Review Article

SMART CITIES OR SMART PEOPLE ? WHAT INDIA ACTUALLY NEED: A REVIEW

Yashika Rawat[1] and Pratish Rawat[2]

[1]Scholar, Business Management Department, Dr. Hari Singh Gour Vishwavidhayala, Sagar, Madhya Pradesh, India

[2]HOD and Assistant Professor, Mechanical Department, Poornima University, Jaipur, Rajasthan, India

E-mails: [1]yashikarawat91@gmail.com (*Corresponding Author*), [2]pratishrawat@gmail.com

Abstract: The Government of India (GoI) initiated the '100 Smart Cities Mission' with the investment of Rs 98,000 crore in 2014. The government have introduced the concept paper has proposed public-private partnership (PPP) to set up Smart cities. Minister of Urban Development, M. Venkaiah Naidu goes a step further to confirm that he's likely to follow the GIFT model of setting up a special purpose vehicle (SPV) to manage and fund PPP projects. The need and the orientation of the Mission in the context of India's present urbanization scenario. The Smart Cities Mission has demonstrated that good design leads to good outcomes.

INTRODUCTION

Prime Minister Narendra Modi has presented an idea about Smart City in pre-election manifesto. The Government of India (GoI) expressed the view that it is 'keen to promote Wealthier, Healthier and Happier cities for better urban life' and that 'Technology will play a major role in Smart City governance'[1]. As per estimates, approx 25–30 people will migrate every minute to major Indian cities from rural areas in search of better livelihood and lifestyles (India). By 2050, around 70% of the people will move to urban. The current scenario indicates a critical need for defining and contextualizing the various aspects of Smart City development.

The objective is to promote cities that provide core infrastructure, to drive economic growth and improve the quality of life of people by enabling local development. In world, concept of Smart City is being planned in such a manner that it replicates both within and outside country, especially in small island countries like Singapore and Cyprus. China has proposed to build 154 Smart Cities, while India has a plan to build 100 Smart Cities [2]. The major technological, economic, and environmental changes have generated interest in Smart cities.

PROBLEMS OF URBANIZATION IN INDIA

The urbanization in India is unplanned and haphazard in general, this in itself is a root cause of almost all the problems. The major problems associated in the urban areas may be categorized into 3 categories:

1. Problems of Infrastructure: – It includes Physical, Social and Institutional infrastructure such as water supply, sewerage, drainage, public health and sanitation, roads, city transport, elementary education, etc. thus resulting in serious deterioration of quality service.

2. Problems of Governance and Management: – This basically deals with the mechanism for the provision of urban infrastructures and services. ULBs are the primary agencies which look after the needs of citizen and decisions regarding investments and also aggravated by inadequate investment in urban infrastructure, poor maintenance of public infrastructure assets, weak administration, poor system of delivery etc. due to lack of coordination and collaboration between Planning Authorities and local government.

3. Problems of Sustainability: It includes the application of appropriate technology to attain the sustainability in terms of environment, economy and society but it is generally dominated by environmental impact because it drastically affects all other systems and aspects [3].

SMART CITY: A PROBABLE SOLUTION

The "Smart City" has become a buzzword over last few years in the realm of government/administration. Smart City means a city equipped with basic infrastructure to give good life and clean and livable environment to live smarter [4]. Cities are real time systems and deem to be supermodels of efficiency and friendly environment.

The migration of citizen from rural areas to urban areas has started to fulfill their needs and have a decent quality of life. The city need to have things like smart waste and water management, smart buildings, smart grids etc. due to the growing demand and pressure because of population in urban areas.Concept of a Smart City where "citizens, objects, utilities, etc., connect in a seamless manner using ubiquitous technologies, so as to significantly enhance the living experience in 21st century urban environments" [5].

Smart City concept is driven by advanced technologies like the use of ICT has been included into the Smart City perimeter; it means that the Digital City is becoming a subset of the Smart City. The ICT is the core component of a Smart City and all the other aspects—citizens, services, information and knowledge, human and social capital—are joined through the technology. MyGov.in is an excellent example of ICT platform. [6]

The Core Infrastructure Elements:

- Adequate water supply & assured electricity supply
- Sanitation, including solid waste management,
- Efficient urban mobility and public transport,
- Affordable housing, especially for the poor,
- Robust IT connectivity and digitalization,
- Good governance, especially e-Governance and citizen participation,
- Sustainable environment,
- Safety and security of citizens, particularly women, children and the elderly, and
- Health and education. [7]

The distribution of Smart Cities will be reviewed after two years of the implementation of the Mission. Based on an assessment of the performance of States/ULBs in the Challenge, some re-allocation of the remaining potential Smart Cities among States may be required to be done by MoUD [8].

THE STRATEGY - HOW WILL THE SMART CITY PROGRAM BE CARRIED FORWARD IN INDIA?

As urban population rising there is a great demand for emerging new cities to quickly build infrastructures and develop with the initiatives between governments, businesses, communities which are sustainable. As older cities legacy infrastructures are stressed further, leaders in government and business will look to successful models to retrofit and regenerate services, improve marketability, economy, environment and community [9].

i) Retrofitting: will introduce planning in an existing built-up area to achieve Smart City objectives, along with other objectives, to make the existing area more efficient and livable. That locality might require widening of roads, making cycle tracks, improvement in waste management system, Wi-Fi facilities. This strategy may also be completed in a shorter time frame, leading to its replication in another part of the city.

ii) Redevelopment: will affect a replacement of the existing built-up environment and enable co-creation of a new layout with enhanced infrastructure using mixed land use and increased density.

iii) Greenfield development): will introduce most of the Smart Solutions in a previously vacant area (more than 250 acres) using innovative planning, plan financing and plan implementation tools (e.g. land pooling/ land reconstitution) with provision for affordable housing, especially for the poor. Greenfield developments could be located either within the limits of the ULB or within the limits of the local Urban Development Authority (UDA).

iv) Pan City Development: envisages application of selected smart solutions to the existing city-wide infrastructure. Application of Smart Solutions will involve the use of technology, information etc [10].

