

# Smart City: Concept and Strategies

*R B Bhagat*



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**H**uman civilisation has been carried forward by the cities that have been seats of power, culture, trade and centres of production. Historians consider the Indus Valley civilisation as an urban civilisation. In later periods, there were many great urban centres in India namely Patliputra (Patna), Vaishali, Kaushambi, and Ujjain in ancient times and Agra and Shahjahanabad (Delhi) during the medieval times just to mention a few. The list is very exhaustive so far India's urban civilisation is concerned (Ramachandran 1995; Sharma 2005; Champakalakshmi 2006).

In order to understand the emergence of the concept of smart cities, it is necessary to understand the nature of cities. Cities are large densely populated areas with heterogeneous population both in terms of occupational and skill diversity and also ethnic and social composition. In fact, heterogeneity and diversity are the hallmark of cities historically established promoting innovations but throwing challenges for inclusiveness, fairness and justice. Also, cities do not exist in isolation but are connected with each other as a part of the urban hierarchy forming an urban system. The lower level of urban hierarchy (small cities and

towns) is more intensively related with rural areas, while rural to urban migration influences almost all the levels of urban hierarchy right from megacity to the small towns. Looked at from this perspective, cities are not only the seats of economic growth, but also a vehicle for distributing the fruits of development in the entire range of settlement hierarchy including both urban and rural segments. Further, cities are also entities of intense flows not only confined to the limits of cities but also across the entire spectrum of cities and towns. They are interconnected with each other with varied levels of flows of information, capital, movement of goods and services and labour migration. As many cities have been harbingers of economic progress and social change in the past, they have been smart in their respective epoch of human history. However, the present nuances of the smart city ought to be seen in the contemporary context of the forces of globalisation and the huge expansion of information technology shaping our cities and influencing our lives.

The paradigm of smart cities appeared in the late 1980s as a means to visualize urban context, and since then they evolved fast in different contexts (Anthopoulos and Vakali 2012). According to Townsend (2014), 'smart cities are places where

The author is Professor and Head, Department of Migration and Urban Studies, International Institute for Population Sciences, Mumbai. He has earlier worked at the Tata Institute of Social Sciences. He has been a resource person with UNESCO-UNICEF India Migration Initiative and consultant to the International Organisation of Migration (IOM). He has also been on many committees of government and academic institutions to advise on research and policy issues. He has published a large number of research papers and books in the field of urbanisation, migration, health, environment and development.



information technology is welded to address problems old and new. The old city of concrete, glass and steel now conceals a vast underworld of computer and softwares. The new city, on the other hand, is a digital upgrade to our built legacy giving rise to a new wind of city'- we may call it a smart city. There is also a perspective that tries to look at the smart city, not as a whole but part of it. For example, it is argued that whatever smart city may mean, not all spaces of the city will be equally smart. It means that some places, people, and activities will have privileges over others (Shelton, Zook and Wiig 2015). A global IT company IBM thinks that 'in the 21st century, cities compete globally to attract both citizens and businesses. A city's attractiveness is directly related to its ability to offer the basic services that support growth opportunities, build economic value and create competitive differentiation. Potential inhabitants, of both the commercial and residential variety, are a discriminating lot, and they are looking for cities that operate efficiently and purposefully. They are looking for smarter cities' (IBM 2012).

There is no definite definition of a smart city, but the basic question is what we want a smart city to be (Angelidou 2014; Townsend 2014). We may define smart cities as those where smart people live. There are two ways of defining smart people. One who is intelligent and prosperous, but individualistic, consumerist and confined to himself, while other is active in reaching out, contributing and transforming the life of the underclass. In a similar vein, the smart city is not an isolated enclave or a gated city but a city that connects with its people and transforms their life. Thus, it would be pertinent to mention that while cities transform people, people make cities. We need to be clear about how we use the technology to shape our cities and its consequences for the poor and the people at the margins (Albino et al, 2015). Further, as India has been rapidly urbanising, the fortunes of people hugely depend upon how we build our cities. At the same time intervention by the government

could be helpful in envisioning and shaping our cities. The policies and programmes of Central Government during the last one decade should be seen in this light.

### Smart Cities Mission

In 2005, JNNURM (Jawaharlal Nehru National Urban Renewal Mission) was started which was redesigned as programmes like the Smart City and AMRUT (Atal Mission for Rejuvenation and Urban Transformation) a decade later in 2015. The JNNURM was significantly different from the earlier urban policy and programmes because it recognised the importance of cities in India's economic growth in the light of the emerging fact that about two-third of GDP accrued from urban areas

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(Bhagat 2011). The recent urban development strategies like the Smart Cities Mission and AMRUT reflect the continuity as well as deepening of the city development strategies initiated under JNNURM. Many criticised JNNURM for being exclusionary given a huge socio-economic inequality within the cities as well as between the regions. Inclusiveness has been a challenge for any urban development programmes along with growth and sustainability.

