



SMART CITIES: A GLOBAL TREND AND A SUCCESS IN INDIAN CONTEXT – CASE OF BHUBANESWAR

The journey to smart cities goes way back to the 1970s, when Los Angeles created the first urban big data project: 'A Cluster Analysis of Los Angeles'. The first smart city was arguably Amsterdam with the creation of a virtual digital city in 1994. Things then speeded up in mid-2000s when IBM and Cisco launched separate initiatives. In 2011, the inaugural Smart City Expo World Congress was held in Barcelona, which has now become an annual event charting smart cities' development. – (Global Data Thematic Research, 28th February 2020). However, the scenario in India was a little different.

India was still struggling with infrastructure provision and upgradation as a developing country through piece meal projects such the JNNURM which was purely project based scheme in which projects of various urban development sectors were selected and financed on a proportionate basis by Government of India, States and ULBs.

FOCUS ON URBAN GOVERNANCE — TRANSFORMATIONAL NEED FOR INDIA

As per most of the national and international researches, by 2050, about 70 per cent of the population will be living in cities, and India is no exception. It will need about 500 new cities to accommodate the influx. Also, as per Gol, cities accommodate nearly 31% of India's current population and contribute 63% of GDP (Census 2011). Urban areas are expected to house 40% of India's population and contribute to 75% of India's GDP by 2030. With the increasing pressure to cater to the needs of the challenging and changing fabric of rural to urban, it became impossible to ignore the leap frog transformation it demanded. A paradigm shift was thus needed focusing "Urban Governance" which could guide the integrated city development approach and make Indian cities future ready.

Converting the challenge into an opportunity with the intent to redefine the Urban Governance System for development of cities in India, the Government of India launched "The Smart Cities Mission (SCM)" on 25 June 2015, a joint effort of the Ministry of Housing and Urban Affairs (MoHUA), and all state and Union Territory (UT) governments. The Mission aims "to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology; one that leads to smart outcomes".

The first of its kind, citizen-centric and competition-based selection for the Smart Cities Mission made the cities rediscover themselves and undertake a thorough assessment of gaps in the present level of infrastructure and service delivery and come out with more comprehensive, credible and actionable plans for area-based development and technology-based pan-city solutions.

BHUBANESWAR SMART CITY PROPOSAL – A CITIZEN-LED PLAN

Bhubaneswar etched its name in the urban history of Indian cities by securing the first position among 98 cities, in this unique Smart Cities competition. Bhubaneswar's proposal was acknowledged to have established the highest technical standard for plan preparation in the country.

As the concept of 'Smart Cities' is relatively new in the Indian context, the Plan was charged with first and foremost defining a citizen-driven vision for the future that would be able to use technology to improve the overall quality of life for a city with 30% of its population living in slums. With a population of nearly 1 million residents residing in 161 sq. kms., embarking on a truly inclusive public engagement process was a

challenging task that the city was able to successfully accomplish in a short time-frame of 4 months. Following the internationally accepted citizen engagement approach of IAP2 (Inform, Consult, Involve, Collaborate and Empower), Bhubaneswar connected with more than 3 lakh residents to prepare the plan.

With primary focus on Responsive Urban Governance, Citizen Engagement and Technology, Bhubaneswar under its proposal implemented the state-of-the-art Intelligent City Operations and Management Centre (ICOMC) providing a digital platform for integrating multiple, city sub-systems under the pan city solution. Currently the ICOMC functioning as the nerve centre of the city monitors city services such as:

- Traffic and transportation issues through Adaptive Traffic Control System (ATCS) implemented on 50 junctions across the city;
- Safety issues through citywide surveillance system;
- Digital connectivity through citywide free wi-fi system;
- Bhubaneswar.me- a one-stop citizen-service-driven portal that integrates city services such as birth and death certificates, public transportation, property tax and many more that get you up to speed with the happenings around;
- BhubaneswarOne, a GIS based portal for citizens;
- Hosts the public grievance redressal system via a dedicated in-person assistance land line - 1929.

