

## INDIA'S SMART CITY PROJECT – UPDATES AND FUTURE

### Introduction

India's urbanization is this century's most significant global phenomenon. India is home to 1.498 billion people, or around 11% of all urban populations worldwide. Moreover, between 2018 and 2050, 416 million new urban residents would be added. With 7,935 urban settlements, it is the second largest urban system in the world. The 53 cities with a population of one million or more comprise about one-third of all urban residents; nevertheless, the 7,839 small and medium-sized towns with a population of less than 500,000 people make up the substantial bulge of the city system. In addition, it is projected that 180 million people live in rural areas adjacent to India's 70 biggest cities; by 2030, that number will rise to almost 210 million. According to the 2011 Census, cities in India support roughly 31% of the country's population and generate 63% of its GDP. By 2030, India's population is predicted to live in urban regions, which would also generate 75% of the country's GDP. The creation of a thorough physical, institutional, social, and economic infrastructure is necessary for this. All play a crucial role in raising living standards, drawing in people and capital, and initiating a positive feedback loop of development. One step in that approach is the creation of smart cities.

The Government of India started a major urban renewal and retrofitting initiative called the Smart Cities Mission in 2015. The Government of India launched the creative and inventive Smart Cities Mission to promote economic growth and enhance people's quality of life by supporting local development and utilizing technology to produce smart outcomes for the citizens.

### History

- Smart Cities Mission in India was launched by Prime Minister Narendra Modi on June 25, 2015. The mission aimed to turn 100 cities across the country into smart cities over the course of five years.
- 100 Smart Cities have been selected through 4 rounds of competition from January 2016 to June 2018.
- In 2016, the first batch of 20 cities was chosen to get funds and support for implementing the Smart City Project. Subsequently, additional rounds of selection were conducted, and the total number of selected cities eventually reached 100 by 2018.
- Every selected city was required to draft a Smart City Proposal detailing its objectives, plans, and particular initiatives. It was anticipated that each city's specific requirements and goals would be represented in these proposals.

- The implementation of numerous initiatives commenced in the selected cities following the adoption of the Smart City proposals. Urban infrastructure, transportation, waste management, water management, and technology integration were only a few of the many areas covered by the projects.

## Objectives of Smart City Mission

The mission outlines several objectives to transform selected cities into smart cities. Keep in mind that developments or changes may have occurred since then. Here are the key objectives of the Smart Cities Mission in India:

- **Urban Transformation**  
The primary goal is to bring about a positive change in the quality of life of citizens by focusing on sustainable and inclusive development.
- **Infrastructure Development**  
To improve and modernize urban infrastructure, including water supply, sanitation, solid waste management, efficient public transportation, and affordable housing.
- **Technology Integration**  
Utilize information and communication technology (ICT) solutions to enhance the efficiency of urban services and governance. This includes the use of smart solutions for better urban management.
- **Sustainable Environment**  
Promote the adoption of green and sustainable technologies to reduce the environmental impact of urbanization. This involves measures like promoting clean energy, green buildings, and efficient waste management.
- **Citizen Engagement**  
Encourage active participation of citizens in the decision-making processes related to urban development. This is aimed at ensuring that the needs and aspirations of the residents are considered in planning and implementation.

- Economic Development

Foster economic growth and job creation by promoting a conducive environment for businesses and industries to thrive. This includes the development of business-friendly infrastructure and services.

- Inclusive Development

Ensure that the benefits of urban development reach all sections of society, including marginalized and economically weaker sections, through the provision of basic services and housing.

- Resilience to Climate Change

Build resilience in cities to cope with the challenges posed by climate change, such as extreme weather events, rising temperatures, and changing precipitation patterns.

- Governance and Institutional Capacity

Strengthen urban governance by improving institutional capacities, promoting transparency, and implementing effective urban planning and management practices.

- Quality of Life

Ultimately, the Smart Cities Mission aims to enhance the overall quality of life for residents by addressing key urban challenges and leveraging technology and innovation for sustainable development.

### Cities that fall under Smart City Project



Map showing Proposed 100 Smart Cities of India

Source: <https://www.mapsofindia.com/government-of-india/smart-cities-project.html>

The project is aiming to cover 100 cities in a span of 20 years. The list of Smart Cities has been updated over time, and new cities have been added in subsequent rounds. The selection of cities was based on a competitive process, and each city had to meet certain criteria to qualify for the mission.

