and involvement in the existence of the Citizens' Charter; Presence of a registered master plan; Clarifying financing mechanisms - their sources, grants, PPPs and financial sustainability; Commitment to environmental sustainability and disaster management strategies Provide financial support to the central government through financial support, policy support and capacity building. Financial mechanisms that use plans from other ministries. PPP project; Creation of central government grants, borrowed by multilateral / bilateral
agencies and state and state development organizations. Although the government is committed to the development of smart cities in India, it must formulate a rapid strategy implementation at the level of the state / ULB and complete the operational model. Government strategy to successfully achieve the dream of '100 Smart Cities' in India.

The following is a recommended strategy for governments such as India to adopt to realize their dreams with regard to smart city network development.

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Allocate Appropriate Funds</td>
<td>➢ Allocate sufficient funds at centre / state level for smart city initiatives.</td>
</tr>
<tr>
<td>➢ Build Competency</td>
<td>➢ Focus on building technological innovation capabilities – R&amp;D centres, innovation hubs etc.</td>
</tr>
<tr>
<td></td>
<td>➢ Provide training to people to develop the required skill set.</td>
</tr>
<tr>
<td></td>
<td>➢ Retrofit the existing technology as per the requirement.</td>
</tr>
<tr>
<td>➢ Favourable Policies</td>
<td>➢ Formulate investor friendly policies to attract investments.</td>
</tr>
<tr>
<td></td>
<td>➢ Lay down transparent partnership terms with foreign countries.</td>
</tr>
<tr>
<td></td>
<td>➢ Formulate local friendly policy to gain support in land acquisition etc. and encourage citizens participation.</td>
</tr>
<tr>
<td>➢ Benchmark with Best Practices</td>
<td>➢ Study international smart cities developed in cities such as Hamburg, Seoul, Barcelona, Brazil etc.</td>
</tr>
</tbody>
</table>

**Conclusion**

The Indian government has adopted this idea by changing the definition as follows. "Smart City offers sustainability across a broad range of populations in terms of economic activity and job opportunities, regardless of training, technology or income level."

**References**


integrative framework. System Science (HICSS), 2012 45th Hawaii International Conference on; 2012: IEEE.


4. Khekare GS, Sakhare AV, editors. A smart city framework for intelligent traffic system using VANET. Automation, Computing, Communication, Control and Compressed Sensing (iMac4s), 2013 International Multi-Conference on; 2013: IEEE.