ICOMC was best tested during natural disasters such as the urban floods in June 2018, Cyclone FANI in May 2019 and during Covid 19 pandemic as well which have been impacting Bhubaneswar's daily life. The resilient system of ICOMC managed to provide all possible assistance to citizens and proved its robust mandates.

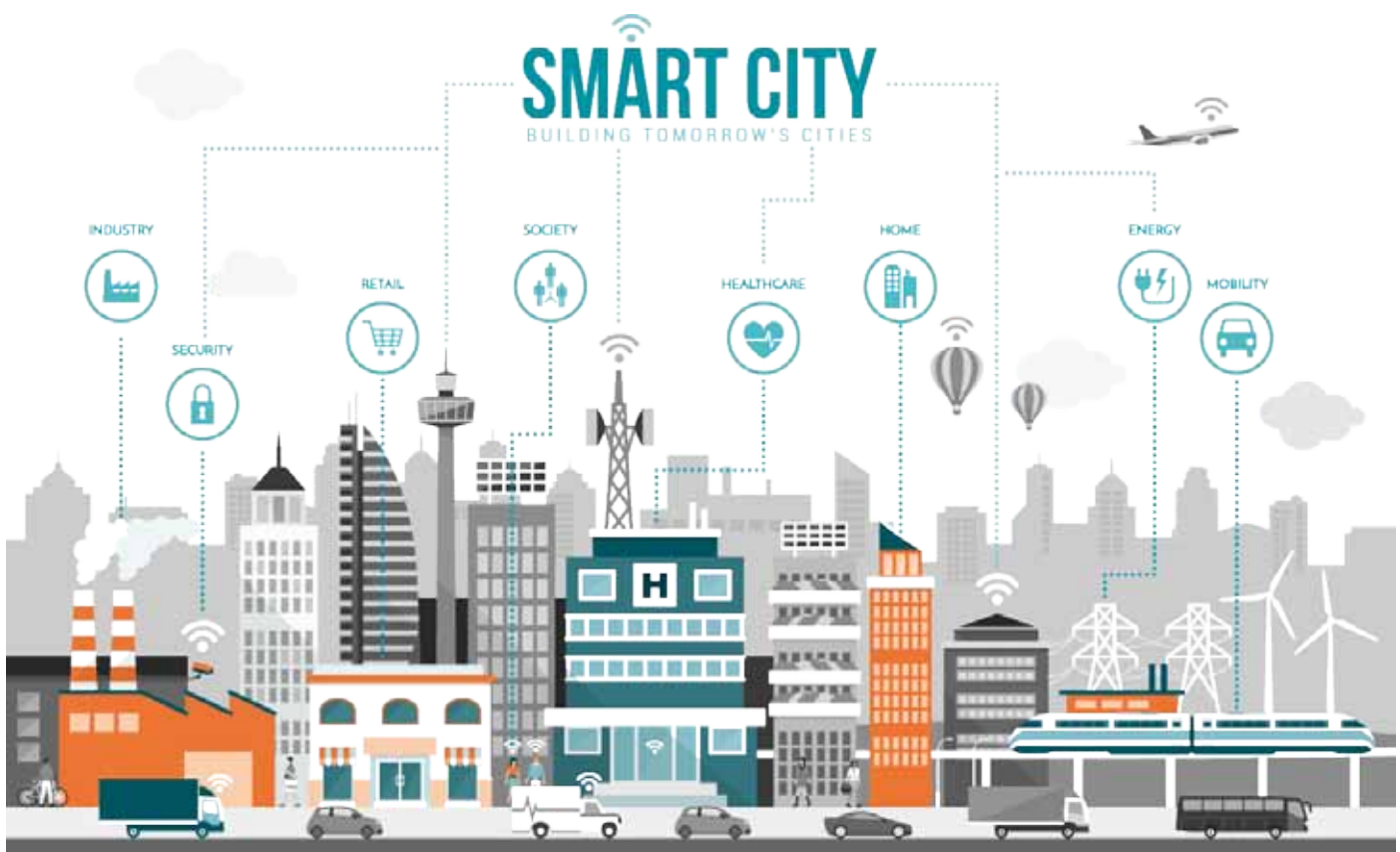




In addition, the plan envisioned to retrofit and redevelop 985-acres centred around its main Railway Station in heart of the city into a vibrant 24x7 destination, The Bhubaneswar Town Centre District (BTCDD). Some of the remarkable projects covered are:

