Smart cities – a constructive proposal towards Smart India

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Abstract

Smart city one of the impressive and progressive project initiated by the central government of India, according to this initiative every small cities including small villages should be well equipped with all the facilities and it should be equal to developed cities of the country. The main objective of this initiative is to ensure gradual development of all the cities in the country with proper facilities. This study focuses on some of the important objectives which will elucidate economic development of the country through smart cities proposals.

Key words: ICT, IOT, MOUD, Retrofitting, AMRUT, CSS

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1. INTRODUCTION

The Smart Cities Mission is an innovative and new initiative by the Government of India to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens. A smart city is an urban development vision to integrate information and communication technology (ICT) and Internet of things (IoT) technology in a secure fashion to manage a city's assets. These assets include local departments' information systems, schools, libraries, transportation systems, hospitals, power plants, water supply networks, waste management, law enforcement, and other community services.

Smart Cities focus on their most pressing needs and on the greatest opportunities to improve lives. They tap a range of approaches - digital and information technologies, urban planning best practices, public-private partnerships, and policy change - to make a difference. They always put people first.

In the approach to the Smart Cities Mission the objective 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. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities. The Smart Cities Mission is meant to set examples that can be replicated both within and outside the Smart City, catalyzing the creation of similar Smart Cities in various regions and parts of the country.

It is very essential for Smart cities to facilitate sufficient fresh water; universal access to cleaner energy; the ability to travel efficiently from one point to another; a sense of safety and security: these are the kinds of promises modern cities must fulfill if they are to stay competitive and provide a decent quality of life to their citizens.

By 2050, 66% of the world’s population is expected to live in urban areas. The challenge will be to supply these populations with basic resources like safe food, clean water and sufficient energy, while also ensuring overall economic, social and environmental sustainability. Already today,

cities consume around 70% of all energy produced globally, while generating 70% of world GDP.

2. LITERATURE REVIEW

Annalisa Cocchia , in her research journal explores the literature about Smart City and Digital City from 1993 to the end of 2012 in order to investigate how these two concepts (Smart City and Digital City) were born, how they have developed, which are the shared features and differences between them.

Evelin Priscila Trindade, Marcus Phoebe Farias Hinnig and others: in their Research journal examines the terms, 'smart city' and 'sustainability', aimed at sustainable development of smart cities. This paper provides detailed information on the most recent scientific articles focusing on smart cities and sustainability issues. The paper points out the need for prospective studies in answering the critical issue, where the review provided here could be a stepping stone for future studies. The paper helps to seek background information for further investigations.

3. OBJECTIVES

- To study the conceptual background of Smart city proposal and its mission
- To understand financial arrangements and strategies adopted to the smart city initiative.
- To identify the challenges and opportunities of smart city proposal

4. METHODOLOGY

The paper iscompletely a conceptual one whose basic foundation comes from various secondary sourceslikeresearch articles,published andunpublished scholarlypapers,books, variousinternationaland localjournalsand websites

5. DISCUSSION:

5.1 SMART CITIES MISSION STRATEGY

- Pan-city initiative in which at least one Smart Solution is applied city-wide
- Develop areas step-by-step – three models of area-based developments
- Retrofitting,
- Redevelopment,
- Greenfield

5.2 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.

5.3 COVERAGE AND DURATION

The Mission will cover 100 cities and its duration will be five years (FY2015-16 to FY2019-20). The Mission may be continued thereafter in the light of an evaluation to be done by the Ministry of Urban Development (MoUD) and incorporating the leanings into the Mission.

5.4 HOW MANY SMART CITIES IN EACH STATE?

The total numbers of 100 Smart Cities have been distributed among the States and UTs on the basis of an equitable criterion. The formula gives equal weightage (50:50) to urban population of

the State/UT and the number of statutory towns in the State/UT. Based on this formula, each State/UT will, therefore, have a certain number of potential Smart Cities, with each State/UT having at least one. The number of potential Smart Cities from each State/UT will be capped at the indicated number. This distribution formula has also been used for allocation of funds under Atal Mission for Rejuvenation and Urban Transformation - AMRUT.

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 the Ministry of Urban Development

5.5 FINANCING OF SMART CITIES

The Smart Cities Mission will be operated as a Centrally Sponsored Scheme (CSS) and the Central Government proposes to give financial support to the Mission to the extent of Rs. 48,000 crores over five years i.e. on an average Rs. 100 crore per city per year. An equal amount, on a matching basis, will have to be contributed by the State; therefore, nearly Rupees one lakh crore of Government funds will be available for Smart cities development.

5.6 CONVERGENCE WITH OTHER GOVERNMENT SCHEMES

Comprehensive development occurs in areas by integrating the physical, institutional, social and economic infrastructure. Many of the sectoral schemes of the Government converge in this goal, although the path is different. There is a strong complementarily between the AMRUT and Smart Cities Mission in achieving urban transformation. While AMRUT follows a project-based approach, the Smart Cities Mission follows an area-based strategy.

