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How Smarter Are Smart Cities

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The understanding of a city and its characteristics are essential before embarking on the development of Smart cities in India. Sociological theories describe topography, climate, history, economy and culture as various characteristics of a city. More recently, spatial and time dimensions has been added to these existing elements of the social change. For developing a smart city, different factors has been identified across the world as qualifying features from research studies conducted in the past. The collaborated use of technology was a common factor among these features in addressing the social issues and challenges faced by the city administration. But, currently there is no one internationally accepted definition of a Smart City and India has a national policy on urbanization which is only in a nascent state.

Economies of the developed world have configured different technological systems in place to administer city and its civic issues. These systems include Electronic Road Pricing in Singapore city to collect fares; Sensors to capture real-time data about the civic environment; applying different communication technologies to track information on Healthcare, Banking Personal, Electricity Pricing and Energy Consumption pattern, Transport Management and Parking services,

Smart Communities to report accidents and other events of a city; GIS based technologies to monitor Demographic, Power and Weather conditions of different locations; Map layer based technologies to monitor important locations; Wireless Sensor Nodes (WSN) technologies to track housing data; and using Network Effect in Value chain to monitor flow of water in bedpans through pressure pumps. The concept of a smart city in these economies, have been categorized into six dimensions vis-à-vis Smart Economy, Smart People, Smart Environment, Smart Mobility, Smart Living and Smart Governance for an overall evaluation.

In India, the smart city is planned as a project and being developed with real-time experiments in infrastructure creation. A concept developed under various development models like “Sustainable Smart City Development”, it extends to provide marginal services through E-Governance framework for innovative decision making and implementation of different services to city administration. The examples of Lavasa ([Pune](#)), GIFT (Gujarat) are a few of the recent developments. The use of technology in power infrastructure through Advanced Metering Infrastructure (AMI), Automated Meter Reading (AMR), Supervisory Control and Data Acquisition (SCADA) illustrate the application of communication networks in collecting, integrating, recording and capturing data and information through the sensors. The Government of India collects information through the Decision Support Systems (DSS) to integrate power that can reduce distribution costs effectively. To their part, different states of India are taking miniscule steps in creating smart cities across the country.

Andhra Pradesh State Wide Area Network was launched recently to link the twin cities of [Hyderabad](#) and Secunderabad for accessing information about utility bills, property taxes, certificates and licenses, building permits and property registration and transport procedures; The Centre for E-Governance initiatives of Karnataka; The E-Governance initiatives of Madhya Pradesh; the computerization efforts of Government of Tamil Nadu to track land records, registration, the education system, and transportation; the efforts on use of transliteration technologies of Government of Kerala, computerization and networking of local bodies, creating information centres through “Akshaya” schemes; the RajSWIFT and RajNIDHI programs of Government of Rajasthan to facilitate data communication among officials (both online and e-mail) and to provide services to citizens are some of the smart city initiatives in India.

The E-Nagar for connecting all government offices and corporations, SWAGAT for grievances, E-Procure system for tendering, E-Jamin for land records, E-Ward for connecting to citizens service portal with Kiosks and Call centres; are examples of real-time focus to Administration with Water, Power, Transport and Traffic, Pollution Control, Land use, Civic Infrastructure, Disaster Management, and Urban Poverty. The M-Governance initiatives of Gujarat where important official contact details of people in government have been shared with common people in order

to get in touch with respective departments directly are no less encouragements of the administration to improve the city.

Any development effort of creating “smart city” should address the challenges and concerns faced by the stakeholders involved especially when technology is applied in such an exercise. This effort provides scope for creating a sustainable eco-system that identifies solutions in the areas of energy, waste disposal and optimum usage of natural resources. Currently, financing does not appear to be a major issue as central government has segregation plan for state-wise funds with a total proposed investment upto 1.45 lakh crores in addition to the private investment fund. It is the prerogatory of the respective state and local bodies to judiciously utilize them for their smart city initiatives. This also highlights the key issue to resolve on center-state coordination. While more active work on smart city development started in the last 3-4 years, globally this has been on ongoing process for the past 20 years. So, the need of the hour is extensive study of smart city planning and execution across the globe and customizing each city, in accordance with its potential and existing state of infrastructure, accessibility, connectivity and other factors.

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