- Community-led total sanitation programme, where the ABD area was made open defecation free.
- Socially Smart Bhubaneswar where:
 - Youth-centric and youth-led integrated social intervention was developed;
 - Safety and security of girls and women through community partnership and self- defence training, and
 - Ensure access to basic amenities and improve availability of health and social services
- Integrated Public Service Centres (IPSCs) – an integrated facility for the citizens having e-seva, Health Care Centre, Library and a Crèche. It will address the social and urban services needs of the immediate neighbourhoods and provide social space for community interaction.
- Redevelopment of Drain 10 as Lake Neutral where a natural drain is being converted into an active public space.
- Janpath - People's street, where a main commercial stretch of 6 km has been transformed using concepts of complete streets and child friendly.

The list goes on.... But, together, both the pan city and area-based implementations provided the foundation for creating a more inclusive, resource-efficient, and technology enabled future for the city.





Since its inception in 2016, BUKC has successfully coordinated the various aspects of urban development and ensured consistency and continuity in design thinking between the various city and state governmental agencies. Taking inspiration from the “three legged” approach of legal systems, urban planning, and local fiscal systems, adopted from the New Urban Agenda of Habitat III, BUKC has been able to successfully initiate vital dialogues in the city about future growth.



Above all, during the plan preparation itself, Bhubaneswar recognized that the transformation envisioned by the Bhubaneswar Smart City Proposal will only be successfully manifested if Responsive Urban Governance is placed as its primary strategic direction. As a solution to this and with a strong legal backing of acts, policies and regulations supporting smart growth principles of New Urbanism, Bhubaneswar envisioned to implement smart solutions through citizen-centric collaborative decision-making and a unique institutional capacity enhancement initiative.

The Bhubaneswar Urban Knowledge Centre (BUKC)

As an innovative model of institutional governance attempted for the first time in India, BUKC was conceived as an idea generation and implementation incubator that manages not only applied research in planning but delivers good governance practices through citizen-driven participatory planning practices. BUKC's emphasis on Child-Friendly Smart Cities brought a fresh perspective on designing cities for tomorrow's citizens.

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As a solution, BUKC has been functioning more than a project, rather it has become the harbinger of change in Bhubaneswar. Key components of the solution include:

- **Multi-disciplinary Applied Research Technical team:** BUKC comprises a 20+ person core team of urban planning, transportation planning, urban design and communications professionals creating synergies in each project that is typically lacking in conventional development projects. Sitting in Bhubaneswar Development Authority (BDA), BUKC team supports various city and state governmental agencies of Bhubaneswar.
- **Urban Innovation Exchange:** For the first-time in India, a permanent in-house team was created in BDA with representatives from the governmental agencies, national and international experts, and BUKC professionals to facilitate a smooth exchange of ideas and foster innovation in urban management initiatives collaboratively with smart solution projects.
- **Active Participation:** Testing a range of new and expanded means by which the public is engaged in city building.
- **Key Performance Indicators (KPI) based Implementation Monitoring:** Formulate new methods of monitoring and evaluating the performance of key aspects of the operation of the city.
- **City Branding:** BUKC brings the lens of promotion and marketing to enhance the attractiveness of Bhubaneswar as an investment destination, as well as creating a sense of ownership and pride in the citizens.



This approach has empowered city authorities to undertake city design and operations in the most efficient manner, ranging from small park design to major street redesign or a master plan preparation to citizen outreach initiatives. Started with the SCM, the BUKC as a model of innovative urban governance has exponentially multiplied the city planning/ designing and citizen outreach capabilities for Bhubaneswar while reducing the dependencies on the external subject experts.

