

## Progress and Development of Smart Cities in India

**Ram Niwas Sangwan**

Assistant Professor of Commerce, Govt. College, Kharkhara, Distt. – Rewari, State – Haryana, Pin – 123401, India

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### Abstract

Development can be possible only where there is under development. It is true that there is possibility of development for the smart cities in India. A smart city is an urban area that uses different types of electronic data collection sensors to supply information used to manage assets and resources efficiently. This includes data collected from citizens, devices, and assets that is processed and analyzed to monitor and manage traffic and transportation systems, power plants, water supply networks, waste management, law enforcement, information systems, schools, libraries, hospitals, and other community services. The smart city concept integrates information and communication technology (ICT), and various physical devices connected to the network to optimize the efficiency of city operations and services and connect to citizens. Smart city technology allows city officials to interact directly with both community and city infrastructure and to monitor what is happening in the city and how the city is evolving. Information and communication technology (ICT) is used to enhance quality, performance and interactivity of urban services, to reduce costs and resource consumption and to increase contact between citizens and government. Smart city applications are developed to manage urban flows and allow for real-time responses.

**KEYWORDS:** Progress, Development, Information and Communication Technology, Special Purpose Vehicle, Public-Private Partnership etc.

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### Introduction:

A smart city is an urban area that uses different types of electronic data collection sensors to supply information used to manage assets and resources efficiently. This includes data collected from citizens, devices, and assets that is processed and analyzed to monitor and manage traffic and transportation systems, power plants, water supply networks, waste management, law enforcement, information systems, schools, libraries, hospitals, and other community services. The smart city concept integrates information and communication technology (ICT), and various physical devices connected to the network to optimize the efficiency of city operations and services and connect to citizens. Smart city technology allows city officials to interact directly with both community and city infrastructure and to monitor what is happening in the city and how the city is evolving. Information and communication technology (ICT) is used to enhance quality, performance and interactivity of urban services, to reduce costs and resource consumption and to increase contact between citizens and government. Smart city applications are developed to manage urban flows and allow for real-time responses. In these cities, the modern technologies will be used to remove the arising problems and the six basic requirements will be easily available to the people. These six basic requirements

are electricity, communication, food and water, residence and transport, safety and security and education & environment.<sup>1</sup>

In India, most of the municipal corporations / municipal committees do not have power to take decision of its development at broad level. While in other countries where we are looking there cities as smart cities, the decision power is given to their municipal corporations / municipal committees. Those cities have full control over the decision regarding the distribution of zones, their transportation system and the better utilization of land. Local requirements could be fulfilled by the decision taken at local level. In our country, the concept of smart city could not be implemented without delegating the decision power at local level.

### **Definition of Smart City:**

Indian Government defines smart city in 2014 as "Smart City offers sustainability in terms of economic activities and employment opportunities to a wide section of its residents, regardless of their level of education, skills or income levels.

The term smart city is, therefore, an umbrella concept that contains a number of sub-themes such as smart urbanism, smart economy, sustainable and smart environment, smart technology, smart energy, smart mobility, smart health etc.

### **Features of Smart City:**

Some typical features of comprehensive development in Smart Cities are described below:

1. Promoting mixed land use in area based developments—planning for ‘unplanned areas’ containing a range of compatible activities and land uses close to one another in order to make land use more efficient. The States will enable some flexibility in land use and building bye-laws to adapt to change;
2. Housing and inclusiveness - expand housing opportunities for all;
3. Creating walk-able localities - reduce congestion, air pollution and resource depletion, boost local economy, promote interactions and ensure security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists, and necessary administrative services are offered within walking or cycling distance;
4. Preserving and developing open spaces - parks, playgrounds, and recreational spaces in order to enhance the quality of life of citizens, reduce the urban heat effects in Areas and generally promote eco-balance;
5. Promoting a variety of transport options - Transit Oriented Development (TOD), public transport and last mile para-transport connectivity;
6. Making governance citizen-friendly and cost effective - increasingly rely on online services to bring about accountability and transparency, especially using mobiles to reduce cost of services and providing services without having to go to municipal offices. Forming e-groups to listen to people and obtain feedback and

use online monitoring of programs and activities with the aid of cyber tour of worksites;