THREE PILLAR BASIC SMART CITY MODEL

To provide for the aspirations and needs of the citizens, urban planners aim at developing the entire urban eco-system model. This model is called 'three pillars' or 'three circles model.'

1. Economic component includes public administration and economic factors. It covers governance models, urban regeneration, mobility, cloud computing, security, business intelligence, etc.

2. Environmental component includes resources and managerial infrastructures. It covers water, air, energy and waste management, public and alternative transportation etc.

3. Social component includes citizens. It covers community life, urban mediation, participatory democracy, social innovation, civic participation, proximity services, etc. [11].

SMART CITY FEATURES

The features of Smart City include:

1.   The planning for the mixed land use in order to make land use more efficient.

2.   To create walkable localities, boost local economy and security. The road network is created or refurbished not only for vehicles and public transport, but also for pedestrians and cyclists.

3.   Providing e-governance services to citizen, using mobiles to reduce cost of services and form e-groups to listen to people and obtain feedback.

4.   Applying Smart Solutions to infrastructure and services. For example, making Areas less vulnerable to disasters using fewer resources, and providing cheaper services. [8].

SMART CITIES ARE BUILT BY SMART CITIZENS

A Smart City is the integration of technology into a strategic approach to sustainability. The Smart Cities Mission requires smart people as well who actively participate in governance and reforms. Citizen involvement is much more than a ceremonial participation in governance. The participation of smart people will be enabled by the Special Purpose Vehicle (SPV) through increasing use of ICT, especially mobile-based tools. Its success is highly dependent on the engagement of citizens. The IT infrastructure and benefits offered in a Smart City is a wonderful addition but the citizens too have to contribute.

Smart Cities are essentially built by utilizing a set of advanced information and communication technologies (ICT), including broadband networks, wireless sensors, Internet of Things, Big Data, cloud services, mobile devices and applications [12].

WHAT ARE THE CHALLENGES?

•   This is the first time; a MoUD programme is using the 'Challenge' or competition method to select cities for funding and using a strategy of area-based development.

•   States and ULBs will play a key supportive role in the development of Smart Cities Understanding

•   The concepts of retrofitting, redevelopment and green field development by the policy makers, implementers and other stakeholders at different levels will require capacity assistance [7].

Conclusion

To conclude, the above examples from the UK and China provide some valuable lessons that shall be learned by national and city leaders in India. Smart City dream cannot be simply dependent on new technologies but also the involvement of citizens in the whole Smart City development cycle, i.e. from planning, designing, developing, to implementing, testing and marketing phases [12]. The Smart City Mission marks the beginning of a `bottom up' approach in urban planning municipalities are assuming a leading role in defining and driving a comprehensive vision about the Smart City Program.Smart concept increase the quality of life of its inhabitants and technology like ICT-driven innovations are smart and whether cities should be creating opportunities for online services offering 24/7 access Thus, Smart leadership and vision at this level and ability to act decisively will be important factors determining the success of the Mission.

References

[1] Bhattacharya, S. a. (2015). Reconceptualising Smart Cities: A Reference Framework for India. Bangalore: CSTEP-Report-2015-03.

[2] Sharma, S.K. Smart Cities for Smart People.

[3] Jawaid, M.F., & Khan, s. A. (2015). EVALUATING THE NEED FOR SMART CITIES IN IN DIA. IJARSE, Vol No. 4, Special Issue (01), 994-995.

[4] Kumar, P. (2015, July 1). Whst's The Real Mean of 'Smart City'? Retrieved from www.smartcitiesproject.com: http://www.smartcitiesprojects.com

[5] Northstream. (2010). White paper on revenue opportunities. Retrieved from http://northstream.se/white-paper/archive

[6] Cocchia, A. (n.d.). Smart and Digital City: A systematic Literature Review.

[7] Government, I. (n.d.). Smart Cities Mission. Retrieved from india.gov.in: www.india.gov.in

[8] India, U.M. (2015, june). Smart Cities: Mission statements and guidelines. Retrieved from Govt. of India Ministry of Urban Development.

[9] DeBroux, J.R. (2012). Emerging Trends in Information Technology. IMT 598 Spring, 15-18.

[10] Bureau, E.E. (2016, august 07).

[11] Anuj Tiwari, D.K. (2014). GIS Steering Smart Future For Smart Indian Cities, volume 4. Internation Journal of Scientific and Research Development, 8.

[12] Peng, G.A. (2015, september 16). Smart Cities are built by Smart Citizens.

[13] India, M. i. (n.d.). Make in India. Retrieved from http://www.makeinindia.com

[14] India, U.M. (2015, june). Smart Cities: Mission Statement & Guidelines. Retrieved from GoI Ministry of Urban Development.

[15] Kaushik, G.D. (2015, march 15). A TAle of 100 Smart Cities.

[16] Batty, M.A. (2012). Smart cities of the future. The European Physical Journal, 481-518.