Breaking the myths - Misconceptions about Smart City Mission outcomes

MYTH 1: The mission is for city-wide interventions

The intent of the mission was to contribute to overall impetus of the government to transform cities into engines of economic growth, through a two-pronged strategy: The (i) Area Based Development-redevelopment/ retrofitting/ greenfield infrastructure projects, and (ii) Pan City Development - electronic service delivery/ intelligent IT enabled systems (traffic, integrated multi-modal transport, smart metering, video surveillance, etc.) (Report on "Success stories from Mission Cities", MoHUA). Subsequently, through competition-based selection process, the mission intended to select cities with pilot areas to test, showcase and present the first step towards transformation of Responsive Urban Governance System through innovative ideas. The competition-based selection system also introduced the way forward for overhauling of the existing governance system where cities would receive funds easily. It made sure that cities should start transforming the system to understand that "You have to work and set new examples and benchmarks to earn it". To summarise, it can be said that, through the learnings of these lighthouse cities from its pilot implementations an upscaling, with a paved way forward, for transformation of existing Urban Governance was envisioned by the Government of India.

MYTH 2: It's only about Technology!

Being the lighthouse city for smart city mission implementation, we can say that the mission was never about "only technology". It was always about bringing transformation into city's urban governance system so that the energy of our cities can be harnessed through local smart solutions and channelized to modern technological advancements for progressive growth with enhanced quality of life for current and future generations.

Also, from the projects highlighted above it is very clear that Bhubaneswar understood this in early stages and acted accordingly or we can say "SMARTLY". First of its kind solutions such as the Bhubaneswar Urban Knowledge Centre (BUKC), Community-led total sanitation, Socially Smart Bhubaneswar and Adaptive Traffic Control Systems (ATCS) have been already implemented enabling local development through smart solutions.

There can be multiple more myths but as cities we should always leverage different opportunities in all possible manner and move towards transforming into more inclusive, safe, just, generative and resilient cities, to summarise "a smart city".

SMART CITY MISSION – A success or a failure?

"Yes, Smart City Mission is a success and as a City we succeeded!"

Now we are city where 985 acres of the Bhubaneswar Town Centre District is open defecation free, people from informal settlements have affordable housing planned, they are sensitive about gender gaps, girls know self-defence techniques, children design their own parks, multimodal options are available, robust public transport is available, street vendors have dedicated spaces for vending, 5m wide footpath is available for walking, dedicated cycle tracks are available, pelican signals for pedestrians are available, drains are converted into active public spaces, single payment smart card (Odyssey Card) for all city services, Satya Nagar Institutional

Core with new economic opportunities, Building Plan approval system and many more innovative first of its kind solutions.

Along with the above we also leveraged and made marks on policy level interventions as well. Bhubaneswar now has first of its kind Parks Open Spaces Master Plan, Street Design Guidelines, Child-Friendly Public Space Guidelines, Development Control Regulations with dedicated Urban Design Guidelines and Transit Oriented Development Regulations.

As a cherry on the cake, we have also managed to connect to citizens through social media. A dedicated cell under BUKC works 24x7 churning out informative post to citizens. It also acts as a grievance recording system where citizens post their requests and a medium for recording suggestions for new projects and initiatives. You can connect to below mentioned handles for further details.

- BMC: Twitter: @bmcbbsr | Facebook: @bmcbbsr
- BDA Twitter: @BDA_BBSR | Facebook: @bdabbsr
- BSCL Twitter: @BSCL_BBSR | Facebook: @bhubaneswartowardssmartcity

Reinvigorating the need for change, the innovative solutions, be it technology driven or local solutions benefitting the citizens, are now being adapted by other States and ULBs which are not part of the mission. "There cannot be any further success than all cities using and adapting the ideas already implemented under the mission".

In simple words it gave a transformational push to urban governance with new ideas being generated at both ends: the services givers- "government" and the users- "citizens". As pro-active city, Bhubaneswar leveraged the platform and became the lighthouse of transformations. ■

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