7. Giving an identity to the city - based on its main economic activity, such as local cuisine, health, education, arts and craft, culture, sports goods, furniture, hosiery, textile, dairy, etc;
8. Applying Smart Solutions to infrastructure and services in area-based development in order to make them better. For example, making Areas less vulnerable to disasters, using fewer resources, and providing cheaper services.<sup>2</sup>

### **Financing of Smart Cities:**

Following are the some basic resources for the development of smart cities:

- Property tax
- Profession tax
- Entertainment tax
- Advertisement tax
- Octroi and entry taxes

Apart to the above basic resources, following are the some additional resources for financing and development of Smart Cities:

- Government of India funds: Rs.500 cr will be provided by the Central Govt. for the development of smart cities.
- Matching contribution by States/ ULBs: The contribution equal to the Central Govt. will also make by the concerned State Govt. i.e. Rs.500 cr.
- User Charges Public-Private Partnerships (PPPs): Municipal Corporations should levy user charges in public-private partnership mode.
- FFC recommendations (including land based instruments)
- Municipal bonds: Municipal Corporations can issue their tax free Municipal Bonds for their financing.
- Borrowings from bilateral and multilaterals
- National Investment and Infrastructure Fund (NIIF)
- Convergence with other Government schemes

### **Smart Cities Planning & Management:**

1. **Planning of Transportation:** Now a day, transportation is a big problem in every city. So, we have to pay attention on the planning of transportation. We have to plan in such a way that there should not only emphasis on cars but also on other types of transportation like two wheelers, cyclists and pedestrians. Transportation planning is the most important part of smart cities. So, the planning of transportation should be prepared very carefully.
2. **Waste Management:** Waste management is one of the major problems of any city. The problem of waste management starts from the point of their generation. So, we have to understand that we should prepare such type of goods which should be re-useable. We have to make practice that minimum waste should be generated. For this, we have to promote the bio-degradable products and their packaging, which can be easily re-cycled. There should be provision of ban on

such products & packaging which cannot be re-cycled. Waste should be processed in different categories. Dry waste, which can be burn, can be used for the production of power or energy. While the other type of waste can be used for the production of fertilizer. So, we can say that the second most important planning is the waste management.

3. **Water Supply Plans:** Water is life, i.e. we cannot even think about life without water. So, how we can think about smart city without proper utilization of water. We have to prepare such type of plans that every drop of water can be properly used and water should not be waste in sewerage. The waste water can be recycled and can be used for the other purposes like agriculture, gardening etc. The water should be used in such types that our water resources can be restored for future generation.
4. **Planned Colonies:** The one more requirement of smart cities is planned colonies. We have to make planned colonies for the development of smart cities. The aim of planned colonies should be that there should shopping complex, schools, social facilities and job opportunities available for the residents of colonies. The smart cities could be developed with the proper planning of colonies.<sup>3</sup>

#### Progress & Development of Smart Cities:

Development can be possible only where there is under development. It is true that there is possibility of development for the smart cities in India. Our Prime Minister has launched on June 25, 2015 to make 100 smart cities in 5 years i.e. till 2020. All the 100 smart cities declared in 4 steps. In the union budget of 2020, it is also announced by the finance minister to develop 5 new smart cities in collaboration with states on PPP (public private partnership) basis.

A total budget of Rs. 2,05,018 Crore was provided for 5151 projects of all the smart cities. But only Rs. 25693 Crore utilized to complete the 1556 projects. Only 12% work is completed till Jan. 2020. 35% work could not start and tender could not issue for 12% projects till the end of Jan. 2020. The main reason for delay in smart cities work is the development of SVP (Special Purpose Vehicle). The second reason is trained people are not available at local level to complete the project.

