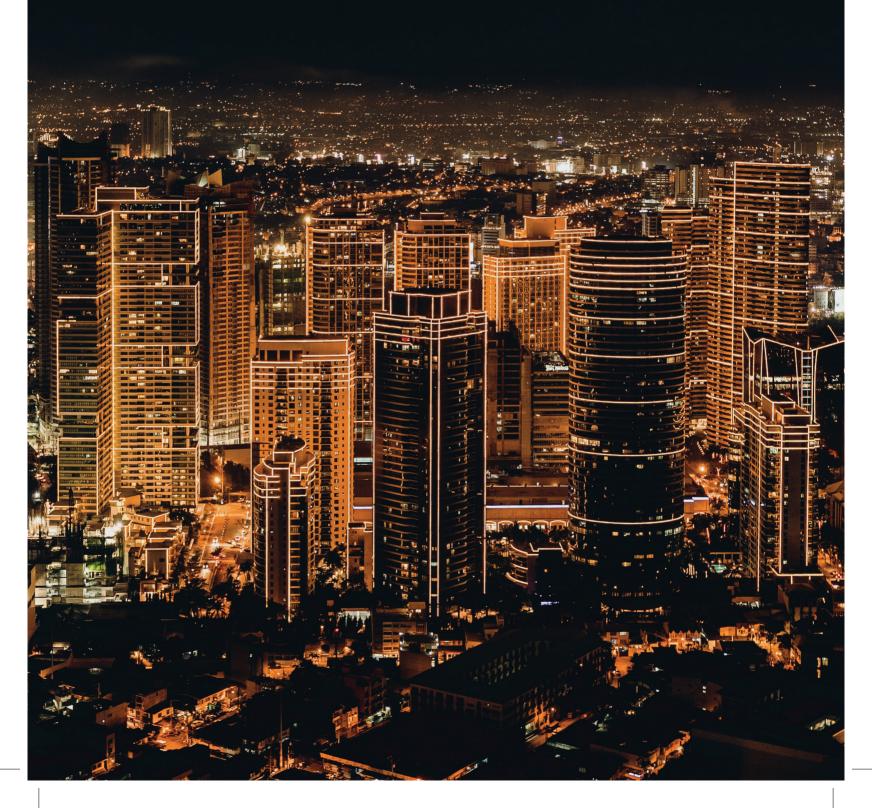


SMART CITIES MISSION: PROGRESS REPORT



Is India Getting Smarter?

Smart Cities Council India takes a closer look at the country's landmark Smart Cities Mission to assess its progress, successes and possible stumbling blocks.



Four years ago, Prime Minister Narendra Modi inaugurated a mission to smarten 100 cities in India. However, while the mission was designed to achieve its objectives over a five-year period, reports indicate progress won't be visible till 2021.

Pratap Padode, Founder Director, Smart Cities Council India, shares a quick update on India's smart act:

- All 100 cities have formed legally constituted SPVs.
- A total investment of \$29.29 billion (area-based projects estimated to cost \$23.31 billion while pan-city initiatives account for the remaining \$5.55 billion) has been proposed by the 100 cities chosen so far with 5,151 projects.
- · Projects worth \$9 billion are currently in the pipeline.
- Contrary to perception, there has been a 183-percentgrowth in tendered projects and 224 per cent growth in implementation/completed projects in approximately the past 15 months!

QUICK BYTES

Of the 5,000 projects 100 cities had proposed:

- Tendered out: 3,800 projects worth ₹1,418 billion
- Grounded: 3,100 projects worth ₹1,000 billion
- Competed: 1,100 projects worth over ₹201 billion
- Remaining projects: To be tendered out by March 2020

(as on 18 Sept 2019)

Over 469Indian cities have credit rating and 163 cities are investible grade and above. 36 cities in India have high investment grade (A- and above) credit rating, which can

- be upgraded to levels required.
- Projects focusing on revamping an identified area (area-based projects) are estimated to cost \$23.31 billion while smart initiatives across the city (pan-city initiatives) account for the remaining \$5.55 billion of investment.

Achieving set targets

While some cities are doing guite well, several are still to catch up. "Implementation progress has been based on the

capacities of city personnel," says Anindya Mallick, Partner, Deloitte India. "As per our constitution, the city functions are the mandate of the local government, with programme design and implementation being the city official's responsibility. In some of the Tier-II and Tier-III cities, there are capacity constraints. However, in major cities, the programme is expected to progress satisfactorily."



Anindva Mallick

"The mission has to be evaluated by what it has been

Abhay Kantak

trying to achieve," says Abhay Kantak, **Director, CRISIL Infrastructure Advisory.** "It has to be credited for attempting to break from the past and providing a new direction to the idea of conceptualising

urban infrastructure projects and providing services."