### **Financing the Smart Cities Mission**

- The total funds for the mission are Rs 2.05 Lakh Crore (25 billion USD).
- 45% of the total mission funds are contributed by the Central and State Governments.
- 21% of the funds are expected to come from convergence and PPP (Public-Private Partnership).
- 5% of the funds will be raised through debts and loans.
- 1% will be generated through their own funds and 7% from other sources.
- ₹8,000 crore (963 million USD) has been allocated for the Smart Cities Mission in the financial year 2023-24.

### **Key highlights of Smart Cities Mission (Data as of 7 July 2023)**

<b>ITEMS</b>	<b>COST/NUMBER</b>
Cities	100
Total Projects	7,978
Amount released for the projects	Rs 73,454 cr (8.8 billion USD)
Completed Projects to Date	5,909
Amount utilized till now	Rs. 66,023 cr (7.9 billion USD)

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1947454>

The Ministry of Housing & Urban Affairs stated in a recent press release that of the total proposed projects under SCM, 6,041 (76%) projects worth Rs 1,10,635 crore have been completed and the remaining 1,894 projects worth Rs 60,095 crore are expected to be completed by 30 June 2024. (Source: ETGovernment, Oct 31, 2023)

## Foreign participation in SCM

Since the launch of India's smart cities project, organizations from France, Germany, Japan, the United States, the United Kingdom, Spain, the Netherlands, Israel, Sweden, and Singapore have indicated an interest for participation. The agreements and memorandums of understanding (MoU) that India has signed with different countries in relation to the Smart Cities Mission go beyond financial assistance.

- France has signed an MoU to develop Puducherry, Chandigarh and Nagpur as Smart Cities. The country's public development bank, Agence Française de Development (AFD) has provided a loan of more than US\$120 million.
- In December 2017, Germany committed US\$105 million to establish ferry connections in Kochi and an additional US\$5 million to enhance public transport in the three cities through the use of ITES-based solutions, non-motorized vehicles, and last-mile connectivity.
- In February 2018, India and Germany signed an MoU regarding "technical cooperation." In accordance with this, Germany will collaborate with select cities namely Kochi, Bhubaneshwar and Coimbatore to provide solutions, namely for affordable housing and essential utilities like waste and water management. The German Government's financial commitment to this three-year project is estimated to be approximately \$10 million USD.
- In August 2014, Japan and India signed a MoU to use Japan's experience of merging modern technology with the ancient to transform Varanasi into a smart city, similar to what they have accomplished with Kyoto, their "smart Buddhist heritage city."
- Along with developing Ponneri, a satellite city close to Chennai and Ennore Port, into a smart city, Japan also plans to build a train station in Ahmedabad, where several Japanese corporations have established operations. As part of the Chennai-Bangalore Industrial corridor, the Japan International Cooperation Agency (JICA) is developing Ponneri and improving Krishnapatnam in Andhra Pradesh and Tumkur in Karnataka.
- The British government has chosen Pune, Amaravati, and Indore as smart cities in order to enhance infrastructure, transportation, and education services after creating a master plan.
- The United States conducted an eight-day mission to India in 2016 during which 18 American companies visited with Indian policymakers, businesses, and urban planners. The state governments of Uttar Pradesh, Rajasthan, and Andhra Pradesh have signed

agreements with the US Trade and Development Agency (USTDA) to establish three smart cities: Visakhapatnam, Ajmer, and Allahabad.

- Israel’s smart city Tel Aviv has joined hands with the Thane Municipality in suburban Mumbai to create a “Digi Thane”.
- One of the first countries to provide assistance in creating sustainable urban solutions based on their own experience was Singapore, an important ASEAN partner for India. Pune Municipal Corporation and the government-run International Enterprise Singapore signed an MoU in 2017 to work together on improving Pune's transport infrastructure, traffic monitoring systems, water and waste-water treatment and management, e-governance, and citizen engagement services.
- Spain submitted a draft MoU for smart cities cooperation in 2015 and has proposed to develop Delhi as a smart city.
- In order to create interconnected, sustainable environments, Sweden, the United Arab Emirates, Australia, the Netherlands, and Italy are all willing to share their finest urban practices.

