ISSN: 2456–5474 RNI No.UPBIL/2016/68367 Vol-3* Issue-3*April- 2018
Innovation The Research Concept

Role of Smart City Mission in Urban Renewal
(A Case Study of Jaipur City)

Renu Shaktawat
Research Scholar,
Deptt.of Geography,
University of Rajasthan,
Jaipur, Rajasthan

Sarita Sharma
Research Scholar,
Deptt.of Geography,
University of Rajasthan,
Jaipur, Rajasthan

Abstract

A smart city is an urban development to improve the quality of life using various types of technologies and to improve the efficiency of services. Smart city applications are developed with the goal of improving the management of urban flows and allowing for real time responses to challenges. The smart cities are emerge as the solution of current scenario of civilization and have various advantages over conventional cities. These smart cities will be mixture of technology into strategic approach of sustainability. The concept of smart city revolves around six major components; smart governance, smart economy, smart mobility, smart living, smart people and smart environment.

Smart city mission is an urban renewal and retrofitting programme by the government of India with a mission to develop 100 cities by the year 2022. Jaipur is one of renewed city of India which has been developing as smart city .The proposed study will elaborates and assesses the major challenges and to propose solutions to Smart city mission is an urban renewal and retrofitting programme by the government of India with a mission to develop 100 cities by the year 2022. Jaipur is one of renewed city of India which has been developing as smart city. The proposed study evolves Jaipur City into smart city keeping heritage status intact. .

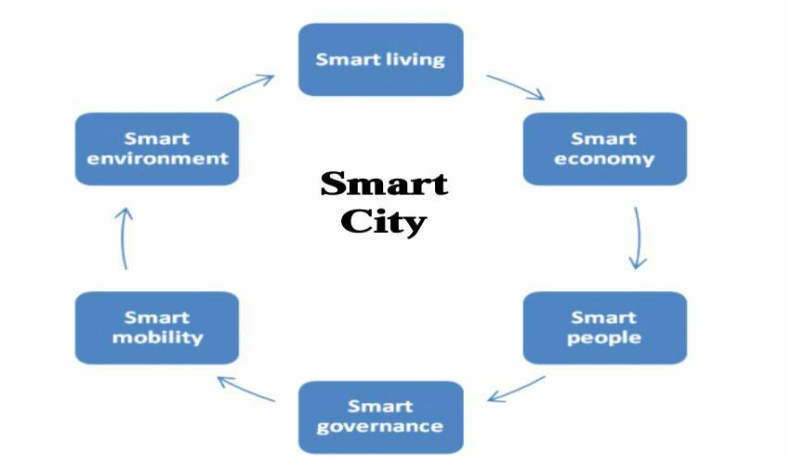
Keywords: Smart City, Urbanization, Urban Development, Technology, Sustainability, Strategic Sustainable Development.

Introduction

Cities in the 21st century will account for nearly 90% of global population growth, 80% of wealth creation, and 60% of total energy consumption. It is a global imperative to develop systems that improve the livability of cities while dramatically reducing resource consumption.

As the world continues to urbanize rapidly, the importance of smart and sustainable cities has begun to attain widespread recognition by national, state and local governments around the world. This is particularity true in emerging economies where expansion of urban area 'as a catalyst of growth' is high coupled with improper management of natural resources and insufficient infrastructure.

Global urbanisation trends and pressing issues around sustainability pose great challenges for cities. The smart city concept has been developed as a strategy for working with cities as they become systematically more complex through interconnected frameworks, and increasingly rely on the use of Information and Communication Technology to meet the needs of their citizens. This thesis explores the concept of smart cities as a potential urban construct that can address the social and ecological sustainability challenges which society faces. Smart cities are defined as cities where investments in human and social capital, and traditional and modern communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance.



India's recent stand on smart city development with a vision of transforming urban landscape, initiates the talk of ideal variables for smart city evolution the Objective of the smart city mission of the ministry of urban development is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of smart solutions for inclusive development. It is the manifestation of a new paradigm and a symbiosis of ecology and human functions.

Sustainable urbanisation and infrastructural development envisages the following

1. Enhancing livelihood security of people by generating wage employment opportunity because of infrastructural development of that particular locality.
2. Rejuvenation of natural resource base of area concerned.
3. Stimulating the economic growth.
4. Ensuring development practices with inclusiveness and sustainability.