"After the election, there has been a push to consolidate the significant progress made for the past four years under the Smart Cities mission," says Ravinder Reddy, Partner, Grant Thornton India.



Ravinder Reddy

The Smart Challenge

The general challenge cities have faced has been setting up the SPVs and getting consultants on board.

"The SPVs have been thinly staffed and lacking the skills to take up the responsibility of implementing this novel approach for project development," says Abhay Kantak, Director, CRISIL Infrastructure Advisory. He elaborates that the SPV has to coexist with local government officials; there is an overlap of responsibilities, and ownership levels of smart projects by local government officials tends to be low. In addition, project implementation requires coordination with other state government departments, adding more complexities.

Few cities can contribute their project contribution of Rs 2.5 billion to the SPV. This will create a funding deficit once the project crosses a threshold value of contracts awarded, ie when they exhaust the state and central contribution to the SPV funding, says Kantak. "The lack of private-sector participation has meant the investment capacity of the SPVs has not been enhanced."

Speaking from his experience of working with multiple cities, Anindya Mallick, Partner, Deloitte India, says, "The first challenge is in the tendering process. The tender size for a CCC will be roughly Rs 2.5 billion to Rs 3 billion. It is possibly the first time city officials are attempting such a project where selection is based on quality and cost. If you see the technical weightage, it is 70 per cent in most cases. Previously, almost all infrastructure-related works are based on least cost selection."

Smart Roads: 103 projects in 32 cities have been completed, while 318 projects are under implementation in 77 cities. 49 cities have issued tenders for 107 projects.

PPP projects: 74 projects in 28 cities have been completed and are operational, while 112 rojects are under mplementation in 47 cities, 41 cities have issued tenders for 92 projects

Smart Command and Control Centres:

24 projects in 24 cities have been completed and 37 projects are under implementation in 37 cities, 12 cities have issued tenders for 12 projects.



Progress Report

Source: Ministry of Housing and Urban Affairs

Smart Solar:

37 projects in 24 cities have been completed, while 53 projects are under implementation in 43 cities. 8 cities have issued tenders for 10projects.

Smart Wastewater:

18 projects in 15 cities have been completed, while 87 projects are under implementation in 53 cities. 20 cities have issued tenders for 31 projects.

Smart Water:

50 projects in 28 cities have been completed. while 130 projects are under implementation in 58 cities. 26 cities have issued tenders for 46 projects.

"There were several interventions that were envisaged; many are under implementation and a few are in the design stage," says NSN Murthy, Partner & Leader-Smart Cities, PwC India.

Elaborating on what is required, he adds: "Further impetus with respect to technical capacities primarily around infrastructure at SPV level and procurement reforms".



NSN Murthy

Smart opportunities

The tendering process of projects under the Smart Cities Mission is initiated about 24 months after the city is selected. As Kantak explains, the design of the mission and translating the concept into an implementable project has meant that considerable time has to elapse before the contracts can be awarded. And the expectation that private equity firms will take a stake in the SPV has not materialised. "The nature of the interventions has been such that the potential for revenue generation is almost non-existent and thereby no possible surpluses, which means no commercial proposition for prospective investors."

However, he sees a significant opportunity for IT companies, mainly through the development of integrated command and control centres (ICCCs). Other than that, the opportunity will open up significantly for EPC contractors when the majority of the cities enter the award stage. However, the number of projects to be developed on the PPP model has been low as the revenue earning possibilities have been low.

Murthy sees smart cities as a great opportunity for the industry, from the largest Indian firms and global firms to start-ups and MSMEs. "There has been a lot of excitement globally and it has translated into business for international firms in this space from Israel, the US, UK, Germany, Austria, France, Korea, Japan, Belgium, and others." However, he adds that the speed of procurement is also affected by technical capacity gaps at the city level as well as the multiple levels of approval required to approve the project, budget and bids. For his part, Reddy predicts, "We will see more and more projects being tendered out soon."

Maximum project take-off

Cities have the primary objective of enhancing their



liveability in a sustainable manner. They are focused on creating an intelligent ecosystem by implementing ICT projects such as ICCCs, e-governance, laying of OFC, etc, on priority.

But have all these projects been gaining equal traction? "ICCC projects are receiving a good response," responds Reddy. "We are seeing take-off in water, transportation and solid waste. Apart from this, city-centric projects specific to the city are also receiving a good response."

"The current focus has been around traffic/transport and public safety; going forward, we will see a lot of focus and attention on education, water and energy," says Murthy.

