ENGAGING WITH MAHARASHTRA'S SMART CITY PROGRAM

THE WAY FORWARD

PRODUCED BY

THE SMART CITY COALITION INITIATED BY

INHAF

ABSTRACT

INHAF, as part of a nation-wide coalition of over 30 individuals and organisations, initiated the process of studying and understanding the smart city programme in all mission cities in Maharashtra in 2017. Setting up the national coalition was time intensive and has absorbed individuals and agencies as partners - professionals, civic groups, academic institutions, professional training institutions, Non-Governmental Organisations, researchers, urban experts and activists – taking up, on a voluntary basis, the assessment of the Government of India's ambitious program under which over 100 cities are being developed as smart cities.

Launched in 2015, the Smart City Mission is one of many flagship public policy and national programs of India, seen as a part answer to the country's massive and complex urban challenge. Its focus is to harness information communication technology (ICT) to improve city efficiency, productivity, security, liveability, sustainability and governance. Cities compete for access to funding and the status of a smart city. 100 cities were selected under the mission out of hundreds of proposals. For these, one hundred crore per year for 5 years is set aside per city by the central government with matching contribution expected from municipal and state governments. Cities must raise additional funds through other means. Each city sets up a special purpose vehicle, structured as a private limited company, to implement the mission on ground.

Aim and Objectives

The aim of the coalition therefore was to:

i) Understand the ground reality of the smart city project in the 8 mission cities of Maharashtra.

ii) Assess project design, implementation arrangements and investment plans in the context of each city's felt needs and articulated priorities.

iii) Identify the program's relevance in the context of the State's urbanization trends and city development challenges including on-going responses in the form of programs, projects and investment plans.

iv) Use the learning from the study to:
a. Better understand the challenges in planning and implementing such development agendas.
b. Provide feedback and constructive suggestions to program planners and implementing authorities at the city, state and national level with a view to strengthen the program.
c. Use the experience of the collective way of working to shape and incrementally develop an organisational model to undertake public interest tasks in different sectors and regions, specifically in those cities.

The complexity of the issues, the scale factor and a need to present workable and acceptable alternatives to the presented program or policy (prescription, not only diagnosis) makes the task difficult for any single individual or agency. Therefore, in order to understand the Mission implementation and implications as holistically as possible, this coalition was seen not only for in its strength in numbers but its diversity of expertise and experience. Its voluntary nature reflects the

open approach and public interest with which this effort was undertaken. Making the coalition model a success therefore was also an objective by itself and although it is acknowledged that this presents a difficult operational model, this way of working is a way of strengthening the role of civil society in the areas traditionally occupied by professionals and consultants.

The purpose of this study is not to criticize the smart cities programme or find fault with it but to use the considerable skills, expertise, and experience that is available within our coalition. More specifically it is to offer valuable insights through a pro-people, bottom-up view of the Smart cities mission in the context of city concerns and of the mission as a strategy in meeting complex urban challenges.

Methodology

The study examines the following:
- Smart Cities Mission as part of the ongoing National and State urban agendas.
- Maharashtra's Smart City Mission: Selection of cities, Engagement strategies, Proposals, Focus Areas, Strategies, Institutional mechanism and Financing.
- Findings from the Cities
- Outcomes on People: Perception and consequences

Study Design

Primary Sources:
On-ground feedback from 7 cities was obtained from local partners using the following methods:

PUNE:
Interviews with Local SME platforms, in Urban villages, general public in aundh and baner, NGO representatives, smart city officials and local community groups. The methods used include an E-survey (90 respondents), offline survey (1300 respondents), 2 transect walks in Aundh and Baner and 7 semi-structured interviews.

SOLAPUR:
Semi-Structured interviews/discussions with: Gurushant Dhuttargaonkar (Shiv Sena Corporator), Priyadarshan Shah (Yashwardhan Const. Pvt. Ltd. and former CREDAI president 2008-10), Sanjiv Pimparkar (Divya Marathi Editor), Yogin Gurjar (Business owner & civil society activist), Prashant Mane (Journalist, Pudhari), Balasaheb Godge (Siddheswar Temple Trust).

THANE:
Focus group discussions with citizen groups, Interviews with TSCL CEO, elected representatives including Hon. Mayor (Shivsena), Senior Corporator Milind Patankar serving his 5th term (BJP), brief interactions with Leader of the House Naresh Mhaske (Shivsena), corporators from Kalwa-Mumbra and Diva.

NASHIK:
Interviews with Elected representatives, Members of opposition, Board of directors of SPV, Citizen surveys.

AURANGABAD:
Interviews with Pushkal Shivam (now deputy CEO, SPV Aurangabad), Imtiaz Jaleel (MLA, AIMIM), Dr. Abdul Gaffar Qadri (AIMIM leader), Bhalchandra Kango (Writer)

PIMPRI-CHINCHWAD:
Interviews with Primary Survey with 102 citizens conducted in various areas in PCMC but focusing more on the ABD areas and additional interviews with other stakeholders.

Secondary Sources:
1) Desk Research – Smart city mission documents, Smart city proposals submitted, SCM website, SPV website, Media articles on progress, other articles, published papers and reports.
2) Media review - Covers the various aspects of the mission (vision, finance, governance, and implementation) over five years and the perception amongst citizens as reported in news articles.

Limitations

Although the Smart City proposals for the 8 cities are available online, there was limited information on the current status of projects or SPV composition in the public domain when this report was being put together. Early this year (2021), the Smart city website was redone by the Ministry of Housing and Urban Affairs and additional city wise information on progress is now available which has been included in this report. However, some discrepancies remain. For instance, the list of projects to be taken up by cities is not consistent in the three places referred to: the smart city proposal, approved list on the SCM website and the SPV/Municipal corporation website. For purposes of this report, the approved list on the SCM website was used as the baseline data on projects and the Smart city proposals submitted were used to capture other information as reported by cities. In terms of city-wise progress, the new Smart city website dashboard was used to collate data.

The primary purpose of this report was to gain an on-ground understanding and perception of the mission through local partners in each of the cities of Maharashtra. Regarding these efforts, there was limited access to interviewees in some cases or as in the case of Kalyan-Dombivli, no access to a local partner. In the other 7 cities, different methods were used to capture information. There is therefore some inconsistency in the type of information collected and in its presentation. However, all the city reports have provided an invaluable source of information in putting together the key findings in this consolidated report.

SUMMARY

1. Smart Cities in the Urban Agenda

- India in the least urbanised country in the global south but the highest in terms of numbers, 377 million people i.e 31.1% urban population. However, only 7 of India's States and Union Territories contribute to this figure. As debates around the causes and nature of urbanisation continue, the Government has taken steps in the last 15 years to respond to specific urban challenges.
- The Jawaharlal Nehru National urban renewal mission (JnNURM, 2005-14) was the first comprehensive urban programme that brought resources to cities. Its investment was largely in infrastructure, housing and required urban local bodies to undertake mandatory reforms. Cities were also meant to create a City development plan.
- In 2016, JnNURM was replaced by 6 missions including the Smart Cities program that cover a wider range of urban concerns but also require better convergence. Highest budgetary allocations so far have been towards the Metro and MRTS.
- The origins of the smart city mission lie somewhere between IBM's smart cities campaign in 2009 to its rise to the urban development agenda through the European union. Either ways, a 'Smart' city in the western concept assumes that basic administration and infrastructure in cities are already in place.
- In India, the mission guidelines, on the other hand, offer no discourse on urbanisation and remains ambiguous on 'what is a smart city'?
- Smart Cities began as Greenfield development in India, with its focus changing to Retrofitting eventually as cities realised that obtaining land for 'new' smart cities was proving to be a challenge in light of the Right to Fair compensation and Transparency in land acquisition, rehabilitation and resettlement Act, 2013. In 2021, the Government has again announced its original intention to build 'new' smart cities.

SMART CITIES MISSION
- 100 Smart Cities in India selected through a 2 Stage process: Stage 1 is Intra-State selection of cities based on criteria given and Stage 2 is selection is at the central level based on proposal strength.
- Two Strategies to be proposed by Cities: Area Based Development (Retrofitting, Redevelopment or Greenfield) and Pan-City Solutions.
- Implementation is carried out through an SPV – Special Purpose Vehicle to be constituted after Stage 2 proposal selection.
- Financing – 1000 cr per city by Centre (500 cr) + State + ULB (500 cr).

	Round 1	Round 2	Round 3	Round 4	TOTAL
Number of Cities	20	40	30	10	100*
Selection Period	Jan 2016	May-Sep 2016	June 2017	Jan 2018	
No. of Projects	829	1959	1891	472	5151
Investment (in cr)	48064	83698	57393	15863	205018
Avg SCP Size (in cr)	2403	2092	1913	1586	2050

[Source: smartcities.gov.in] *Shillong selected as 100th smart city in June 2018

33 cities formed the initial list from Maharashtra

10 cities selected in Stage 1 from the State amongst 98 other cities
> Navi Mumbai, Nashik, Nagpur, Greater Mumbai, Thane, Solapur, Amravati, Aurangabad, Pune and Kalyan-Dombivli.

8 cities were finalised after Stage 2 involving proposal submission
Round 1, 2016: Pune, Solapur
Round 2, 2016: Kalyan-Dombivli, Nagpur, Thane, Nashik, Aurangabad
Round 3, 2017: Pimpri-Chinchwad

2. Maharashtra: Smart City Mission

2.1 Selection of Cities

- Based on its urban population and number of statutory towns, Maharashtra was allowed to choose 10 cities under the Smart Cities mission. The State ranks third in terms of number of cities allocated after Tamil Nadu (12) and Uttar Pradesh (12).

- From the 10 cities allocated, 8 were eventually selected as 'Smart Cities'. Mumbai and Navi Mumbai dropped out after objections to the implementation structure (of the Special Purpose Vehicle) and Amravati did not qualify in the proposal selection round. Eventually, Pimpri-Chinchwad was added to the selection in the third round in 2017.

- Stage 1 selection was internal to the State and was based on the strength and capacity of urban local bodies related to existing service levels, grievance redressal systems, municipal budget on websites, collection of revenue, payment of salaries, audited accounts, past track record and reforms.

- Stage 2 selection was based on smart city proposals submitted by each city and evaluated against credibility of implementation, city vision and strategies, cost effectiveness, innovation, scalability and process followed in proposal preparation.

2.2 Engagement Processes

- Maharashtra took the decision to appoint IAS officers as mentors to the cities during the proposal development stage, in addition to private consulting firms being empanelled by the Centre for all cities selected for Stage 2.

- Sakal Group's (Developer) Delivering Change Foundation were engagement facilitators in 4 out of 8 cities. All cities also set up an internal, dedicated team for outreach within the civic bodies.

- Tel Aviv, Israel's model of engagement was used as an aspiration by the State with a learning exchange organised in the early stages.

- Both online and offline modes of engagement were used in all cities. Although citizens were the primary focus, cities also reached out to elected representatives and parastatal agencies.

- The coverage of engagement claimed by cities in their smart city proposals lies between 35 lakh (Pune) to 80% of households (Thane, Solapur).

2.3 Focus Areas

- **Area-Based Development (ABD):**
  - Solapur, Nashik (Older historic areas) and Aurangabad (Greenfield): Heritage & Tourism
  - Kalyan-Dombivli and Thane: Station node improvement
  - Nagpur: Regularisation of unplanned areas through Town planning scheme
  - Pune and Pimpri-Chinchwad: New areas with growth potential

All cities except Aurangabad proposed a retrofitting model. However, some cities (Pune, Kalyan-Dombivli, Nashik) also proposed one Greenfield site within the ABD area for redevelopment.

Projects Proposed:
Transport, mobility and accessibility take precedence in all cities except in Thane and Aurangabad where housing is given the higher budgetary allocation. Water, Sanitation and waste are the next priority across the cities. The third priority differs across cities: Pune, Solapur, Nagpur focus on energy; Nashik places importance on heritage, Greenfield and Riverfront; Thane on waterfront and Aurangabad on community facilities. As both Aurangabad and Pimpri-Chinchwad do not have a waterfront component, the budget allocations towards community facilities are higher. Total allocations of all cities towards IT solutions (Wifi, ICT, Surveillance and Safety) in the ABD area are lesser.

- **Pan-city:**
City-wide IT driven initiatives with cities adopting different project focus areas.

Projects Proposed:
Transport, WATSAN and Safety & Surveillance are the primary sectors covered under the Pan-city component. Investments also focus on City planning and governance such as data analytics, online performance monitoring, command centre, service benchmarking and service related apps.
IT connectivity upon which the mission hinges, is a focus in the Pan-city component but cities such as Solapur, Kalyan-Dombivli, Nashik make no allocations towards this. Pimpri-Chinchwad is the only city that covers a wide range of ICT social and livelihood interventions.

2.4 Institutional Model

- All 8 cities set up a Special Purpose Vehicle for implementation.
- Maharashtra opted to appoint the IAS officers that had served as mentors for city proposals in the position of SPV Chairperson instead of civic chiefs or local representation.
- The SPV board was to have 15 members: 6 from Urban local body, 4 from State Government, 1 from Central Government, Independent, Municipal Commissioner, Additional Municipal Commissioner and an independent CEO.
- An advisory committee was also to be set up at the city level to contain a cross-section of stakeholders including elected, non-elected representatives, community representatives and business associations.
- A number of private sector consultants were appointed in the roles of project management, planning and implementation.

2.5 Financing Mechanisms

Overall Mission Budget: 48,000 cr, **Financing per city over a 5-year period:** 1000 cr

Break-up of Funds: 100 cr per annum per city by Central Govt. (500 cr over 5 years), 100 cr per annum per city by State and ULB. (250 cr each over 5 years). Balance funds are to be raised by cities through various sources.

- In Maharashtra, a State GR in 2016 notified agencies (CIDCO, MMRDA, NIT) to contribute 100 cr without waiting for central funds.

2.6 Project Overview and Implementation Status

Table 12: Smart City Progress in Maharashtra							
	SCP Budget (in Rs.cr)	Tender Issued	Tenders Issued Amount (in Rs.cr)	Work Order Issued (No. of Projects)	Work Order Issued Amount (In Rs.cr)	Projects Completion %	Financial Amount Utilized%
PUNE	2960	60	3946	48	1806	31.7	23.8
SOLAPUR	2226	46	1991	35	903	50.0	5.1
KALYAN-DOMBIVLI	2027	18	1546	15	1382	16.7	0.2
NAGPUR	3351	10	1997	7	1879	30.0	29.7
THANE	6132	42	6140	41	5901	47.6	1.6
NASHIK	2195	46	3053	43	2749	56.5	29.6
AURANGABAD	1730	20	727	12	452	50.0	25.4
PIMPRI-CHINCHWAD	1175	22	1448	21	1400	40.9	8.9
Total (Maharashtra)	**21796**	**264**	**20848**	**222**	**16472**	**42.8**	**14.3**
Total (India)	**205018**	**5577**	**172998**	**4876**	**139991**	**42.8**	**19.5**
State Share	10.6	4.7	12.1	4.6	11.8		

[Source: Smart Cities' Performance as per https://smartcities.gov.in/dashboard as of 31st March 2021]

3. Maharashtra: Key Findings

3.1. Flawed selection criteria for cities

- Despite the fact that one of the key goals was to develop new towns close to developed cities under the Smart cities mission, the financial contribution expected from cities (50 cr per year for five years of the mission) prevented smaller cities from participating. The mission places stronger emphasis on urban governance and capacities of the civic bodies as opposed to urban challenges. As a result, many cities with higher future urban growth potential or those with relatively lower human development indicators or lack of basic infrastructure were not included in the mission from Maharashtra.
- Despite set criteria, the final selection of cities in Maharashtra includes non-merited selections that do not meet the conditions such as Solapur. The State never disclosed the performance scores of cities or gave an explanation regarding these exclusions indicating a lack of transparency in final city selections under the Smart cities mission.

3.2. Inadequate participation

- Engagement of people in proposal preparation as claimed by cities is highly exaggerated as per city level reports.
- Moreover, it is difficult to assess the means of engagement and its coverage and effectiveness, particularly online methods. Certain groups therefore were excluded largely due to modes of engagement and the technical language of presentations. Most offline modes also did not serve the purpose - in Nagpur there were claims that the forms were filled in by corporation officials and in meetings there was a one-way flow of information but discussion not encouraged.
- There is no way to know how many of concerns were taken into consideration in the end. In cities such as Nashik (Goda riverfront) and Thane (SATIS), despite objection to the projects, the smart city proposals were submitted with these.
- SPV officials in Aurangabad felt that citizen consultation at the proposal stage was not intrinsic at a practical level. Yet, consultations have not taken place during the implementation stage as well fueling the perception that 'participation' has remained tokenistic and non-inclusionary in its approach.

3.3. Selective Improvement

- Barring Nashik and Pimpri-Chinchwad, the allocation of smart city funds towards the ABD area is disproportionately more than Pan-city solutions. This is despite the fact that the ABD area forms a very small part of the total city area. Although the explanation is that the ABD is a 'pilot' to be replicated elsewhere, the challenges of each selection require very particular solutions that possibly cannot be translated to other parts of the city.
- Project investments in cities are also disproportionately allocated across the sectors: therefore transport, mobility and WATSAN get highest priority except in Aurangabad and Thane where housing is the highest allocation. Livelihood interventions, environmental challenges, housing and community facilities are neglected under the smart cities mission. The riverfront development, part of cities' economic strategies, is a focus in 6 of the 8 cities but neglects environmental improvement or the resettlement of people living along its edges. These exclusions abound across projects.

3.4. Threats to communities

- Smart cities proposed large-scale projects under the mission but do not adequately address the issue of communities that currently occupy land on which the projects are proposed. This includes agris and kolis in Thane, informal vendors in Thane, Nashik impacted by ABD improvements, settlements along all the identified water/river/lake improvements and farmers on Greenfield land in Nashik. These communities were not part of proposal discussions and face a real threat of displacement during implementation.

- In addition, with the heavy focus on 'smart' technologies, the investment in IT infrastructure within the mission is less and most funds for this sought under the convergence agenda. The larger question is how it will impact communities who have historically faced the issue of the digital divide and if social divisions will be deepened further.

3.5. Lack of convergence clarity

- Convergence funds are the second highest contributor to the mission in Solapur, Nashik, Nagpur. All 8 cities are covered under AMRUT which focuses on water and sewerage, SBM which covers sanitation and PMAY-urban which focuses on housing. Cities also rely on funds under Digital India, Safe City project, FAME, IPDS and the National river conservation project. All cities also seek performance grants released under the 14th finance commission.

- Given the coverage and focus areas of the convergence schemes, there is an overlap of roles and a lack of clarity in what the Smart cities plan covers as reflected in interviews where respondents were not clear about which projects were being undertaken under which of the current national missions.

3.6. Lack of city integration: past and future

- Whereas the mission attempts financial convergence, it does not make explicit how they will integrate at a planning level or coordinate with other agencies for right of way. This has impacted project progress – for instance, in Nagpur, houses regularised under the Nagpur improvement trust are now being asked to self-finance under the town planning scheme being implemented in the same area under the smart cities mission. In the meantime, NIT continues to approve building layouts on these plots.

- Some cities also proposed projects that had been taken up under earlier programs – such as Mobility in case of Pune or the SATIS project in Thane or Waterfront and Riverfront projects in Thane and Nashik. There is some piggybacking of projects but the real concerns raised were that these projects repeat the designs of the past without correcting the mistakes and therefore are not addressing the city's challenges.

3.7. Concerns of Democratic Decentralisation

- Smart city guidelines did not provide for the composition of the SPV board of directors therefore the member selection was left upto the discretion of the States resulting in the case of Maharashtra to several consequences.

- Elected-member representation in the city SPV composition is much lesser and even where there is representation, local partners report that the types of projects are influenced by consultants and key decisions are taken by bureaucrats. Decisions therefore remain top-down and bypass local governance.

- Objections to the SPV structure were raised at the start of the mission by Mumbai and Navi Mumbai (who eventually withdrew) noting that the SPV would weaken the civic body. Pune and

Nashik also raised similar issues but secured enough approval of elected representatives to go through. After final selection, both Solapur and Nashik have passed resolutions to have more elected representatives on board. However, data on current board composition across 7 cities (not including KDMC), indicates that there are lesser democratically elected members despite this.

- SPV leadership too is largely occupied by non-elected members – for one, the State appointed the IAS officers, who served as smart city proposal mentors, in the position of SPV chairperson. Also, barring Nagpur, Nashik and Pune, the CEO posts in the remaining 5 smart cities of Maharashtra are currently held by the city municipal commissioners, additional commissioners or Dy. Commissioner. The CEO position was meant to be held by a full time, independent authority. Besides the fact that these key posts are not held by elected representatives, frequent transfers of these officials impacts SPV functioning.
- Most cities, barring Pune, also fall short of overall board requirement to have 15 total members. Aurangabad, for instance, has only 4 members at present.
- There are also no members from civil society, advisory councils are absent in most cases and the role of 'city level subject' experts is ambiguous.

3.8. Lack of information in the public domain

SCM guidelines do not mandate SPVs or ULBs to publish annual accounts, audit report, administrative report, progress of works and such. As a result, information on the State urban development department websites, SPV or ULB websites on project progress is inadequate and difficult to navigate. In early 2021, the Smart city website was revamped and new information on progress of the mission per city has been included.

3.9. Financial incapacities

- On paper and based on analysis (See Ravikant Joshi paper, Section 6), all cities in Maharashtra have the capacity to put in their mandatory financial share and barring Thane, all have submitted viable smart city proposals. However, on ground, a different picture is emerging.
- All cities rely excessively on Smart city mission funds in the initial 5-year period with the balance to be met through convergence schemes or private sector partnerships. The exception to this is PCMC which notes minimal scheme convergence and is expected to meet balance funds largely through ULB contribution.
- Local partner reports from four cities (Nashik, Aurangabad, Nagpur and Solapur) cite concerns over ULB capacities to raise and contribute funds towards the smart cities mission.
- There is also the question of increased reliance on privatisation – PPP and Land monetization – which serve as tools to unlock the value of public land on one hand and offer a viable source of financing but are notorious in exacting a social cost for project impacted communities.

3.10. Project implementation challenges

The ambitious nature of the SCM projects and unforeseen challenges have caused cities run into extended timelines. Key challenges noted were high consultant fees, poor consultancy services, inability of ULB to raise own funds and time-consuming tendering processes.

3.11. Smart city project perception

User experiences were captured through surveys in two cities by local partners of this study: Pune and Pimpri-Chinchwad.

4. Maharashtra: Outcomes

4.1. Lack of awareness about the Smart Cities Mission
- Limited awareness about the mission itself across the cities and inability to make the connection between ongoing projects and the mission.
- Several city reports claimed that citizens either did not know why the projects were selected, or that well developed areas were selected instead.

4.2. Reduced agency of local governance
- The agency of city local governance seems removed from the process – although the SPV structure is meant to bring in efficiency – it has undermined the decision making capacities and financial strength of the ULB. This brings into question the sustainability of the smart cities mission, which was envisioned to be a 5-year program that would eventually be taken over and implemented by the city civic bodies.

4.3. Unanswered urban challenges
- The type of projects under the SCM was influenced by consultants and decisions taken by bureaucrats, with little connection to the grassroots of the city.
- Consequently, key needs and challenges have not been addressed through the smart cities mission as is evident from the interviews in the cities wherein most people felt that projects picked were 'low hanging fruit' - already being implemented by the city, influenced by the point system that awarded more to certain projects (mobility, water, transport) and offered either inadequate or inappropriate solutions to existing challenges.
- Projects were selected despite the fact that there were objections and concerns raised through earlier experiences (Thane-SATIS, Nashik-Goda riverfront). In some cities, pressing issues – Garbage (Aurangabad), Unauthorised settlements (Kalyan-Dombivli) remain unanswered. In others, projects under the mission have further marginalised people and communities.
- The general consensus also offered was that the mission focused far too much on specific areas (under Area Based Development strategy) rather than a city-wide approach. Moreover, it appears unlikely that 'pilot' strategies in ABD areas can really be replicated elsewhere given the specificity of approaches and solutions employed.

4.4 People-led contestation
- Two cities, Thane and Nashik both went on to oppose the riverfront/lakefront projects and had them withdrawn.
- In Nashik, a big breakthrough came in June 2020, when the SCM funds were redirected towards removing earlier concretization of the river bed (initiated under JnNURM) and is now focused on river rejuvenation instead.
- ABD area in Nagpur – houses regularized under NIT are now being demolished under SCM improvements and TPS scheme which led to an agitation in 2019 and has consequently stalled the project from progressing much.
- Gaothan residents in Thane opposed the waterfront and cluster redevelopment projects. Eventually, in 2018 a State assembly decision declared that koliwadas and gaothans would be excluded from the cluster redevelopment scheme.

- Makhmalabad farmers in Nashik have protested the use of their land for the Greenfield project under the SCM without proper compensation leading to a court order in 2020 stalling the process altogether.

4.5. Slow Progress

Absence of integration with city level processes – unmindful of earlier lessons and lack of proper coordination between agencies for right of way or inadequate land acquisition rights are now impacting project progress under the smart cities mission which find themselves entangled in land issues, D.P processes and overlapping parastatal areas. Financial disbursement delays, ULB capacities, flawed tendering processes and ambitious projects under the SCM that have not been able to find agencies have also impeded progress.

5. Recommendations (requires discussion to collate)

5.1. Develop Capacities within civic bodies

5.2. Embed smart solutions within wider city visions and planning frameworks

5.3. Focus on better engagement that works beyond the proposal stage

5.4. Mandate transparency in the mission

5.5 Ensure protection of the rights and needs of marginalised communities

ABBREVIATIONS

ABD	Area Based Development
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ASCDCL	Aurangabad Smart City Development Corporation Ltd
AURIC	Aurangabad Industrial City
BRTS	Bus Rapid Transit System
CCTV	Closed Circuit Television
CEO	Chief Executive Officer
CIDCO	City and Industrial Development Corporation
CREDAI	Confederation of Real Estate Developers Association of India
CSR	Corporate Social Responsibility
DCF	Delivering Change Foundation
DCR	Development Control Regulations
DP	Development Plan
DPR	Development Planning Regulations
ERP	Enterprise Resource Planning
EY	Ernst and Young
FAME	Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India
FDI	Foreign Direct Investment
FSI	Floor Space Index
GDP	Gross Domestic Product
GIFT	Gujarat International Finance Tec-City
GIS	Geographical Information System
GPS	Global Positioning System
GR	Government Resolution
HFA	Housing for All
HRIDAY	Heritage City Development and Augmentation Yojana
IAS	Indian Administrative Services
IBM	International Business Machines Corporation
ICT	Information and Communications Technology
IOT	Internet of things
IPDS	Integrated Power Development Scheme
IT	Information Technology
ITMS	Intelligent Transport Management System
JICA	Japan International Cooperation Agency
KDMC	Kalyan Dombivli Municipal Corporation
MIDC	Maharashtra Industrial Development Corporation
MLA	Mmeber of the Legislative Assembly
MMRDA	Mumbai Metropolitan Development Authority
MOHUA	Ministry of Housing and Urban Affairs
MOHUPA	Ministry of Housing and Urban Poverty Alleviation
MOUD	Ministry of Urban Development
MP	Member of Parliament
MRTS	Mass Rapid Transit System
NGO	Non-Governmental Organisation

NIT	Nagpur Improvement Trust
NMC	Nagpur Municipal Corporation
NMSCDCL	Nashik Municipal Smart City Development Corporation Ltd.
NMT	Non-Motorised Transit
NRCP	National River Conservation Plan
NSSDCL	Nagpur Smart and Sustainable Development Corporation Ltd.
PCMC	Pimpri Chinchwad Municipal Corporation
PCSCL	Pimpri Chinchwad Smart City Limited
PMAY	Pradhan Mantri Awas Yojana
PMC	Pune Municipal Corporation
PPP	Public Private Partnership
PSCDCL	Pune Smart City Development Corporation Limited
SATIS	Station Area Traffic Improvement Scheme
SBM	Swachh Bharat Mission
SCADA	Supervisory control and data acquisition
SCDCL	Solapur City Development Corporation Limited
SCM	Smart Cities Mission
SCP	Smart City Proposal
SKDCL	Smart Kalyan Dombivli Develpoment Corporation Ltd
SMC	Solapur Municipal Corporation
SPV	Special Purpose Vehicle
SWM	Solid Waste Management
TDR	Transfer of Development Rights
TMC	Thane Municipal Corporation
TOD	Transit Oriented Development
TPS	Town Planning Scheme
TSCL	Thane Smart City Limited
ULB	Urban Local Bodies
WATSAN	Water and Sanitation

CONTENTS

1

SMART CITIES IN THE URBAN AGENDA

The Smart Cities Mission, a flagship program of the Government of India, seeks to give new direction to urban development. A 'smart city' has no universal definition and it conceptualisation has varied from city to city and nation to nation. This section attempts to provide the context within which the smart cities discourse developed in India. It profiles the evolution of urbanisation and its policy responses both nationwide and in Maharashtra, as we begin to understand the Smart cities mission within a wider urban context.