Source: [Smart Cities Mission sees rising foreign participation - IndBiz | Economic Diplomacy Division | IndBiz | Economic Diplomacy Division](#)

### Best Smart Cities

As part of the Smart Cities Mission, the India Smart Cities Award Contest (ISAC) was organized by Ministry of Housing and Urban Affairs, Government of India.

One of the significant initiatives under the mission is the recognition of innovative city strategies, projects, and ideas to reward exceptional performance, facilitate peer-to-peer learning, and spread best practices. The 100 smart cities that are encouraging sustainable growth and fostering inclusive, equitable, safe, healthy, and collaborative communities are acknowledged and rewarded by the ISAC, which also aims to improve everyone's quality of life.

Sl. No.	Award Name	Award Winner
1.	Built Environment	Coimbatore: Model Roads, Restoration and Rejuvenation of Lakes

Sl. No.	Award Name	Award Winner
2.	Culture	Ahmedabad: Revamping and up keep of heritage structure and development of the heritage tourism using technology
3.	Economy	Jabalpur: Incubation Centre
4.	Governance	Chandigarh: E Governance Services for Chandigarh Smart City
5.	ICCC Business Model	Ahmedabad: Traffic Management through ICCC
6.	Mobility	Chandigarh: Public Bike Sharing (PPP) along with cycle tracks
7.	Culture	Thanjavur: Conservation of Ponds – Ayyankulam
8.	Sanitation	Indore: Gobardhan Bio-CNG Plant
9.	Social Aspects	Vadodara: Implementation of Hospital Management Information System (HMIS)
10.	Urban Environment	Indore: Air quality improvement and Ahilya Van along with Vertical Garden
11.	Water	Indore: Saraswati and Kahn Lifeline Project (SANKALP), Rainwater Harvesting – “WATER PLUS TO WATER SURPLUS”

Sl. No.	Award Name	Award Winner
		and Rejuvenation of Lakes, Wells and Stepwells
12.	Innovative Idea Award	Hubbali Dharwad: Open Space Upgradation 2 - Nalla Renovation and Green Corridor
13.	Covid Innovation Award	Surat: Covid 19 Response Category - Multiple Initiatives
14.	Partner Award: Industry (Infrastructure)	L&T
15.	Partner Award: Industry (MSI)	L&T Construction- Smart World Division
16.	Partner Recognition: PMC	PwC India
17.	Zonal Smart City Award (Eastern Zone)	Ranchi, Bhubaneswar
18.	Zonal Smart City Award (Northeast Zone)	Kohima, Namchi
19.	Zonal Smart City Award (Northern Zone)	Varanasi, Udaipur
20.	Zonal Smart City Award (Southern Zone)	Coimbatore, Belagavi
21.	Zonal Smart City Award (Western Zone)	Ahmedabad, Solapur

Sl. No.	Award Name	Award Winner
22.	National Smart City Award	Indore
23.	Union Territory Award	Chandigarh
24.	State Award	Madhya Pradesh

List of winning Smart Cities under ISAC 2022 (August 2023)

Source: [Press Information Bureau \(pib.gov.in\)](http://pib.gov.in)

### SCM Ranking (2023)

Through the use of "smart solutions," SCM seeks to offer its citizens with basic infrastructure, a clean and sustainable environment, and a respectable standard of living. The key element that sets the SCM apart from earlier urban-reform projects is the creation and implementation of "smart" solutions to address diverse urban problems. Since information technology has advanced so quickly in recent years, practically every aspect of urban management is now covered by these clever applications, which include making governance more affordable, transparent, accountable, and citizen-friendly.

Cities that have topped the charts in SCM ranking 2023 are

1. Surat

Surat Smart City Development Limited (SSCDL), a special purpose vehicle (SPV) established by Surat Municipal Corporation, will carry out the developing projects. Out of 76 projects totaling Rs. 2988 crores, 53 works worth Rs. 1204 crores have been complete in the last two years.

2. Agra

The 19 SCM-related projects in Agra include an automated self-cleaning toilet system, a vacuum-based sewage system integrated with the ICCC, smart health centres serving the local population, solid waste management collection monitoring via GPS tracking of vehicles and RFID tags, and a 24-hour metered water supply.