In Kantak's view, the maximum take-off has been in smart public safety and smart solutions for citizen services delivery. Going forward, he sees the development of public spaces and smart streets gaining substantial activity.

"For most smart city projects, a key focus area is mobility, including congestion management," reckons Mallick. "So

there has been a lot about traffic violation detection systems and adaptive traffic control systems, along with solutions like multilevel car parking with

app-based parking management solutions. In terms of citizen services, a common offering is the citizen portals that offer city specific services through a common portal. This includes grievance redressal for each service."

The Money Crunch

Many cities are not able to generate surpluses of Rs 500 million to make their project contribution for each of the five years of the mission.

"Usually, the ratio of the bifurcation is 60:40, where 60 per cent of the budget is allocated towards area-based development and 40 per cent is for pan-city development," says NSN Murthy, Partner & Leader-Smart Cities, PwC India.

Government budgets are traditionally the major source of finance for envisaged projects. The majority of projects under implementation or at the completed stage have been funded through the smart city fund created by SPVs with both the state and Centre's contribution. However, cities are facing gaps in implementation as the provision of adequate financing as funding disbursement is based on physical progress of the project. Some projects envisaged by cities are also built on non-feasible funding models. "Cities need to shift from traditional sources of funds and look at more innovative models," iterates Murthy. "Innovative financing models built on monetisation of assets, rights and data will help create additional streams of revenue."

For his part, Abhay Kantak, Director, CRISIL Infrastructure Advisory, says, "The SPV generally caters to a smaller section of the city's population. Elected officials have their own misgivings in releasing money to projects that are not likely to have a city-wide impact, or at least in their electoral wards." Also, cities are not able to generate surpluses that will allow them to service the interest and principal repayment obligations, he adds. "The projects to be funded are not revenue generating to help meet debt service obligations."

That said, just increasing financing capacity will not be sufficient; the absorptive capacity of local governments will need to be significantly increased for a truly transformative impact.

"Some cities have gone for municipal bonds while others have opted for debt components," says **Anindya Mallick**, **Partner**, **Deloitte India**.

"There is also value capture finance, for which a separate study has been facilitated by the ministry at the city level. Some cities are also contemplating tax incremental funding. Cities are considering various other measures they can adopt, one of which is land monetisation."

Meanwhile, Ravinder Reddy, Partner, Grant Thornton India, shares, "Most smart city plans have been prepared by clear identification of the sources of the same. For example, if a project in affordable housing has been identified, the plan would clearly earmark the mode under which this shall be implemented with a clear funding pattern."

He adds that once projects start operating, there will be avenues to raise funds to make SPVs more resourceful by looking at monetisation. "The CCC is a classic case, wherein, once these centres are operational, SPVs can look at monetisation through analytics, optimisation of existing ICT infrastructure, digital advertising, etc."

Further, there can be potential fund-raising activities based on the quantum of infrastructure built, revenue streams and accessing asset-backed funding options.

Call for attention!

The cities would have progressed more in terms of money expended on pan-city solutions, says Kantak. "The critical progress, which will make a direct impact on improving quality of life, lies in the area-based development projects where progress could have been relatively faster."

Development of social infrastructure has not picked up much pace. As Murthy says, "Education and healthcare in the cities need attention." While there are smart classroom projects, these are not holistically driven. "The implementation of smart education in Visakhapatnam and Bhopal needs to be studied for replication."

In terms of adopting renewable sources for power, most cities are going in for rooftop solar panels, however, this is largely prevalent on municipal and government buildings. Otherwise, their installation on private buildings will require policies incentivising these, in Mallick's opinion. He further adds, "Cities with large water bodies are opting for floating solar panels." He goes on to say that the easier thing most cities have adopted is LED street lighting. "There are PPP models or even government-made EESL." Another area is pedestrianisation and cycling, especially in large cities. Again, these projects are easy to implement and there are PPP models available. So while public bike sharing has come up, pedestrianisation involves proper and well-lit footpaths with shade trees and beautification.

Evidently, while we're on the right track, we need to get smarter!

"We have tendered out 3,880 projects worth Rs 1,418 billion."

Kunal Kumar, Joint Secretary & Mission Director (Smart Cities Mission),
 Ministry of Housing and Urban Affairs, Government of India

The Smart Cities Mission (SCM) is proving to be a game-changer in Indian urban transformation. "This is a unique mission, working to rejuvenate the mind, body and soul of Indian cities!" affirms Kunal Kumar, Joint Secretary & Mission Director (Smart Cities Mission), Ministry of Housing and Urban Affairs, Government of India. He goes on to add that it is arguably the largest and most complex urbanisation initiative on the planet, catalysing investments of Rs 2 trillion for the development of 100 smart cities. Kumar shares more about the achievements of the mission and the opportunities ahead.