Similarly, great benefit can be derived by seeking convergence of other Central and State Government Programs/Schemes with the Smart Cities Mission. At the planning stage itself, cities must seek convergence in the SCP with AMRUT, Swachh Bharat Mission (SBM), National Heritage City Development and Augmentation Yojana (HRIDAY)- External Website that opens in a new window, Digital India, Skill development, Housing for All, construction of Museums funded by the Culture Department and other programs connected to social infrastructure such as Health, Education and Culture.

5.7 WHAT ARE THE CHALLENGES?

- This is the first time; a MoUD program is using the 'Challenge' or competition method to select cities for funding and using a strategy of area-based development. This captures the spirit of 'competitive and cooperative federalism'.
- States and ULBs will play a key supportive role in the development of Smart Cities. Smart leadership and vision at this level and ability to act decisively will be important factors determining the success of the Mission.
- Understanding the concepts of retrofitting, redevelopment and greenfield development by the policy makers, implementers and other stakeholders at different levels will require capacity assistance. Major investments in time and resources will have to be made during the planning phase prior to participation in the Challenge. This is different from the conventional DPR-driven approach.
- The Smart Cities Mission requires smart people 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.

5.8 OPPORTUNITIES

It's a city outfitted with high-tech communication capabilities. It uses digital technology to enhance performance and well being, to reduce costs and resource consumption, and to engage more effectively and actively with its citizens.

The idea of smart city came into formulation owing to the need to accommodate rapid urbanization of the age. Interest in smart cities continues to grow, driven by a range of socioeconomic and technological developments across the globe. It is due to the increasing number of smart cities that established suppliers from energy, transport, buildings, and government sectors are moving into the smart city market, while startups are addressing a range of emerging opportunities in the same field.

According to a recent report from Navigant Research, the global smart city technology market is expected to grow from **$8.8 billion annually in 2014 to more than $27.5 billion by 2023**. Eric Woods, research director with Navigant Research said, "Cities are seeking partners and suppliers to collaborate on ambitious programs for sustainability, innovation in public services, and economic development that depends on significant technology investments. The leading players in this market not only have the capacity to provide leadership on large-scale projects spanning multiple city requirements, but also delivering smart infrastructure, IT, and communications solutions to cities, supporting cities across multiple operational and infrastructure issues, and have established a global presence."

The report examines the strategy and execution of 16 leading smart city suppliers with the capacity to provide leadership on large-scale smart city projects spanning over multiple operational and service areas. These smart city suppliers are rated on 10 criteria: vision, go-to-market strategy, partners, product strategy, geographic reach, market share, sales and marketing, product performance and features, product integration, and staying power. IBM and Cisco are some of the top suppliers in the global smart city market. They are ranked the highest in terms of strategy and execution.

5.9 SCOPE OF SMART CITIES IN INDIA

India is drawing on the development of smart cities at the global level. Prime Minister Narendra Modi's vision 'Digital India' has a plan to build 100 smart cities across the country. Modi in his speech said, "Cities in the past were built on riverbanks. They are now built along highways. But in the future, they will be built based on availability of optical fiber networks and next-generation infrastructure."

Digital India envisages making India a leader in digitally delivering services in the health, education, banking sectors. Modi announced an investment of $1.2 billion in smart cities with more funding coming from private sectors and abroad.

As reported by CNN, a number of new cities are already under construction, especially, in the corridor between Delhi and Mumbai. Many of the planned cities include Special Investment Regions or Special Economic Zones, which relax regulations, reduce taxes, and generally make

it easier for foreign companies to invest. The $100 billion Delhi-Mumbai corridor effort has a 26 percent investment from Japan.

Singapore Foreign Minister K. Shanmugam on his visit to India offered to build one smart city. Also, British Chancellor George Osborne extended a 1 billion pound credit line to help U.K. companies invest in Indian infrastructure.

A recent development observed in the smart city project was, the meeting held on 16th February 2015, confirming partnership between the Indian Prime Minister Narendra Modi and former Mayor of New York City Michael Bloomberg's Philanthropies with regard to the advancement of the initiative.

As reported by Domine, Bloomberg Philanthropies will provide assistance to the urban development ministry to select cities for smart city mission, funding the latter on a continuous basis.

Although as of now, there are enough foreign funds for the government's smart city project, there still remains a concern associated with the dream. However hard the government might be trying to execute its ambitious plan, this project seems to be turning into an elitist concept, leaving out or marginalizing the underprivileged section of society. The percentage of rural population in India is 68 while percentage of urban population is 32. Rural percentage is higher than the urban because India is an agrarian country and majority of its people are into farming practices.

6. CONCLUSION

The concept of Smart City is varies from city to city and country to country, depending on the level of development, willingness to change and reform, resources and aspirations of the city residents. In the approach of the Smart Cities Mission, the objective 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.

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