3. Bhopal

The goal of the Bhopal Municipal Corporation (BMC) initiative, Smart City Bhopal, is to "transform Bhopal into a leading destination for Smart, Connected and Eco Friendly

communities focused on Education, Research, Entrepreneurship and Tourism." Madhya Pradesh has allocated ₹700 crore (US\$88 million) for this project.

#### 4. Ahmedabad

As per the GoI guidelines, Ahmedabad Municipal Corporation (AMC) has formed a Special Purpose Vehicle (SPV) as Smart City Ahmedabad Development Limited (SCADL) for the implementation for the projects under the Smart City Mission for the city of Ahmedabad. Several smart city initiatives have been introduced in Ahmedabad ranging from transit management, city surveillance, e-governance, Integrated Command and Control Centers, digital payments in utilities and many more.

#### 5. Varanasi

Several smart city initiatives have been released, including the creation of the city as a global centre for tourism and culture, urban planning, offering incentives for innovative land use, supporting the Ganga ecosystem's long-term growth, technological environmental management that prioritises the social, cultural, religious, and traditional aspects of society in order to support long-term, sustainable development and many more.

Tumkuru, Madurai, Udaipur, Vellore followed by Kanpur, bagged the next five positions.

Source: [Rise of Smart Cities: Urbanization and Economic Transformation in India 2047 - BusinessToday](#)

## Case Study

### 1. Coimbatore

Out of the twenty cities that participated in the Smart Cities challenge, Coimbatore was one of the cities that was chosen in the first round. Projects that have been implemented by Coimbatore Smart City include

- water restoration and conservation
- energy conservation
- water supply
- solid waste management
- model roads, smart surveillance
- social and infrastructure development

## 2. Indore

In the first round of the city challenge, Indore was selected as a smart city by the Ministry of Housing and Urban Affairs (MoHUA). The two main components of Indore's proposed smart city plan are pan-city development and area-based development (ABD).

Area-based development is intended to concentrate on smart technology that will integrate city systems and supply data to create a more efficient system.

They include:

- Redevelopment of public land
- Water supply, wastewater management & sanitation
- \* Transport and walkability
- Solid waste management
- Power supply & efficiency
- Underground electrification & shifting/laying of other utilities
- IT connectivity & IT enabled government services

Pan city development is intended to focus on smart technology that will integrate systems within the city and provide data to create a more efficient system. Indore aims to integrate intelligent transport systems (ITS), solid waste management, and traffic metering through pan-city development.

Source: [Report-Layout \(cenfa.org\)](http://cenfa.org)

## 3. Chandigarh

Chandigarh was chosen as one of India's 100 smart cities to be developed because of its many accomplishments, bold initiatives, and inclusive mindset.

The project "Implementation of e-Governance services for Chandigarh Smart city," which is being carried out by Chandigarh Smart City Ltd. (CSCL) in collaboration with PwC as the implementation agency, is one of the projects listed in the SCP Chandigarh.

Chandigarh Smart City has undertaken projects pertaining to

- Water Supply and Sewerage
- Sanitation
- Urban transport with innovative smart solutions

- Improving social infrastructure
- Urban retrofit
- Rejuvenation projects
- e-governance

Source: [procedure water.pdf \(chd.nic.in\)](#)

## Conclusion

Smart City Mission represents a visionary and transformative initiative aimed at revolutionizing urban living in India. Launched with the goal of harnessing technology and innovation, the mission strives to create cities that are more efficient, sustainable, and responsive to the needs of their residents. The initiative has witnessed significant progress, with cities across the country implementing a range of projects encompassing advanced technologies, infrastructure development, and citizen engagement.

Challenges undoubtedly exist, ranging from funding constraints to technological adoption hurdles. However, the ongoing efforts to address these challenges and find innovative solutions demonstrate resilience and commitment to the mission's objectives.

Looking ahead, the future of the Smart City Mission holds promise. Continued technological advancements, infrastructure development, and a commitment to sustainability are expected. The replication of successful models and potential expansion to more cities could signify a broader nationwide commitment to reshaping urban landscapes.

In summary, the Smart City Mission in India represents a dynamic and evolving effort to redefine urban living in the 21st century.