You have been closely involved with the SCM since inception. In terms of targets and achievements, how would you rate it at present?

Completed projects are already contributing to improvement in quality of life in cities with smart solutions integrating infrastructure and services. The SCM is transforming the country into a digitally empowered society and knowledge economy. It is setting a template for future development, establishing new institutions and concepts, and developing institutional and professional capacity to make Indian cities cater to citizens' needs in the best possible way. Cities are developing the capacity to think strategically about urban development. The mission is creating an environment to leverage the power of communities and bottom-up planning and technology to enable the creation of connected, liveable, energy-efficient, adaptive and resilient cities. It involves three key elements: Upscaling economic opportunities and efficiencies through innovation and entrepreneurship; evidence-based policy and decision-making, and governance focused around data; and capacity building of all stakeholders.

Of the 5,000 projects that 100 cities had proposed, we have tendered out 3,880 projects worth Rs 1,418 billion; grounded 3,100 projects worth Rs 1,004 billion; and competed 1,100 projects worth over Rs 201 billion. This is only one aspect of what the mission has achieved. Remaining projects are expected to be tendered out by March 2020.

The mission has promoted numerous innovative and first-in-India projects. Some examples are:

- Integrated command and control centres (ICCCs): These
 are being built in all the 100 mission cities. Twenty four
 such centres are already operational. ICCCs function as a
 single source of information and point of resolution for all
 civic functions. They contribute to making cities safer
 and liveable through efficient management of urban
 services and better governance and decision-making.
- · Addressing the needs of citizens through innovative



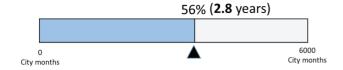
solutions: Some examples are: Toilets that are self-cleaning and unmanned in Faridabad; DigiThane, an online platform to connect residents with government; mobile public toilets for women by converting old city buses in Pune; Oxy Reading Zone Raipur, a public library in a green zone with Wi-Fi connectivity; the Integrated Traffic and Mobility Administration Centre in Surat; smart classrooms in NDMC schools; and bio-methanation plants for sustainable waste treatment; to name a few.

 Promoting a culture of entrepreneurship across the 100 cities: SURATiiLAB provides a platform for innovation, research, start-up incubation, trade facilitation and skill development. B-Nest Foundation in Bhopal is supporting start-ups in several different sectors, and over 30 start-ups from sectors, including waste management, home automation, agri-tech, IoT, autonomous vehicles, healthcare, digital marketing, drone surveillance and fin-tech are operating out of the facility.

The mission intended to catalyse investments of around \$30 billion into the 100 smart cities in a period of five years. Where do we stand in terms of achieving this target?

SCM was launched on June 25, 2015. Thereafter, 100 cities were selected in five rounds. Although it has been four years since the launch, the effective 'Mission Age' is only two years and eight months. This is based on the fact that each city gets 60 months to complete implementation – all 100 cities get 6,000 city-months. So far, a total of

3,394 city-months have been utilised from the total of 6,000.



Thus, with the Mission Age as above, the performance of SCM (as on September 18, 2019) is as follows:

- Tendered: 69 per cent of total SCM project value.
- · WO issued: 49 per cent of total SCM project value.
- Completed: 10 per cent of total SCM project value. More than 5,000 projects for over Rs 2 trillion are at various stages of implementation. The increase in the pace of implementation can be seen in the graphs titled Smart Cities Mission Progress - Projects Tendered, Projected Grounded / Completed and Projects Completed.

When you were municipal commissioner of Pune, several innovative concepts and ideas were incorporated in the city's

SCM vision. Any innovative concepts you would like to share for cities to adopt?

Pune is among the first 20 'lighthouse cities' selected in Round 1 of the Smart City Challenge. As municipal commissioner, I have led the implementation of many innovative projects in the city. Pune is one of the first cities to build the ICCC and link all public services through this centre. Dilapidated and limited use sites have been transformed into areas of active citizen participation through several place making projects. Other innovative projects include public bike sharing, public Wi-Fi hotspots, an integrated traffic management system (ITMS), street redesign and LED lighting, solar rooftop installations and 'Ti' restrooms exclusively for women by renovating old city buses. Pune Idea Factory Foundation (PIFF), a subsidiary of Pune Smart City, is boosting the start-up ecosystem and driving the innovation agenda. Hackathons in partnership with NITI Aayog and the City of Austin, Texas, have been conducted on issues in urban governance, urban mobility, citizen safety and security, health, solid waste management