Study Area

Jaipur is the capital of Rajasthan in Northern India. It was founded on 18 November 1727 by Maharaja Jai Singh II, the ruler of Amer after whom the city is named. Located 260 km (162 miles) from the Indian capital New Delhi, Jaipur forms a part of the Golden Triangle.

Location

Jaipur is located on 26° 55’ north latitude and 75° 49’ east longitude. It’s muncipal boundary extends from 26o46' north latitude to 27o 01' north latitude and 75o37' east longitude to 76o57' east longitude.

Topography

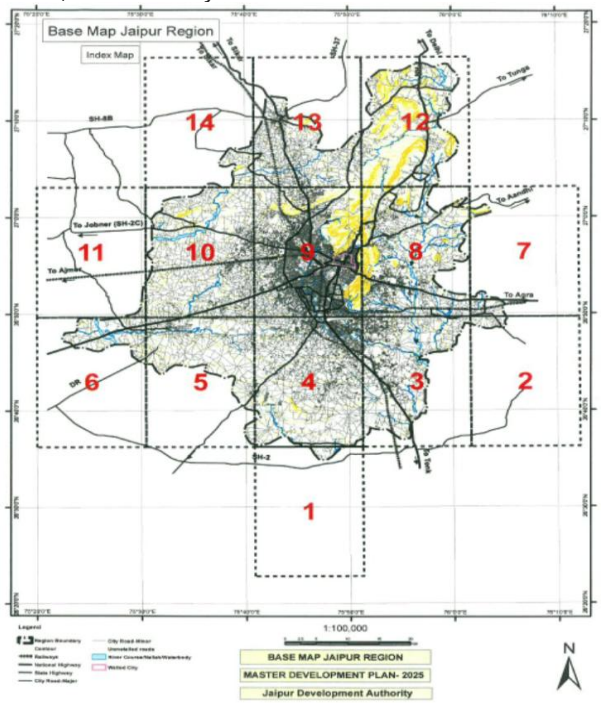
The general slope of the Jaipur city is from north to south and then to south-east. Nearly all the ephemeral streams flow in this direction. It has average elevation of 432 meters. It is bounded by Sikar district on the north, Haryana state on the extreme north-east, Alwar and Dausa district on the east, Sawai Madhopur district on the south, Ajmer district on the west Nagaur district on the north west.

Climate

The Jaipur is located in the semi-Arid Zone of India. It has characterized by high temperature, low rainfall and mild winter. The mean temperature of Jaipur is 36oC varying from 18oC in winter (January) to 40oC in summer (June). Thus the January and June are the coldest and hottest months.. The normal rainfall of Jaipur is 600 mm; nearly 90 percent of which takes place in the summer monsoon period i.e. from June to September, the rest comes from the winter cyclones.

Dem0graphy

According to 2011 census, Jaipur has a population of 6,663,971. This gives it a ranking of 10th in India. Population density of 595 inhabitant's per square kiolometer. Its population growth rate over the decade 2001-2011 was 26.91%. According to census 2011, has sex ratio of 849females for every 1000 males, and a literacy rate of 75.5%.



Review of Literature

The concept of smart cities originated when the entire world was struggling hard on grounds of the worst economic crises. In 2008, IBM started developing a new concept of ‘smarter cities' as part of its Smarter Planet initiative. By 2009, it coined the

concept of Smart city that attracted many countries all across the globe. With growing urbanization, problems related to urban development are also accelerated. So to tackle this problem of Urbanization smarter solutions need to be brought which may focus in Sustainable Accelerated development. Michell's (1995) book on the city of Bits set out a vision of urban life literary done to bits,left fragmented and in danger of coming ustruck. Mitchell's (1999) next book on e-topia provides the counter-point to the vision of urban life and scenario where the city is no longer left in Bits and pieces, but a place where it all comes together. Cairney (2000) in his article named smart sustainable cities and regions stated that social infrastructure and also involved with education, training, culture, arts and business.

Dawes and Pardo (2002) in their work named 'Building collaborative digital government system's stated that The conceptual components of a smart City can be divided into three categories: Technology, people and Institution. A city can therefore be considered a smart when investment in these specific areas of development leads to sustainable growth and enhance quality of life. Aurigi (2005)in his work' moving the Digital City- the early shaping of urban interest space argues that ,even through there are many different perspective on smart cities ,the idea that ICT is Central to the operation of Future city is at the core of all perspectives. Giffinger (2007)in his work, smart cities; ranking of European medium sized cities. Commented smart city's relative that these are some brands of city like digital City, intelligent city, ubiquitouscity, creative City Knowledge City and learning city, which would be similar to smart in its domains and involved in the six dimensions of the Smart City, which are economy ,people ,mobility, governance ,environment and living. Hollands (2008) in his research work named "will the real Smart City please and stand up? Evaluated the real term of the Smart City, and mentioned it as a phenomenon in the urban context.