Table no. 1

Progress list of major 55 smart cities of 12states (Position as on Feb. 5, 2020)							
Sr. no.	Name of States	No. of cities	Work completed	Grant Received (in crore)	Grant utilized (in crore)	Unutilized grant (in crore)	% Unutilized grant (in crore)
1	Uttar Pradesh	12	25%	2860	1860	1000	34.96%
2	Maharashtra	10	25%	2438	1000	1438	58.98%
3	Madhya Pradesh	7	60%	2413	1760	653	27.06%
4	Gujarat	6	35%	2236	1911	325	14.53%
5	Rajasthan	4	36%	2645	951	1694	64.05%
6	Bihar	4	5%	977	106	871	89.15%
7	Punjab	3	35%	439	156	283	64.46%

8	Chhattisgarh	3	34%	800	320	480	60.00%
9	Haryana	2	18%	503	171	332	66.00%
10	Himachal Pradesh	2	0%	110	0	110	100.00%
11	Delhi	1	65%	988	199	789	79.86%
12	Jharkhand	1	26%	588	422	166	28.23%

(Source: bhaskar.com)<sup>4</sup>

Table no. 1 shows the progress of major 55 smart cities of 12 states. The maximum work completed is in Delhi and Madhya Pradesh, i.e. 65 and 60% respectively, while the minimum work completed is in Himachal Pradesh and Bihar, i.e. 0% and 5% respectively. There is a big difference of work completed between the states. The average work completed of smart cities in maximum states is 35%, which is also not better position as 5 years had been passed after launching the mission.

The same situation is in case of utilization of grants by the states for the development of smart cities. Himachal Pradesh had not utilized the allotted grant of Rs. 110 crore. In Shimla, the tendering process was not complete till Feb. 2020. The progress of 'Underground Dustbin Project' in Dharamshala is delayed as the earlier payment had not made to the concerned firm and the firm had denied to work in future. Hence, the total grant is not utilized in Himachal Pradesh. The situation of Bihar is also not good as 89.15% of allotted grant of Rs. 977 Crore is not utilized by the state and only 10.85% i.e. Rs. 106 Crore is utilized till Jan. 2020. The maximum grant is utilized by Gujarat i.e. Rs. 1911 Crore out of allotted grant of Rs. 2236 Crore i.e. 85.47% grant had been utilized by Gujarat.

### Sister Smart City Approach:

The govt. has given the responsibility of top 20 forward smart cities to help the top 20 backward smart cities. The govt. has made combinations of these cities, which is called "Sister Smart City Approach".

List of Sister cities combination		
Sr. No.	Top 20 forward smart city	Top 20 backward smart city (Sister Smart City)
1	Varanasi	Amritsar
2	Nasik	Jammu
3	Agra	Puducherry
4	Ahmedabad	Chandigarh
5	Bhopal	Aizawl
6	Amravati	Atal Nagar
7	Dehradun	Shillong
8	Ranchi	Shimla
9	Pune	Dharamshala
10	Vishakhapatnam	Diu

11	Udaipur	Itanagar
12	Indore	Guwahati
13	Kota	Pasighat
14	Vellore	Kawarti
15	Surat	Saharanpur
16	Vadodara	Moradabad
17	Kanpur	Karimnagar
18	Nagpur	Port Blair
19	Tirupur	Silwassa
20	Davangere	Bareilly

(Source: bhaskar.com)

The combinations of these smart cities are made with some common characteristics between these two cities like two capital cities or two hilly cities or two off shore cities or two industrial cities or tourism city with another tourism city. These sister cities will work together for next 100 days and after that on their performance their ranking will be changed.

The top 20 forward smart cities will give presentations of work done by them in front of top 20 backward smart cities and these forward smart cities will look after the problems of sister smart cities. The forward smart cities will share the DPR of their projects, feasibility reports, assessment impact reports with sister smart cities and by doing this, the problems of backward smart cities could be resolved.

### Conclusions:

The smart city proposal of each shortlisted city is expected to encapsulate either a retrofitting (city improvement) or redevelopment (city renewal) or green-field development (city extension) model, or a mix thereof and a Pan-city feature with Smart Solution(s). It is important to note that pan-city is an additional feature to be provided. Since smart city is taking a compact area approach, it is necessary that all the city residents feel there is something in it for them also. Therefore, the additional requirement of some (at least one) city-wide smart solution has been put in the scheme to make it inclusive.

There is forecast about increasing of population in cities till 2050 is about 30 Crore. There is 60% contribution of cities in the Gross Domestic Product (GDP) of India. So, the development and management of smart cities is the requirement of present time.

### References

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