The Smart Cities Mission will cover 100 cities during the five year period from 2015-16 to 2019-2020. It may be extended depending upon the evaluation by the Ministry of Urban Development. So, the concept and strategies of the smart city will continue to be an evolving one. The Mission did not provide any definition of the smart city but aims to harness the potential of the city which aspires to become smart through smart

solutions. Smart solutions include e-governance and electronic service delivery, video crime monitoring, smart meters for water supply management, smart parking and intelligent traffic management to mention few from a long list. Application of smart solutions will enable cities to use technology, information and data to improve infrastructure and services. It will also endeavour area based development through retrofitting (city improvement) and redevelopment (city renewal). In addition, new areas/greenfield (city extension) will be developed around the city to accommodate growing urban population. It is envisaged that the strategies for the development of a smart city will create enough jobs and take care of the poor. Thus, it is conceived that the smart cities would be inclusive.

The implementation of the Smart Cities Mission will be carried out by a Special Purpose Vehicle (SPV) headed by a full-time CEO with nominees of Central, State and Local Governments. The SPV will be a limited company under the Companies Act, 2013 at the city-level. At the city level, a Smart City Advisory Forum will be established for all 100 Smart Cities to advise and enable collaboration among various stakeholders and will include the District Collector, MP, MLA, Mayor, CEO of SPV, local youths and citizens and technical experts. The Smart Cities Mission requires smart people to participate actively in governance and reforms. The participation of smart people will be enabled by the SPV through increasing use of ICT, especially mobile-based tools. The Central Government will provide Rs 194 crore as grant initially with an equal matching grant from the state government. The future grants to the smart city depend upon performance. The 100 smart cities will be selected based on competition inviting Smart City Proposal. A large number of consulting firms, as well as handholding agencies, will be engaged in different stages of smart city development. In the long run, these cities will acquire a brand and an identity based on their main economic activity such as local cuisine, health, education, arts and



craft, culture, sports goods, furniture, hosiery, textile etc. Thus, the smart cities will emerge not only as sites of production and efficient governance but also the sites of consumption. In the event of this, it is likely to spur economic growth and improve the quality of life of its citizens.

At a complementary to the Smart Cities Mission, AMRUT has been launched to cover 500 cities with a population of one lakh and more. The mandate of the AMRUT confines to water supply, sewerage and septage management, storm water drainage, urban transport and development of green spaces and parks including capacity building and reform implementation by the Urban Local Bodies (ULBs). It is envisaged that funding under AMRUT will give first preference to the potential smart cities. A State Annual Action Plan will be prepared (SAAP) in conformity with other central and state government programmes. The state contribution to SAAP should not be less than 20 per cent of the total project cost. The preparation of SAAP will be followed by preparation of SLIP (Service Level Implementation Plans). Under AMRUT, one of the innovative approaches suggested for augmenting water supply is the recycling and reuse of water instead of bringing it from long distances. These two programmes also have a strong complementarity in achieving urban transformation. While AMRUT follows a project-based approach, the Smart Cities Mission follows an area-based strategy. However, both programmes endeavor to promote partnership with State, ULBs and private sectors with Central Government playing a decisive role (see for details [www.smartcities.gov.in](http://www.smartcities.gov.in); [www.amrut.gov.in](http://www.amrut.gov.in)).

### Challenges and Implications

The unique feature of India's present urban system is that it has 7935 cities and towns led by three mega cities namely Mumbai, Kolkata and Chennai which grew during British rule along with the national capital of Delhi. They have been followed by second ranking large cities namely Bengaluru, Hyderabad, Ahmedabad

and Pune. The interdependence and inter-linkages among these eight cities together with their regional manifestations and urban corridors has the potential to transform India into a global economic power. However, these cities themselves may not be able to do it as they face huge challenges. Therefore, urban development strategy could play a vital role. The regional inequality, rural-urban divide and intra-city disparities are the strong barriers to India's urban transformation and economic progress. The concept and strategies of Smart city and AMRUT (Atal Mission for Rejuvenation and Urban Transformation) of the present Central Government must be seen in this light. There are many smart cities being proposed for the less urbanised areas of central, eastern and north-eastern India. AMRUT also proposes to cover 500 urban centres out of the 4041 statutory cities and towns in the first

### **The potential of Smart Cities Mission and its convergence with AMRUT and Housing for All may bring many benefits, but there is a need to safeguard the poor and also the slum dwellers that comprise 65 million as per 2011 Census.**

instance. However, there are a large number of Census Towns (3894) which are not covered by either of the two programmes. Census Towns are mostly governed by Village Panchayats, which lack resources and institutional capacity but have the potential to act as a bridge between rural and urban areas. Also, incorporation of census towns in the fold of urban development strategy will be likely to unleash the potential of urbanisation for rural development.

The potential of Smart Cities Mission and its convergence with AMRUT and Housing for All may bring many benefits, but there is a need to safeguard the poor and also the slum dwellers that comprise 65 million as per 2011 Census. These programmes should not be seen in isolation either at the level of governance or at the level of implementation; otherwise they

might lose sight of inclusiveness. As envisaged, smart cities are not meant to widen the digital divide but to help bridge the intra-urban gap as well as the rural-urban divide. The emergence of the idea of the smart city ought to be seen in the backdrop of the need to contain corruption and meet the requirement of adequate and efficient service delivery in urban areas using information and digital technologies. The success of the programmes will be judged in future by its power to transform the life of the people, and their ability to reduce growing inequality in our society.

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(E-mail: [rbbhagat@iips.net](mailto:rbbhagat@iips.net))