Gajendra Singh, Jaideep Singh and Jai Singh (2008) authors have studied air pollution due to traffic in Jaipur. They have tried to study number of vehicles and spatial pattern of air pollution and suggest some remedies .The city is divided into 4 groups such as sensitive, commercial, residential and industrial areas .they alarmed that pink city may turn into black city. Khan, Sayeed Ahmad (2009) studied urban growth in India and future prospects. They study the growth rates of urban population and net decadal growth of urban population. They projected the probability of future trend and explore the nature of these trends. In corporate quantitative approach method was adopted. They also got data from India Infrastructural Report and Planning Commission of India. The study has shown that the urban growth has declined but urban population has increased. It will affect urban infrastructure and environment. Doug Washburn(2010)in his research work "Defining the smart city" explained the use of technologies to make the critical infrastructure components and services of a city which include City administration, education ,healthcare, public safety, real estate and transportation and utilities more intelligent , interconnected and efficient. Scott , (2010) in his article named "institutions and organizations demonstrated that Smart cities can be summarized as being places that are forward thinking in the areas of people, living ,economy ,governance, environment and mobility. Allwinke and Cruickshank (2011) in their work , creating smarter cities:An interview journals of urban technology, social inclusion is a key characteristic of smart cities and any opportunities for economic development need to be coupled with investments in social capital. Nam and pardo (2011) in their research work smart city as urban innovation, demonstrated that this concept of smart city derived from different perspective, including the "information City", this concept; however, has gradually evolved the idea of the city centric information and Communications technology or an open City. Zygiaris (2012) asserted that smart city could be understood as a certain intellectual ability that addresses several innovative socio-technical and socio-economic aspect of growth.World Urbanization prospects(2014) United Nations Development of Economics and Social affairs, demonstrated , The concept of Smart City brings about reforms of urban development goals,urban space structure, management mode. while the most notably effect on urban planning is the innovation of planning type and the improvement of urban planning system. the innovation of planning type is found to brings about series of new related specialised planning types, such as 'Smart City Development strategic planning ', 'Smart City Development overall planning' , 'pilot smart city construction planning' etc.

Objectives of the Study

The following are the broad objectives of research-

1. To study the role of smart city mission in the development of infrastructure (physical and social) of jaipur city.
2. The study the need of smart city mission for Jaipur city and it's role in the addressing the shortcoming of previous projects.
3. To study the roles of government, private partners, business and other stakeholders in the realization of smart cities mission.
4. To study the role of smart city mission towards mitigating increasing urbanisation problems.
5. To study the challenges, being faced in the effective implementation of smart city mission.
6. To study the inclusiveness of smart city mission.

Research Questions

1. What is the role of smart city mission in the development of infrastructure (physical and social) of jaipur city?
2. What is the need for smart city mission in Jaipur?
3. What role do government, private partners, business and other stakeholders play in the realisation of smart city mission goals?
4. How smart cities mission the panacea for increasing urbanization problems in Jaipur city?
5 What are the challenges in the implementation of the smart city mission?
6. How inclusive is the smart city mission?

Data Collection

Both primary and secondary data will be collected to carry out the research study. Primary data will be collected by detailed interview schedule prepared while keeping in view objective included in the research study. Secondary data will be collected from the government records, journals, periodicals, and internet sites. Reports of smart city mission of ministry of urban development. Data, plan and reports of Jaipur Municipal Corporation, jaipur development authority other published report's related with the study.

Research Methodology

Coverage of the Study

The research study will cover Jaipur city. The information obtained as a result of this study will be the reality situation of the extent of benefits, problems and role of smart city mission in development of Jaipur city.

Research Method

Both analytical and functional research method will be used. The analytical scope covers the fulfillment of the objectives set out, and the functional scope is confined to tendering a set of appropriate suggestions which will help the beneficiaries to get maximum benefit and the authority to ensure proper implementation.

Units & Sample of the Study

There are 91 wards in Jaipur and divided into 14 Zones. Zones will comprise the unit's of the Study. For sample, stratified sampling will be used. Other methodology related with study will include composite index for analyses.