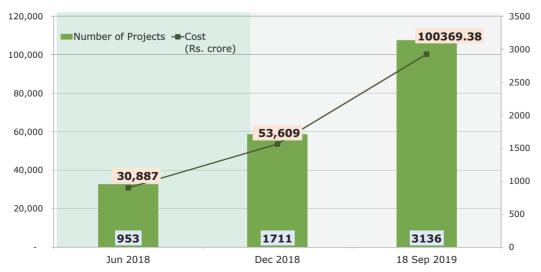
Smart Cities Mission Progress - Projects Tendered





Smart Cities Mission Progress - Projects grounded/completed





and digital connectivity. As a result, 72 start-ups were funded between 2014 and 2016 with capital of \$435 million. PIFF raised over \$250 million in 2016, considered a 'winter year' for the start-up ecosystem.

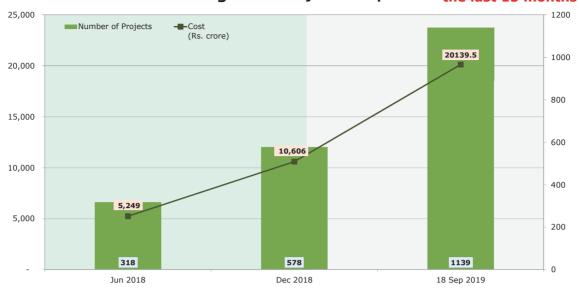
Other smart cities have also implemented similar innovative projects adapting the concepts to their own context. The mission is also engaged in preparing and disseminating knowledge publications to document success stories so that smaller cities can emulate the success achieved by lighthouse cities like Pune.

In your current role, you are responsible for the nationwide implementation of the SCM. What are the challenges you face?

I firmly believe cities need to be built

Smart Cities Mission Progress - Projects Completed

284% growth in the last 15 months



around communities and that we must use technology as a means, not an end – in a way that helps create inclusion and support bottom-up innovation. My focus is on empowering cities to achieve sustainable economic growth so that they become more liveable and safe, with clean air, adequate infrastructure, reliable utilities, and opportunities for learning and employment. Indeed, there are some challenges that come in the way of achieving that growth. Key areas I have been focusing on while leading the mission are:

- Improving local governance and financial sustainability:
 Local governments with the capacity to make timely and effective decisions for planning and management and generating enough internal revenue can work better to renew infrastructure and have credit-worthiness to access capital markets for funds.
- Appropriate planning based on evidence based decision-making: It leads to sustainable landuse and transport patterns. Cities need modern planning frameworks, adaptable master plans and zoning regulations to make the best use of available land, and allow cities to grow in accordance with changing needs. Enormous amount of data is available that can be leveraged to make better decisions.
- Adequate transport and infrastructure: Urban transport
 planning needs to be more holistic with the focus on
 meeting the needs of the large number of people who
 need to reach their homes and work quickly and safely,
 rather than on moving vehicles. Similarly, other
 infrastructure to support urban services, such as water
 and power supply, sewerage, air, water, and surface
 mobility, is either inadequate or dilapidated, or both,
 in most cities. This needs to be addressed in an
 integrated manner.
- Enhancing the quality of services delivery: Services like
 water and power supply and supporting infrastructure
 need to be improved with our people's improved technical
 capacity. Quality of services needs to be of a standard
 that can make a definitive contribution to the economic
 development we are aiming for.
- · Better preparedness to address climate change: The

threat of climate change has put the existence of the human race at risk. Cities are the prime contributors to the deteriorating urban environment, which is taking a toll on people's health and productivity and diminishing quality of life. This needs to be reversed by incorporating climate resilience into urban development.

We have launched several initiatives as mentioned earlier that directly or indirectly address these challenges with innovative solutions.

What could be the most viable means of raising funds for the cities?

Bonds are a viable option and have been used extensively in the US and Europe. Total bonds issuance in India between 1998 and 2010 was Rs 15 billion, including taxable and tax-free bonds and pooled financing issues. In July 2015, SEBI notified a new regulatory framework to issue municipal bonds in India and credit ratings were done for over 400 cities. Since 2017, eight cities have come forward to raise bonds worth Rs 34 billion. This includes Pune Municipal Corporation, who was the first to issue municipal bonds worth Rs 2 billion; Greater Hyderabad Municipal Corporation, who issued bonds worth Rs 2 billion; Indore, with Rs 40 billion; Amaravati, who raised a whopping Rs 20 billion; Bhopal Municipal Corporation with Rs 1.75 billion; and Ahmedabad Municipal Corporation with Rs 2 billion. As per industry estimates, municipalities are likely to raise Rs 150 billion overall by 2023, of which Rs 60 billion is likely to be raised through municipal bonds within the next three years.