1.1 GLOBAL ORIGINS OF 'SMART' CITIES

The idea of 'smart' overtook our imagination at the end of the twentieth century with the introduction of technology as the enabler. Its juxtaposition with cities originated in 2005 as CISCO systems began researching how cities could be made more sustainable using technical know-how. The research, funded by the Clinton Foundation, spanned five years and worked across cities in different countries on pilot projects – San Francisco, Amsterdam, Seoul. In 2009, IBM unveiled its Smart Cities campaign to help cities run more efficiently (Tyler Falk, 2012). Some sources (Bhide and Burte, 2015) however note that the concept has risen to the agenda of international urban development through its championing by the organisation of the economic cooperation and development of the European union since the start of the 21st century. Regardless, its emergence as a concept from the global north positioned smart cities as an upgradation through technology not a reinvention. It is based on the assumption that cities already stand on the bedrock of basic administrative, infrastructural and informational efficiency.

1.2 URBANISATION IN INDIA

This assumption plays out differently in Indian cities. In a country considered one of the least urbanised countries in the Global South, the challenge is first of numbers – 377 million people in 7900 odd cities and towns as per the 2011 census. The magnitude of the challenge is huge and the potential for growth even larger: Between 2001 and 2011, urban areas grew by 31.8%. Without adequate systems of planning and governance in place, impacts of mis-managed urbanization on living and working conditions are huge. In 2011-12, it was estimated (MOSPI, India Country Report, 2017) that 13.7% of the urban population lives below the poverty line. Its most visible manifestation is the 0.9 million homeless and 65.5 million slum dwellers (NBO, 2015), thirty six percent of whom have no access to electricity, tap water and sanitation within their premises.

Box 1. URBAN PROFILES

National Urban Profile:
Urban India: 377 million people, 31% of total in 7900 cities and towns
By 2030, 40% of India's population is expected to live in urban areas contributing
75% to the GDP *(MoUD, GoI, 2015)*
Slum population: 65.5 million

State Profile:
Urban Maharashtra: 50 million people, 45.2% of total, third most urbanised State
Only State with 10 cities of million+ population
Slum population, highest in country: 11.8 million
45% of total poor, live in urban areas of State (1999-2000) (*NITI Ayog State Development Report)*
6 Regional divisions
6 most urbanised districts of the total 30, had lower urban poverty ratios indicating that urbanisation cannot be necessarily equated with poverty.

Key Challenges:
Poorly managed cities
Inadequate access to amenities & housing
Growth of informal workforce and settlements
Disconnected hinterland
Economic concentration in a few cities
Disconnected development and regional plans
Incomplete implementation of 74th amendment to devolve powers to municipal corporations

1.3 POLICY APPROACHES

India does not have any specific urban development policy and constitutionally, urban management and governance is a State matter. However, with nothing substantive in terms of urban policy at a State level, urban policies and programmes have largely come through national (Five-year) plans framed by the planning commission up until its dissolution in 2014. In 2015, the NITI Aayog (National Institution for Transforming India) was established as a think tank but unlike the planning commission, it has no powers to allocate budgets and State governments are expected to play a larger role.

National initiatives have emphasized decentralized urbanization as reflected in policies – the draft National Urbanization Policy of 1975 - which led to the Integrated Development of Small and Medium Towns (IDSMT) in the 80s and Provision of Urban Amenities in Rural areas (PURA) in the 21st century.

In 1985, GoI constituted the National Commission on Urbanisation which continued to focus on decentralized growth policies based on the notion that rural-urban migration was the main cause of burgeoning growth of larger cities.In 1992, the 74nd constitutional amendment put in place measures to decentralize decision making through devolution of essential functions from States to Urban local bodies. However, even today, this is incomplete due to its voluntary nature and the lack of accompanying resource devolution equivalent to responsibilities.

Within cities, emphasis was being placed on creation of Master plans or Development plans. The issue of slums became a focus point of many schemes – evolving from slum removal to housing upgrading to redevelopment in the last decade – as Government became increasingly reliant on private sector participation, not only in housing but almost all sectors.

However, overall, urban initiatives remained ad-hoc without a comprehensive, whole-city approach or vision until JnNURM (2005-14). This was a reforms linked initiative for providing assistance to States and ULBs through two sub-missions: Basic Services to the Urban Poor and Urban Infrastructure and Governance Cities. It focused on urban renewal, water, sanitation, sewage, solid waste, transport, slum improvement. Cities that drew down funds from JnNURM were required to carry out certain mandatory reforms at the State and ULB level. A City Development Plan was also a requirement and focused on economic and social infrastructure, strategies for the urban poor and strengthening of governance. It was meant to work alongside existing Master Plans of cities that are essentially land use and infrastructure plans with development control regulations. Most cities in Maharashtra under JnNURM however undertook projects on an ad-hoc basis. In the end, 231 out of 1298 infrastructure projects and 22 out of 1517 housing projects were completed. Of a total of Rs.66,084 cr, only 49.8% of the funds were released indicating a lack of capacities to implement (CAG, 2012). Another scheme, Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) was also launched, merging with earlier similar schemes focusing on smaller towns.

The short-lived Rajiv Awas Yojana (2014-15) was ambitious in creating 'slum free' cities, focused on land tenure rights. Its emphasis on market-led strategies and the increased use of technology (GIS) in data-led planning, however, have come to the forefront of urban policy making in India.

With the increase in urban growth, there is even more pressure for basic services – water, sewage treatment, transportation and affordable housing. **In the 12th year plan, (2012-17), prior to the introduction of the Smart Cities Mission and other urban missions, following were the key national issues identified: Inclusive cities, urban governance, funding, planning, capacity building and low income housing.**

Table 1: Key national urban development schemes						
Year	Key Urban Development Schemes	Cities/Towns Covered	Central Budget (billion)	Funding Pattern (%)		
				Centre	State	Local
1980-2005	IDSMT	1854	N.A	60	40	20-40
1994-2005	Mega City	5	23	25	25	50
2005-2015	JnNURM	65	660	35	15	50
2015-16-ongoing	Smart Cities	100	480	50	25	25

[Source:]

The State response to urbanisation has followed that of Central policies. It has evolved from a focus on small and medium towns and backward districts to relieve migration to larger cities and now under the Smart Cities Mission, focuses on cities that have the institutional capacity, resources, service levels and track record to build upon. Financing mechanisms have increasingly moved towards private sector incentives and market led proposals, something that the Smart City capitalises on.

Box 2. MAHARASHTRA'S RESPONSE TO THE URBAN CHALLENGE

As per the State development report, urbanisation is welcomed as progressive and desirable, but needing to be better planned. Urban development policy in the State is based on objectives of economic growth, equity across regions and cities, including the poor.

Broadly, 3 types of actions taken to achieve this:
Policies to correct regional imbalance and to bring about development of backward districts.
Policies to address balanced urban growth by focusing on small and medium towns in order to reduce migration to large cities or divert it to new urban centres.
For instance, the development of Thane, Kalyan, Dombivili, Navi Mumbai and Pimpri-Chinchwad were meant to relieve the pressure on Mumbai and Pune.
Special institutions created – MMRDA, CIDCO, MHADA.
Policies to promote access of the poor to urban services
For instance, through SJSRY, VAMBAY, SRA and implementation of national schemes.
(State Development Report, https://niti.gov.in/planningcommission.gov.in/docs/plans/stateplan/sdr_maha/ch-13-14-02-05.pdf)

Planning Approaches & Tools through the MR&TP Act 1966:
3-tier approach: Regional plan, Development plan, Town planning scheme
Tools: Use of TDR/FSI, land acquisition, accommodation reservation, unauthorised housing regularisation, special township policy.
Policies: Affordable housing, Peri-urban/rural areas, Slums, Uniform DCRs
(K.S Akode, Urban Planning Scenario in Maharashtra, http://icrier.org/pdf/kamlakar_akode.pdf)

Key National Urban Schemes Implemented:
1980-2005, IDSMT scheme focused on small and medium towns to reduce migration to larger cities. 178 towns in the State were covered, second highest allocation after U.P.
2009-14, JnNURM, The State secured the highest number of projects with claims that it had implemented nearly 80% of the mandated ULB reforms (India Spend, 2012).
However, a TISS study (URIF, 2011) notes that pace of reforms were very slow and were enacted in the 5 selected cities in varying degrees.
Maharashtra had 80 sanctioned projects of which it was able to complete only 21 (CAG, 2012).
Of the cities that were part of this program, barring Mumbai and Nanded, the others: KDMC, Thane, Nagpur, Pune & Nashik are now included in the Smart Cities Mission.

1.4 SCM: AN URBAN DISCOURSE

Greenfield to Brownfield

In order to tap into the potential of cities as engines of economic growth and expecting that more of the Indian population would eventually be urban, the Government introduced smart cities as part of its larger urban policy agenda.

Smart Cities mission began as a Greenfield approach in 2014, as per the BJP election manifesto, which promised the construction of '100 new cities; enabled with the latest in technology and infrastructure - adhering to concepts such as sustainability, walk to work etc, and focused on specialized domains' (CPR, 2018). It was most likely an idea built on Gujarat International Finance Tec-city (GIFT) city, launched in 2007, and India's first 'Smart' City. In May 2014 the BJP formed its coalition government and by July, they re-defined smart cities as '…satellite towns of larger cities and by modernizing the existing mid-sized cities' (CPR 2018; CSTEP report 2015).

Both these early Greenfield conceptualisations, were based on the notion of rapid urbanisation due to unprecedented rural-urban migration and thus the focus on satellite towns of larger cities and modernization of existing mid-size cities (P.Mukhopadhyay, 2015) – referring back to earlier approaches of decentralized urbanization.

However in 2015, the smart cities draft was circulated with a larger focus on retrofitting projects in existing cities and moved further away from both Greenfield and satellite cities (Bharatiya Janata Party, 2014). This change in discourse is said to be linked to the non-availability of land for new smart cities (Hoelscher, 2016). In particular, The Right to Fair compensation and Transparency in land acquisition, rehabilitation and resettlement Act that was issued under the previous government had strengthened the rights of landowners. As a result, and due to the current Government unable to relax this condition under the Act, the mission was reformulated to focus on existing areas (Hoelscher, 2016).

No in-depth discourse on urbanization

The critique is that SCM shies away from use of critical discourse (on urbanisation) (Taraporewala, 2018). This may explain why although the mission allocated highest number of cities to the 3 States with the highest urban population – Tamil Nadu, U.P and Maharashtra – its two stage city selection criteria do not include identifying cities based on urban challenges or urban population or growth rates, choosing instead to build on existing city ULB capacities.

Mission Guidelines, circulated with the official announcement of the national program in 2015, contain only a brief introductory paragraph on urbanization and its contribution to the GDP, noting that to allow for more growth (economic and population), cities will require 'comprehensive development of physical, institutional, social and economic infrastructure' in order to 'improve the quality of life' and 'attract people and investment to the city' (p.5). In order to do this will require 'enabling local area development and harnessing technology' (p.6) that will lead to comprehensive development – improving the quality of life and creating employment and incomes for all, leading to inclusive cities' (p.7).

Defining a Smart city

The mission guidelines offer no real definition of what a smart city is---accepting that it means 'different things to different people' (p.5) and offering instead a host of core infrastructure elements

that a Smart City would include: Adequate water supply, assured electricity supply, sanitation including SWM, efficient urban mobility and public transport, robust IT connectivity and digitalization, good governance, sustainable environment, safety & security and health & education.

A reading of the Guidelines by P. Mukhopadhyay, offers the point of view that the government visualises smart cities mostly as a set of physical characteristics, such as industrial parks, hubs, open spaces, pedestrian improvements, urban design of traffic junctions etc. Indeed, while cities propose a series of projects under the mission and seek financial convergence with other urban schemes – it does not specify how SCM will integrate with ongoing planning processes or future urban visions.

Several critiques (ORF 2015; CENFA 2020) suggest that the Smart City mission with its emphasis on inclusive, participatory and unprecedented resource support to States and ULBs, is a departure from earlier urban schemes. However, four years down the line, the unrealistic standards and the limited focus of the SCM on certain areas in the city coupled with implementation challenges, reflect upon the slow progress of the mission. In 2019, the BJP dropped the SCM from its manifesto and unlike the 2014 manifesto, had a reduced urban focus altogether (CENFA, 2020). However, the Government interest in 'Greenfield' smart cities continues with an announcement in 2020-21, to develop 5 'new' Smart Cities along the lines of GIFT city in addition to the ongoing 100 mission cities.

Box 3. AURIC – THE FIRST INDUSTRIAL SMART CITY UNDER THE MISSION

The early conceptualization of the smart city as a Greenfield development near cities or along Industrial Corridors (Dholera or GIFT city), were State efforts with Gujarat, Tamil Nadu and Maharashtra as forerunners of States integrating market-led approaches to urban development (Datta 2015; Hoelscher 2016).

In Maharashtra, AURIC city (outside of Aurangabad) was inaugurated in September 2019 as the first industrial, integrated smart city under the Smart Cities Mission. It is an SPV of the Delhi-Mumbai Industrial Corporation and Maharashtra Industrial Development Corporation. Spread across 10,000 acres, land was acquired under the MIDC act from farmers/land owners. It is planned to be used for industrial purposes (60%) and 40% for residential, commercial, institutions, open spaces and socio-cultural activities (BS 2019; https://www.auric.city).

1.5 SCM WITHIN THE URBAN MISSION

The SCM sits within a larger group of urban missions announced by the GoI in 2015 and as compared to JnNURM, covers almost all cities and towns. Although the approach to the urban challenge is sector-oriented and split across several missions (PwC report), the current missions cover a broader range of urban concerns as opposed to only infrastructure and housing as under JnNURM. The idea is to encourage the various missions to converge and complement each other. Also of note is that the programmes are now being implemented under one authority: Ministry of Housing and Urban Affairs (MoHUA), formed in 2015 by merging the earlier MoHUPA and MoUD.

As is seen from budgetary allocations over 5 years, funding towards Smart Cities has been relatively lower but has increased slightly from 10% of the total in 2015-16 to 13% in 2021-22.

2021-22 BUDGET ALLOCATIONS TOWARDS URBAN MISSIONS BY MOUD

MRTS & Metro 50%	AMRUT 15%	PMAY-urban 17%	Smart Cities 13%	SBM 5%
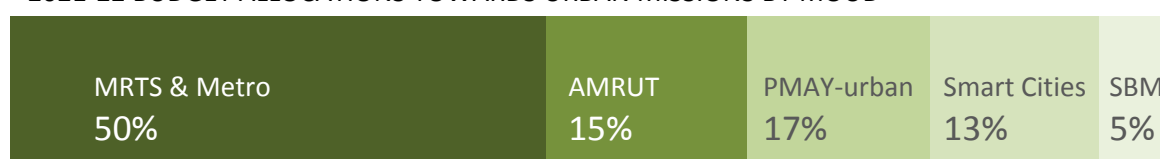
2015-22 BUDGET ALLOCATION TOWARDS URBAN MISSIONS
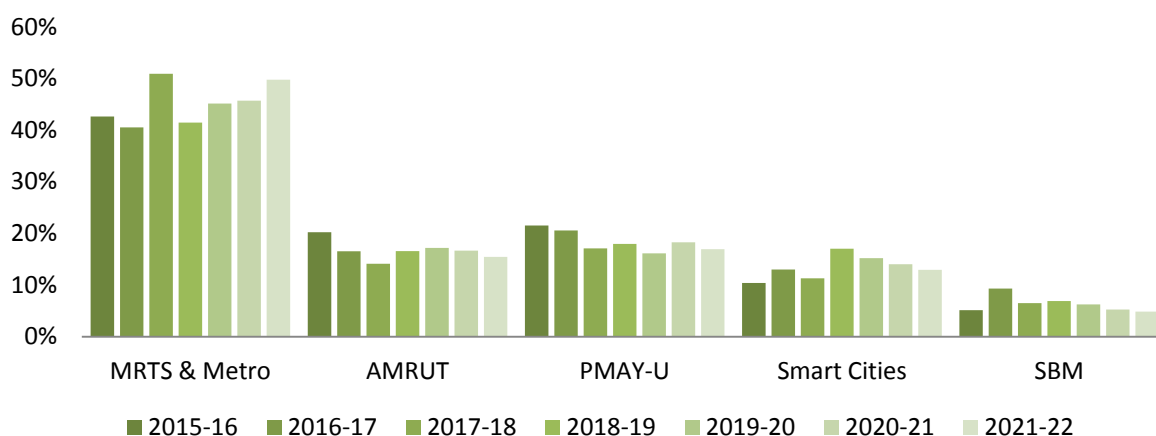
Table 2: Year-wise Budget allocations towards key national urban missions					
Year	MRTS & Metro	AMRUT	PMAY-Urban	Smart Cities	SBM	Totals
2015-16	8,260	3,919	4,175	2,020	1,000	19,374
2016-17	10,000	4,080	5,075	3,215	2,300	24,670
2017-18	18,000	5,000	6,043	4,000	2,300	35,343
2018-19	15,000	6,000	6,505	6,169	2,500	36,174
2019-20	19,152	7,300	6,853	6,450	2,650	42,405
2020-21	20,000	7,300	8,000	6,136	2,300	43,736
2021-22	23,500	7,300	8,000	6,118	2,300	47,218

[Data Source: Demand for Grants 2021-22 Analysis, Housing and Urban Affairs, PRS Legislative Research]

Box 4. SMART CITIES MISSION AND OTHER URBAN MISSIONS IN MAHARASHTRA

1) MRTS & Metro: 2 cities under the MAHA-Metro JV between Centre and State include Mumbai and Nagpur (2014)

2) AMRUT: 43 cities including all 8 smart cities. Best performing cities are PCMC, Pune and Nagpur.

3) PMAY-Urban: 391 cities including all 8 smart cities, 11.47 lakh houses sanctioned to State and 3.45 lakh houses completed as of August 2020.

4) Swachh Bharat Mission: 6.3 lakh household target (SBM baseline survey 2015), 302 cities declared open defecation free by 2017.

5) HRIDAY: Only 1 city – Amravati was included. State had advocated for Aurangabad but was denied (HT, 2018)

6) Smart Cities Mission: 10 cities allocated to Maharashtra of which 8 made the final list.

(unable to find comprehensive information on Maharashtra urban mission progress)

1) MRTS & Metro: Rail Networks, Metro rapid transit systems

2) AMRUT: Atal Mission for Rejuvenation & Urban transformation focusing on water and sewerage.

3) PMAY-Urban: Part of the Housing for All Mission.

4) Swachh Bharat Mission: Focused on waste and sanitation.

5) HRIDAY: Heritage City Development and Augmentation Yojana.

6) Smart Cities Mission: Smart Solutions for selected urban areas.

1.6 SMART CITIES MISSION: COMPONENTS AND PROGRESS

100 Smart cities were selected between 2016 and 2018.

Table 3: Selection of 100 Smart Cities					
India	Round 1	Round 2	Round 3	Round 4	TOTAL
Number of Cities	20	40	30	10	100*
Selection Period	Jan 2016	May-Sep 2016	June 2017	Jan 2018	
No. of Projects	829	1959	1891	472	5151
Investment (in cr)	48064	83698	57393	15863	205018
Avg SCP Size (in cr)	2403	2092	1913	1586	2050

[Source: smartcities.gov.in] *Shillong selected as 100th smart city in June 2018
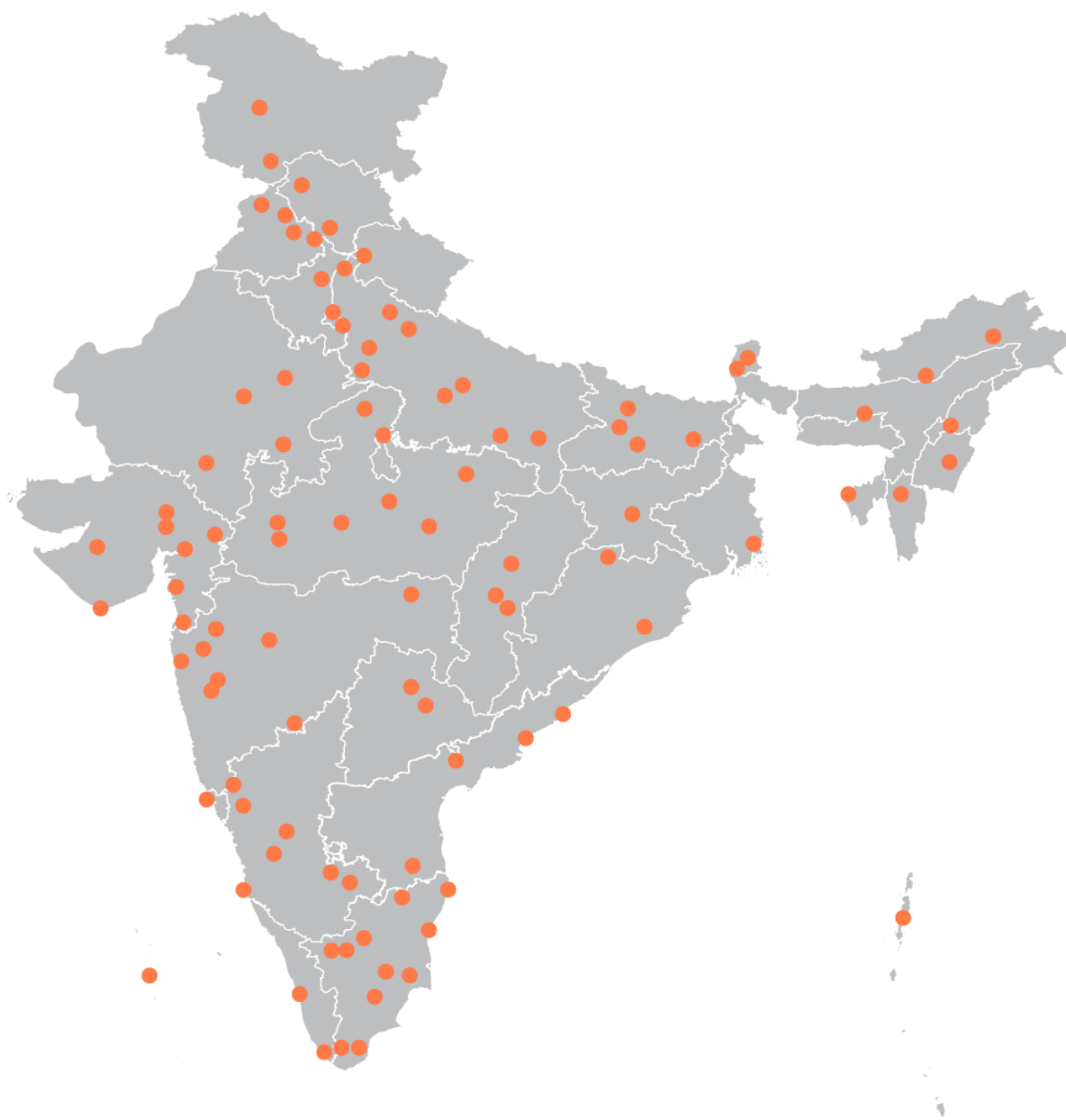
[Source: Scroll.in]

Number of cities allocated to State based on urban population and number of statutory towns:

A&N Islands: 1

Andhra Pradesh: 3

Arunachal Pradesh: 1

Assam: 1

Bihar: 3

Chandigarh: 1

Chattisgarh: 2

Daman & Diu: 1

Dadra & Nagar Haveli: 1

Delhi: 1

Goa: 1

Gujarat: 6

Haryana: 2

Himachal Pradesh: 1

Jammu and Kashmir: 1

Jharkhand: 1

Karnataka: 6

Kerala: 1

Lakshwadeep: 1

Madhya Pradesh: 7

Maharashtra: 10

Manipur: 1

Meghalaya: 1

Mizoram: 1

Nagaland: 1

Odisha: 2

Puducherry: 1

Punjab: 3

Rajasthan: 4

Sikkim: 1

Tamil Nadu: 12

Telangana: 2

Tripura: 1

Uttar Pradesh: 13

Uttarakhand: 1

West Bengal: 4

Of these 100 cities, 35 are million plus, 24 cities have 5 to 10 lakh population, 12 cities have 3 to 5 lakh population, 22 cities have 1 to 3 lakh population while 7 cities have a population of less than 1 lakh.

[Source: smartcities.gov.in]

In Maharashtra, based on national criteria, 10 cities were allocated under the mission and, 8 Smart cities eventually finalised.

Table 3: Selection of 8 Smart Cities in Maharashtra					
Maharashtra	Round 1	Round 2	Round 3	Round 4	TOTAL
Number of Cities	Pune (2nd) Solapur (9th)	Kalyan Dombivli (2nd) Nagpur (5th) Thane (8th) Nashik (11th) Aurangabad (26th)	Pimpri Chinchwad (18th)	--	8
Selection Period	Jan 2016	May-Sep 2016	June 2017	Jan 2018	--

STRATEGIES UNDER THE SMART CITIES MISSION

I] Area Based Development
- Retrofitting: Existing built up area upto 500 acres to make it more liveable and efficient with intensive infrastructure service levels and smart city applications.
- Redevelopment: New layout with enhanced infrastructure, mixed use, increased density in area more than 50 acres.
- Greenfield: Vacant land development with innovative planning, and planning tools with affordable housing of more than 250 acres.

II] Pan-City Solutions
A technology based solution for the infrastructure needs and requirements of the city. Guidelines suggest a 'less is more' approach that build upon existing assets and are resource efficient initiatives. I**mplementation** of the Mission at the city level is envisioned through a Special Purpose vehicle (p.12) with a CEO and nominees of Central, State and ULB on its board.

Institutional Mechanism
Implementation of Mission at city level will be through a Special Purpose Vehicle that will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate smart city projects (p.12, SCM guidelines). A smart city advisory forum is also to be established by cities to enable collaboration among different stakeholders.

Financing
- 48,000 cr over 5 years
- 1000 cr per city, 100 cr per annum per city by Central Govt., 100 cr per annum per city by State and ULB.
- Balance to be raised by cities through Municipal Bonds, PPP, Land-based fiscal tools, convergence, land monetization, loans, user charges, 14th finance commission. Convergence is expected to be achieved by cities with other urban schemes such as AMRUT, Swachh Bharat Mission, HRIDAY, Digital India, Skill development, Housing for All, etc (p.17, SCM Guidelines).

Progress
The combined performance of 100 smart cities over the last three years is as follows:

Cities	Projects	Amount (cr)	Year	Tendered	Work Orders	Works Completed
Table 4: Progress of 100 Smart Cities						
100	5151	2,05,018	March 2019[1]	3469 projects 131,892 cr	2726 projects 72,524 cr	846 projects 14,324 cr
100	5151	2,05,018	March 2020[2]	5577 projects 172,998 cr	4876 projects 139,991 cr	2388 projects 39,953 cr
100	5151	2,05,018	March 2021[3]	5614 projects 173,018 cr	4912 projects 139,851 cr	2420 projects 40,152 cr

[1] MoHUA Annual Report 2018-19: http://mohua.gov.in/cms/annual-reports.php. Data as of 11th April 2019.
[2] MoHUA Annual Report 2019-20: http://mohua.gov.in/cms/annual-reports.php
[3] Smart Cities Mission Dashboard: https://smartcities.gov.in/dashboard. The Mission has only recently begun issuing State and city wise data on a dashboard.