Study Implications

Role of smart city mission in urban renewal - A case study of Jaipur city Study will help in understanding the ill effects of unplanned urbanisation. Cities nowadays especially those "non smart" are facing challenges such as: effect of climate challenge, increasing in population versus resource depletion, transport problems and changing in life style of people, while in the paradigm of smart city the urban area is capable to cope with most of these challenges. Global urbanisation trends and pressing issues around sustainability pose great challenges for cities. It is a global imperative to develop system that improves the livability of cities while dramatically reducing resource consumption.As the world continues to urbanize rapidly, the importance of smart and cities has began to attain wide spread recognition by national, state and local governments around the world.

Cities in future will be the place of humankind. Growth of populations makes the cities over the world to face challenges of global climate change, power source, traffic congestion, public health and socio- economic issues. Cities contribute to climate change and in turn are influenced by its consequences, so to resolve these challenges, there should be focus on solution driven by technology; and the need for smart solution is growing to achieve the sufficiency in sustainable energy , fresh and drinkable water, transport efficiency and resources management. This requires re-thinking, we have to think smart to identify the challenges and asking relevant questions, and choose to the best tools.

India's recent stand on smart city development with a vision of transforming urban landscape, initiates the talk of ideal variables for smart city evolution the objective of the smart city mission ot the ministry of urban development is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of smart solutions for inclusive development. It is the manifestation of a new paradigm and a symbiosis of ecology and human functions.

This research will help in understanding the phenomena of developing a smart cities is the next generation urbanisation process for improving the efficiency, reliability and security of traditional city. This study will learn about the economic benefits, cost of implementation and challenges towards a smart city. It also focuses on its building blocks, history, advantages and disadvantages of smart cities. This research will throw light on the reality ground and a road map to the future cities.

References

1. *Arora, R.K., 1978.Jaipur, Profile of a changing city.Prashansnika, Vol W No. 1-2.*
2. *Batagan L (2011) Smart cities and sustainability models. InformaticaEconomicaˇ 15(3):80–87.*
3. *Caragliu A, Del Bo C and Nijkamp P (2011) Smart cities in Europe. Journal of UrbanTechnology 18(2): 65–82.*
4. *Coe A, Paquet G and Roy J (2001) E-governance and smart communities: A social learning challenge. Social Science Computer Review 19(1): 80–93.*
5. *de Wilde R (2000) De Voorspellers. Eenkritiek op de toekomstindustrie. Amsterdam: DeBalie.*
6. *Dvir R and Pasher E (2004) Innovation engines for knowledge cities: An innovation ecology perspective. Journal of Knowledge Management 8(5): 16–27.*
7. *·England P (2009) Managing urban water in Australia: The planned and the unplanned.Management of Environmental Quality: An International Journal 20(5): 592–608.*
8. *Florida R (2002) The Rise of the Creative Class: And how it's Transforming Work, Leisure, Community and Everyday Life. New York: Perseus Book Group.*
9. *Inayatullah S (2011) City futures in transformation: Emerging issues and case studies.futures 43(7):654-661.*
10. *Kuk G and Janssen M (2011) The business models and information architectures of smart cities. Journal of Urban Technology 18(2): 39–52.*
11. *Lazaroiu GC and Roscia M (2012) Definition methodology for the smart cities model. Energy 47(1): 326–332.*
12. *Lee JH, Phaal R and Lee S-H (2013) An integrated service-device-technology roadmap for smart city development. Technological Forecasting & Social Change 80(2): 286–306.*
13. *Leydesdorff L and Deakin M (2011) The triple-helix model of smart cities: A neo-evolu-tionary*

perspective. Journal of Urban Technology 18(2): 53–63.

14. *Shapiro JM (2006) Smart cities: Quality of life, productivity, and the growth effects of human capital. Review of Economics and Statistics 88(2): 324–335.*
15. *Tapscott D and Agnew D (1999) Governance in the digital economy: The importance of human development. Finance & Development 36(4): 34–37.*
16. *Willke H (2007) Smart Governance: Governing the Global Knowledge Society. New York: Campus Verlag.*
17. *Winters JV (2011) why are smart cities growing? Who moves and who stays. Journal of Regional Science 51(2): 253–270.*

Websites

18. *http://www.academia.edu/*
19. *http://www.futurecities.org/*
20. *http://www.medicities.org/*
21. *http://www.smartcities.gov.in/*
22. *http://www.smartcites challenges.in/*
23. *http://www.urbanindia.nic.in*