While issuance of bonds is a welcome move, cities will have to diversify the sources of financing. Many have identified projects on the PPP model and several projects worth Rs 230 billion have been tendered out, of which work orders have been issued for projects worth Rs 150 billion, with over Rs 36 billion completed. Cities also need to look into ways to use existing powers and structures more efficiently. They can increase internal sources of funds through increasing property tax, advertisement tax and user charges for delivering urban services. Value capture

Project Investments - Key Sectors



financing tools also need to be considered while planning redevelopment and expansion of urban areas.

You recently spoke of plans to launch the Smart Cities Data Challenge for cities....

With the deployment of IoT devices, sensors and other methods to 'sense' the city, the sources and size of the data generated in a city are increasing every day. DataSmart Cities are those that have successfully imbibed a culture of data awareness and usage in their functioning. The envisaged outcome of becoming 'DataSmart' is to bring greater efficiency, accountability and transparency in city governance decisions, while fostering civic engagement, co-creation and innovation in problem-solving.

The DataSmart Cities strategy lays down the tenets of a Data Maturity Assessment Framework (DMAF) to be implemented through self-assessment. Detailed guidelines have been finalised by MoHUA. The objective is to encourage cities and assess their readiness against the three foundational pillars of People-Platform-Process, while combining the dual objective of robust processes and intended outcomes. The Smart Cities Mission Directorate intends to initially implement the DataSmart Cities strategy for the existing 100 smart cities, which will become lighthouses for all other cities and towns across the country that aspire to emulate a paradigm of data-driven governance. The goal of DMAF is to enable a healthy competitive spirit, which will further drive cities to empower themselves with relevant and necessary technical and functional guidance with the basis of peer learning, to help all cities become datasmart.

The first cycle of DMAF, which was launched on May 6, 2019, has been successfully completed and we will release the rankings for this cycle of assessment. As it is the first time a data readiness assessment has been done, which involved a lot of pre-preparation, the first cycle is intended for cities to attain a basic certification level. As DMAF is not a one-time activity, cities should look forward to improving

their data-related capabilities to achieve the required certification levels and be more 'data ready'.

In what proportions are the various verticals under the SCM represented in proposed projects?

The smart city proposals have been prepared after a lot of consultation with stakeholders, including citizen groups. Therefore, all sectors have appropriate representation commensurate with the priorities of citizens. Maximum value of projects has been proposed in area development, followed by urban transport, water supply, housing and IT connectivity and digitisation, in that order. The graph above depicts the cost-wise breakup of proposed projects by sectors.

Are there any weaknesses or challenges faced by city officials in project execution and management?

Traditionally, project execution and management have been a challenge in Indian cities owing to lack of technical and administrative capacities of ULBs. Thus, to ensure operational independence, autonomy and greater speed in decision-making and execution, the SCM has constituted an SPV in every smart city, with a full-time CEO and a board, with the responsibility to plan, execute and finance projects. The mission provides for specific powers vested with the local bodies, urban development departments/municipal administration/local development departments to be delegated to the CEO and SPV Board. Matters that require the approval of the state government are delegated to the state-level High Powered Steering Committee (HPSC) for smart cities. A programme of this scale and complexity requires a multidisciplinary team and effective coordination with multiple stakeholders to plan and execute projects within the defined timeframe. Thus, SPVs need technical, administrative and financial support from ULBs and state government agencies. The mission directorate is constantly engaging with the city SPVs, state governments and ULBs to provide timely advice and support to smoothen out project execution and management.

Progress: Smart Cities Mission

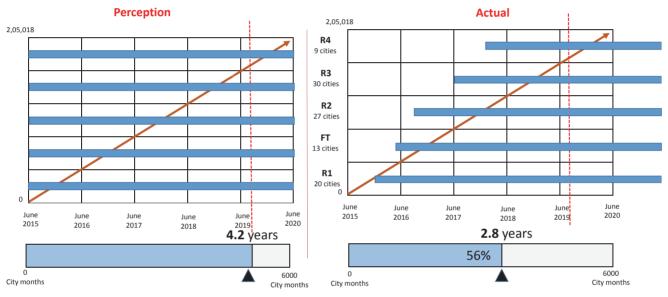
India's Smart Cities Mission was launched by the Prime Minister Shri Narendra Modi four years ago on June 25, 2015. The main objective of the Mission is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart Solutions'. The focus is on sustainable and inclusive development and to create replicable model, which will act like a lighthouse to other aspiring cities.

Since the 100 cities have been selected over four rounds

of national completion, the average Mission age is 2.8 years and not 4.1 years since its launch. The same in elaborated in the below graphic titled Perception / Actual.