At the end of the 4th year (March 2019) of the SCM, progress was 16% in terms of number of projects and 7% only in terms of financial outlay. In the 5th year of the project (December 2020) speed of execution increased and performance in terms of number of projects stood at 28.4% and 12% in financial terms. As per latest data on the smart cities dashboard, accessed on 10th April 2021, at the end of March 2021, in terms of financial outlay is 19.5% of the total and 46.9% projects are completed of the total.
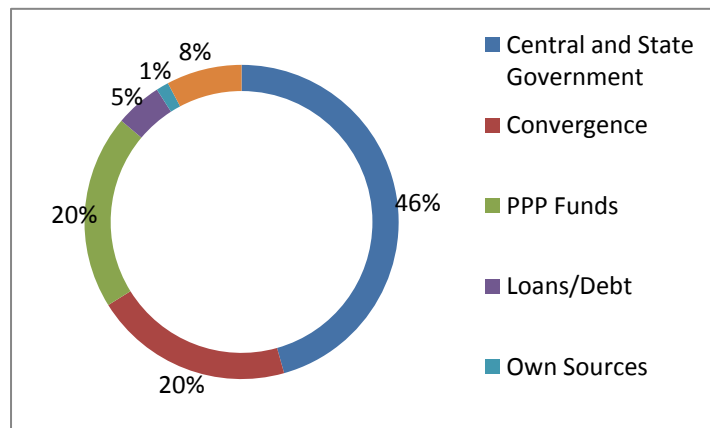
Distribution of Financing

Distribution of funds by Smart City Component:

ABD: 81%, Pan-City: 19%

[Data Source: MOHUA Annual Report 2019-20, p.55]

Distribution of funds by Source:

[Data Source: MOHUA Annual Report 2019-20, p.55]

Distribution of funds by Project Type:
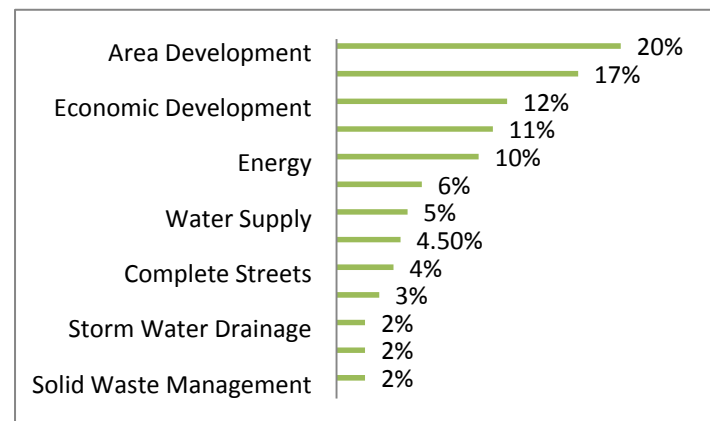
[Data Source: MOHUA Annual Report 2019-20, p.55]

Budget versus Utilization of Smart City Funds

2015-16	2016-17	2017-18	2018-19	2019-20
73.4%	37.2% Overutilization	0.13% Overutilization	95.7%	53.4%
Budget: 2020 Cr	Budget: 3215 Cr	Budget: 4000 Cr	Budget: 6169 Cr	Budget: 6450 Cr
Utilised: 1484 Cr	Utilised: 4412 Cr	Utilised: 4526 Cr	Utilised: 5902 Cr	Utilised: 3207 Cr
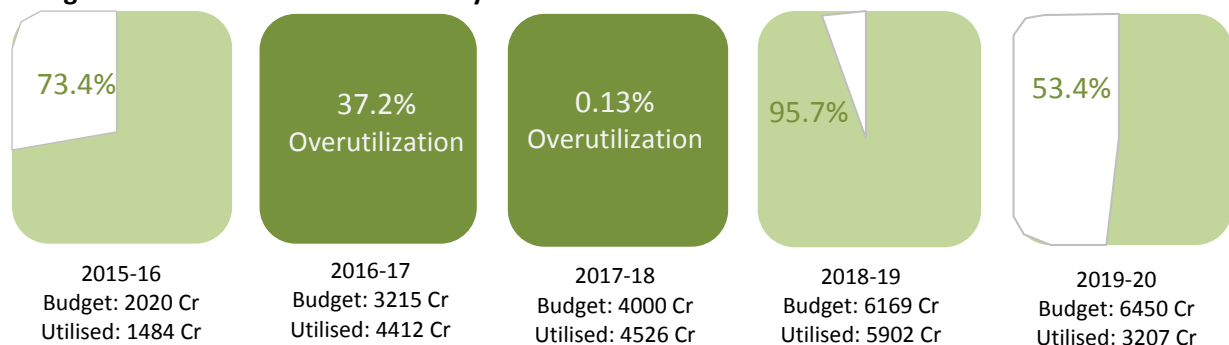
[Source: PRS India Grant Analysis, 2020-21
https://www.prsindia.org/parliamenttrack/budgets/demand-grants-2020-21-analysis-housing-and-urban-affairs]

1.7 MEDIA REVIEW

This review examines 102 articles over a 5 year period covering: (1) changes over time in media coverage, (2) differences in local and international news coverage, and (3) public perception of different aspects of the Smart Cities Mission.

Method
Similar articles from a single news source were eliminated.
Each article was given a rating from 1-5, with a '1' given to articles with a 'very negative' perspective on the SCM and a '5' given to articles with a 'very positive' perspective. Articles that were purely news-based were eliminated, and articles with roughly equal portions of praise and criticism were rated a '3'.

Following media sources were used in this analysis:

- BBC News
- Business Standard
- Business Today
- Business World
- Cisco
- Citizen Matters
- Dataquest
- Deccan Chronicle
- Deccan Herald
- Dev Discourse
- DevEx
- DNA
- Down to Earth
- Economic Times
- Financial Express

- Geographical (UK)
- Guardian
- Hindustan Times
- India Times
- India Today Insight
- International Bar Association
- IT World Canada
- Live Mint
- Mediamama
- Mondaq
- Money Control
- National Herald
- Northeast Now
- Open Democracy
- Quartz India

- Times of India
- Urban Transport News
- Youth ki Awaz
- Zee Business
- Scroll.in
- Swarajya
- Telegraph India
- The Conversation
- The Globalist
- The Guardian
- The Hindu
- The Hindu Business Line
- The Indian Express
- The New Indian Express
- The Pioneer
- The Wire

Table 5: Media Articles Analysis							
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**Total**
International	2	1	4	0	0	4	**11**
National	1	6	17	14	14	26	**78**
Local	1	0	1	0	4	7	**13**
Grand Total	**4**	**7**	**22**	**14**	**18**	**37**	**102**

Perception of SCM by Media Sources
The media review serves as a proxy for public perception of the Smart Cities Mission, through its different iterations over the past five years.
Although the average rating has not changed significantly over time, the percentage of the reviews that are 'very negative' has significantly decreased since the first two years of the mission. In 2014, roughly 50% of the reviews were 'very negative', whereas in 2017, that portion dropped to less than 10%.

The average rating hovers a little below '3', meaning that coverage of the mission is balanced, with roughly equal proportions of positive and negative reviews.
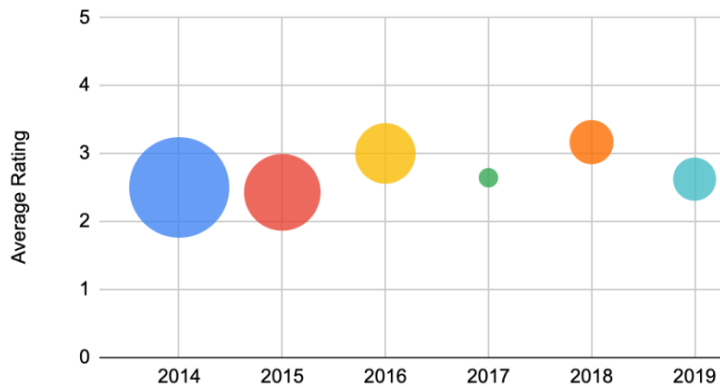
News organizations were also grouped by the regional distribution of the coverage, as 'local', 'national' and 'international'. The differences in coverage by region is shown below.

Overall, there are almost twice as many negative reports as positive ones. International media sources tend to be much more critical of the Smart Cities Mission than Indian media, and almost three quarters of international coverage is negative.
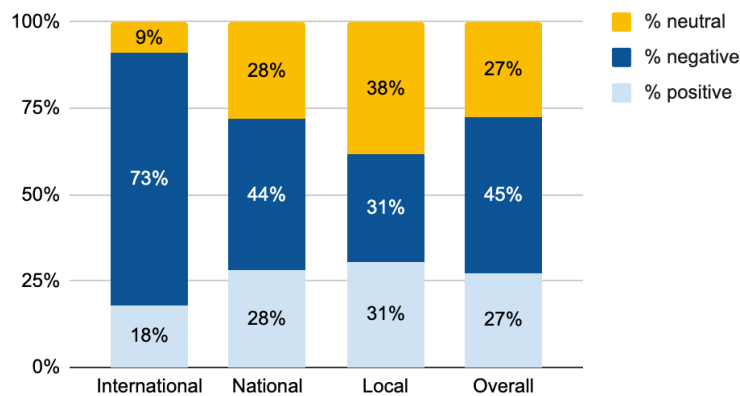
Perception of SCM in Media by Focus Area

However, whereas the average rating of the mission hovers a little below '3', the perception by focus area indicates an overwhelmingly negative view of financing, governance, implementation and outcomes. To understand this better, the programme was evaluated using the selected media articles along five key axes: (1) vision and goals, (2) financing, (3) governance, (4) implementation and (5) outcomes.

The definitions of these categories are outlined below.

1. **Vision and Goals**

   For the purposes of this report, any article that discusses the overall goals of the SCM, including sustainability, technology and automation, infrastructure and redevelopment projects are categorized within 'vision and goals'.

2. **Governance**

   'Governance' refers to the division of responsibilities of local governments and Special Purpose Vehicles. This category also includes articles that discuss the effectiveness of the SPV structure, the transparency of governing bodies and the participation of local actors and citizens in the implementation and evaluation of the mission.

3. **Financing**

   The 'financing' category covers all articles that discuss the distribution of funds among and within cities. This includes the overall budget of the SCM, changes in budget allocation over the years, and the division of financing responsibilities between local governments and private investors.

4. **Implementation**

   Articles grouped under 'implementation' of the SCM include those that evaluate the pace and effectiveness of the implementation of the vision and goals of the mission, and progress towards the distribution of funds and selection of projects and cities.

5. **Outcomes**

   'Outcomes' refer to projected or actual impacts of the Smart Cities Mission on people, livability, marginalised communities and the poor, as well as the implications of the involvement of technology in Indian cities.

Over the past five years, the media has focused primarily on the vision of the Smart Cities Mission, the progress, in terms of implementation, and the outcomes thus far. Media and public interest in financing and governance appear to be comparatively lower.

Table 6: Reviews of the mission in Media articles			
	Positive Reviews	Negative Reviews	Total Articles
Vision	18	4	31
Financing	1	9	12
Governance	1	7	12
Implementation	3	22	35
Outcome	6	17	28
Other	0	0	3
Grand Total	**28**	**46**	**102**
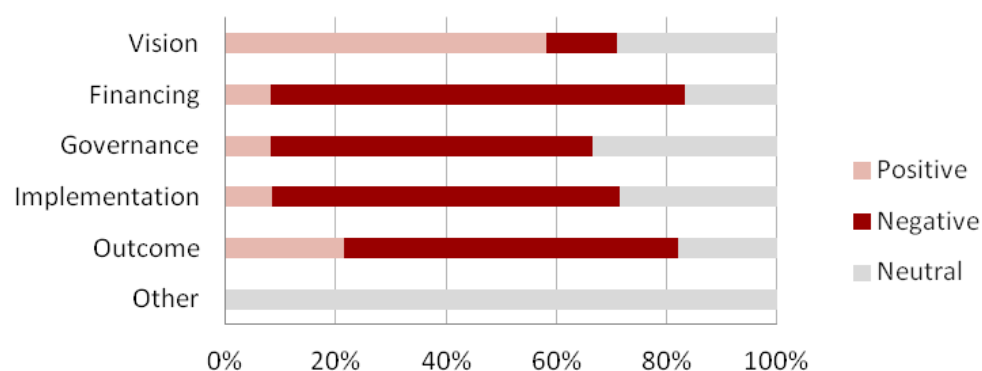
This focus has changed over time:

While the first few years of the Smart Cities Mission were characterized by a focus on its lofty vision and goals, the focus of the media has since shifted to the implementation of that vision, and the impacts that the mission has had. People have also begun to look at the financing of the mission, and how funds are distributed between and among cities.

While the vast majority of coverage of the mission is negative, coverage of the vision and goals is about 60% positive, though the majority of that coverage occurred within the initial two years of the SCM. This suggests that there is enthusiasm for the idea of smart cities in India, particularly as the idea was first marketed.

This is a key takeaway from the report, as it means that careful reform and restructuring of the programmes could result in outcomes envisioned by the mission.
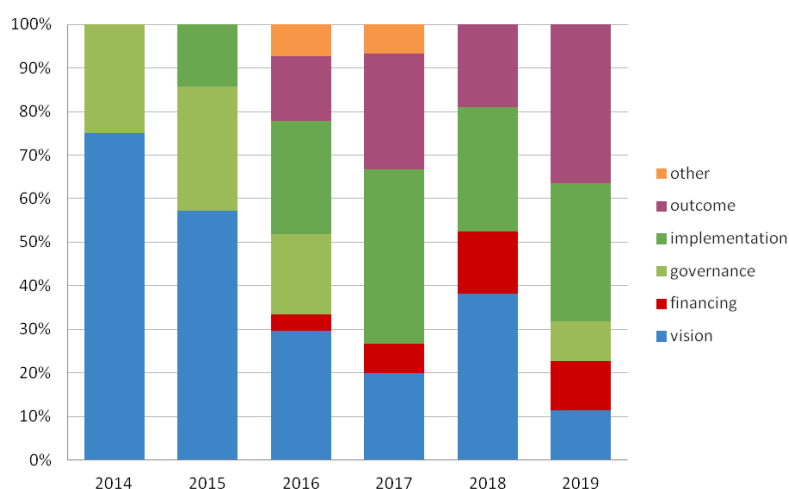
Key Takeaways

1. Vision and Strategies

The initial two years of the Smart Cities Mission saw primarily positive coverage, pointing towards a receptive enthusiasm for the vision and the goals of the programme as well as the idea of creating safer and more sustainable cities. The coverage indicates that people were hopeful about the ability of technology and the private sector to spur development in urban areas, reduce traffic, improve health outcomes, and provide citizens with needed electricity and water systems.

There were however, serious concerns that have been expressed, the primary one being potential threats to privacy due to digitalization. The increase in CCTV surveillance, and the collection and consolidation of individual and household-level data is a credible threat to personal privacy. There is significant concern over how this information could be used, and how state and non-state actors' access to this information could threaten the right to privacy.

Another concern was that, due to the Area Based Development model, only a small percentage of citizens will benefit from the majority of the investment. According to the Ministry's website, area-based development projects across are worth a total of ₹1,64,204 crores while the pan-city one's amount to just ₹38,914 crores. This, combined with the selection of cities, means that only about 8% of India's total population will see investment through the Smart Cities Mission.

2. Governance

Due to the nature of the special purpose vehicle, which does not comprise of any elected officials, the Smart Cities Mission could be beholden to private corporations over the interests of citizens.
The involvement of the private sector, including large multinational corporations, in the decision-making process for public works projects means that investments may be driven primarily by a profit motive, rather than serving the interests of the citizenry. Tellingly, media reports and analyses by the Housing and Land Rights Network (HLRN) reveal that people's participation in the development of Smart City Proposals, especially from low-income communities, has been insufficient.

3. Financing

There have been concerns raised in many cities regarding the allocation of funds for projects that do not align with the city's main concerns and objectives. Although the primary focus of the SCM has thus far been on transportation infrastructure projects- various city reports suggest that the citizens would prefer to invest in safety, social factors and solid waste management.
For example, according to several articles the development of a bus shelter in Mangalore came under scrutiny when it was revealed that a single bus shelter had cost the SPV ₹12 lakh to construct, a project that cost less than half in Mumbai. Moreover, the bus shelter was poorly designed, and did not cover the full 600 square meter area that the SPV had proposed, leading to a potential increase in traffic congestion.
Additionally, cities have not utilized the majority of the allocated funding from the SCM, and the revenue generated by projects does not come close to covering costs, the stated reason for private sector involvement. In July 2018, a Parliamentary Standing Committee report revealed that only 1.83% of the funds released by the government had been utilized till March 2018. In a 2019 survey done by the Economic Times, it was revealed that half of the 23 cities surveyed did not generate enough revenue to even pay for the salaries of their municipal staff.

4. Implementation

The majority of the negative media coverage of the SCM has revolved around the speed of its implementation. Up until February 2017, just 3% of the approved projects had been completed. By July 2018, this had gone up to 21.56% of approved projects.
Although the previous three years of the Smart Cities Mission has seen primarily negative coverage, the media has once again begun to report optimistically on some aspects of the SCM, namely that the pace of implementation of projects has picked up significantly during the last one year. By December 2018, nearly a third of projects had been completed, leading to optimism.

5. Outcomes

The focus on large infrastructure projects in Smart Cities has led to several cases of eviction and displacement. In a 2017 report, HLRN documented forced evictions and demolitions of homes in 32 of the 99 'smart cities.'
While some evictions were directly linked to 'smart city' projects, others were carried out for reasons ranging from 'city beautification' to 'slum clearance.' The goal of several cities to become 'slum-free' without including concomitant indicators—such as the number of houses demolished or the number of homeless persons recorded in the city every year—to assess realization of this target could

promote evictions and the destruction of low-income settlements under the guise of creating 'cities without slums.' From the list of 99 'smart cities,' eight cities have proposed greenfield development, including the new city of Amaravati.
Source: Housing and Land Rights Network, 2017

Environmental groups have also raised concerns about the sustainability of projects listed under the Smart Cities Mission, even though environmentalism is one of the stated goals of the mission. Increased e-waste from the technology being deployed across the country as well as the depletion of forest and agricultural land for large infrastructure projects are two of the primary concerns that environmental organizations list.

Some cities have also seen positive developments under the SCM. The Diu Smart City has become the first city in India that runs fully on renewable energy during the day. Gwalior has been able to restore several heritage monuments. Cities like Jabalpur and Ghaziabad have focused on waste management.

People have also been appreciative of the restoration of green and open spaces that has happened under the SCM. Parks and green areas have been developed in Bhubaneshwar, including a children's science park in Belagavi and science center at Kakinada, a themed nature park in Coimbatore, happiness areas in New Delhi, and riverfront parks in Guwahati.

Pune has set up real-time CCTV networks and children's smart devices to use wireless networks to locate missing children as quickly as possible. A stretch in Aundh has been turned into a play zone for kids where the Pune Municipal Corporation has installed a skating track and designed a play area, and an amphitheater.

2
MAHARASHTRA: SMART CITY MISSION

Becoming a Smart City takes several steps as outlined in mission guidelines although some discretion is allowed to States to direct their own process. This section lays out, in the context of Maharashtra, how cities were selected, smart city proposals developed; focus areas decided, finances allocated and institutional mechanisms set up that would allow for implementation.

2.1 SELECTION OF CITIES

Out of a total of 100 Smart Cities, Maharashtra had the third highest number of cities allocated to it based on urban population. The other two highest States were Tamil Nadu (12 cities) and Uttar Pradesh (12 cities). Subsequently, the selection of cities was done through a two-stage 'city challenge'.

Stage 1: States and/or Union Territories conduct an intra-state competition for cities, shortlisted as per pre-requisites defined by the guidelines.
Scoring criteria to be used by the States/UTs in Stage 1 were based on:
- Existing service levels related to household level sanitary latrines, online grievance redressal system, monthly e-newsletter, project wise municipal budget expenditure information on the website.
- Institutional systems/capacities: penalty delays in service delivery, total collection of internally generated revenue
- Self financing: payment of ULB salaries, Audit of accounts, etc
- Past track record and reforms

Stage 2: Selected cities work with empanelled consulting firms and submit proposals to Ministry for approval. Scoring criteria for Stage 2, proposal selection:
City Evaluation Criteria
- Credibility of implementation: efficiency of public entities, traffic congestion improvements, administrative efficiency improvement due to IT, water and sewerage charges, affordable housing goals.
- City Vision & Strategy: needs and aspirations of people, use of ICT, summary of key aspects
Proposal Evaluation Criteria:
- Impact of proposal, Cost Effectiveness, Innovation and Scalability, Process followed

Smart Cities selected in Maharashtra
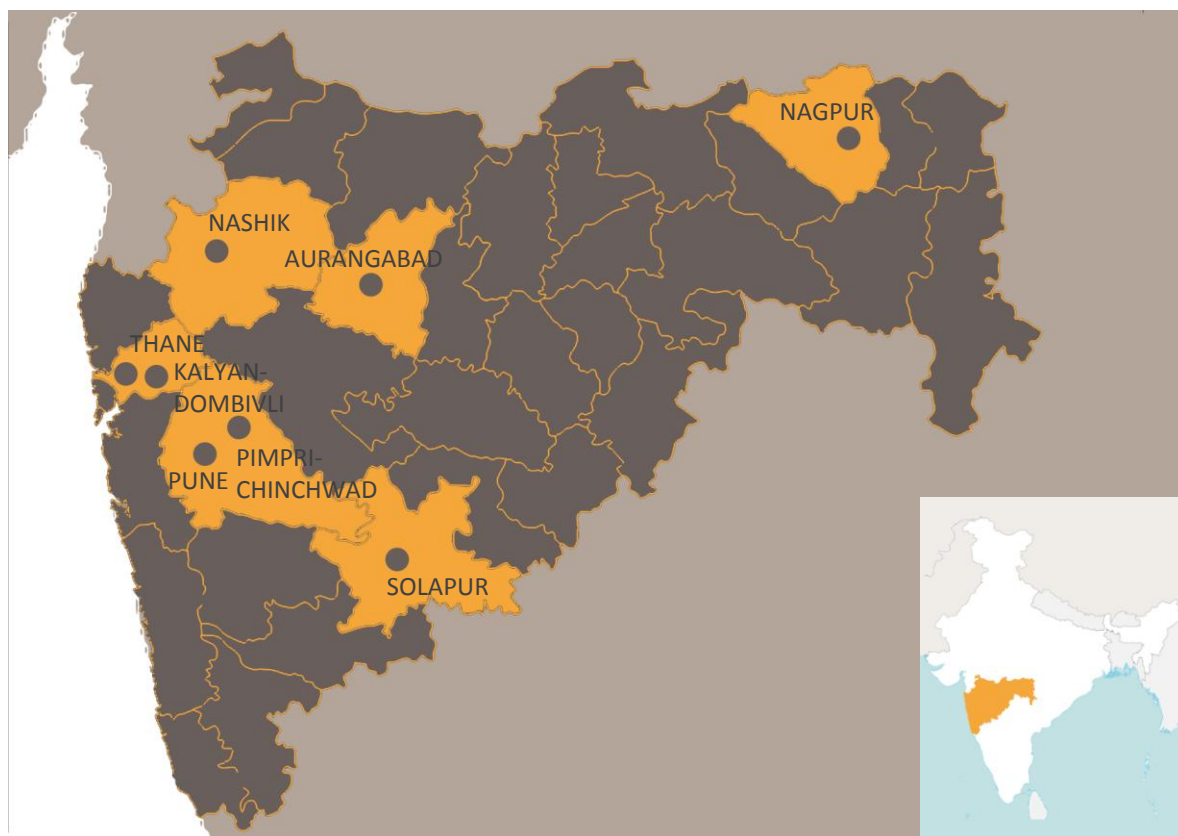
33 cities formed the initial list in Maharashtra from which 10 cities were selected in Stage 1: Mumbai, Navi Mumbai, Pune, Solapur, Kalyan-Dombivli, Nagpur, Thane, Nashik, Aurangabad and Amravati.

8 cities were finalised after Stage 2 involving proposal submission:

City	Round	Ranking	Budget	ABD		Pan-City		O&M
			5-Year	Cost	Projects	Cost	Projects	
PUNE	1, 2016	2nd out of 20	2960	1850	27	510	19	580
SOLAPUR	1, 2016	9th out of 20	2226	1968	26	279	5	--
KDMC	2, 2016	2nd out of 27	2027	1643	20	384	8	--
NAGPUR	2, 2016	5th out of 27	3351^	876	24	126	3	
THANE	2, 2016	8th out of 27	6132	5869	15	262	5	728
NASHIK	2, 2016	11th out of 27	2195	1215	19	979	6	
AURANGABAD	2, 2016	26th out of 27	1730	1198.3	16	362.5	4	167.2
PCMC	3, 2017	18th out of 30	1175	565.4	23	529.1	24	54.7
TOTAL			**2,05,018**					

Table 7: Details of Maharashtra's 8 Smart Cities: Budget and Projects

*Budgets include Project costs and additional costs such as those for DPR preparation, consultant fees etc. and Operations & Maintenance. ^ Includes 3 phase costs but only phase 1 (2016-21) is under SCP.

[Source: Individual smart city proposals accessed from https://smartcities.gov.in/]

2.2 ENGAGEMENT PROCESSES

In each State, shortlisted civic bodies prepared the smart city proposal with consultants empanelled by the Ministry of Urban Development. These were submitted to the Ministry for evaluation and final selection. The mission emphasized that proposal development, at Stage 2, should be citizen-driven through consultations and active participation of groups of people such as resident welfare associations, tax payers associations, senior citizens and slum dwellers (p.22, Smart City Guidelines).

- Maharashtra took the decision to appoint IAS officers as mentors to the cities during the proposal development stage, in addition to private consulting firms that were empanelled by the Centre for all cities selected for Stage 2.
- All cities report setting up a dedicated team for outreach and engagement within the ULB. In addition, Nashik, Pune, Nagpur, Thane and PCMC utilised the services of Delivering Change Foundation (Of Sakal Media Group) although only Nashik notes their involvement in its Smart city proposal (SCP). KDMC, Aurangabad, Solapur make no mention of DCF.
- All cities also report a range of online and offline modes of outreach. Online modes include social media such as FB, Twitter, Whatsapp and SMS. All cities also used competitions – logo design, essays – as outreach. In person meetings, workshops, focus group discussions and surveys were also carried out by all cities to arrive at their strategic focus areas.
- Although the focus of the outreach was primarily citizens, some cities included elected representatives and parastatal agencies in the discussions and interaction during proposal preparation.
- The reach claimed by cities in the SCP is anywhere between 35 lakh (Pune) to 80% of households (Thane, Solapur).

Box 5: LEARNING CITIZEN ENGAGEMENT THROUGH THE TEL AVIV MODEL

Tel Aviv, in Israel was used as an aspirational model by Maharashtra. In 2015, the Israeli government, Tel Aviv municipal corporation and the Maharashtra Government aimed to support the Sakal Media Group to replicate the same efforts in the State. A tour of Tel Aviv was organised by DCF (a foundation set up by Sakal) for the municipal commissioners and representatives from the 10 smart cities.

[Sources: DCF Blog]

Table 8: Mentors and Consultants in Maharashtra's 8 Smart Cities			
City	State Appointed Mentors*	Engagement Facilitators	Principal Consultants
PUNE	Nitin Kareer, Principal Secy, UDD, GoM	Smart volunteers supported by a team of 400 members across public and private sectors, War room set up by PMC + DCF**	McKinsey
SOLAPUR	Milind Mhaiskar, Secy to CM	15 member committee of city officials, academics and citizens	CRISIL + PriMove Infra Dev. Pvt.Ltd. + Probity Soft Pvt. Ltd.
KDMC	U.P.S Madan, Metropolitan Commissioner	Citizen Engagement Unit by KDMC	CRISIL + PriMove Infra Dev. Pvt.Ltd. + Probity Soft Pvt. Ltd.
NAGPUR	Praveensingh Pardeshi, Principal Secy to CM	NMC officials + DCF**	CRISIL + PriMove Infra Dev. Pvt.Ltd. + Probity Soft Pvt. Ltd.
THANE	Manu K. Srivastava, Principal Secy, Revenue Dept, GoM	TMC DCF (noted in partner report not SCP)**	CRISIL Palladium-DCF (appointed later, not publicly announced as per local partner report)
NASHIK	Sitaram Kunte, Principal Secy, Finance Dept, GoM	Delivering Change Foundation (Sakal Group)	CRISIL + PriMove Infra Dev. Pvt.Ltd. + Probity Soft Pvt. Ltd.
AURANGABAD	Apurva Chandra, Principal Secy, Industries & Power, GoM	War room by AMC with sector experts, IT partners and others	Knight Frank + Fortress Infra. Services + PSP financial consultants
PCMC	Nitin Kareer, Principal Secy, UDD, GoM	Citizen consultation cell by PCMC + DCF**	CRISIL

*Designation at time of proposal mentoring

[Source: Mentor list – The Economic Times Aug 2015, nashiksmartcity.in, Engagement facilitators compiled from individual Smart City Proposals available on smartcities.gov.in , Principal Consultants - architexturez.net, The Economic Times Oct 2015]

Table 9: Engagement Reach as per Smart City Proposals in Maharashtra			
Cities	**Online Numbers**	**Offline Numbers**	**Target Citizens**
PUNE 35 lakh inputs received	2.2 lakh audience, 5300 likes, 508 shares - FB 22 lakh reach - Twitter 1.5 lakh – Web portal registration 6700 responses – Apps 21767 views - Youtube 60,000+ - Whatsapp 300 –Competition entries	4 lakh HHs (50% of city) – Surveys 100 – meetings with stakeholders	Citizens interacted with Public representatives, urban planners and partners comprising private sector, students, civil society. Ideas refined by experts, solution providers, NGOs, and people reps.
SOLAPUR Targeted to 80% of population	3.9 lakh - SMS 4548 comments, 853 vision statements – Web portal 5000 – Essay competition	52000 – responses in hard copy 12500 HHs – engaged by students to capture their vision FGDs – 7084 stakeholders 2096 citizens – meetings by reps.	Councillors, Members of Government, women, professionals, industrial associations, Resident welfare groups, NGOs, City police, Temple Management trust, street vendors, unemployed, slum dwellers, builders, professors.
KDMC 50% citizens 4 lakh responses	12 lakh – SMS 8.2 lakh reach – FB 75000 impressions - Twitter 1633 views - Youtube	1.5 lakh – Ward level meetings and HH surveys 924 citizen group reps – FGDs, competitions	Students, Youth, Women Self help groups, Resident Associations, Senior citizens, disabled, Slum dwellers
NAGPUR 11 lakh people 40%+	66500 reach and 25,185 likes - FB 3513 - Website visitors 1643 – Competition entries	10.58 lakh people (40% of city) - Surveys 3400 participants - Events	Households, domain experts, private service providers, media, students, women, business reps, and meetings of ward elected reps with citizenry
THANE 80% HHs	42000+ citizens reached – FB, Emails, Letters, My Gov 72000+ - Essay Competition entries	4 lakh+ people - Surveys 1200+ - Open Fora 150+ - Slum residents 60+ - FGD	Businessmen, professionals, housewives, students, resident and non-resident workers, slum dwellers, teachers, elected reps, sector experts, vendors
NASHIK 2 lakh+ people	27487 - App downloads 3075 - Online form 14.35 lakh – SMS 3.14 - Newspaper 3.2 reach, 61000 likes – FB 29500 followers – Twitter 25000 – Whatsapp 5611 – Emails	2 lakh people – Zonal day and offline forms 3.14 lakh HHs - Surveys 8600 – Workshops 7000 – Smart Nashik Run	Youth, women, senior citizens, slum dwellers, educational institutes, NGOs, professional associations, hawkers, builders, sector experts, parastatal agencies, elected representatives

Table 9: Engagement Reach as per Smart City Proposals in Maharashtra			
Cities	**Online Numbers**	**Offline Numbers**	**Target Citizens**
	53961 – Competition entries		
AURANGABAD ~12% of city	1.12 lakh - FB 4 lakh - SMS 44 - Twitter 12000+ - Whatsapp 4 lakh - Emails 868 – Smart City website & My Gov 168 – Competition entries	1.35 lakh - Survey respondents (11.5% of city) Face to face consultations Publicity and Advertising	Citizen groups such as Women welfare groups, Sector experts, Builders, Media,Transport associations etc Professional associations Youth Line department officials, Elected reps.
PCMC	1.6 lakh - SMS 16 lakh, 8300 likes – FB 93 – My Gov responses 3.2 lakh visitors & 34,260 responses - Smart city website	17 stakeholder groups, 353 participants- FGDs 50 - newspaper articles/ads Hoardings, Banners 109 –Competition entries 2.15 lakh – Feedback booths & Surveys	Slum dwellers, Senior citizens, NGOs, RWAs, Youth

[Source: Data compiled from individual Smart city proposals submitted available on smartcities.gov.in]

2.3 FOCUS AREAS

Based on engagement processes, cities outlined their visions, strategic focus areas and specific projects in the smart city proposal. These were meant to provide 'comprehensive development of physical, institutional, social and economic infrastructure' in order to 'improve the quality of life' and 'attract people and investment to the city' (p.5, SCM)

VISION STATEMENTS

Neighbourhood Liveability – Open spaces, streets, parks, waste	**Heritage & Tourism**	**Governance** – responsive	**Governance** – responsive
Leverage heritage, human capital and **business environment** – Riverfront Start up hub E-governance	**Environment** – Waste, clean energy, walkability, public spaces	**Environment** – waste, sewage, lake and green development	**Environmen**t – Waste, riverfront, Sustainable habitats
	Efficiency – **Governance**	**Economy** – Growth centres on vacant land	**Mobility** – TOD, multi modal, form regeneration
Infrastructure – mobility, water, waste, energy, housing, safety & security	**Economy** – Business friendly, more jobs	**Waterfront**- Cultural destination, public realm	Smart Living – **Infrastructure** for all, poly-centric city, safe streets, **economic vitality** –leverage MIHAN
	Infrastructure – Water, power, mobility	**Mobility**- Station area, pedestrian focus	
Pune "To become the most liveable city in India by solving its core infrastructure issues in a future proof way and by making its neighbourhoods beautiful, clean, green and liveable."	**Solapur** "Clean, Efficient and Progressive"	**Kalyan-Dombivli** "To be the most preferred city in MMR to live & work in, offering highest standard of living, clean and green environment, long beautiful waterfront, best in class smart infrastructure and ample employment opportunities"	**Nagpur** "To transform India's heart-Nagpur into the most liveable eco-friendly, edu-city that electronically connects people with the government to co-create an inclusive ecosystem"

Governance – responsive

Environment – Reduce floods, water, sewage

Energy Saving – Street lights, solar

Waterfront – conserve and beautify

Safe Habitat – cluster redevelopment

Mobility by de-congesting city centre – Station, multi modal hub

Governance – responsive

Traffic management – Junction design

Investment destination - connectivity

Compact City – ToD, mixed use, walkability

Tourism as wine capital – Workforce development

Heritage + Tourism - Strengthen local economy, Old city focus

Governance – responsive

Infrastructure – transport, water, sanitation, power, safety and security

Inclusive Development – Mixed use, housing

Heritage – Tourism, protection of structures.

Governance – responsive

Economy –ease of doing business, start ups, skilled labour supply

Mobility – Traffic, parking, cycling

Environment – Efficiency, toilets

Neighbourhoods connected streets, parks, systems – water, waste, social amenities

Social Infra – Municipal schools, health, arts

Thane
"It shall be a city where the mind is free and, comfort and safety are assured, drawing a wave of creative employment opportunities; where anyone irrespective of their age, ability, gender or income are able to access all that the city has to offer and more.'

Nashik
"A responsive local government plans the city to be safe to walk, cycle and be sustainable with quality infrastructure and services"

Aurangabad
"A citizen friendly and socially inclusive, tourism, heritage and industrial city with world class infrastructure and safe environment"

Pimpri-Chinchwad
To "Re-define" itself into an attractive, vibrant and liveable destination. Moving beyond providing basic facilities, the City aspires to invest in urban "software" - society, environment, community - to improve the quality of life of its citizens.

Each Smart City Proposal consists of two components:
I] Area Based Development
- Retrofitting

Existing built up area upto 500 acres to make it more liveable and efficient with intensive infrastructure service levels and smart city applications.
- Redevelopment

New layout with enhanced infrastructure, mixed use, increased density in area more than 50 acres.
- Greenfield

Vacant land development with innovative planning, and planning tools with affordable housing of more than 250 acres.
II] Pan-City Solutions
A technology based solution for the infrastructure needs and requirements of the city. Guidelines suggest a 'less is more' approach that build upon existing assets and are resource efficient initiatives.

In Maharashtra, under the first component of area-based development, 4 strategies were chosen across the 8 selected smart cities, as follows:
- **Heritage & Tourism:** Two cities – Solapur and Nashik – focus on older historic areas. Aurangabad proposed a Greenfield modern era tourism project that was later dropped for a retrofitting approach.
- **Regularisation of Unplanned growth:** Nagpur
- **Station Node Improvement:** Thane, Kalyan-Dombivli
- **New areas for growth potential:** Pune, Pimpri-Chinchwad

Under the second component, related to pan-city development, proposals are largely focused on IT driven initiatives.

Broadly, the cities in Maharashtra propose their specific projects within these two strategies as per the core elements expected to be covered as per the SCM guidelines. These include: Adequate water supply, assured electricity supply, sanitation including SWM, efficient urban mobility and public transport, robust IT connectivity and digitalization, good governance, sustainable environment, safety & security and health & education.

A detailed set of observations from the smart city proposals of the 8 cities of Maharashtra follows.

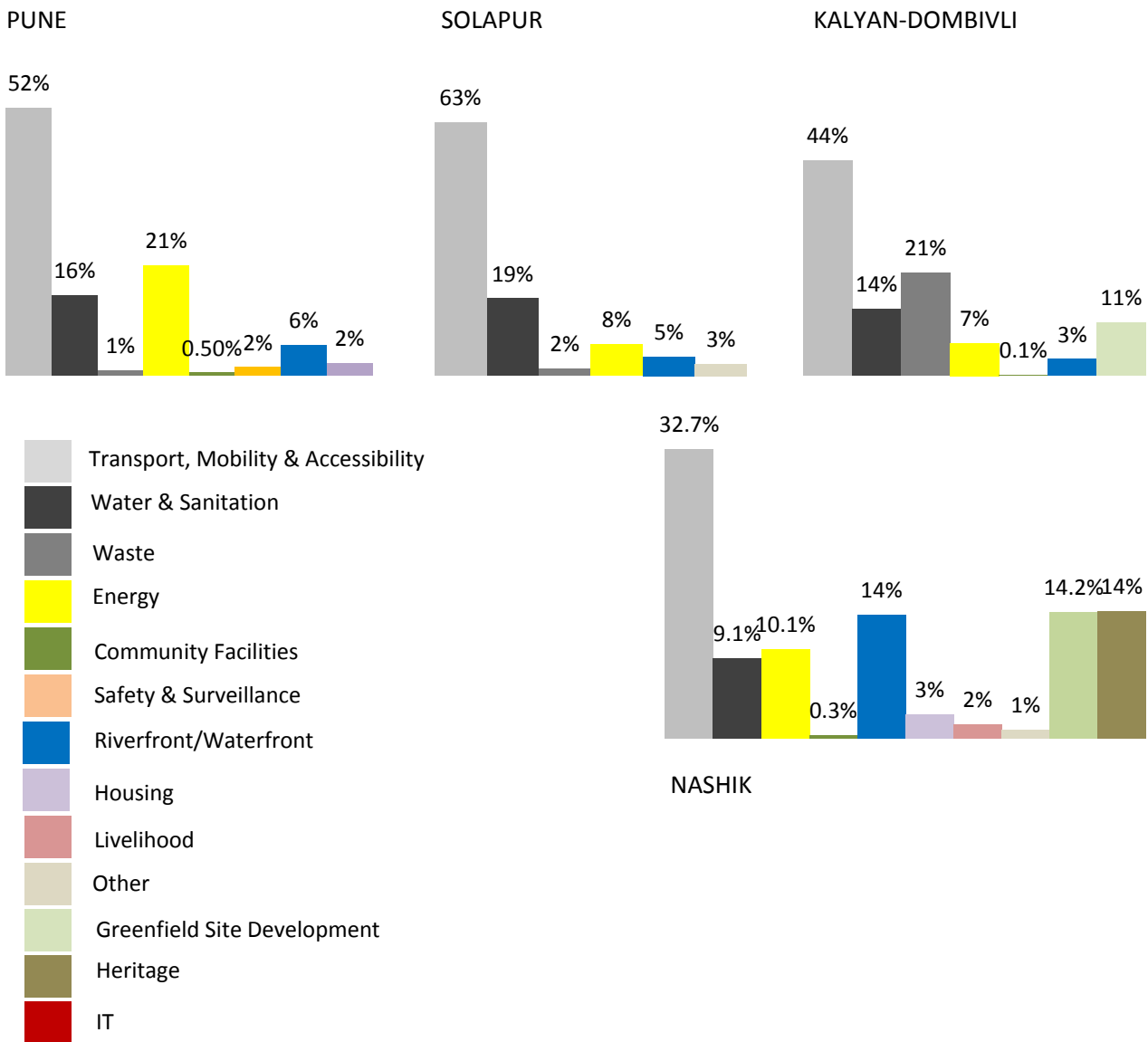| Table 10: ABD-Pan-City Strategy Details in Maharashtra's 8 Smart Cities			
City	ABD Area	ABD Strategy	Pan-City Solutions
PUNE	Aundh-Baner-Balewadi **3.64 sq.km** New Area, future development potential, high impact area	**Retrofitting-Greenfield:** Mobility, Water, Open Space, Start-up zone, Citizen services **27 projects, 1706 cr**	Mobility and Water **19 projects, 657 cr**
SOLAPUR	Old Gaothan area + ext. **4.2 sq.km** Historic core with temple, annual festival Unplanned with infra deficiencies, High impact area	**Retrofitting:** High usage/impact for residents and tourists or pilgrims. Sense of belonging, public space, infrastructure. **26 projects, 1968 cr**	Responsive governance and progressive economy – transparency, efficient service delivery, business friendly **5 projects, 279 cr**
KALYAN-DOMBIVLI	Kalyan Station Node **11.75 sq.km** High impact area, replicability in other nodes	**Retrofitting-Greenfield:** Pedestrian friendly station area, Socio-cultural activities, storm water, ground water, smart infra **20 projects, 1057 cr**	Responsive governance, improved mobility and accessibility. **8 projects, 384 cr**
NAGPUR	Pardi-Bharatwada-Punapur **3.84 sq.km** Inclusion by managing dichotomous growth, bring vulnerable areas at par with city, Replicability	**Retrofitting:** Convergence of riverfront and public transport to impact urban form, Walkability, mixed-use, eco friendly, carbon neutral **24 projects, 876 cr**	Garbage management and Safe city. **3 projects, 126 cr**
THANE	Thane Station Area **4.33 sq.km** High impact, replicability in other nodes	**Retrofitting** Mobility, inclusive housing, waterfront-natural habitat improvement, energy saving, infrastructure improvement **15 projects, 5730 cr**	Responsive and accountable Governance **5 projects, 169 cr**
NASHIK	Old city historic core with river + Vacant land adjacent >2 + 1.27 sq.km = **3.71 sq.km** Replicable in 2 other traditional growth areas in city	**Retrofitting & Greenfield:** Heritage & tourism, Harness tourism as wine capital, Compact City model **19 projects, 995 cr**	Water and Traffic & Parking management **6 projects, 948 cr**
AURANGABAD	Jalna-Jalgaon bypass **2.33 sq.km** Replicable in areas prone to unplanned development – due to labour influx.	**Greenfield:** Tourism, skill development, affordable housing **16 projects, 963 cr**	Leveraging cultural heritage and industrial base of city to propose solutions aimed at citizens and tourists. **4 projects, 330 cr**
PIMPRI-CHINCHWA	Pimple-Gurav and Pimple-Saudagar, **5.54 sq.km** New Area, Good connectivity and transport but less recreational/cultural space	**Retrofitting:** Liveability improvement, reconnecting neighbourhoods **23 projects, 565.4 cr**	Governance, mobility, environment, social and economic development **24 projects, 529.1 cr**

[Source: Smart City Project list on website which does not include opex costs, consultant fees etc]

AREA BASED DEVELOPMENT

Under the first component of area-based development, cities have suggested redevelopment of historic neighbourhoods, city centres or business districts, creating public spaces, and retrofitting infrastructure such as for sanitation and water supply.

Transport, Mobility and Accessibility projects take precedence in all cities, barring Thane where the cluster redevelopment of Kisan Nagar overshadows all other projects in the ABD area and in Aurangabad, where the affordable housing project as part of the Greenfield ABD is the focus.

Second priority is given to **Water and Sanitation or Waste** sector in all cities. The third focus area differs between cities: Pune, Solapur, Nagpur focus on energy. Nashik places importance on heritage, Greenfield and Riverfront; Thane on waterfront and Aurangabad on community facilities.

PUNE

52%
16%
1%
21%
0.50% 2%
6%
2%

SOLAPUR

63%
19%
2%
8%
5%
3%

KALYAN-DOMBIVLI

44%
14%
21%
7%
0.1%
3%
11%

Transport, Mobility & Accessibility

Water & Sanitation

Waste

Energy

Community Facilities

Safety & Surveillance

Riverfront/Waterfront

Housing

Livelihood

Other

Greenfield Site Development

Heritage

IT

32.7%
9.1% 10.1%
0.3%
14%
3%
2%
1%
14.2% 14%

NASHIK

29

Both Aurangabad and Pimpri-Chinchwad do not have **waterfront/riverfront projects** unlike all other cities, therefore allocating a higher budget towards a variety of community facilities. Community facilities are not prioritised across the other cities and largely focus on public toilets and in some cases, gardens.

Housing forms a part of ABD projects in Pune, Nashik, Nagpur. This takes particular importance in Aurangabad and Thane which have the highest budgetary allocations towards housing as opposed to other sectors.

Across the cities, total allocations towards IT infrastructure for the ABD area are non-existent except in Nagpur (Kiosks and Wifi hubs) and Aurangabad (Telecom and ICT). Safety and Surveillance also form a small part of the overall budget with only 3 cities – Pune, Nagpur and Aurangabad – making allocations in the ABD area.

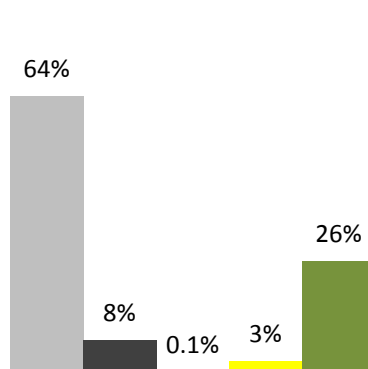Only Nagpur and Nashik set aside any funds for a skill development centre.

NAGPUR
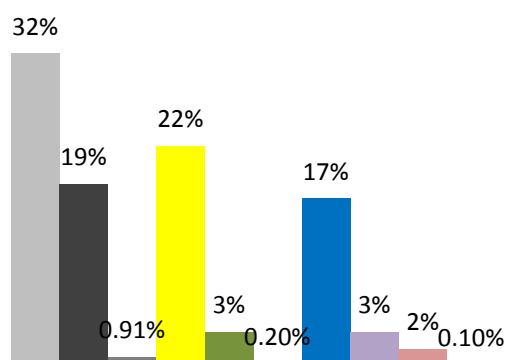
THANE
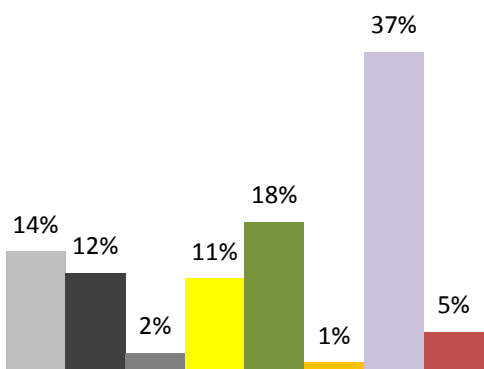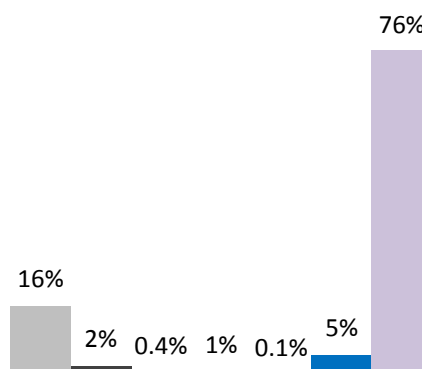
AURANGABAD

PIMPRI-CHINCHWAD

[Source: Data analysed using approved Smart City Project List on SCM Website so does not include opex costs or other additional costs, but only project cost]
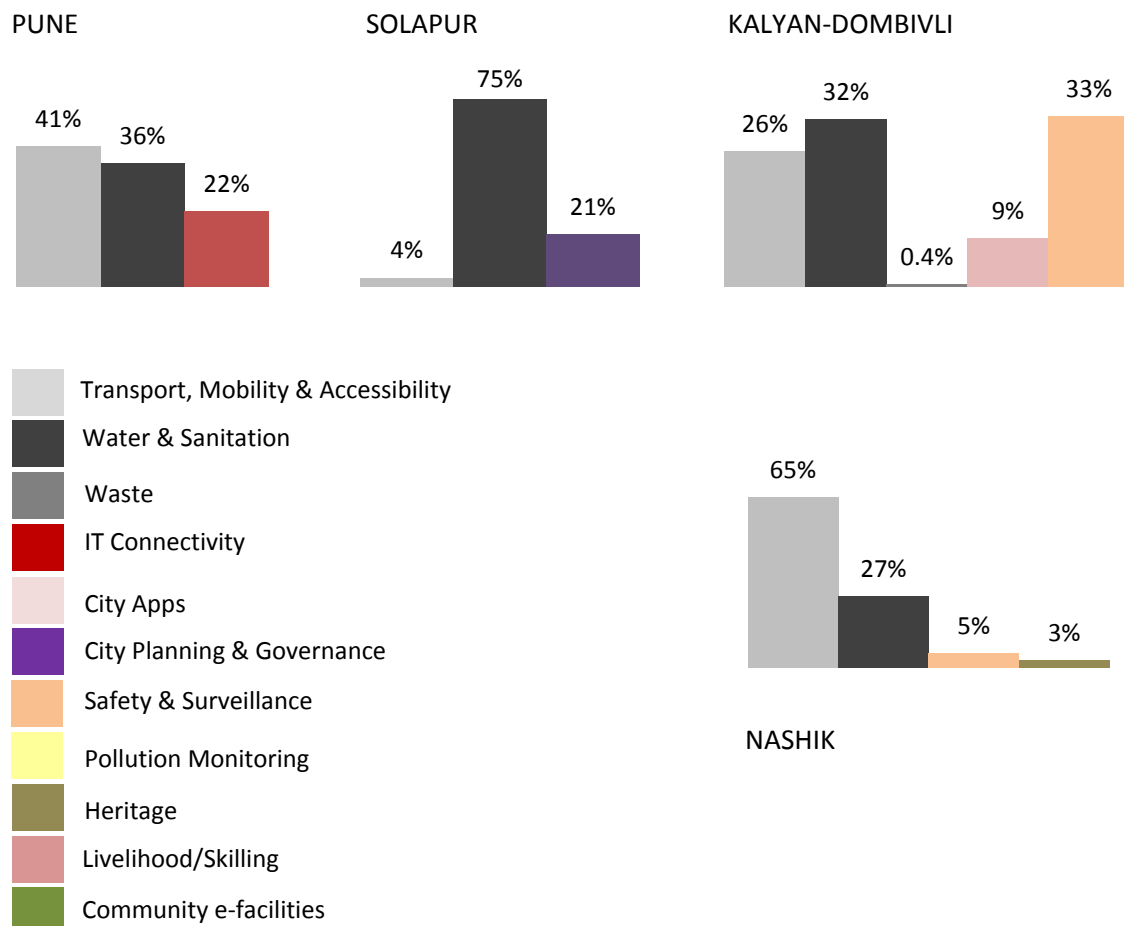
PAN-CITY

ICT initiatives largely cover Transport, WATSAN and Safety and Surveillance sectors in most of the 8 cities' Pan-city interventions.

Transport & Mobility is a top priority for all cities except Thane. Water and Sanitation is covered by 5 cities barring Thane, Nagpur and Aurangabad. Safety and Surveillance is a part of pan-city initiatives in 5 out of 8 cities, investing mostly in CCTV cameras at junctions with only Nagpur proposing a wider range of solutions including police kiosks, Wifi hubs and the Suraksha app.

City planning and Governance aspects are also covered in all cities as part of the Pan-city strategy which includes data analytics, online performance monitoring, command centre, service benchmarking and service related apps.

PUNE

41% 36% 22%

SOLAPUR

75% 4% 21%

KALYAN-DOMBIVLI

26% 32% 0.4% 9% 33%

Legend:
- Transport, Mobility & Accessibility
- Water & Sanitation
- Waste
- IT Connectivity
- City Apps
- City Planning & Governance
- Safety & Surveillance
- Pollution Monitoring
- Heritage
- Livelihood/Skilling
- Community e-facilities

65% 27% 5% 3%

NASHIK

Key to the success of the Smart cities mission, is the presumed **IT connectivity** across all 8 cities. Although neglected under the ABD areas, IT investments in Kiosks, Wifi Hubs, telecom, ICT and fibre network is a focus in Pune, Nagpur, Thane, Aurangabad and Pimpri-Chinchwad. Solapur, Kalyan-Dombivli and Nashik do not cover this aspect in Pan-city or ABD solutions.

Of all the cities, Pimpri-Chinchwad is the only city that also covers a wide range of S**ocial and livelihood interventions** in its Pan-city approach including Public e-toilets, Municipal school e-learning and Student health monitoring

NAGPUR

THANE

AURANGABAD

PIMPRI-CHINCHWAD

2.4 INSTITUTIONAL MODEL

Following approval of proposals, cities were to set up Special Purpose Vehicles for implementation and appoint project management consultants. In addition, an advisory committee at the city level was to enable collaboration amongst diverse citizen groups and associations with technical experts and government representatives.

Special Purpose Vehicle
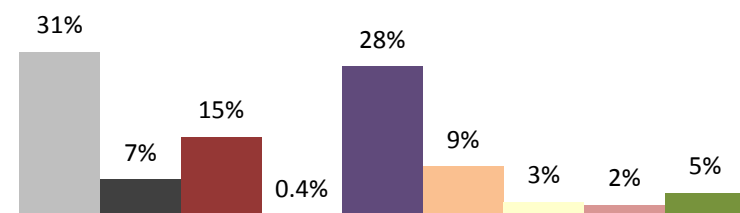The SPV will, for the period of the mission (5 years), plan, implement, manage and operate the projects. The SPV can also appoint project management consultants to do the same for area-based projects.
The SPV board composition is to include a CEO, nominees of central-state-ULB, functional directors and independent directors. The chairperson could be an official of the urban development authority, appointed by the State Government. The CEO would be appointed by the approval of the Ministry and serve for a term of 3 years.

Advisory Committee
This committee is expected to be established at city level to enable collaboration among various stakeholders and will include the District Collector, MP, MLA, Mayor, CEO of SPV, local youth, technical experts and atleast one member from the area who is a, representative of: Resident Welfare Association, Tax payers association, Slum level federation and NGO/Mahila Mandal/Chamber of commerce/Youth association.

IN MAHARASHTRA
As per State GRs, 2015 & 2016:
- States were allowed to decide the SPV Chairperson and Maharashtra opted to appoint the IAS officers that served as mentors for city proposals in that position. Some reports claim that this was earlier to be held by civic chiefs (TNN, 2016).
- The board was to have 15 members: 6 from ULB, 4 from State Govt., 1 from Central Govt., Independent, Municipal Commissioner and Addl Municipal Commissioner and a separate CEO of the SPV.
- Individual cities also appointed a host of private sector companies to play the roles of project management consultants, planning consultants and implementation partners.

City	SPV Name	Board Composition	CEO	Municipal Commissioners
PUNE	Pune Smart City Development Corporation Ltd. (PSDCL)	**15 board members** 8 bureaucrats 6 elected reps 1 CEO	**Changed Twice.** R. Jagtap (2017-19), R. Agarwal (Addl. Municipal Comm. 2019-20), Kolte (2020-)	K.Kumar (2014-18), S.Rao (2018-20), S. Gaikwad (2020-July), V.Kumar (2020-current)
SOLAPUR	Solapur City Development Corporation (SCDCL)	**11 board members** 4 bureaucrats 4 elected reps 2 Independent 1 CEO	**Changed Twice.** S.Teli (2016-19), T.D.Patil, (Dy.Comm.2020-)	A.Dhakne (2017-19), D. Taware (2019-20), P.Sivashankar (2020-current)
KALYAN-DOMBIVLI	Smart Kalyan Dombivli Development Corporation Limited (SKDCL)	**13 board members**	**Changed Thrice.** All served as Municipal Commissioners also.	E.R (2015-17), P.Velasuru (2017-18), G.Bodke (2018-20), Dr.V.S (Feb 2020-)
NAGPUR	Nagpur Smart and Sustainable City Development Corp. Ltd. (NSSCDCL)	**14 board members** 5 bureaucrats 6 elected reps 2 independent 1 CEO	**Changed Thrice.** R. Sonawane (Addl. Comm. 2016-20), T. Mundhe (M. Comm. 2020), M.Moroney (2020), Buvaneswari S. (2020)	S.Hardikar (2015-17), A.Mudgal (2017-18), A.Bangar (2018-19), T.Mundhe (2020 Jan-August), R.Game (2020-)
THANE	Thane Smart City Limited (TSCL)	**11 members** 5 elected reps 3 bureaucrats 2 deactivated 1 CEO	**Change Once.** S.Chavan (Addl.M.Com, 2017-19), S. Unhale (Addl.M.Com, 2019-)	S. Jaiswal (2015-20), Dr.V.Sharma (2020-current)
NASHIK	Nashik Smart City Development Corporation Ltd. (NMSCDCL)	**13 members** 6 bureaucrats 4 elected reps 2 Independent 1 CEO	**Not changed.** P.Thavil (2017-)	T. Mundhe (2017-20), R. Game (2018-20), K.Jadhav (2020-current)
AURANGABAD	Aurangabad Smart City Development Corporation Ltd. (ASCDCL)	**4 members** 1 elected rep 1 bureaucrat 1 CEO	**Changed Twice.** ? (2016-18) N. Vinayak (M. Comm.2018-19), A. Pandey (M. Comm.2019-)	D.S. Mugalikar (2017-18), N.Vinayak (2018-19), A.Pandey (2019-current)
PIMPRI-CHINCHWAD	Pimpri-Chinchwad Smart City Limited (PCSCL)	**12 members** 5 bureaucrats 6 elected reps 1 CEO	**Changed Once.** D. Waghmare (M.Com, 2016-17), S. Hardikar (M.Com, 2017-)	D.Waghmare (2016-17), S. Hardikar (2017-current)

[Source: Data compiled from various sources by Inhaf]

2.5 FINANCING MECHANISMS

Following approval of proposals, cities were to set up Special Purpose Vehicles for implementation and appoint project management consultants. In addition, an advisory committee at the city level was to enable collaboration amongst diverse citizen groups and associations with technical experts and government representatives.

Overall Mission Budget: 48,000 cr
Financing per city is provided as follows over a 5-year period: 1000 cr per city
Break-up of Funds:
- 100 cr per annum per city by Central Govt. (500 cr over 5 years)
- 100 cr per annum per city by State and ULB. (250 cr each over 5 years)

The budget of each Smart City proposal may however exceed the mission grant of 1000 cr. Balance funds are to be availed from the following sources (p.14, Smart City Guidelines):
- State or ULB's own resources
- Additional resources as provided under 14th Finance Commission
- Innovative mechanisms such as municipal bonds, pooled finances, tax increment etc
- Other Central Government Schemes
- Leverage borrowing from financial institutions
- National Investment and Infrastructure Fund (announced in 2015 budget)
- Private Sector PPPs

After Stage 1 of the challenge, cities are given an advance of INR 2 crore for preparing the Smart City Proposals. Post-selection, the Government will give INR 200 cr to each city to create a higher corpus. After deducting the Rs.2 crore advance and A&OE share of the MoUD, each selected Smart City will be given Rs. 194 crore out of Rs. 200 crore in the first year followed by Rs.98 crore out of Rs. 100 crore every year for the next three years.

IN MAHARASHTRA
- **State GR in 2016 notified agencies to contribute 100 cr towards each city to begin the mission without waiting for central funds. 50% of amount was to be released after setting up of the SPV**.
  CIDCO: Nashik, Aurangabad, Nagpur
  MMRDA: Thane, Kalyan-Dombivli
  NIT: Nagpur
- Indicated in the charts (p.56) are city-wise SCM capex budgets approved for a 5 year period and corresponding financing sources envisioned to cover capex and opex costs both in that period.
- In addition to the 5-year period covered under SCM, all cities also envisioned costs for a total period of 10 to 12 years.

PUNE

- 6%
- 31%
- 31%
- 22%
- 6%
- 4%
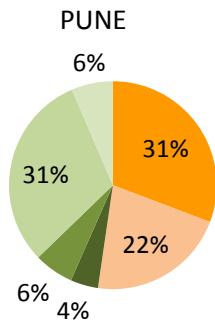
5-year SCM Budget: 2363 cr
5-year Financing Budget: 3250 cr
Lifetime cost:

SOLAPUR

- 11%
- 43%
- 46%
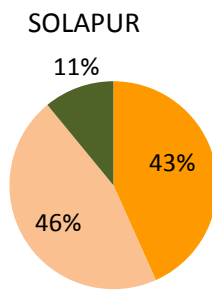
5-year SCM Budget: 2247 cr
5-year Financing Budget: 2247 cr
Lifetime cost: 2920 cr, 10 yrs

KALYAN-DOMBIVLI

- 23%
- 7%
- 70%
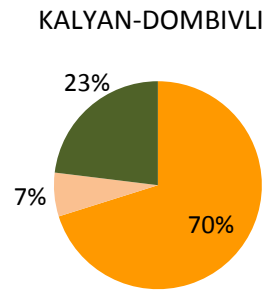
5-year SCM Budget: 1411 cr
5-year Financing Budget: 1411 cr
Lifetime cost: 3293 cr, 10 yrs

NAGPUR

- 10%
- 14%
- 2%
- 47%
- 27%
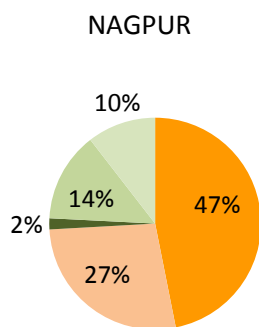
5-year SCM Budget: 1002 cr
5-year Financing Budget: 2107 cr
Lifetime cost: 3351 cr, 10 yrs

THANE

- 8%
- 6%
- 86%
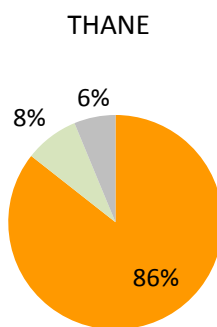
5-year SCM Budget:
5-year Financing Budget: 1104 cr
Lifetime cost: 6630 cr, 10 yrs

NASHIK

- 2%
- 20%
- 1%
- 12%
- 40%
- 25%
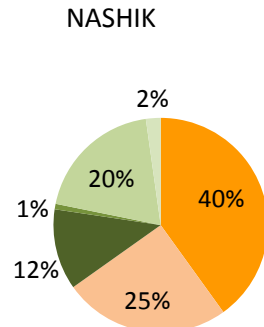
5-year SCM Budget: 1943 cr
5-year Financing Budget: 2442 cr
Lifetime cost: cr, 10 yrs

AURANGABAD

- 1%
- 30%
- 61%
- 8%
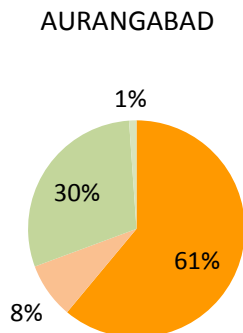
5-year SCM Budget: 1293 cr
5-year Financing Budget: 1638 cr
Lifetime cost: 1730 cr, 11 yrs

PIMPRI-CHINCHWAD

- 27%
- 73%
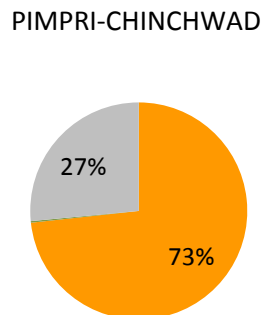
5-year SCM Budget: 1094 cr
5-year Financing Budget: 1351 cr
Lifetime cost: 1819 cr, 12 yrs

Legend:
- Smart City Mission Funds
- Convergence Funds
- PPP
- CSR
- Land Monetization
- Revenue from SCM Projects
- ULB Funds
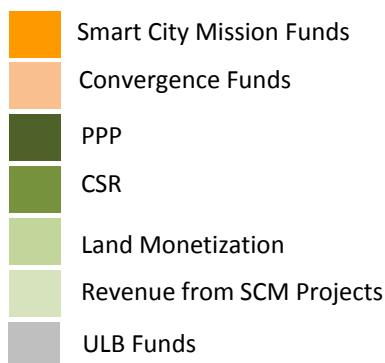
[Source: Data analysed using 5-year budget from SCP and Annexure for each city]

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2.6 PROJECT OVERVIEW AND STATUS

Upto 2020, the MoHUA annual reports provided data on overall progress of the SCM in terms of work tendered and completed but city-wise actual expenditure/progress was not available. Recently, State and City-wise data on progress is available on the Smart Cities Dashboard.

Table 12: Smart City Progress in Maharashtra							
	SCP Budget (in Rs.cr)	Tender Issued	Tenders Issued Amount (in Rs.cr)	Work Order Issued (No. of Projects)	Work Order Issued Amount (In Rs.cr)	Projects Completion %	Financial Amount Utilized%
PUNE	2960	60	3946	48	1806	31.7	23.8
	Media: As of December 2019, 5 out of the total projects were implemented. ABD pilots were dropped, 12% projects are nearing completion or completed. However most tenders have been processed. After an audit in end 2019, most PPP projects were done away with and a feasibility review conducted.						
SOLAPUR	2226	46	1991	35	903	50.0	5.1
	12 projects under ABD completed, no Pan-city projects underway. Several projects proposed are dropped. Rang Bhavan improvement is the key project taken up by the city and solar panels installed atop the bus stop near the civic body.						
KALYAN-DOMBIVLI	2027	18	1546	15	1382	16.7	0.2
	As per media reports, upto Nov 2020, only 4 out of 20 projects are completed: solid waste management automation, garbage bins at household level, bio-methane plant and LED street lights. Main projects such as station area improvement, waterfront development and transport are pending. The city park and control command centre-traffic signals and CCTV will be opened soon.						
NAGPUR	3351	10	1997	7	1879	30.0	29.7
	As of July 2020, only 5% ABD work is completed. 4 projects being implemented in ABD including TenderSURE road work and Home Sweet Home project. Delays due to land disputes under road work and Nagpur Improvement Trust-NMC conflict in ABD area.						
THANE	6132	42	6140	41	5901	47.6	1.6
	Implementation of 60% projects is 10%. 5 projects completed in ABD: 4 lakefronts, street lighting. Cluster redevelopment is the main project however that has not begun. Under Pan-city, wifi, smart metering, CCTV have begun.						

Current rankings for 100 Smart Cities by MoHUA and as of Jan 2021 based on 10 parameters including tenders floated, work orders issued, convergence, progress, funds transferred to SPV, expenditure and regular meetings of citizen advisory committee:

Pune (18), Nashik (20), Thane (21), Pimpri-Chinchwad (41), Nagpur (44)

	SCP Budget (in Rs.cr)	Tender Issued	Tenders Issued Amount (in Rs.cr)	Work Order Issued (No. of Projects)	Work Order Issued Amount (In Rs.cr)	Projects Completion %	Financial Amount Utilized%
NASHIK	2195	46	3053	43	2749	56.5	29.6
	Smart city road was pilot project which is implemented. Two big projects were scrapped due to cost escalation including Godavari riverfront which is now brought back with a renewed focus in line with environmental demands. Delays also due to Makhmalabad farmers protesting use of their land for the Greenfield project proposed.						
AURANGABAD	1730	20	727	12	452	50.0	25.4
	Smart city buses are a key project that has progressed since 2019 onwards. In 2020, heritage conservation, master system integrator work, cctv was begun. Progress prior to this was slow. Greenfield project under ABD was dropped altogether due to land disputes.						
PIMPRI-CHINCHWAD	1175	22	1448	21	1400	40.9	8.9
	As of Dec 2020, media reports claim that the city has been able to complete only 20% of overall work. Projects begun include public bicycle sharing facility, electric bikes and solar rooftop systems at the Y.C.M hospital in Pimpri and water treatment plant at Nigdi.						
Total (Maharashtra)	21796	264	20848	222	16472	42.8	14.3
Total (India)	205018	5577	172998	4876	139991	42.8	19.5
State Share	10.6	4.7	12.1	4.6	11.8		

[Source: Smart Cities' Performance as per https://smartcities.gov.in/dashboard as of 31st March 2021]

3
MAHARASHTRA: KEY FINDINGS

Despite its intent, the on-ground implementation of the smart cities mission has varied across cities. Documented here are the findings from local partners in seven of the eight 'smart' cities of Maharashtra. The findings cover the key aspects of the mission as explained in section 2, including selection criteria of cities, citizen engagement, focus areas, special purpose vehicles and financing.

3.1   FLAWED SELECTION CRITERIA FOR CITIES

Urban Challenges were not the main criteria in selecting cities

- Although the number of cities per State were allocated by urban population and number of statutory towns (under the Smart cities mission), limited urban criteria were used to select the cities themselves.
- Cities or towns with lower service level benchmarks were not prioritised as financial and governance criteria in Stage 1 took precedence. Also, financial conditions that required urban local bodies to contribute Rs. 50 crore per year towards the mission left out many faster emerging but smaller towns in Maharashtra.
- Of the 10 cities finalised, barring Solapur, all fall within the top 10 cities with highest urban population in the State (Census 2011) and are million plus cities. Although Solapur was not million plus in 2011, during the Smart city mission proposal submission (2015-16) it crossed this mark later. The selected cities cover some of the fastest growing districts as well (in terms of urban growth): Aurangabad, Thane, Pune and Nashik (Census 2011) and rank highest in human development indicators (HDR, 2012).
- However, cities in other districts considered fastest growing - Raigad, Gadchiroli, Gondiya, Satara, Ratnagiri and Nandurbar – were not included. Of these, Gadchiroli and Nandurbar maintain lowest human development indicators and Gondiya falls in the medium category (Maharashtra Human Development Report, 2012).
- Therefore, in Maharashtra, as with most States, cities with financially capable ULBs, better governance parameters and higher service level benchmarks ended up being selected under the mission.

Table 13: Urban Data on selected Smart Cities								
City	**PUNE**	**SOLAPUR**	**KDMC**	**NAGPUR**	**THANE**	**NASHIK**	**AURANGABAD**	**PCMC**
District	Pune	Solapur	Thane	Nagpur	Thane	Nashik	Aurangabad	Pune
Urban Population (in million)	3.12	0.95*	1.24	2.5	1.89	1.48	1.17	1.89
Growth Rate	38.9%	0.09%	50%	19%	43%	3%	2.94%	6.5%
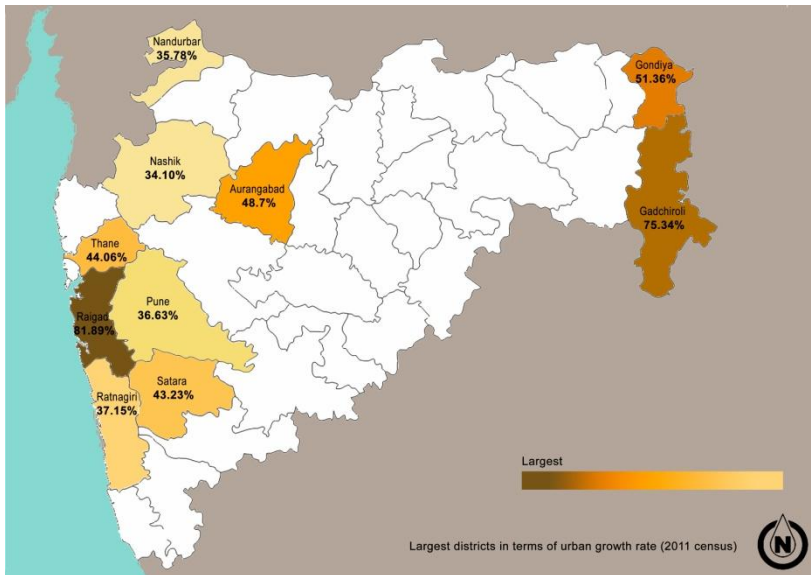
Largest districts in terms of urban population growth rate (2001-2011), Census:
Raigad
Gadchiroli
Gondiya
Aurangabad, 48.7%
Thane, 44.06%
Satara
Ratnagiri
Pune, 36.36%
Nandurbar
Nashik, 34.1%
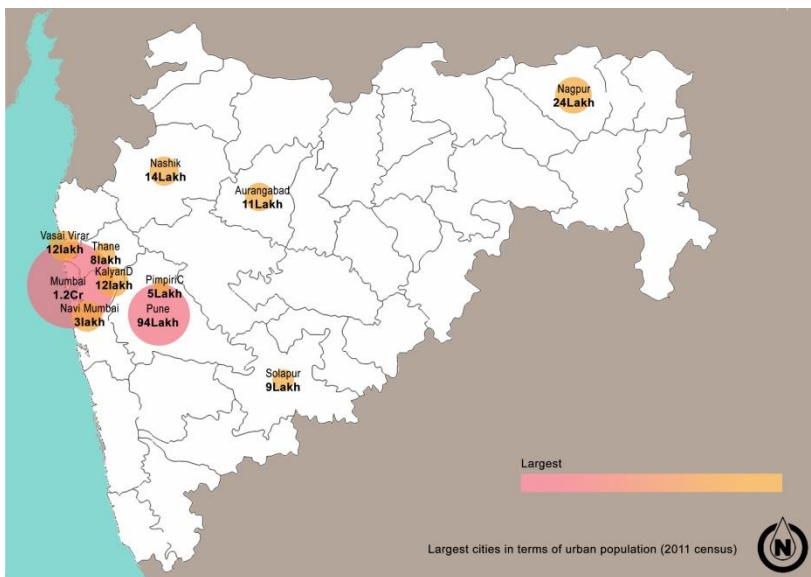
Largest Cities of Maharashtra by Population:

Mumbai
Pune
Nagpur
Thane
PCMC
Nashik
KDMC
Vasai-Virar
Aurangabad
Navi Mumbai

[Source: Census 2011, Maps -]

Non-merited inclusion of cities

▪ Stage 1 and part of Stage 2 criteria for selecting cities focused heavily on ULB resources and capacities, yet all cities in Maharashtra did not meet this criteria but were selected under the mission.

Box 6: NON MERITED INCLUSION OF CITIES

According to Dr. Ravikant Joshi (See article, Section 6), the Maharashtra Government (or for that matter all the States) never disclosed performance scores of cities or provided an explanation with regards to cities being nominated or left out. This practice of non-performance based selection of cities for SCM by all the States completely killed the merit based feature of the SCM in the first round and then approval of SCP of cities with any consideration for cities financial capacity and financial sustainability of SCP in second round by GoI completely killed element of merit, spirit of competition and performance.

During interviews with city level stakeholders, Journalists, activists as well as political leaders expressed doubt about the transparency of the methodology used for selecting Solapur as Smart City in Phase I itself. Although Solapur did receive 9th ranking in the competition, many of the interviewees felt that this ranking was awarded because of lobbying by politicians at the state-level committee. They felt that it is difficult to justify the selection of a city, which does not have even basic infrastructure and services properly in place. [Sources: Solapur local partner report, INHAF]

3.2   INADEQUATE PARTICIPATION

Exaggerated engagement compared to actual reach

The number of people engaged as reported by cities in their smart city proposals was highly exaggerated according to on-ground reports.

▪ **Nagpur:** To record citizen responses and spread awareness, 2500 NMC officials were to carry out door to door surveys. Instead there were reports that the survey forms were filled out by NMC officials themselves (Nagpur Today, 14.10.2015).

▪ **Thane:** The SCP claims that 80% Households were engaged but far from reality. The TSCL CEO interviewed noted that facebook likes were counted as 'positive suggestions'. In interviews with the Mayor, there was disbelief that more than 4 lakh people were engaged through surveys. To crosscheck, the Mayor had demanded survey forms from her ward but did not receive any response.

▪ **Pune:** Interviewees suggest that the reach was half that of the 35 lakh claimed by the smart city proposal and sometimes, both gimmicky and tokenistic.

▪ **Pimpri-Chinchwad:** Local partner reports that only 16% had taken part in citizen engagement initiated by the city as per a 102 person survey focused on ABD areas even though about 40% were aware of the mission itself. Overall, in PCMC, local report suggests that there was strong participation from various stakeholders.

Inadequate modes of engagement

Online modes were used extensively by cities to engage with people on the Smart Cities Mission and seek their input, as compared to past practice. The effectiveness of these modes leaves much to question. One, there is little to suggest that online modes of engagement such as facebook or mass

messaging is effective. Two, the engagement appears largely one-sided, offline or online. Third, is that most cities lack digital connectivity and/or digital literacy in all areas, therefore limiting certain modes of participation used in the visioning exercises to a fraction of the citizenry.

Findings from local partner reports are as follows:
- **In Solapur**, public meetings for stakeholder consultation were held in the presence of the private sector consultant for the proposal but these were generic and inconsistent. A CREDAI representative noted that a delegation was even invited to meet the commissioner and minister for urban affairs four times over the last four years but most times, they were left to meet with lower level officials.Civil society activists noted that social media, radio etc were used to record what were isolated responses from people but did not focus on ABD area selection. Public meetings also captured only generic issues – 300 odd people had attended these meetings including builders, industrialists and others but the people in attendance were mostly from the upper class.
- **In Thane,** on the launching eve of 'Digi Thane Platform' as part of the pan-city proposal in association with the Tel Aviv Municipal Corporation there was one general presentation for corporators, MLAs and MPs where the information was mostly in English and technically beyond comprehension for many corporators. Despite this, discussion or questions were discouraged.
- **Aurangabad:** Meetings were held with MLAs and corporators in a haphazard manner and organised by the ULB to only give information but not receive suggestions. MLAs interviewed suggested that the mission was too complex for corporators to study and give inputs.
- **Pune:** Interviewees suggest that the Smart city plan was promoted like a development plan and is far more gimmicky in its advertising but without any transparency. NGOs were invited to comment and take part in surveys but have no idea if their objections were recorded.

Table 14: Types of Engagement Strategies									
City	**Online Modes**				**Offline Modes**				
	Web portal*/My Gov	Social Media	SMS/What sapp	Mobile App	Compe titions	Ads: Radio/T.V	Mandals	Surve ys	Meetings/Camps/Workshops/FGDS
PUNE	Y	Y	Y	Y	Y	Y	Y	Y	Y
SOLAPUR	Y	--	Y	--	Y	Y	Y	--	Y
KDMC	Y	Y	Y	--	Y	Y	--	Y	Y
NAGPUR	Y	Y	Y	--	Y	Y	Y	Y	Y
THANE	Y	Y	--	--	Y	Y	--	Y	Y
NASHIK	Y	Y	Y	Y	Y	Y	--	Y	Y
AURANGABAD	Y	Y	Y	--	Y	Y	--	Y	Y
PCMC	Y	Y	Y	--	Y	Y	--	Y	Y

* Solapur, Nagpur, Nashik, Aurangabad & PCMC had portals that are no longer functional - www.smartcitynagpur.com, www.SmartNashik.in, www.aurangabadsmartcity.co.in, www.solapursmartcity.com. PCMC and Pune websites are still functional: punesmartcity.in and www.smartcitypimprichinchwad.in. KDMC mentions use of a web portal but there is no record of it online. Thane did not have a separate portal but a page create on the ULB website.

Box 7: ENGAGEMENT PROCESS IN PUNE

From amongst the 8 cities in Maharashtra, Pune had the most extensive engagement exercise by far. Local newspapers, online media, citizens' engagement forums as well as digital signboards displayed on important roads in the city have generated considerable awareness but it is unclear to what extent citizens are aware of the ways in which the SCM will impact everyday life in the city. A short survey was carried out by the local partner in Pune amongst 1148 respondents to develop a better understanding of this awareness, particularly in the ABD area, locally known as ABB (Aundh, Baner and Balewadi).

The results demonstrate that a majority of 67% of the respondents were aware that Pune was involved in the national SCM. However, still a considerable number of respondents (28%) were not aware about the mission. Out of the total number of respondents only 38% were aware about the ABD initiative, with a majority of 58% completely unaware. Around 3% did not respond to the questions.

In terms of participation in the engagement initiatives, of the 98% who did respond to the survey by the local partner, results show that 58% did not participate in the engagement by PMC in 2015, 21% did participate and 13% said they were unaware. This implies that around 70% people in the selected ABD area were not involved in the proposal design for their area.

[Sources: Local Partner Report, Pune]

As per the Pune smart city website, the city continues to hold citizen engagement meetings during the implementation stage.

As per Pushkal Shivam (now CEO, SPV-Aurangabad),
"Citizen consultation is not intrinsic to the preparation of the proposal at a practical level. There are better ways of engaging citizens, through different platforms. The idea is that citizens should be engaged periodically and their interest should then feed into how projects are proposed and how they get implemented."

Exclusions

Whereas cities reported including all stakeholders in the smart city visioning exercises prior to proposal preparation, local partners reported that in reality elected representatives and even technical experts were left out of the proposal stage altogether and even where included, the bureaucracy remained the main decision maker.

- **Thane:** Detailed interviews with elected representatives and corporators brought forth that there were hardly any attempts by Thane administration to communicate or consult with corporators.
- **Aurangabad:** As per interviews with MLAs, both MLAs and MPs were not involved in proposal preparation as they were seen as infringing upon the rights of the municipal corporation. Some interviewees also noted that citizens were also not taken into confidence and in the end, the bureaucracy remained the decision maker.
- **Solapur**: The Editor of Divya Marathi noted that technical experts from Solpaur have never raised objections nor participated in the decision making process. Divya Marathi however as a newspaper itself was used to raise concerns within projects proposed in the SCM.

Across the cities, there is also exclusion of key citizen groups whom the projects directly impact but who were not consulted at the proposal stage and will possibly face threat of displacement or eviction during project implementation. The groups facing these threats are covered under point 3.4, page 54 of this report.

Excluded communities during proposal stages include:

- **Solapur**: Siddheshwar Temple Trust who claim that the beautification of the lake area was selected without consultation.
- **Nagpur:** Plot/House owners on NIT land in the ABD area planned for regularization, Slum dwellers along the Nag river planned for riverfront development.
- **Pune:** Informal settlements adjacent to the river planned for beautification.
- **Thane:** Agri and Koli communities in the area identified for cluster redevelopment, waterfront and Informal vendors around the station area planned for improvement.
- **Nashik:** Informal vendors and hawkers along the 'smart city' road, Farmers at Makhmalabad Greenfield site.

Consultations limited to proposal stage

Many cities reported that consultations were confined to early proposal stages. Once the proposals were accepted and the SPV set up to implement projects, citizens are rarely involved and most do not know how many of their suggestions were incorporated in the proposals or progress of implementation.

- **Pune:** Although feedback was actively sought, no ideas if these were incorporated.
- **Aurangabad:** No briefings or meetings are held by Commissioners as to ongoing work.
- **Solapur:** Both the corporator at the ULB and editor at Divya Marathi and journalist with Pudhari said that the SPV functions on its own and although public meetings were held by CRISIL, they do not know if there is a mechanism to ensure inclusion of suggestions made by people. The SPV does not include corporators in decision making, any complaints are told to the party leader who is on the SPV board. But Local politicians do not seem to act as representatives of the people citing their lack of influence on the non-political members of the SPV board.
  Some political leaders also asserted that many citizens did not come with overall Mission-related grievances; they expressed frustration about specific projects under SCM, such as the slow progress of the works of the road in front of Solapur Municipal Corporation.
- **Nashik:** Over 2 lakh people were engaged prior to proposal preparation by the municipal corporation and stakeholder consultations held with government agencies, corporate houses, NGOs, public institutions but since then, no more consultation was held prior to project announcement or during implementation. Minimal consultation and elected representatives remain sceptical of projects selected on this basis.

Moreover, there are reports that, in some cases, even when suggestions were sought, they were not always considered: Environmental activist objections to the Goda riverfront project in Nashik were not addressed nor were the concerns raised with respect to the Thane SATIS project.

3.3 SELECTIVE IMPROVEMENT

ABD areas were over-prioritized

As can be seen from the maps, barring Nashik and Pimpri-Chinchwad, the allocation of smart city funds towards the ABD area is disproportionately more than Pan-city solutions, despite the fact that ABD areas forms a very small part of the total city area.

The ABD was meant to be a pilot that could be replicated elsewhere. However, sites selected in the cities have specific challenges that are being addressed and do not translate across the wider range of concerns impacting the cities.

Moreover, the selection of areas appears to be influenced by those that were inclusive of or adjacent to riverfront/lakefront opportunities, had business start-up or existing business potential, had slum redevelopment potential and Greenfield sites that could be developed to generate additional funds.

Feedback from cities also indicate that ABD areas are perceived to be well-developed areas and do not address immediate needs.
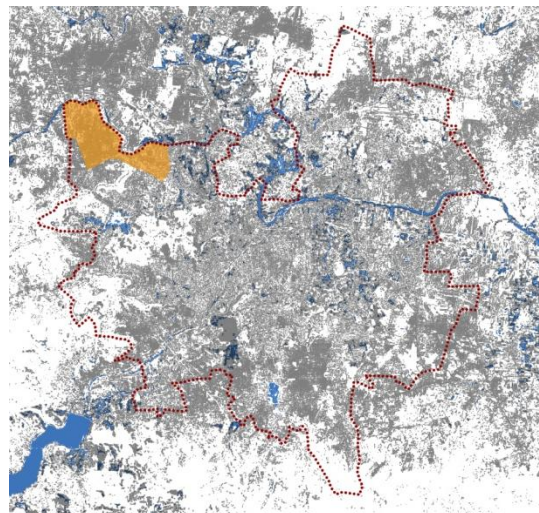
PUNE
Area: 251 sq.km, Urban Population: 3.12 m. I Urban Growth Rate: 38.9%
ABD: 1.5% of the total city area, 72% of funds
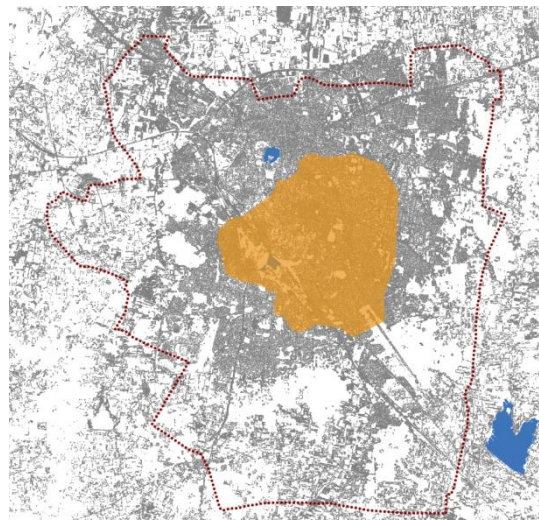
SOLAPUR
Area: 179 sq.km I Urban Population: 0.95 m. I Urban Growth Rate: 0.09%
ABD: 2.4% of the total city area, 88% of funds
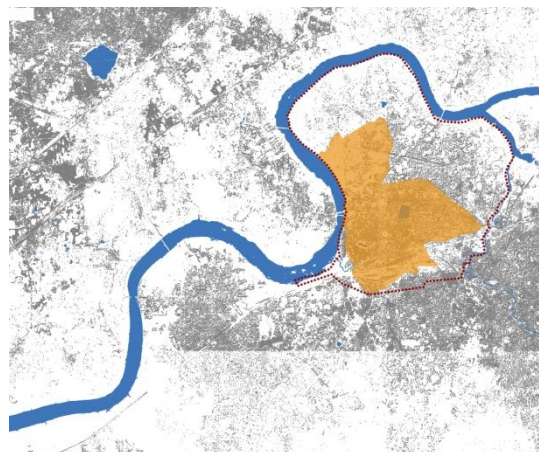
KALYAN-DOMBIVLI
Area: 137 sq.km I Urban Population: 1.24 m. I Urban Growth Rate: 50 %
ABD: 8.6% of the total city area, 73% of funds

45
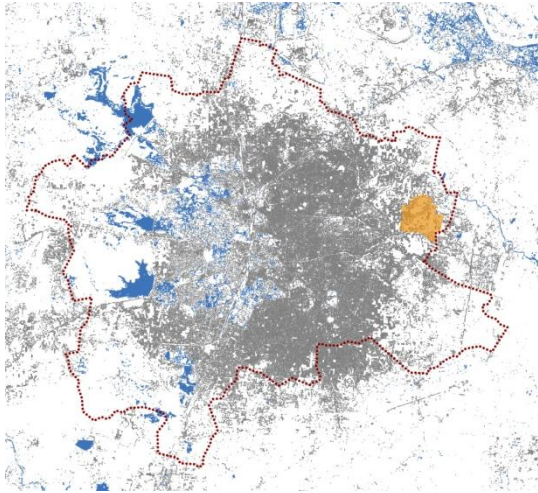
NAGPUR

Area: 225 sq.km I Urban Population: 2.5 m. I Urban Growth Rate: 19%

ABD: 1.76% of the total city area, 87% of funds
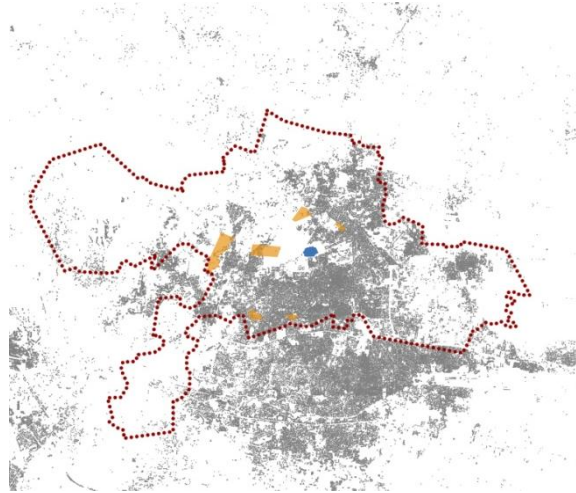
AURANGABAD

Area: 138 sq.km I Urban Population: 1.17 m. I Urban Growth Rate: 2.94%

ABD: 1.7% of the total city area, 74% of funds
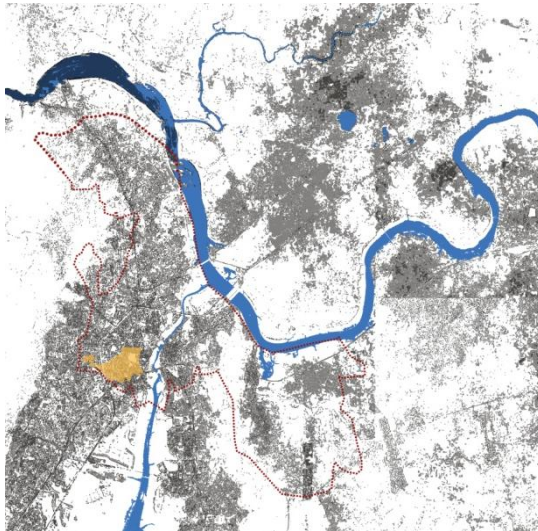
THANE

Area: 147 sq.km I Urban Population: 1.84 m. I Urban Growth Rate: 43%

ABD: 2.9% of the total city area, of funds
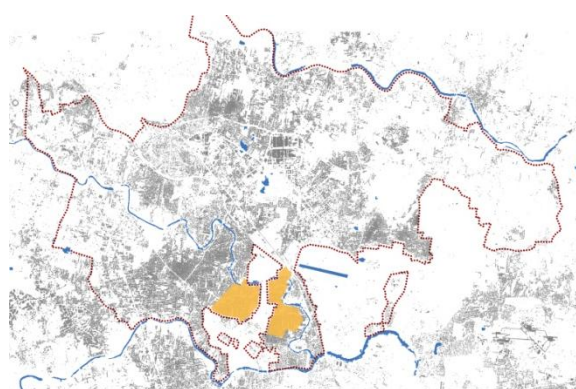
PIMPRI-CHINCHWAD

Area: 181 sq.km I Urban Population: 1.72 m. I Urban Growth Rate: 6.5%

ABD: 3.1% of the total city area, 52% of funds

Built | Un-Built | Waterbo[dy]
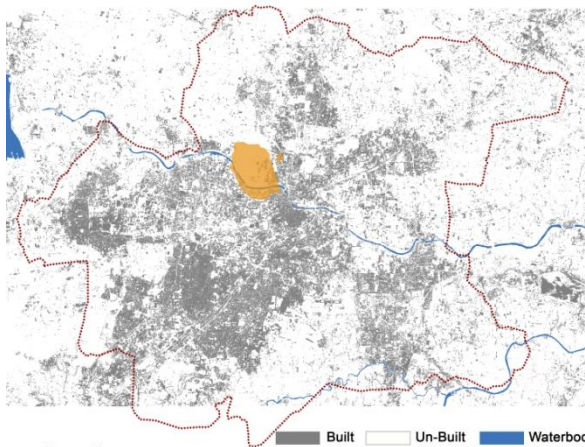
NASHIK

Area: 259 sq.km I Urban Population: 1.48 m. I Urban Growth Rate: 3%

ABD: 1.4% of the total city area, 51% of funds

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Disproportionate infrastructure investments

An improvement to the physical and institutional infrastructure of cities was meant to contribute to larger economic strategies by improving the quality of life in cities, thereby attracting people and investment. Based on the smart city proposals submitted by the eight smart cities of Maharashtra, the bulk of investment is in the areas of Mobility and Transportation, Water-Sanitation-Waste and to some extent, Energy solutions. There is little focus on Affordable Housing (seen as largely converging with PMAY-urban) or other Social amenities. Moreover, the investments are largely made in one area of the city selected for Area-based Development.

Transport and Mobility

- ABD solutions proposed by the cities in Maharashtra are a combination of:
    1) Urban design interventions (through non-motorised transport options, street redesign, bus stop redesign)
    2) Traffic management (Parking, Road improvements)
    3) Transport Mode/hub investments (Bicycles, BRTS, Station area improvements)
- Pan-city solutions focus on using IT solutions to manage traffic and parking primarily. Solapur and Nagpur did not propose Pan-city solutions focusing on mobility or transportation. Aurangabad proposed more Pan-city mobility solutions.

WATSAN, Waste, Energy

- 7 out of 8 cities propose ABD solutions focusing on Energy, Water and Waste. Only Nashik leaves out waste solutions.
- Pan-city solutions for all cities, focus on water metering, utility mapping, performance monitoring.

The criticism of these interventions is that whereas the Smart cities mission acknowledges the national urban transport policy, cities such as Pune already had these proposals or projects in place prior to the SCM. The mission therefore has not brought in new focus areas but piggybacked on existing plans, not necessarily picking up the lessons from these.

Table 15: Mobility Strategies in ABD Areas			
City	Mobility and Transportation I ABD Only		
	Urban design Interventions	Traffic Management	Transport Modes/Hubs
PUNE	NMT Infrastructure: Footpaths, street-junction redesign, Pedestrian roads, Placemaking	Smart parking, Road widening, ICT bus stops	Bicycles, BRTS e-buses, airport services, e-rickshaws
SOLAPUR	NMT improvements: Redesign of streets, cycle tracks, Junction improvement	Smart parking	Bus depot and commercial complex, Bus shelters
KDMC	Station area focusing on junction design, Complete streets network	--	Station precinct improvement
NAGPUR	Street revitalisation	Multi level car parking	E-rickshaws, Share a Bike, E buses, NMT, Smart Bus shelters
THANE	Junction improvement, Improving pedestrian paths	Parking management	New suburban station, Multi-modal transit hub
NASHIK	Project Marg	Traffic management	--
AURANGABAD	--	Road network	--
PCMC	Streets-urban design, Junction improvement, Bus stop improvement, Pimpri Bus station ToD	Parking Management	Multi-modal facility, BRTS improvement

[Source: Smart City Proposals, SCM Website]

Table 16: Mobility Strategies in ABD Areas	
City	Mobility and Transportation I Pan-city Solutions
PUNE	Adaptive traffic management system, ITMS bus system, Smart parking, Intelligent road management, Traffic modelling, E-challan
SOLAPUR	--
KDMC	Intelligent traffic management system, transit & parking management
NAGPUR	--
THANE	Intelligent transit solutions include monitoring of buses, passenger information, TMC digi card – mobile app and web portal
NASHIK	Street beautification, Parking Management, Traffic Management
AURANGABAD	Traffic management, Tourism corridor with pedestrian facility, GPS enabled public transport buses.
PCMC	Traffic management – live data collection, One transit app, Parking, Bicycle sharing

[Source: Smart City Proposals, SCM Website]

Prioritized Waterfront Beautification

A key part of the economic strategy was also the development of the riverfront/lakefront – which by far, has taken precedence over other interventions and impacted the choice of ABD areas.

ABD areas were therefore selected so as to include or be adjacent to lakes, rivers or water bodies. Barring the two cities of Pimpri-Chinchwad and Aurangabad, the remaining six cities in Maharashtra have a riverfront development as a part of their proposal, and where the city does not have a river, lakefront development is proposed such as in Thane, Solapur and Kalyan-Dombivli.

However, Smart city proposals have only focused on beautification or recreation along the riverfront or lakefront. River rejuvenation is taken up as a separate convergence component (See table 17) but even then, only four cities propose this under the National River/Lake Conservation plan. This has raised environmental concerns across cities as also social concerns as settlements along the river remain neglected in the proposed beautification plans (See Box 8 and 3.4). In addition, in some cities such as Thane, lakes are being created to implement the project (See Box 8).

Table 17: Water/River front Strategies		
City	**SCM Funds**	**Convergence**
PUNE	Recreational area	10% of pan-city project from National river conservation plan: 990 cr sewage treatment plant approved, Cleaning funds under JICA
SOLAPUR	Recreational area with night tourism, night bazaars	--
KDMC	Bicycle, Jogging tracks, amphitheatre	--
NAGPUR	Open, green space, promenade, pedestrian trails, bike routes	National river conservation plan and includes cleaning of river
THANE	Landmark Public spaces, Identity	National lake conservation plan
NASHIK	Public space, recreational, beautification, e-boating	National river conservation plan and includes cleaning of river

Box 8: WATERFRONT PROJECTS

- **Mula and Mutha in Pune:** Appeal made to include citizens in the riverfront project and not only to seek feedback. Whereas the SCM seeks beautification and recreational areas along the Mula and Mutha rivers, environmental groups have raised concerns regarding the river as a ecosystem that needs to be addressed first.
- **Nashik, Goda riverfront project:** The Godavari river is of cultural and religious significance for the city that hosts the Mahakumbh mela every 12 years. While taken up for improvement under JnNURM, several issues that came up with regards to concretization and flooding were not addressed under the SCM proposal which focuses on beautification and recreational activities.
- **Kamal Talav:** One of the first projects to be taken up under the mission and already in its completion stage – it has never featured in the 'List of City Lakes' published on the TMC website and senior residents in the locality share that the lake site used to be a depression created after digging stones for highway construction.

Neglected Focus Areas

Housing

Housing is an area of concern across all eight cities as indicated by data on slums and homeless populations but the response to it under the SCM is limited. In the seven out of eight cities in Maharashtra that proposed housing solutions under the SCM, the focus is on redevelopment of slums, affordable housing development or regularising unauthorised settlements. However, it is difficult to determine how much of this proposed 'housing' is part of the SCM or converged under the housing for all mission or other state agency initiatives (See table 18). Budgetary allocations for housing are among the lowest across the eight cities, with only Thane and Aurangabad proposing the highest allocations towards housing compared to other sectors.

In Thane, housing focuses on the cluster redevelopment of Kisan Nagar, a 70 acre area containing informal settlements around an old, declining industrial estate that is a potentially attractive real estate investment. It was to be replicated in 42 other such sites in Thane which includes urban villages and Agri gaothans. In Aurangabad, the Greenfield area comprised an affordable housing component to tackle illegal subdivisions and selling of agricultural land within municipal limits and the continuing pressure for affordable housing particularly in upcoming industrial areas – Shendra and Bidkin. Despite regularisation under the Gunthewari Act, these settlements lack basic facilities or amenities. With the dropping of the Greenfield project, this project is no longer being implemented.

Table 18: Housing Strategies			
City	Slum Population (as% of Total)	Housing (ABD Area) under SCM	Convergence under HFA
PUNE	28%	*SCM role unclear	Slums/Affordable housing of 486 slums under HFA, DPR submitted to State
SOLAPUR	31%	*SCM role unclear	14 slums with 8000 people in ABD under HFA
KDMC	7.87%	Affordable housing as part of proposed TPS by MMRDA	--
NAGPUR	35.73%	Affordable housing, Rentals, Shelter, Hostels – 30 cr SCM	HFA (40 cr), Survey underway
THANE	17.75%	*SCM role unclear	Cluster redevelopment - PPP under HFA, impact assessment conducted
NASHIK	12.77%	*SCM role unclear	Slum Rehab HFA, Survey initiated
AURANGABAD	18.8%	Land share component by SPV under SCM	Affordable housing in Greenfield ABD under HFA, 3492 units
PCMC	7.47%	--	--

Nagpur, stands out with a broad set of housing strategies proposed that include not only affordable housing but rental units, shelters for the homeless and hostels. However, according to HLRN eviction data (2017), none of the smart city proposals recognise housing as a right or focus on standards to ensure adequacy. With evictions across many cities as part of 'development' including under the Smart cities mission, the aim to improve the quality of life does not apply to all.

Community Public Facilities

Social Infrastructure

By far the most neglected component in the smart city proposals, all cities barring PCMC focus only on the ABD area. Even then, the range of projects suggested are limited. Solapur, Thane and Nashik only proposed public restrooms as part of this strategy whereas KDMC does not have any proposal and limited its social infrastructure to the lakefront development project. Only Aurangavad and in particular, PCMC proposed the broadest range of projects. Infact, Pimpri-Chinchwad is the only city to have proposed social infrastructure as part of its pan-city solutions as well, focusing on: health monitoring and e-learning in municipal schools.

Green Infrastructure

Four (Pune, Nagpur, Aurangabad and PCMC) out of eight cities propose interventions limited to a few parks and open space improvements. PCMC is the only city to suggest innovative ideas of developing typically unused or neglected areas in the city into public space use.

Table 19: Community/Public Facilities		
City	**ABD**	**Pan-City**
PUNE	Public toilets, Gardens, open vegetable market, community hall, Fire Stations (2)	None
SOLAPUR	E-toilets	None
KDMC	-- (Part of Lakefront development) --	None
NAGPUR	Primary schools, Hospital, Public Realm, Gardens, Landscaping	None
THANE	Urban restrooms (12 no.s)	None
NASHIK	Public toilets	None
AURANGABAD	Open space, garden, Fire and disaster management building, police station, Government health facilities, Government school	None
PCMC	Playground improvement, Area under flyover, Major parks, urban forestry, Refurbishment of sports and education, Public e-toilets, On-street hawking, Vegetable market development, Retrofitting municipal hospital	Public e-toilets, Municipal school e-learning, Student health monitoring

3.4 THREATS TO COMMUNITIES

Displacement

The smart city proposals do not adequately address the issue of communities that currently occupy land on which the projects are proposed, leading to the threat of eviction or displacement.

- **Thane:** Agri and Koli communities have existed for years in the waterfront and cluster redevelopment area and were concerned about being clubbed with other groups. Informal vendors and hawkers surround the station area planned for improvement.
- **Pune**: Informal settlements lie adjacent to the river edges slotted for development but their fate in the process of 'riverfront beautification' is not addressed.
- **Nagpur:** Slum dwellers along the Nag river from Ambazari lake to Punapur, located within 15 metres of the river raising concerns of a land grab from slum dwellers living here for 40 years (TOI, 2018).
- **Nashik:** Vendors and hawkers have a sizeable presence on the main arterial road slotted for the pilot smart road project. Some of the vendors belong to the Matoshree Hawkers Union. Their association with the union has allowed them to remain on the road longer than others but earnings have dipped by 50% and the hawkers are bracing for an eviction soon with no discussion

around relocation to another place. Similarly, farmers at Makhmalabad on whose land a Greenfield project was proposed claim that they were not part of the discussions at proposal stage (See Box 19). In addition, about 11 years ago during the Godavari river improvement (under JnNURM), some 300 hutments were evicted without rehabilitation as they did not have entitlements. This project is now under the SCM and so is the adjacent Sundarnarayan temple precinct complex that contains shops and residences very likely to face evictions to create broad walkways under the mission.

Widening the Digital Divide

The Smart Cities Mission focuses on technology as a key solution to urban challenges. Whereas the focus in ABD areas is to pilot liveability and economic strategies, Pan-city interventions entirely rely on 'smart' technologies to better governance and citizen engagement. Cities proposed a wide range of solutions under Governance and planning with some intervention in CCTVs as part of safety and surveillance, however the investment in IT infrastructure is minimal (See table 20).

Much of the IT infrastructure is covered under the convergence agenda, but there is concern that the digital divide is only being widened as lack of internet connectivity and access to data has historically impeded lower-income, 'informal' communities from participating in city-wide governance and planning as was evidenced during engagement processes at the smart city proposal development stage. There are also concerns that increasing use of CCTV in the name of safety and surveillance is impinging on citizen privacy.

Table 20: Digital Interventions			
City	IT Infrastructure	Governance - Citizen Services	Safety and Surveillance
PUNE	Pan-city solution	Mobile app, consumer mapping & awareness, online bill payment	CCTV
SOLAPUR	-	Service level data analytics, mapping utilities and SCADA	CCTV
KDMC	-	My City app, grievance redressal, data analytics of services through SCADA and vehicle tracking	Security*only at waterfront
NAGPUR	ABD: Kiosks, Wifi hubs Pan-city Community Network project: Fibre, kiosks, public wi-fi hotspots	Unified operations & command centre, City community network	CCTV at junctions, police kiosks, Wi-fi hubs, Suraksha app
THANE	Pan-city: City wide public wi-fi	ERP, ITMS, Online performance monitoring, TMC Digi card	-
NASHIK	-	Performance monitoring of water services, traffic command centre	-
AURANGABAD	ABD: Telecom and ICT Pan-city: ICT Infrastructure	Command centre	CCTV, Telecom, ICT infra
PCMC	Pan-city: Telecom and IT network	Transit app, GIS enabled ERP, Command centre, municipal service benchmarking	-

[Source: Smart City Proposals, SCM Website]

3.5 LACK OF CONVERGENCE CLARITY

Convergence funds are the second highest contributor to the mission in Solapur, Nashik, Nagpur. All 8 cities are covered under AMRUT which focuses on water and sewerage, SBM which covers sanitation and PMAY-urban which focuses on housing. Cities also rely on funds under Digital India, Safe City project, FAME, IPDS and the National river conservation project. All cities also seek performance grants released under the 14th finance commission.

Given the coverage and focus areas of the convergence schemes, there is an overlap of roles and a lack of clarity in what the Smart cities plan covers as reflected in interviews where respondents were not clear about which projects were being undertaken under which of the current national missions.

Below are some examples across the 8 cities:

Infrastructure – WATSAN augmentation and improvement – was to be a core part of the SCM. However, a large part of this infrastructure is also undertaken under AMRUT. In addition, as agencies in-charge of implementation for AMRUT and Smart Cities are different, it is unclear how co-ordination will take place.

ICT and IOT is another key component of Smart Cities but overlaps considerably with the Digital India mission.

In cities, where housing is converged with HFA, the role of the Smart cities mission is not entirely clear. This is with the exception of Aurangabad whose SCP clearly states that the land share component was to be provided by the Smart cities mission but houses would be built under HFA.

In addition to a lack of clarity, a key exclusion is the convergence with the HRIDAY scheme in Maharashtra.

Box 9: NO HRIDAY CONVERGENCE IN MAHARASHTRA

Of the eight cities, three focus on heritage. Of these, two cities focus on revitalisation of their older, historic cores – Solapur and Nashik, whereas Aurangabad sought to create a new heritage Greenfield area. In only one SCM proposal – Solapur, approved in 2016 under Round 1 - HRIDAY is noted as the scheme under which to converge its Area Based Development proposal to link city heritage with tourism, create night tourism activities, and revitalise the historic core. The proposal goes on to acknowledge that the city was not selected under HRIDAY and these objectives will be met under the SCM, yet it mentions the scheme in its convergence plan. In its smart city proposal, Solapur covers components within the heritage area related to infrastructure improvements and lakefront improvement. Therefore, the support from HRIDAY funds would be vital to the city in terms of conservation of actual structures while SCM focuses on an overall area development.

However, as of 2018, no city in Maharashtra has been selected by the Centre for the HRIDAY scheme despite lobbying to have Aurangabad, which has many UNSECO world heritage sites included.

3.6 CITY INTEGRATION: PAST AND FUTURE

Lack of planning-level integration

Whereas the mission attempts financial convergence, it does not make explicit how they will integrate at a planning level or embed themselves within the larger urban vision and commitments of the city. A part of this co-ordination difficulty is located within the current implementation structure where the SPV run projects are intertwined with the functions of the ULB and other agencies.

Box 10: DISCONNECTED 'SMART' CITY PROJECTS

In Pune, although cycles were introduced within the ABD area, they are not integrated outside the limited Aundh-Baner-Balewadi area with a citywide cycle network. This is because the Pan-city solutions focus more on smart parking, e-challans, and not on a street network for cycles.

In Nagpur, the unauthorised settlements in Pardi-Bharatwada-Punapur are under the authority of the Nagpur Improvement Trust (NIT) as special planning authority but under the SCM were demarcated under the Area based development proposal with the SPV as implementing authority. Prior to the SCM, NIT had already collected regularisation charges from plot owners in the ABD area who have to pay again to self-finance the town planning scheme being implemented under the SCM. TPS being implemented in these plots have to negotiate with *khasra* boundaries that are different. Commercial structures are not being compensated for and NIT continues to approve building layouts on these plots despite the implementation of the TPS under the smart city mission.

In Pimpri-Chinchwad, commencement of new projects requires a lot of paper work, with respect to site clearances, which is not being given by the Municipal Corporation authorities in a timely manner, leading to delays and time over runs in completing the project.

Not learning from earlier projects

Some cities proposed projects that had been taken up under earlier programs – such as Mobility plans in case of Pune or the SATIS project in Thane or Waterfront and Riverfront projects in Thane and Nashik. Concerns raised were that these projects repeat the designs of the past without correcting the mistakes.

Box 11: REPETITION OF PROJECTS UNDER SCM BUT NOT THEIR LESSONS

Replicating the SATIS project in Thane: The Station Area Traffic Improvement Scheme project in Thane East under the ABD is a replication of the earlier SATIS project in Thane west. However, the earlier SATIS project in Thane West has not solved the traffic congestion, rather has contributed to it. The project took away the old plaza-like public space adjacent to Thane station and has made way for concrete super structure that has not solved the problem. Another critique is that the station is proposed between Thane and Mulund stations while most of the crowd rushing towards Thane station comes from Kalwa-Mumbra belt that is highly underserved by transport facilities. [Source: Local Partner Report]

Waterfront development, Thane: An extremely controversial project – the idea was first mooted in 2010 and finally incorporated under the SCP to develop 10.10 KM of waterfront along Thane Creek into promenades, access points and Jetties. The waterfront was to be developed in seven stretches mainly along the Agri Gaothans of Ghodbunder Road and required heavy reclamation at the cost of mangroves and also involved displacement of some 310 families. Despite its earlier concerns, the SCM proposal introduced this as a project as part of their ABD strategy.

Nashik, Goda riverfront project: Taken up first under JnNURM funding as the Godavari river is of cultural and religious significance for the city that hosts the Mahakumbh mela every 12 years. However, several issues that came up with regards to concretization and flooding were not addressed under the SCM proposal either, which focuses on beautification and recreational activities.

3.7 INADEQUATE DECENTRALISED IMPLEMENTATION

Objections to the SPV structure

The announcement of the Smart cities mission and its proposed implementation structure led to several objections in Maharashtra with concerns raised about the impact the special purpose vehicle would have on the agency of civic bodies. From the initial list of 10 cities, Mumbai and Navi Mumbai, both objected and finally withdrew. Nashik and Pune had also raised concerns but were eventually selected under the mission.

Box 12: WHY MUMBAI AND NAVI MUMBAI DROPPED OUT OF THE SMART CITY RACE

From the original list of 10 cities selected in Round 1, political parties controlling the civic bodies in Navi Mumbai (NCP), Greater Mumbai (Shiv Sena), Nashik (MNS) and Pune (NCP-Congress) raised objections to the mission requirement to set up an SPV which they felt would weaken the civic body. The BJP-led government ignored these objections including the suggestion by the Sena that the SPV be headed by the Mayor instead who would have right to veto the SPV decisions.

Mumbai also found that the 100 cr project funds offered annually for 5 years was too little for the corporation to give up its autonomy. The Mumbai municipal corporation submitted its proposal to the State during rounds of the city challenge along with a list of amendments including making the Mayor chairperson of the SPV, ensuring 50% members were from the civic body and so on. Eventually, Mumbai and Navi Mumbai both withdrew from the mission. Navi Mumbai also went on to claim that the National Government definition of a Smart City Mission included good drainage, sewerage, schools, public transport and so on, which the city already had. Pune and Nashik both were able to eventually secure the approval of elected representatives to go through with proposal submission and selection.

Ultimately, eight cities in the State submitted proposals including Amravati which did not qualify despite participating in all rounds and was eventually replaced by Pimpri-Chinchwad.

[Sources: The Indian Express June 2016, Hindustan Times 2016]

Board Membership Flaws

SPV guidelines did not provide for the composition of Board of Directors but going by other SPV shareholding pattern of 50:50 between State and ULB, it was expected that the board would have equal representation. This was not followed in most cities moreover there appears to be a minimal representation of locally elected representatives. Another technical, legal aspect is related to the formation of the SPV which in normal practice would have the two agencies involved pass a resolution deciding upon the article, memorandum of association and proposed board of directors. In the Smart city SPV this process was not followed and it was the States that ultimately decided the composition of the board through a one-sided order.

In Maharashtra, the State decided the board composition to have 15 members as follows: 6 from ULB, 4 from State Govt., 1 from Central Govt., 1 Independent, 1 Municipal Commissioner, 1 Additional Municipal Commissioner and a separate CEO of the SPV. With respect to overall membership requirements of the board, most cities in Maharashtra fall short of these requirements.

Barring Pune, all cities fall short of the required 15 board members with Aurangabad at a membership of only 4 members. Elected representatives are anywhere between 4 to 6 members in all cities barring Aurangabad which has only 4 members in total and KDMC for which we have no data at present. There is therefore a lesser representation of democratically elected members.

Box 13: RESOLUTIONS TO HAVE MORE ELECTED REPRESENTATIVES IN THE SPV

While there are shortfalls in SPV membership requirements in Maharashtra's smart cities as per INHAF findings, Solapur and Nashik, both passed resolutions to have more elected representatives on the board.

In 2016, **Solapur Municipal Corporation (Congress)** passed a resolution to have a total of 9 representatives from across political parties on the SPV board as compared to the current 4 (Sources: nyooz.com 2015) Similarly, in 2015, **Nashik (MNS),** selected in the second round, passed a resolution to have more elected representatives at the time of SPV formation (ToI, 2019).

Prior to proposal selection, Nashik along with Navi Mumbai and later Pune (NCP-Congress), had been unable to convince its elected representatives for the SCP with concerns raised that the SPV model would hamper financial independence and autonomy of ULBs. A resolution by NMC was forwarded to the State with the following conditions: No tax hike, Municipal commissioner should head the SPV and the SPV board must include mayor, standing committee chairman, leader of the house, leader of opposition and found general body members from parties excluding those of the house leader and opposition leader. Representatives of State and Centre in the SPV must be Government officials. While seeking a loan or development permission, SPV must seek approval of the NMC and provide a report every month (TOI, 2015). Many blamed this 'political interference' responsible for the city not making the first round of selections (TOI, 2016 Jan).

However, data analysis of SPV membership in Nashik and Solapur both indicates that there are only 4 elected members despite 6 being the allowed number by the State (See Table 11, p.34). As per local partner reports, the elected representatives have no decision making powers leading some members to believe that the inclusion was done only to suppress resistance (Sources: Local Partner Report, Nashik).

SPV Chair and CEO positions play into the bureaucracy

In Maharashtra, the State opted to appoint the IAS officers that served as mentors for city proposals in the position of SPV Chairman although media articles report that this was earlier to be held by civic chiefs (TNN, 2016).

As per data collated by INHAF for the State, in all cities barring Nashik, the SPV CEO post is or has previously been occupied by Municipal commissioners, additional municipal commissioners or Dy. Commissioners, who are all State appointed and not elected representatives. Currently, barring Nagpur, Nashik and Pune, the CEO posts in the remaining 5 smart cities of Maharashtra are held by the city municipal commissioners, additional commissioners or Dy. Commissioner.

The SPV intended the CEO to be a full time, independently held position which is not the case in most cities. Moreover, civic chiefs are constantly transferred from cities which impacts the 3-year tenure imagined for the position under the SCM. The cities have seen two to three changes in the CEO position over the last five years of the mission period. In Thane and PCMC, although the additional municipal commissioner and municipal commissioners are also CEO of the SPV, less frequent transfers have ensured that the SPV has retained its CEO also with only one change in the mission period.

Box 14: OBJECTION TO CEO APPOINTMENTS

In Aurangabad, MPs raised concerns about the slow pace of work, pointing to the appointment of the Municipal Commissioner as CEO as one of the leading causes. With the municipal commissioner also taking care of other civic issues, the CEO position needed to be filled by a dedicated officer for implementation. In 2020, the State issued a directive to the city civic chief in Aurangabad to look for a dedicated officer for the smart city SPV (Source: TOI, 2020).

However, there has also been political interference in the appointment of SPV CEOs. The State appointed a full time CEO for Aurangabad in 2021 but was met with objection by the Municipal Commissioner who insisted that the post remain with an IAS cadre officer. Political parties also raised objection to the appointment. Similarly, in Nagpur, at the start of 2020 the new Municipal Commissioner (T.Mundhe) also took over charge of the SPV leading to leading to vehement opposition from the ruling NMC, Mayor and Union Minister for road, transport and shipping. This led to his removal in July 2020 and replacement with an acting CEO from the members of the board.

Decisions are not inclusive of elected representatives

Despite efforts at increasing representation of elected representatives, the feedback from cities is that decisions are not inclusive and dynamics of discussion remains limited to non-elected representatives. Feedback from cities is as follows:

- **Pune:** NGO representatives noted that SPV members are largely non-elected and have no connection to the roots of the city.
- **Aurangabad:** Dynamics of the municipal corporation spill over into the SPV board so party agendas and hierarchies are at play even though political representatives are given space to participate.
- **Thane:** Proposal discussion remains limited to bureaucrats and civil society representation is completely lacking. Proposal discussion was limited between chairman, CEO and members of GoM. Interviews with Mayor, Corporator and leader of house also revealed that board meetings were not interactive. Waterfront proposal was not discussed in Board meetings as per the corporators. SPV structure makes it answerable to the State and Centre but not to the city. Despite elected representatives, type of projects are influenced by consultants. No staffing within TMC to run the SPV – which limited consultants from giving ideas of innovation and inclusion.
- **Nashik:** As per local partner reports, these representatives have no voting rights or decision making powers leading members to believe that the inclusion was merely done to suppress resistance (Sources: Local Partner Report, Nashik).

- **Pimpri-Chinchwad:** Views of bureaucrats and elected representatives are not matched as each have different objectives to fulfil. **An important point raised in the city report is that this may be due to differences in the statutory period** - the tenure of the mayor (2.5 years) and that of the standing committee members (the 16 member standing committee of PCMC - two year tenure, with eight members or 50% of the committee being replaced each years as they complete their term) varies.

Lack of Advisory councils

Cities were also meant to include an advisory council comprising of city level experts, which has not been formed in most.

- **Pune:** The advisory council was meant to provide a feedback loop for the SCM to remain responsive but their role remains ambiguous and list of appointees to the council is yet to be finalised.
- **Thane:** Advisory committee does not contain subject experts and suggestions are therefore consultant led. Non-inclusion of subject experts in the advisory committee meant that suggestions were largely consultant led. Civil society is completely lacking in the SPV structure.

3.8 LACK OF INFORMATION IN THE PUBLIC DOMAIN

SCM has not mentioned the aspect of transparency (as indicated by a mandatory public disclosure law reform under JnNURM) in its guidelines which would make it necessary for SPVs and ULBs to publish annual accounts, audit report, administrative report, progress of works and such. Still, it was hoped that SPVs being registered under the companies act with better transparency provisions, would abide and put information in the public domain. However, data analysis shows otherwise.

At the same time problem with the data (which has been taken from MOHUA's two sets of data) can be found wherein there is a mismatch between projects proposed in SCP and their value and projects tendered or grounded and their value. This inconsistency extends to the cities as well where furthermore; there is non-availability of micro level data about progress. Neither the State urban development department nor the 8 ULBs or SPV websites carry much information.

A review of 8 cities of Maharashtra revealed that all cities have their own web site through which information is placed in public domain. Smart City SPV is a company incorporated under Companies Act so it is expected and necessary that it should also be putting information about its activities and progress in public domain but 5 out of 8 ULBs have independent web site for Smart City SPV while 3 ULBs have created a separate web page on their ULB web site.

A detailed review of the information placed in the public domain by the 8 Smart cities of Maharashtra is contained in the Annexure (See special paper by Ravikant Joshi). The tables here taken from the paper indicate that that 5 out of 8 ULBs have not placed their annual accounts, , latest annual budgets, and the progress of development works undertaken and no ULB has placed its auditor's report in public domain (on website). Beside this in general web sites of all ULBs are inadequately developed, difficult to navigate logically and whatever information they have placed has gaps or are disjointed.

Review of information shared by ULBs/SPVs through websites about smart city project implementation (Table 21, 22; for full article by Ravikant Joshi see Section 6) clearly shows that except Nashik and Pune, other cities have shared very minimal or no information with the people.

Table 21: Information in the public domain by Maharashtra's smart cities (Taken from Ravikant Joshi Paper, See Section 6)					
Name of City	Existence of website	Annual Accounts	Annual budget	Audit Report	Projects' Progress
PUNE	Yes	Yes 18-19	Yes 19-20	No 17-18	Yes
SOLAPUR	Yes	Yes 18-19	No	No 14-15	No
KALYAN-DOMBVLI	Yes	No 2014-5	No	No	
NAGPUR	Yes	No 2017-8	No	No	No
THANE	Yes	No	Yes 19-20	No 16-17	Yes
NASHIK	Yes	No	No 2018-9	No 14-15	No
AURANGABAD	Yes	No	No	No	No
PIMPRI-CHINCHWAD	Yes	Yes 18-19	Yes 19-20	No 12-13	Yes

Table 22: Details about Information in the public domain by Maharashtra's smart cities (Taken from Ravikant Joshi Paper, See Section 6)							
Name of City	Separate Website	Board of Directors information	Memorandum & Article of Association	Achievements / best practices	Annual Accounts	Audit Report	Smart City Projects' progress
PUNE	Yes	Yes	No	Yes	Yes but 2017-18	No	Yes but indirectly
SOLAPUR	Part of ULB site	No	No	No	No	No	No
KALYAN-DOMBVLI	Part of ULB site	Yes but indirectly	No	No	No	No	Yes but indirectly
NAGPUR	Yes	Yes but indirectly	Yes	No	No	No	Yes but indirectly
THANE	Part of ULB site	Yes	No	No	No	No	Yes
NASHIK	Yes	No but indirectly	Yes	Yes	Yes	Yes	Yes but indirectly
AURANGABAD	Part of ULB site	Yes but indirectly	No	No	No	No	Yes but indirectly
PIMPRI-CHINCHWAD	Yes	No	No	No	No	No	No

3.9 FINANCIAL CAPACITIES

Inherent strength of Maharashtra's ULBs on paper

The 8 smart cities of Maharashtra all have the capacity to put their mandatory share: 5 out of 8 cities of Maharashtra have a high investment grade credit rating and 5 cities have a per capita municipal revenue above Rs.10000 per annum.

Viable Smart City proposals

Barring Thane, all other 7 cities of Maharashtra submitted moderate and financially viable smart city proposals. As compared to the national scenario, the cities in Maharashtra also submitted resource plans that are less dependent on government grants and are more realistic. Considering all 8 cities, 45% resources are expected to come from Government (India and Maharashtra) grants, 12% from other revenue sources, 23% from PPP and 10.6% through land monetisation. The resource plan for these cities therefore leverages the ULB capacity and strength. In addition, the size of the smart city plan is not disproportionate to their financial capacity barring the case of Solapur where the ration of annual smart city plan expenditure to average annual expenditure of ULB is more than 1. (For more details see Section 6, Ravikant Joshi paper).

Name of City	SCP Rs. Crores	Annual Revenue Rs. Crores	Annual Expenditure Rs. Crores	Annual SCP / annual income	Annual SCP /annual expenditure	Per capita municipal income (Rs)
Pimpri-Chinchwad	**1175**	4892	4118	0.05	0.06	28308
Pune	**2960**	5912	5910	0.10	0.10	18918
Nagpur	**3351**	1895	1844	0.17	0.18	7875
Nashik	**2195**	2176	2170	0.20	0.20	14643
Thane	**6132**	2381	2429	0.52	0.50	12934
Kalyan–Dombivli	**2027**	1445	1163	0.28	0.35	11586
Aurangabad	**1730**	596	595	0.58	0.58	5070
Solapur	**2226**	322	321	1.38	1.39	3377

Table 23: Comparison of SCP financial outlay and income and expenditure of ULBs (See Ravikant Joshi Paper, Section 6)

High per capita ABD cost

It can be observed that in case of Maharashtra Smart Cities only Pimpari – Chinchwad has proposed reasonable Per Sq. Kms. ABD cost at Rs. 103 crores but other cities of Maharashtra have proposed very high Per Sq. Kms ABD cost. This is because 6 out of 8 Maharashtra ULBs have opted for smaller Area for ABD. Thane ULB tops this list with absurd cost of Rs. 1223 crores per sq. kms because of unreasonably high SCP of Rs. 6132 crores which is second largest in financial terms among 100 smart cities. A detailed report on this in comparison to the national scenario is in Section 6 of this report (See paper by Ravikant Joshi).

Financial Challenges of SPVs during implementation

SCM funds are the major source of funding in the initial 5-year period for all cities with the balance envisioned to be met largely through convergence schemes or private sector partnerships. The exception to this is PCMC which notes minimal scheme convergence and is expected to meet balance funds largely through ULB contribution. Not many cities proposed use of ULB funding in the 5 year SCM period barring Pimpri-Chinchwad and Thane –through loans and capital infusion from the ULB towards the SPV. Pune makes a mention of contributing if needed through its own Capex budget and loans. Other cities, do not account for ULB contribution in the budget but make a mention of it in only in the narrative of the Smart city proposals submitted.

In the actual implementation, local partner reports and media have found difficulties faced by ULBs to contribute their share towards the Smart city funds, leading to an impact on pace and quality:

- **Nashik:** Decreasing income of Municipal Corporation due to removal of octroi and implementation of GST-concerns as to how the municipal corporation contribute financially towards smart city projects.
- **Aurangabad:** Other challenges that came through the interviews are that AMC cannot raise its own finances and has to borrow from the centre. AMC's finances make it unable to contribute financially (ET, 2019).
- **Nagpur:** In early 2020, the new CEO cancelled a number of tenders and stopped proposed projects, citing a lack of funds (Source: Indian Express, July 1 2020).
- **Solapur:** Almost all interviewees cited the lack of timely fund disbursement by State and Central government. Concern raised is that SCM is financially strapped – something noted even in the city D.P (2041) prepared by CRISIL in 2015. As a result, very few projects are initiated even though convergence forms a large part and pace is very slow.
- **Pimpri-Chinchwad:** The efficient utilisation of funds and timely disbursal of payments from the Centre and State is a concern. Interviewees however noted that the SPV can use their own resources to address these delays. Budget allocation by the civic body to smart city in 2020-21 is 2.26% (150 cr) paralleling allocation in earlier years as well.

3.10 PROJECT IMPLEMENTATION CHALLENGES

The ambitious nature of the SCM projects and unforeseen challenges have caused cities run into extended timelines.

- **Pune:** The SPV decided to review the work offered to the consultants (McKinsey) over an issue raised by the civic body over high consultant fees paid compared to the progress of work on the ground. One suggestion was to remove third party consultant participation and let government employees or the SPV take responsibility (HT, Feb 2020).
- **Solapur:** Knowing that the ULB is unable to raise its own funds have led to reluctance amongst reliable contractors to work in the city. As a result, tenders are issued through a nexus between contractors and politicians.
- **Kalyan-Dombivli:** Project management consultants were changed twice due to project delays (HT, Nov 2020).
- **Nashik:** Flawed tendering process of projects has resulted in delay of projects - clubbing of sub-projects increased costs and they were unable to find bidders to meet the costs. It also eliminated local contractors due to high costs of combined project tenders. SPV members have also expressed concern over poor consultancy services provided by the project management consultant and were debating whether to levy penalty charges. The PMC is paid 5 cr of the 31 cr fee thus far (ToI, 2020).

- **Aurangabad:** Project Management consultants CH2M were dropped over misaligned interests with the ASCDCL and exorbitant fees. Many cities are facing similar concerns as per Pushkal Shivam, who is currently Deputy CEO of the SPV. The preparation of detailed project reports for every component has also added to project timelines (ToI, 2018).
- **Pimpri-Chinchwad:** Nilkanth Poman, CEO, SPV noted that the tendering of several projects was underway but less projects had actually begun because the SPV was targeting major projects such as optical fibre cables, Wi-Fi systems which required time to start. The local partner report also notes that commencement of projects requires lot of paperwork including site clearances from the ULB which is taking time. New appointments and transfer of officials also impacts hand-over of projects. Unforeseen challenges such as floods (2019), Covid (2020-) and elections (2017, 19) have all impacted project timelines.

3.11 SMART CITY PROJECT PERCEPTION

[Source: Hindustan Times, Nov 2017 Cycle track on road connecting Bremon square and Parihar Chowk]

Box 15: CITIZEN OPINION OF IMPLEMENTED PROJECTS UNDER SCM

In two of the cities in Maharashtra, local partners conducted surveys amongst citizens to understand the perception and usage of implemented smart city projects.

PUNE

Mashal used an e-survey, offline survey, 2 transect walks and 7 semi-structured interviews to assess project implementation of four projects in the ABD area.

1. Bicycle Hire Scheme, ABD: Piloted in Aundh and Savtribai Phule Pune University campus with Zoom cars' PEDL and OFL. 34% use the bicycle scheme everyday and is considered one of the more successful initiatives. Its roots however lie in a 2016 comprehensive cycle plan prepared by PMC – laying an effective groundwork. Some concerns raised by citizens was that while cycles were available, cycling infrastructure is still inadequate outside the ABB area. In 2019 June, three service providers to the bicycle plan backed out due to financial problems and vandalism of the cycles (HT, 2019) leaving some uncertainty over the sustainability of the project.

2. PMPL Bus App: Designed to work in sync with GPS tracking on new and old buses pan-city to provide real-time bus tracking, fare estimates and route planning. Response rate to this question was 85%. 45% respondents were regular commuters who rated Pune's current public transit as below average. 43% used the bus regularly but only 24% use the PMPL app. 75% do not use the app at all and as per the questionnaire did not indicate an interest in doing so in the future. A majority of 51% noted that the PMPL app and bus tracking system has not contributed to an improvement in the overall services so far suggesting that an increased frequency of buses, punctuality and safety measures would be more beneficial.

2. D.P road Redevelopment, ABD: This is a street re-design initiative to provide wider footpaths, bicycle lanes, tactile markers for the visually impaired and space for commercial activities along a stretch of 27 kms in the ABB area. It has the most visibility among all SCM projects with 95% respondents. 43% respondents visit this street 5-7 times a week on the way to work or college and 30% use it for shopping purposes. Improvements cited point to an improvement in aesthetics and road design but not in parking management.

3. Placemaking, ABD: Undertaken in collaboration with a local architecture firm, this project targets unused spaces owned by the PMC to develop them into open spaces in the Baner ABB area. 90-92% people responded to this survey. Only 23% visit this place regularly i.e 5-7 days a week. 43% respondents found no change but about 51% respondents did find that the safety of the area had improved. Majority of the respondents visit this site to meet friends or for leisure but although sports infrastructure was also installed here, a smaller percentage use the sites for this purpose. About 48% respondents were not ready to pay an entry fee to the site. Most people had heard about these spaces in the city from friends and family as opposed to the smart city website. Respondents also noted that there were less trees in both sites and suggested that existing green spaces in built-up areas could be improved as well. Placemaking as a way to enable access to green spaces in the city therefore strives to meet a particular image but may not have addressed citizen needs fully.

(Detailed survey findings are in the Pune local partner report)

Box 15: CITIZEN OPINION OF IMPLEMENTED PROJECTS UNDER SCM

PIMPRI-CHINCHWAD

Symbiosis School of Economics carried out an observation survey of certain projects in March 2019 followed by a survey of 102 citizens in May 2019 using purposive and convenient sampling technique and focusing on the ABD area.

Some general observations were made: people are very satisfied street lighting facilities, rainwater harvesting, and roads and bridges; satisfied with sewage network, drainage, street lighting facilities, and roads and bridges; people are neutral about services such as fire services, solid waste management, pollution monitoring system. However, people are dissatisfied with modern hospitals, CCTV surveillance system; very dissatisfied with public Wi-Fi, CCTV surveillance system and modern hospitals.

Pertaining to specific projects:

1. Public bicycle sharing scheme: Implemented in 2018, begun with 600 bicycles and now 200-250 cycles at different locations. Residents complain that although there are cycles, there is insufficient infrastructure to run them - no dedicated bicycle tracks. CEO, Nilkanth Poman cites a need for behavioural change among citizens for it to be successful (HT, 2019).

2. BRTS buses: 58.82% do not use the bus. Those who do, use it often (18.62%) and daily (25%) and primarily for work purpose (35%). BRTS bus stops are almost 5-10 min walk from their home and workplace. Most respondents who commute i.e. 18.62% have given a good rating, 17.64% have given an average rating, 17.64% have given a poor rating and the rest 5.88% have given a very poor rating. Suggestions for improvement include: increasing frequency of the BRTS buses, safety and hygiene, more routes, AC buses, locating BRTS bus stops elsewhere and reduction in rates.

3. Public E-toilets: Most (69.60%) denied using public E-Toilets and only a few i.e. 30.39% claimed to have used the same. Out of the respondents who had used the e-toilets, 80.64% respondents claimed that it was not in usable condition. Provide facility, better hygiene, water availability were a few suggestions given by the respondents.

4. Hawking Zones: 49.01% respondents mentioned that there aren't enough hawking zones in PCMC. Suggestions include: more hawking zones near residential areas as opposed to chowks and roads which could also help reduce congestion on footpaths due to hawkers. It also guarantees a stable and safe place for hawkers to sell their products without having to fear police or any other inspection.

(Detailed survey findings are in the Pimpri-Chinchwad local partner report)

[Source: Image from Surbana Jurong website, PCMC Smart City Concept View, 2018]

4
MAHARASHTRA: OUTCOMES

While the mission brings in new focus areas and innovations to cities, it has also has encountered planning and governance challenges and has exacted a social cost for people and slowed down progress. This section tracks the different outcomes and responses that the mission implementation has had on the cities of Maharashtra. It also seeks to answer how and if the smart cities mission is answering the key urban challenges in the eight selected cities.

4.1 LACK OF AWARENESS

From on-ground reports, it appears that despite claims by cities to have reached a staggering number of people through online and offline modes prior to proposal creation, strategies were not always effective, sometimes tokenistic and not inclusive of all groups. Post-proposal and implementation stage engagement is limited, if at all, across the cities. As a result, 'participation' which was a much appreciated and key part of the mission, has not necessarily led to qualitative changes in the design of the projects themselves nor led to a better informed citizenry with regards to the smart cities mission.

Feedback from cities is that people are unable to make the connection between ongoing work and the smart cities mission or are unclear as to the purpose of the mission. Where there is some awareness, people have different ideas as to what the mission offers and several cities claim that citizens either did not know why the projects or certain areas were selected.

4.2 REDUCED AGENCY OF LOCAL GOVERNANCE

In most cities officials acknowledged the efficiency of an SPV for implementation purposes in terms of fast-tracked decision making, easier to receive foreign direct investment and collaboration with international partners. However, on the ground, its function is being confused as a governance model rather than an institutional mechanism and has subsequently undermined the decision making capacities of the ULB.

In addition, the financial capacities of the ULBs appear little to be impacted by the mission given proposed resource planning as per smart city proposals submitted. Smart City Mission funds form a significant portion of funding in the first 5 years. Of the balance funds, in some cities, private sector sources form a large part of the budget contribution. These include Public private partnerships and Land Monetization. Only Thane and PCMC clearly cite the use of revenue from SCM projects and ULB contribution.

An optimistic view sees the unlocking of the value of public lands as a potentially significant source of finance for upgrading urban and social infrastructure projects. However, it also has other implications on exclusion of certain communities or threats of displacement at the cost of profit. PPP is not only seen as a financial contribution in the smart city budget but is included in all cities as part of their implementation plan, with a host of contractors, operators, developers, consultants listed in the roles of preparation of DPRs, design, and execution of projects. When the 5-year mission period ends, the ULB is meant to take over the SCM projects but the excessive reliance on the private sector has made little notable difference to the internal capacities of civic bodies.

This would bring to question the sustainability of the smart city projects beyond the five year period for which they are assigned under the SPV.

4.3 SCM AS AN ANSWER TO URBAN CHALLENGES

The type of projects chosen under the Smart cities mission is influenced by consultants and decisions are taken by bureaucrats, with little connection to the grassroots of the city. There are no members from civil society, advisory councils are absent in most cases and the role of 'city level subject' experts is ambiguous.

Consequently, in several cities, key needs and challenges have not been addressed through the smart cities mission as is evident from the interviews in the cities wherein most people felt that projects picked were 'low hanging fruit' - already being implemented by the city, influenced by the point system that awarded more to certain projects (mobility, water, transport) and offered either inadequate or inappropriate solutions to existing challenges. Projects were selected despite the fact that there were objections and concerns raised through earlier experiences (Thane-SATIS, Nashik-Goda riverfront). The general consensus also offered was that the mission focused far too much on specific areas (under Area Based Development strategy) rather than a city-wide approach.

Some of the perceptions captured across the cities are presented in the following pages. (If more points can be added by local partners – this section can be developed further to answer the question – does the smart cities' mission really answer the urban challenges in these cities?)

▪ PUNE

In term of infrastructure, only Water and Waste concerns are taken up as pan city solutions whereas a majority of service infrastructure is taken up only under the ABD. This seems inadequate given that the three core challenges in the city are housing, air quality, sewerage and rivers. These largely remain within the convergence agenda. Although the proposal suggests that the ABD area was decided through a city-wide citizen engagement initiative, the selection of a fairly well developed area suggests that it does not address the immediate needs of the city. Rather, to achieve the aim of being 'India's most liveable city' PMC selected an area considered more convenient to act as a 'test bed' for smart city projects. In fact, many initiatives related to mobility had begun long before the smart cities mission. Citizens note that the SPV will open up PPP projects that make economic sense

– since it is meant to be a self sustaining model even if not a profit-making one. The perception is that Smart cities are hyped but projects will benefit those who fund them and there is little required expertise in India to create a Smart city. Several plans in the SCM have not been implemented well – metro and automation of bus routes are yet to work; Cycle networks in the ABD area do not connect to the rest of the city; Solar panels pioneered for rooftop use were installed on five acres of land instead.

NGO representatives offer that the 'Smart city does not seem to have a lot of things that are needed - it is technology oriented so for example, it will have crossings for hearing disabled but cannot provide buses to improve transport. Similarly, it can track garbage collection but whether citizens will obtain a cleaner environment is still a question mark'.

- **SOLAPUR**

As per the city Development Plan, the city is in a state of decline but has some redeeming features (heritage structures) in the old city which also houses the Solapur Municipal Corporation. This forms 20% of the total city area that is developed, however even then, services are weak. Water supply coverage is 37%, 20-30% households rely on septic tanks, 37% roads are unpaved leading to air pollution, only 5% population uses public transport. 31% of the city population lives in slums. Siddheshwar lake has become polluted due to Ganapati emersions in the last 10 years.

The Smart cities mission was therefore seen as a welcome move to improve the city's declining civic infrastructure (Feb 2016, The Hindu Business Line). However, some citizens interviewed during the course of this study fellt that Solapur was wrongly selected for the mission. The SCM focuses on a relatively well developed ABD area, whereas the emphasis should be on improving the conditions of the entire city. The 80% of the city (outside the core heritage area) and with severe infrastructure deficiencies remain neglected by the mission. Considering this, and rising poverty, smart city solutions such as solar panels seem woefully inadequate. Even projects that were taken up under the mission such as Laxmi Bazaar (night bazaar) have no real demand. The D.P (2041) prepared in 2015 by CRISIL notes that the Solapur Municipal Corporation cannot take on large projects due to limited financial resources. This is key as the SCM does not utilize the availability of vacant land to propose a Greenfield in addition to the old city retrofit strategy that could have offset costs. Although the city proposes convergence with HRIDAY for specific heritage structures, the scheme is not prevalent in Maharashtra apart from Amravati.

- **KALYAN-DOMBIVLI**

Although there was no local partner for this study in Kalyan-Dombivli, secondary sources reveal the key challenges in the city and from that, a fair assessment may be made about the place of the smart cities mission within this context. The biggest challenge in KDMC as noted with the then Municipal commissioner (Indian Express, Feb 2018) are illegal buildings, numbering 60,000 in 2004 and now estimated at 1.5 lakh structures. Regularisation is not the answer as the road widths and floors do not meet adequacy requirements. This is a challenge not noted in the SCM proposal and not dealt with under the mission. The other concern noted is that of haphazard parking and traffic. Other reports note that the region is low-lying and prone to flooding due to a weak drainage system (Isa Baud) and lacks adequate drinking water facilities – again not highlighted in the SCP report. Instead, the smart city proposal chose to focus on the station area in KDMC. In addition, e-governance initiatives were already introduced to KDMC in 1999 and in place by 2002 however a study found that municipal corporation staff did not accept use of the digital information system and data linking is absent. The Smart cities mission while proposing digital initiatives has not necessarily taken this into consideration.

Nagpur's development plan (prepared in 2015 by CRISIL supported by CBUD) focuses on a lack of service level indicators, loss of water, lack of adequate IT infrastructure, NMT, Hawker encroachment, absence of parking and footpaths and NMC policy to provide individual toilets. 45% land use is residential, 15% public purpose and 6% railways. The key challenges noted are inadequate infrastructure, lack of employment opportunities, landlocked city, delay in the MIHAN project whereas the opportunities are the clean and green image of Nagpur, its low cost high skilled labour, distribution hub, space for IT parks and health city.

However, the SCM chose to focus on unplanned layouts outside the city limits and to resolve conflicting land uses with the development plan.

▪ **THANE**

As noted by the local partner report, the Thane plan rides heavily on the assumption that it is a dormitory city but neglects the larger profile of the city. Thane has increasingly also become a city for a large migrant population and is home to local communities such as Agris, Kolis and Adivasis. The SC plan however did not consider these needs. Solutions such as junction improvement, lake rejuvenation do not address the main challenges of the ABD strategy focusing on the Station area. From the perspective of daily commuters, the area is highly congested with multiple claims over the space by pedestrians, street-vendors, auto-rickshaw drivers, private vehicles and unauthorized parking. Consequently, the announcement of the project has led to an increase in vendors and hawkers. The Eastern side of the railway station has unauthorized pick-up drop points for private bus services at the cost of Municipal transport services. Another perspective is offered by a set of the oldest Gaothans, Chendani Koliwada and Kopri village, both of which are sliced apart by the railway line. Residents of these gaothans have previously agitated against the bus service providers. For residents here, the proposed retrofitting is an encroachment over their space by outsiders. Current challenges need to be tackled through an effective combination of implementation of Street Vendors Act 2014, local area parking policy, zoning, urban design and civic consultations.

A clear case of a project created unrelated to actual need is that of the Kamal Talav – one of the first projects to be taken up under the mission and already in its completion stage – it has never featured in the 'List of City Lakes' published on the TMC website and senior residents in the locality share that the lake site used to be a depression created after digging stones for highway construction.

▪ **NASHIK**

The engagement exercises in Nashik put the riverfront and cultural tourism development as the key vision for the city under the SCM. Citizens voted equally for both retrofitting and Greenfield in the ABD area. Under Pan-city issues traffic/parking management was given first priority followed by water supply management. As per interviews carried out by Inhaf, citizens noted that Slum redevelopment, potable water and education should have been the priorities instead.

It was also noted that projects that were taken up, for instance, the Road work from Ashok Stambh to Trimbak road was not required as it was already well developed. This smart road pilot project is a 1 km stretch of road abutting the district court, educational institutions, central bus stops etc and had a natural gradient for water which has now disappeared after concretization. In addition, displacements have occurred: an auto rickshaw stand is now replaced with private parking and hawkers/informal establishments are removed except for those belonging to the Matoshree Hawker's Union.

Although the riverfront was given priority by citizens, the proposed project to further concretise the riverbed received numerous objections from environmentalists leading to one of the few successful

outcomes for people (See Box 20). On the other hand, although citizens voted for a greenfield project in the ABD area, the consequences on farmers living in these areas was not considered (See Box 19).

- **AURANGABAD**

Interviews suggest that JnNURM was a better scheme as it focused on overall public infrastructure rather than focusing on one area. Others felt that certain approaches – Greenfield – were prioritised due to higher points being awarded rather than actual need. Eventually, the proposed Greenfield fell through as land was not available and it conflicted with other city priorities such as water shortage, solid waste disposal and public transport. Most interviewees felt that key issues in Aurangabad, were not being addressed under the SCM. The only project that has taken off is the PPP with MSRTC to provide buses. The city has not addressed its waste crisis nor did it leverage its existing tourist potential with the presence of many heritage structures and a world heritage site in proximity.

Box 16: NO WASTE SOLUTIONS FOR AURANGABAD'S WASTE CRISIS

In 2018, a decade-long garbage crisis in Aurangabad came to a head when the village where the municipal corporation had been dumping waste for over three decades decided not to allow garbage trucks to enter, armed with a Bombay high court order. Other villages resisted also. Reports suggest that the city generates 436 tonnes of solid waste every day, there is no treatment or processing of solid waste and dumping only destroys land and contaminates groundwater. Following the village resistance, AMC and the State developed an action plan to manage the city waste including preparation of a Detailed project report. The city has not done this earlier – neither under the Swachh Bharat Mission nor the Smart City Mission. Infact, reports also suggest that the garbage crisis has taken a toll on the effective implementation of Aurangabad's smart city mission. It may be noted that Aurangabad's top priorities in the Smart city mission are housing, mobility, community facilities and water-sanitation. Despite a long standing garbage crisis, the mission does not address this concern.

[Sources: The Wire, 2018]]

PCMC's smart city proposal is one of two cities in Maharashtra where there is equitable distribution of funds between the ABD and Pan-city components. It also is one of two that does not propose a waterfront project under the SCM and has higher allocations towards social/community infrastructure focusing on health and education as well as a wide range of business and employment development initiatives. However, in terms of progress media reports note that the PCMC smart city has been able to complete only 20% of proposed work upto December 2020 owing to a number of factors as corroborated in the local partner report. These include unusually heavy rainfall, in November 2019, elections leading to the local code of conduct, limited manpower, site clearances not being given in time by the civic body and due diligence during tendering of projects.

In terms of meeting the city's challenges – prior to the Smart city, the growth of PCMC was marked by rapid development followed by a rise in concerns related primarily to acute water shortage, illegal construction, waste/garbage management and traffic congestion/weak transportation infrastructure. The visioning exercises under the SCM put traffic management as its first priority, followed by smart governance and pollution monitoring. Budgetary allocations indicate that transportation was given first priority by PCMC, followed by social facilities and then, water. Pan-city initiatives focus on transport as well, followed by governance initiatives.

As raised in the local partner report, PCMC has been under perennial construction for the last decade or more with roads, then the BRTS and now the metro project. Despite this, there is no long term vision or plan and has led to a wasteful utilisation of capital. Given the slow progress of smart city projects on-ground however, its outcome on the city's challenges is difficult to determine at this stage.

4.4 PEOPLE-LED CONTESTATION

Lack of inclusive engagement processes and threats of displacement faced by communities over proposed large-scale projects under the Smart Cities Mission has led to contestation across the cities.

▪ **NAGPUR**

In 2019, several residents from the ABD area staged an agitation in front of the municipal corporation – their homes were built with NIT sanction and are now being demolished for regularisation and road development under the Smart cities mission (TOI, 2019).

▪ **THANE**

The agri, koli communities raised objections to the cluster redevelopment and the Thane waterfront project, both, with successful outcomes in protecting their own land.

Box 17. CLUSTER REDEVELOPMENT IN THANE

The selected area comprises of informal settlements around Wagle Estate – the first industrial area set up under MIDC in Thane – which, since its decline led to an informal change in land use. The cluster redevelopment was to be replicated across 42 sites in the city through another scheme which would include urban villages– Chendani and Kopri Koliwada within ABD and Aagri Gaothans in Thane. These communities raised a successful fight against imposition of the Cluster Scheme on their traditional settlements. In 2018, the issue was raised in the State Assembly Session and the State Government had to declare that Koliwadas and Gaothans of Thane would be excluded from the Cluster Redevelopment Scheme.

Box 18. THANE WATERFRONT CONTROVERSY

An extremely controversial project – the idea was first mooted in 2010 and finally incorporated under the SCP to develop 10.10 KM of waterfront along Thane Creek into promenades, access points and Jetties. The waterfront was to be developed in seven stretches mainly along the Agri Gaothans of Ghodbunder Road and required heavy reclamation at the cost of mangroves and also involved displacement of some 310 families. TSCL was supposed to obtain permissions from Maharashtra Maritime Board and follow the Coastal Regulatory Norms. In a blatant violation of these norms, without permissions and excluding the local Koli and Agri Community, TSCL started reclamation, destruction of mangroves and displacement of people. Activists along with the Gaothan Conservation Committee of Thane sought judicial intervention in the matter after which the Hon. Bombay High Court directed the TSCL to stop waterfront development work until requisite permissions were obtained.
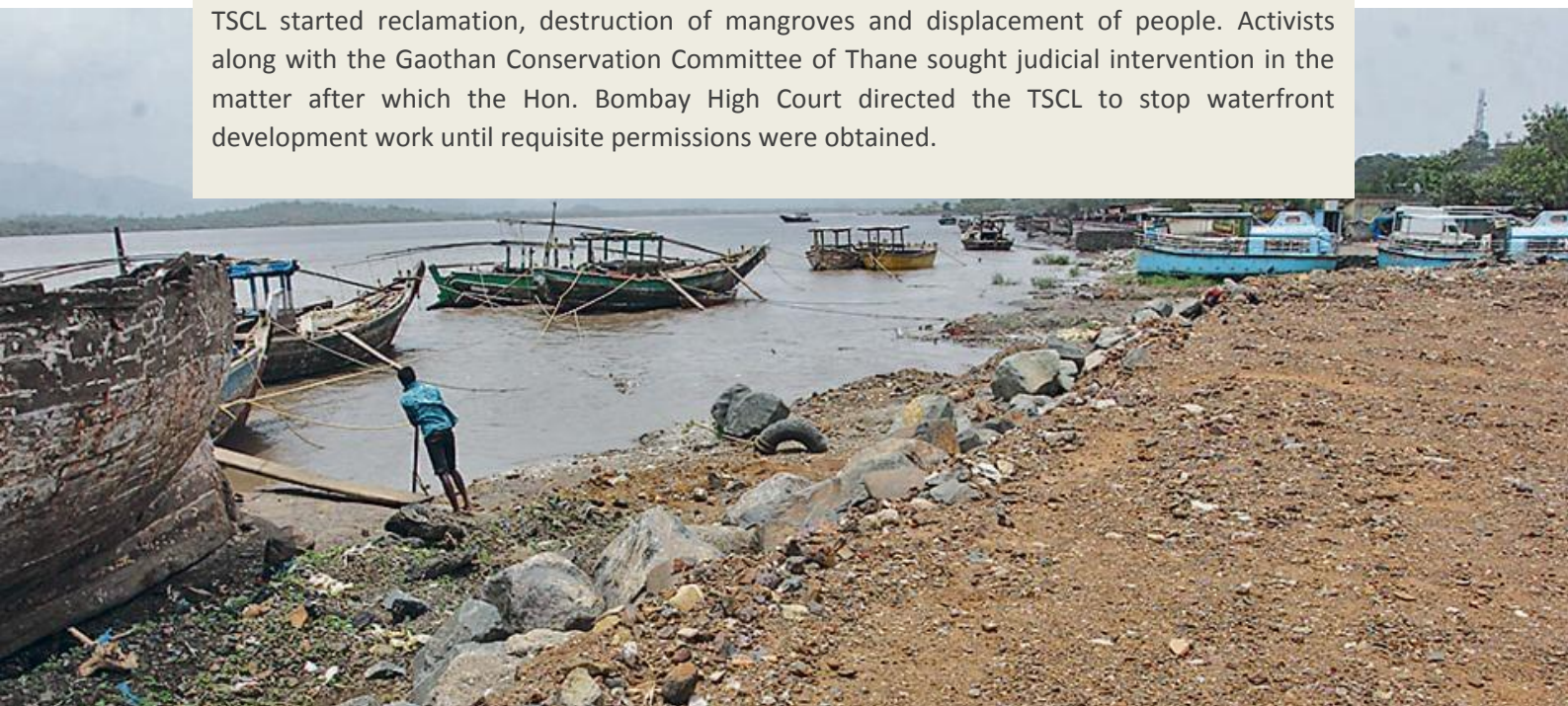
Farmers in the ABD Greenfield area in Nashik claim that they were not informed about the mission leading subsequently to contestation and demands for compensation.

Box 19. FARMERS AGAINST THE GREENFIELD PROJECT IN NASHIK

Protests are being led by farmers at Makhmalabad in Nashik - who did not want to part with their land (753 acres) to implement a Greenfield township project based on the Gujarat Model, costing Rs.300 cr under the SCM. Objections were also raised by activists who claim that construction activity is being carried out in the no-construction zone along the Godavari but the SPV claims that only gardens will be developed here and the rest of the township will be fitted with smart infrastructure while compensation is being provided to the farmers. Farmers will get 55% of the land for integration development and infrastructure on the balance.

Study by the local partner found that while the proposed township area is largely on agricultural land, it also covers some 'gunthewari' housing plots. The land under the gunthewari is regularised but houses are not and are classified as slums. Many people living here are adivasis or other backward classes. Agricultural plots belong to vanjari, mali and Marathas who are growing mostly cash crops.

Interviews with farmers by the local partner found that they were not officially informed of the plan. After a notice informing the farmers of survey numbers of land to be acquired, only five meetings took place. The farmers are reluctant to part with their land as agricultural activities will be affected and are demanding proper compensation. However, it may be noted that Greenfield areas in Nashik have seen a rising number of mixed land use ventures for homestays and resorts in the last few years for which farmers have entered into deals, prior to the smart cities mission.

In December 2020, the Bombay high court restricted the Nashik Municipal Corporation from carrying out any further activities with regards to Mahlamabad based on a case filed by 28 landowners including some farmers. As the project has gotten delayed, and the draft of the township needs to be declared within nine months of declaration, farmers are arguing that norms were violated anyway and insist that the project should be implemented further in the outskirts, on non-irrigated land instead.

[Sources: Nashik Local partner reports, Media: https://content.magicbricks.com/property-news/nashik-real-estate-news-industry-news/bombay-hc-tells-nashik-smart-city-to-stop-work-on-new-township/118002.html]

- In Nashik, the development of the Godavari riverfront has raised numerous protests leading upto a breakthrough in June 2020 when the SCM funds were redirected towards removing earlier concretization and focusing on rejuvenation instead.

Box 20. A LANDMARK CASE – NASHIK GODAVARI WATERFRONT

The Godavari riverbank was targeted for improvement in 2002 under the JnNURM, ahead of the Kumbh Mela of 2003. There are also reports that in 2013, the project was handed over from the charge of the Nashik Municipal Corporation to Reliance Foundation due to lack of funds.

The project destroyed 17 ancient ponds and by 2015, the river was dry – depending as it does on groundwater and small springs for its flow (Source: vikalpsangam.org). Residents and environmental activists also raised concerns that the 'improvement' through concretization of the riverbed had encroached on river flood lines. In 2016, massive floods hit Nashik ghats, which seemed to prove this point.

Despite this, the project was re-introduced under Smart City as part of renewing religious tourism that the city attracts with 2 components: riverfront beautification and de-silting river.

Between 2015 and 2018, a public interest litigation was filed against the municipal corporation, district administration and Maharashtra State irrigation department by an city environmentalist. The demand was that the focus of the SCM be on rejuvenating the river and uncovering the submerged ponds rather than beautification alone.

Despite rising costs and project delays, bids for the project were called but with little success. As of Dec 2018, tenders for the project were opened 4 times with only 1 bid. In March 2019, citing cost issues, the project was scrapped.

However, in a landmark move, the Smart City SPV as of June 10th, 2020 has begun removing concrete from the riverbed and will also be working to revive the old kunds in the river.

4.5 SLOW PROGRESS

Absence of integration with city level processes – unmindful of earlier lessons and lack of proper coordination between agencies for right of way or inadequate land acquisition rights are now impacting project progress under the smart cities mission which find themselves entangled in land issues, D.P processes and overlapping parastatal areas. Financial disbursement delays, ULB capacities, flawed tendering processes and ambitious projects under the SCM that have not been able to find agencies have also impeded progress.

- **Pune:** Media: Media reports (2019) noted that corporators have raised concerns about lack of coordination between PMC and PSCDCL. The new CEO (Dec 2019) noted that projects were stuck due to land issues, legal disputes and lack of funding. Tender for widening Mahaji Shinde Road was cancelled due to development plan issues.
- **Nagpur:** Overlapping parastatal areas in the ABD area – between the Nagpur Improvement Trust and the Municipal Corporation have caused friction between the two agencies and impacted people who had their houses regularised under NIT but now have to pay under the smart cities mission as well.
- **Nashik:** As per interviews, the project (Electric Crematorium) is directly meddling with responsibilities of Municipal-Corporation that are fulfilled by the elected representatives and thereby creating a distance between elected representatives and citizens.
- **Aurangabad:** Dropping of the Greenfield stemmed from many reasons – including no land availability, other townships in the same vicinity – so although at the start the board was happy with the idea of the project, it became clear that the project was not feasible. In addition, much of the land in the city belongs to the Nizam, land ceiling act is not implemented properly and so property disputes are common.

Box 21: PUNE – DEVELOPMENT FOR WHOM?

Within the Smart city objective of developing physical and social infrastructure, Pune sought to 'solve' core infrastructure in a 'future-proof' way. This reflects a central agenda of the MoUD, to use the SCM revenue and foreign direct investment (FDI) to improve, primarily, urban mobility and water equity, with some goals addressing other core infrastructure such as energy, housing, security and sanitation. As noted in the Pune local partner report, although this model makes sense on paper, such a top-down approach raises significant questions. For example, to what extent are such efforts directed at improving the quality of life for its citizens, especially those most in need, or to what extent is it an effort to boost real estate and corporate investment in the city, particularly the ABD?

[Source: Local Partner Report]

5
MAHARASHTRA: RECOMMENDATIONS

Based on findings from the 8 smart cities of Maharashtra, both in terms of challenges and innovations, the following recommendations are proposed to equip the various stakeholders through the smart city journey.

5.1 DEVELOP CAPACITIES WITHIN CIVIC BODIES

5.2 EMBED SMART SOLUTIONS WITHIN WIDER CITY VISIONS AND PLANNING FRAMEWORKS

5.3 FOCUS ON BETTER ENGAGEMENT

Involvement of civil society and NGOs for better participation

5.4 MANDATE TRANSPARENCY IN THE MISSION

Inclusion in the Smart city guidelines and monitoring by higher level governments so that information is shared in the public domain.

5.5 ENSURE PROTECTION OF THE RIGHTS AND NEEDS OF MARGINALISED COMMUNITIES

[needs discussion to collate]

6
THEMATIC PAPERS

Disciplining Citizens through Smart City Engagement Strategies, Dr. Avinash Madhale

Financial Sustainability of Smart Cities in Maharashtra, Dr. Ravikant Joshi

Smart Cities Mission in Maharashtra: What is so smart about it?, Dr. Amita Bhide

Disciplining Citizens through Smart City Engagement Strategies
Dr. Avinash Madhale

Dr. Avinash Madhale, is currently working as a Programme Officer for Centre for Environment and Education's Urban Program Group based out of Pune. For last 15 years, he has been facilitating participatory budgeting and helping citizens engage in city governance processes. He has been working as political communication expert in the area of sustainable urban transportation, water & sanitation, school education and informal economy with focus on street vendors.

[AWAITING FINAL PAPER]

[AWAITING FINAL PAPER]

[AWAITING FINAL PAPER]

Financial Sustainability of Smart Cities in Maharashtra
Dr. Ravikant Joshi

Dr. Ravikant Joshi worked as Chief Accountant in Vadodara Municipal Corporation for 20 Years. After voluntary retirement in 2002, he worked as an Advisor for Urban to CRISIL Risk & Infrastructure Solutions Ltd. – Mumbai for the period 2002-2017. He works as a freelance consultant with various national and multi-lateral institutions. He was Chair Professor – Urban Management at St. Joseph College of Business Administration – Bangalore. He is also associated with various civil society groups including Janaagraha/PROOF and various universities, academic / training institutes.

I. Introduction

The Smart Cities Mission (SCM), with the proposed outlay of Rs. 48000 crores from GOI for 100 cities, the much discussed, awaited and promoted city/urban development programme of the NDA Government was announced on 25 June, 2015 after 13 months its coming to the power in May 2014. The names of 98 cities[4] selected after the first round of selection were announced on 27th August, 2015. By the end of November 2015, Smart City Plans of 100 cities was submitted and in January 2016 the country got its first batch of 20 cities selected under Smart City Mission (SCM). As cities from 23 states and union territories could not find place in the first 20 cities there was uproar, so instead of 40 cities in the next round of selection, a fast track selection process was undertaken and one city from each of 23 States and Union territories submitted their Smart City Plans (SCPs) by end of April 2016 and 13 cities out of 23 fast track cities got selected in June 2016. With 13 slots out of 40 cities of second round selection gone, the unselected 67 cities submitted their SCPs for 27 slots by the end of June 2016 and in September 2016, 27 cities' out 67 cities got selected. In the third-round smart city proposals of 30 cities were approved on June 23, 2017 and finally in the fourth round remaining smart city proposal of 10 cities were approved on January 18, 2018. Thus, 100 cities were selected under Smart Cities Mission and their SCPs were approved.

Out of these 100 cities 35 cities are million plus (9 cities having population more than 2 million), 24 cities having 5 to 10 lacs population, 12 cities having 3 to 5 lacs population, 22 cities having 1 to 3 lacs population while 7 cities are having population less than 1 lacs. Against these all eight cities of Maharashtra are million plus – Solapur in 2011 was not million plus but when it submitted SCP it had become million plus.

Under SCM each smart city will get funds of Rs. 100 crore per annum (maximum Rs. 500 crores in five years) and equal amount will have to put in by the State and the City together (Rs. 50 crores by the State and ULB, in all Rs. 250 crores by State and ULB in five years). The smart cities and their respective States will have to incorporate Special Purpose Vehicles (SPVs) and then implement smart city projects with private partner under PPP mode. All the cities have incorporated SPVs and have also appointed project management consultant.

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[4] Initially Jammu and Kashmir and Uttar Pradesh failed to nominate one city from the quota allotted to them, which they later nominated beside that additional 7 cities were included in the list at the request of the State by GOI, so now smart cities list stands at 107.

Smart Cities Mission has many shortcomings – conceptual, structural right from its inception which are now getting amplified and supplemented by the operational problems. One of the very important problem is regarding financial sustainability of smart cities.

'Financial sustainability' has been mentioned only at one place (see Figure 1) in the smart city plan format of 40 odd questions to be filled in by cities and submitted to the Ministry of Urban Development. However, the concept of financial sustainability has not been explicitly defined in the Smart City Mission guidelines. Moreover, the financial sustainability indicators or parameters which will be considered while analyzing the SCP of the city have not been outlined in the guidelines or other smart city mission documents. In SCM guidelines, it is not made clear whether financial sustainability of SCP will be examined or not? Similarly, financial sustainability is not made a mandatory condition or prerequisites to receive funds. In the SCPs submitted, all the cities have provided Financial Operating Plan (FOP) of the proposed SPV and a resource plan to fund SCP, but many cities have not provided overall financial operating plan of the ULBs showing clearly impact of Smart City Plan on overall finances of ULB.

The review of all the 100 SCPs have clearly indicated that barring some exceptions, ULBs have not submitted an action-plan for resource improvement to make the ULB financially self-sustaining as was asked in Smart City Proposal format. This fact can be noticed from SCPs by a non-professional. However, the reality is all these SCPs have got approved without asking any further explanation or raising any doubt about the action-plan submitted for making the ULB financially self-sustaining.

Figure 1: Snapshot of Smart City Plan document format (Ministry of Urban Development, 2016)

38. RESOURCES PLAN

Describe the financing sources, the own-sources of income, the financial schemes of the Central or State governments for which your city/SPV is eligible, which can be used to fund the SCP proposals and pay back loans. Briefly describe an action-plan for resource improvement to make the ULB financially self-sustaining. (max. 1500 words)

GOI of India has promised budgetary support in the form of SCM grant of Rs. 48000 crores which amounts roughly to 25 per cent. Another 25 percent funds around Rs. 50000 crores will come from State Governments and ULBs contributions. Thus, total envisaged investment in SCM is Rs. 100000 crores against these 100 smart cities have submitted project proposals of Rs. 2,15,325 crores[5]. Even if it is assumed that GOI, State Governments and 100 Urban Local Bodies will be able to put in investment of Rs. 100,000 crores, there are serious concerns about the ability of the 100 cities selected under SCM to be able to raise remaining Rs. 115325 crores; in other words, there are serious concerns about the financial robustness and financial sustainability of the SCM[6]. Before examining financial performance of Maharashtra Smart Cities, it would be appropriate to understand overall performance SCM.

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[5] Rs. 205018 crores as per smart cities mission website if figures inclusive of life cycle cost are taken in to account then this total Smart City proposal figures stand at Rs. 215500 crores.

[6] Joshi Ravikant – Smart Cities Mission – A Contrarian View – Urban Sanitation – July – September 2015 issue.

II. Smart Cities Mission: Macro Financial and Implementation Picture

There is non-availability of systematic, consistent macro and micro level data about the progress of smart cities mission. The only macro level SCM performance picture is available from Annual Report of the MoHUA for the year 2018-19[7] and 2019-20[8]. According to these annual report at end of March 2019 against the 5151 project proposals amounting to Rs. 205018 crores in all 846 projects of Rs. 14324 crores have been completed. This means combine performance of 100 smart cities at the end of 4th year of SCM was 16 % in terms of number of projects and 7 % only in terms of financial outlay.

As per annual report of MoHUA for the year 2019-20; by the end of 31 December, 2020 in all 1461 projects of Rs. 24467 crores were completed. In percentage terms performance stands at 28.4 % in terms of number of projects and 12% in financial terms.

As per Smart Cities Mission Dashboard[9] accessed on 2nd April 2021, at the end of 31st March 2021, tenders for 5577 projects have been issued of Rs. 172998 crores; against which work orders have been issued of Rs. 139991 crores but works of 2388 projects has actually got completed at the cost of Rs. 39953 crores. In percentage terms actual performance amounts only 19.5 % in financial terms at the end of the sixth year of the project.

Recently SCM dashboard has started providing city-wise expenditure data in broad sense using that performance of Maharashtra cities under SCM has been analysed in the summing part of the paper.

Another set of macro data[10] comes from the credit rating carried out of SCM and AMRUT Towns. AMRUT reform agenda which included a set of 11 reforms comprising 54 milestones to be achieved over a period of 4 year provided for Credit rating of ULBs as one of the AMRUT reform to be attained by Mission cities.

Figure 2 – Credit Rating of SCM and AMRUT Cities

*Rating of 2 cities awaited
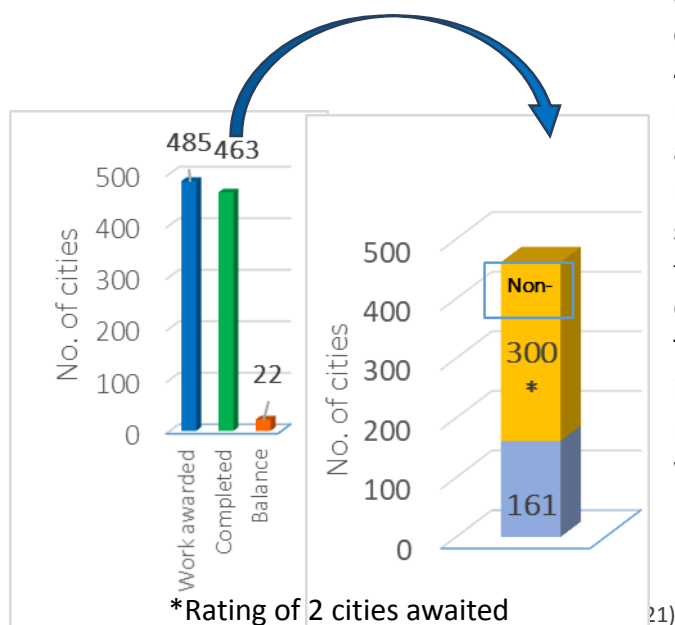
Credit rating work of 485 cities was awarded and by end of November 2018 credit rating of 463 cities have been completed[11]. Out of 463 cities, in all 161 cities (35 per cent) have received investment grade rating (BBB⁻ and above). Only 37 cities out of 161 cities have received high or adequate investment grade status. Further analysis shows that out of these 37 cities only 22 belonged to Smart Cities Mission cities.

The credit rating exercise has clearly indicated that only 22 cities out of 100 cities under SCM has investment grade rating, while 37 cities have simple investment grade

[10] AMRUT – MoHUA PPT on Credit Rating and Issuance of Municipal Bonds in National Workshop on Municipal Finance and Urban Planning, Stein Auditorium, IHC, New Delhi – 26th November, 2018

[11] https://www.icra.in/Rating/Index?RatingType=RANA

rating (above BBB¯¯¯ up to A¯¯¯) and 41 cities out of 100 cities SCM lacked financial health (See Table 1).

Table 1 - List of Smart Cities with their credit rating

Credit Rating Symbol / Category	Description / Safety of the investment	Name of the smart city municipal body	Number of cities
AAA	Highest Safety		
AA+		Pune, Ahmedabad, Faridabad, Pimpari-Chinchwad, New Delhi	5
AA	High Safety	Vishakhapatnam, Surat,	2
AA-		Thane, Nashik,	2
A+		Indore, Kalyan-Dombivali, Vadodara,	3
A	Adequate Safety	Chennai, Warangal, Mangaluru, Rajkot,	4
A-		Jaipur, Jabalpur, Bhopal, Lucknow, New Town Kolkata, Madurai	6
BBB+		Bhubaneshwar, Coimbatore, Udaipur, Ludhiana, Raipur, Kota, Kanpur, Ajmer, Tiruchirappalli, Ujjain, Gwaliar	11
BBB	Moderate Safety	Kochi, Davangere, Kakinada, Chandigarh, Panaji, