

## Quality of Life in Smart Cities– Characteristics & Challenges

*With special reference to Jaipur*

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### ABSTRACT

With increasing population and limited resources and more demanding people, The smart cities are emerge as the solution of current scenario of civilization, where more and more people are turning to urbanization. Smart cities have various advantages over conventional cities. Jaipur is one of renowned city of India which has been developing as Smart city. This paper draws the characteristics and challenges of the Smart City, especially for Jaipur. A model has been created for development of Jaipur which underline the role of Government, Public-private organizations & citizen of the city in development.

**Keywords:** Smart, City, Education, Media, Historical, Health, Data Center.

### 1. Introduction

Busy traffic, sophisticated people, Sky- scrappers, people working in multinational organizations and many more. Leading life in smart cities draws the same pictures in one's mind. A smart city is rather considered as a city with smart ambience, smart surroundings, smart infrastructure and above all the smart youth. A smart city is one of the latest buzzwords in an Indian real estate market that is constantly seeking to differentiate to simplify the life of the professionals and migrants. A City fulfilling the demand of basic services, public utilities, amenities, infrastructure, safety, sustainability, healthy environment and provide the scope of development for present and future. World's population continuously moving from rural to urban areas so the pressure on cities increasing demanding the new development measure to create a balance between supply and demand for urbanization. There are basically two ways one is creating new cities and secondly improving current cities i.e. development of conventional cities to smart cities. Smart cities rely on the technology to deliver the quality services free from errors and reduce the cost of services. In smart cities development in each sector e.g. transportation (including roads, public transport management, parking etc.) healthcare, waste management, banking, educational institutes, security, markets and other public utilities is in such way that it fulfill the current demand as well as provide the scope for future. So the future of urbanization depends upon the smart cities as the world has limited resources and increasing demand to accommodate more citizens in cities.

### 2. Key features of Smart Cities

There is no universally adopted definition of Smart City. Features of smart cities are the measures of smart cities which may vary from city to city with advancement.

**Mixed and optimum use of Land:** One of most scared resource is land. Smart city urge of use of unplanned area in a way that land can be used with flexibility and laws should quick response in acquiring and adoption of land for one or more specific use.

**Housing:** Adequate housing for all is one of primary goal of government. Smart city require the planned housing to provide safe and peaceful environment where citizen can get a healthy, convenient, and economic housing.

**Healthcare Facilities:** Hospitals, rapid relief systems, medicines and other facilities should be in reach of few minutes.

**Pollution-free Environment:** Environment safety, air, water & soil pollution all are to be minimized. Smart solutions for energy management, water management and waste management are to be implemented all across.

**Transportation:** Public transport facilities are the backbone of a city. Safe, hassle free transportation includes the development of roads, flyovers, automated traffic signals, smart traffic systems, public transportation (bus, railway, metro) and rules and regulation abiding the no and type of vehicles on road (e.g. BHARAT VI – for smoke emission guidelines for vehicles) to be implemented.

### **3. Quick Response Mechanism**

Mechanism should be developed for quick action in odd situation, digitalization of networks, close monitoring and adequate data management and decision making techniques must be implemented.

**Data Centre:** For the smart cities a centralized data centre where information of each person, locations, and about everything of city should be stored and managed, which will help in planning and providing the facility and safety to the city. Modern techniques and machinery under experts should be used for that.

**Employment Opportunities:** No facility is useful until the citizens are not economically in state to survive. Employment opportunities within and nearby the cities are to be developed.

**Education:** Education from primary to higher education in every field is the right of every citizen. Schools, colleges, universities are placed in development agenda of a city.

### **4. Jaipur – Emerging as Smart City**

Total population of Jaipur according to census 2011 is 6,663,971. Rural is 3,164,767 and urban is 3,499,204. Lifestyle at a smart city like Jaipur is a luxury we can say that enables the people to explore Jaipur in a different way, studying in the prestigious educational institutions, watching movies under the umbrella of prominent cinema halls one of them is the “RAJ MANDIR”, and enjoying the food of the five star hotels provide the people with the great lifestyle of their own. National and multinational companies are growing and helping in economic growth and employment generation. The fast moving metro trains have really led a greater emphasis on the infrastructural development of city Jaipur.

The Pink City “Jaipur” has emerged out as the smart city of the modern era. The Jaipur development Authority said that it has gone live with four smart projects in a few city areas. These includes wi-fi services in areas such as the 25-hectare central park , city information kiosks that will be a boon to the 40 million tourists who visit the city every year ,environmental monitoring sensors , and networked surveillance as well as analytics .

### **Historical Development**

Prestigious historical monuments that are the part of the Jaipur’s heritage are standing tall and responsible for magnifying tourist hub. The Hawa Mahal was being inaugurated and the other historical monuments like the Amber kila, the City place and various others, although there are other governmental issues to which some of the monuments are still left to work on, but jaipur is at the success in its historical development. Jaipur’s other landmark like the Jantar Mantar is denoted as the spot of tourists’ attraction that enables Jaipur to gain huge gathering of tourists at various festivals such as “The Kites festival”, The Gangaur festival and many other.

### **Infrastructure Development**

There are plenty of infrastructure developments currently taking place in Jaipur which will have a positive impact on the real estate scenario in the city. The important ones are metro rail, Ring Road and NH11 construction. The Phase I of the metro project, from Mansarovar to Chandpole Bazaar will impact values in localities of Mansarovar, Vivek Vihar, Shyam Nagar, Civil Lines, Railway Station and Chandpole Bazaar .

Another key infrastructure development that is set to fuel the realty market in Jaipur is the Ring Road which is a radius of 147 kms. This will divert the outside traffic from entering the city.

### **Education**

Jaipur is boasting for its educational growth, in recent years Jaipur came out as education hub. Jaipur have got a collection of educational Institutions, schools and Universities. There are 15 private universities, 1 deemed university, ,1 national institute of technology, 3 state government universities and more then hundred private and government colleges. Top premiere schools like I.I.S , st. Xaviers, step by step, Cambridge fort and many others. Thus jaipur is none other than a smart and beautiful city that would never put on a comparison of another state. Thus lifestyle in A city like jaipur is larger than life that contains number of scope for entertainment.

### **Healthcare**

Another than education Jaipur is known for healthcare. Sawai Man Singh Hospital witness for various critical surgeries and operation successfully even at the less cost than any part of country. Jaipur is not only providing healthcare facilities to localities but to near-by states also.

## **Media**

Media played a crucial role in the changing of lifestyle in smart city Jaipur. Media represents the city's tradition and culture. The stability of a society is ensured through the transmission of values from one generation to the next. Children learn to imitate their parents, brothers, and sisters. They learn values from listening and observing. Media is bridging a gap between the different generations. Blending the incident values with the modern culture. The, and other social institutions that mass media, especially television, has eroded the boundaries between the generations, genders people once respected

## **5. Challenges for Jaipur as Smart City: Conservation of Heritage**

Being on heritage city Jaipur has a lot of responsibilities of conserving the heritage. Jaipur witness a lot of monuments Hawamahal, Albert Hall, Jantar Mantar, City Palace, Choti & badi Chopars and old markets which attract tourists from nation and abroad to the "Pink city" To make a smart city a lot of renovations and modifications are to be done in Jaipur, but authorities should make provision to provide safeguards to heritage. One example is construction of Metro from Chandpole to Badi Chopar is unique example to world in creation of modern transport facility in heritage, which is under construction.

## **Financial Requirements**

Modernization needs a lot of public funds to be spend on the facilities which increase the burden on government. Govt. should look on the innovative practice of fund generation and to increase the investment from private sector. Resurgent Rajasthan held in Nov. 2015 attended by Investors, including representatives of international and domestic businesses of all sizes, that sought to establish or expand operations in north and west India, Representatives of economic development organisations, advisors, specialists, companies, chambers of commerce, and associations facilitating direct investment into Rajasthan promised 3.2 lac cr. Rs. investment in ten sectors which also generate more than two lacs employment in Rajasthan. It will help in fund generation which not only useful in development of Jaipur but for entire Rajasthan.

## **People Awareness & Support**

There is need of people awareness and support for any development. Many incidents had been seen on various issues on personal, community and regional basis which halted or created the development of city. Before acquiring lands or initiating any work govt. should do some homework to combat such situations.

## **Technology Creation and Adoption**

Automation and technology are the face of smart cities. Hundred present user base is the key mark of development. Jaipurites should be motivate and trained to adopt the new technologies which help in automations. Vending machines for tickets at Railway stations and Metro stations have given a positive response from Jaipur's people in technology adoption.

## A Model for Development

The success of a smart city depends on residents, government, development authorities, entrepreneurs and visitors who are actively involved in developing, implementing and others activities of energy creation and saving of energy and resources by adopting the new methods and technologies. However all efforts of city are on the pivot of its citizens because they are the end users of energy and their behaviour plays a major role in consumption. Time factor is also to be considered, development takes times to be implement and usually a city needs 20 to 30 years to be a smart.

Government, citizens and different development bodies are to contribute in development. All have their distinct roles as to make a city smarter each contribution make a difference which leads to progress in development, conservation and utilization of resources, as the need of Smart cities.

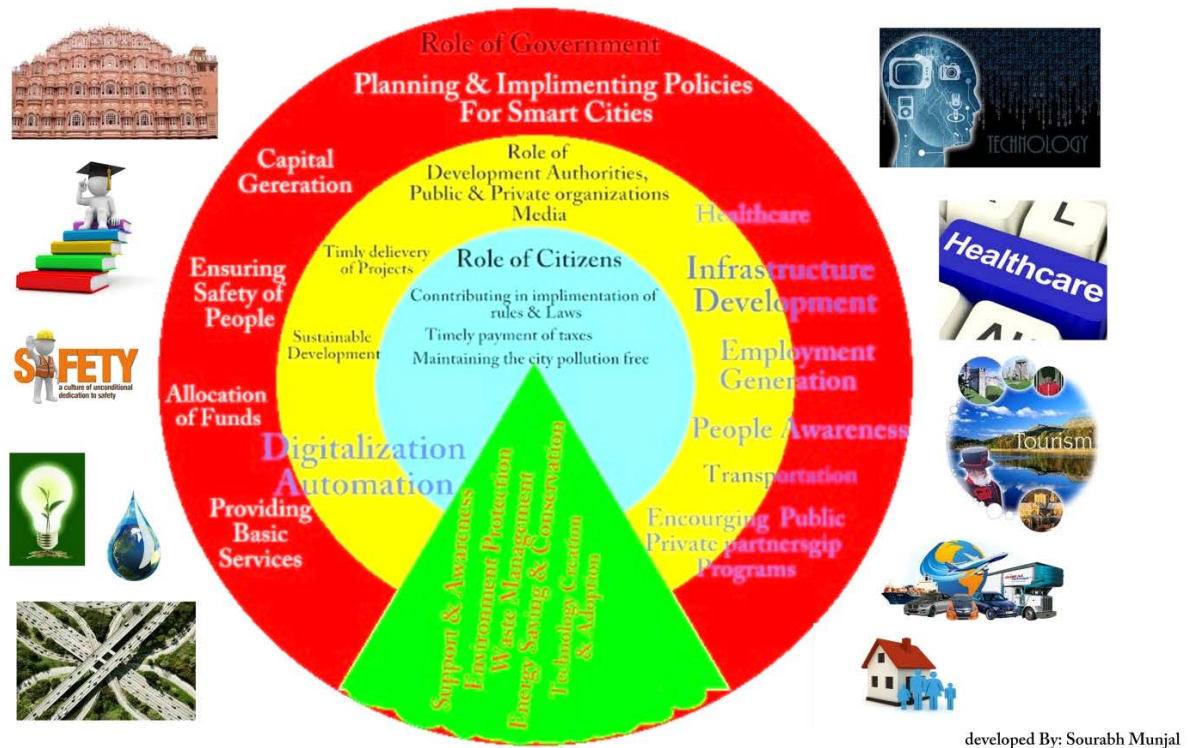


Figure 1: A Model for Development of Jaipur as Smart City

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