Cities are working in multiple sectors in an integrated manner like solid waste management, social sectors, storm water drainage, environment, complete streets, waste water/sewerage, water supply, affordable housing, energy, IT connectivity, economic development, urban mobility, area development. The 100 cities under the Mission have

Smart Cities Mission – What is our age?



Source: Ministry of Housing and Urban Affairs

India Urban Observatory

The Smart Cities Mission of Government of India is an ambitious urban rejuvenation programme. As cities begin to implement 'smart'solutions, data becomes a significant asset and enabler for data driven governance, leading to urban transformation. The Mission has set up a state-of-the-art India Urban Observatory along at the Ministry office in New Delhi to plug into the myriad sources of data from cities, both from real-time and archival sources. It was inaugurated by Shri Hardeep Singh Puri, Hon'ble MoS (I/C) Housing and Urban Affairs on 9 March 2019.

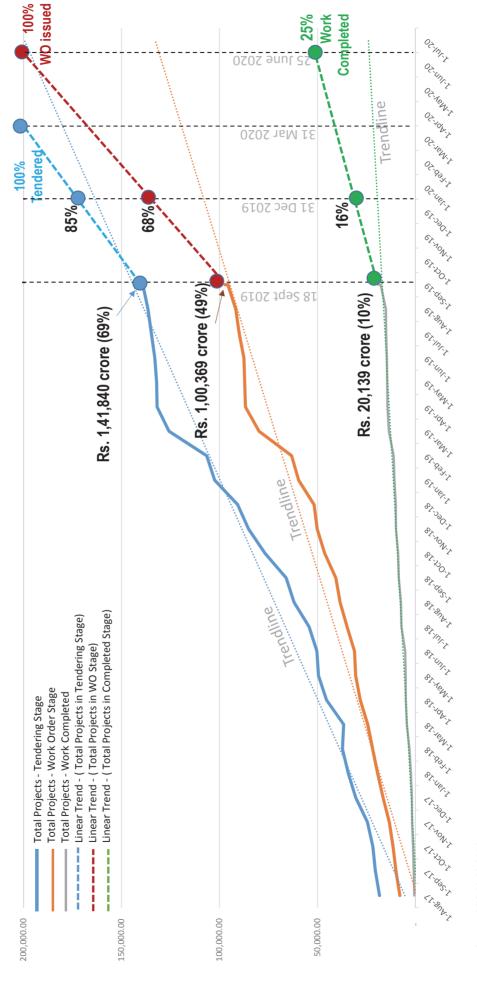
With the deployment of IoT devices, sensors and other methods to 'sense' the city, the sources and size of the data generated in a city are increasing every day. The India Urban Observatory provides an interactive showcase of collective insights on cities over various parameters using data through various sensors, devices, third party sources including citizens and social media. The Observatory helps in getting reliable, up-to-date information on a meaningful set of indicators over various domains such as transport, health, environment, water, finance and so on, which will further assist in developing best practices, future strategies and policy interventions as and when required.

The conceptualisation of this Observatory recognises the value of enhancing engagement among all four stakeholders of the 'quadruple-helix' model – government, citizens, academia, and industry, along with improvements in the internal workflow and decision-making processes of city governments.

The India Urban Observatory is an important component of the recently launched DataSmart Cities strategy that envisions to create a 'Culture of Data' in cities, for intelligent use of data in addressing complex urban challenges. The strategy aims to lay down the basic premise, three foundational pillars vis. People, Process, Platform, and a suggested roadmap for cities to improve their readiness for intelligent use of data. Making cities 'DataSmart' is key to realising the full potential of technology interventions and innovation ecosystems in cities.

The India Urban Observatory has helped in project implementation monitoring of the Mission and has generated insights across important urban issues like Ease of Living, sanitation, water stress, mobility, etc. 14 such insights spanning across sectors have been developed till date.

Smart Cities Mission - Progress, Trends and Targets



proposed to execute 5,151 projects worth Rs 205,018 crores in five years from their respective dates of selection. Financial innovation is built in the design of their capital investment plans.

Current progress:

- All 100 smart cities have established their SPVs, constituted their City Level Advisory Forum (CLAF) and all cities have appointed Project Management Consultants.
- More than 3,880 projects worth around Rs 1,410 billion have been tendered which is about 70 per cent of the total value of projects. Close to 3,100 projects worth Rs 1,000 billion have been grounded or completed.
- The number of projects tendered in SCM has accelerated by 182 per cent since June 2018.
- Most of these projects are innovative and/or are happening in our country for the first time. For example, Command and Control Centres – there were none earlier but now there are 24 and 37 would get operational by end of this year. Most cities are actively working on areas like urban spaces, solar energy, safety, public transport, complete streets, and improved citizen services and so on.

Therefore, considering the average age of the mission (i.e. 2.8 years) and the progress that cities have made in project implementation, it would be appropriate to say that the mission progress is at par with the mission timelines.

Smart Cities Mission - Why set targets?

	Cities	City Months	Date of Start	Mission End date	City month (Aug-19)	% Comp	Mission Age	Tendered	WO issued	Completed
R1	20	1200	Jan-16	Jan-21	44	74%	3.6 years	80%	54%	14%
FT	13	780	May-16	May-21	40	67%	3.3 years	37%	29%	4%
R2	27	1620	Sep-16	Sep-21	36	60%	3.0 years	73%	51%	11%
R3	30	1800	Jun-17	Jun-22	27	45%	2.2 years	45%	31%	3%
R4	9	600	Jan-18	Jan-23	20	33%	1.7 years	100/	11%	0%
R4	1		June-18	June-23	14	23%	1.2 years	19%		
Total	100	6000			167.57	56%	2.8 years	69%	47%	9%

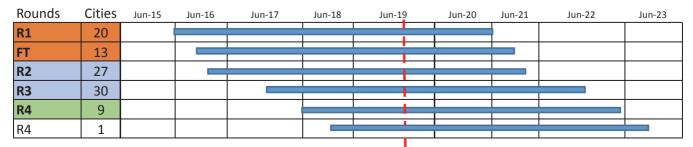
Target	Cities	Mission Age	Aug 2019	Oct 2019	Dec 2019	Feb 2020	April 2020	June 2020	Aug 2020	Balance time (in months) to complete implementation	
R1	20	3.6 years			-					13	
FT	13	3.3 years			-					14	
R2	27	3.0 years			-)			18	
R3	30	2.2 years						9-		24	
R4	9	1.7 years					-			31	
R4	1	1.2 years								36	

Target date for 100% projects to be tendered

Target date for 100% projects to issue WOs

Smart Cities Mission - City months consumed

	Cities	City Months	Date of Start	Mission End date	Aug-19	City Months (Aug 19)	City Months (%)	Jun-20	City Months (Jun 20)	City Months (%)
R1	20	1200	Jan-16	Jan-21	44	885	74%	53	1060	88%
FT	13	780	May-16	May-21	40	523	67%	49	637	82%
R2	27	1620	Sep-16	Sep-21	36	976	60%	45	1215	75%
R3	30	1800	Jun-17	Jun-22	27	811	45%	36	1080	60%
R4	10	600	Jan-18	Jan-23	20	199	33%	29	290	48%
	100	6000			167.57	3394	57%	212	4282	71%
				Mission Age		2.8			3.6	



Source: Ministry of Housing and Urban Affairs

SmartCitiesCouncil India

LIVABILITY | WORKABILITY | SUSTAINABILITY

ABOUT US

The Smart Cities Council is a working group representing some of the best and brightest companies selling to cities. Our partners include Cisco, Huawei, Intel, Qualcomm, AT&T, and over 40 more leaders in smart city deployments. We work with cities and solution providers to understand and educate, to accelerate movement in the industry.



SMART CITIES ACTIVATOR

Innovative online platform for collaborative, multi-stakeholder planning.

Rapidly gather stakeholder input. Use proven project templates. Employ powerful online planning tools. Work collaboratively from multiple locations.



Vendor-neutral guidance and workshops for cities, states, provinces, and electric companies. Align your stakeholders. Assess your options. Pick your priorities. Build your plans.



A g

SMART CITIES READINESS NETWORK

A global knowledge exchange for experienced public sector practitioners.

Exchange ideas with peers from other cities. Learn from pioneers. Expand your expertise. Grow your personal network.

JOIN THE COUNCIL

Global and regional memberships for suppliers. Meet cities deploying at scale. Showcase success stories. Find go-to-market partners. Help us help cities.



SM@RT URBANATION

2020

For Membership Opportunities, Contact:

ANURADHA DAS, Program Director - First Construction Council (anuradha.d@firstinfocentre.org, +91 22 24193000)

NEHA GOEL, Executive - Operations, Smart Cities Council India (neha.goel@india.smartcitiescouncil.com, +91 7045 117 118)

TANVEER PADODE, Manager - Operations, Smart Cities Council India (tanveer.padode@india.smartcitiescouncil.com, +91 22 24193000)

PRASHANT GURAV, Memberships - Smart Cities Council India (prashant.gurav@india.smartcitiescouncil.com, +91 22 24193000)

www.SmartCitiesCouncil.com www.SmartUrbanation.com

IIII DEE IIII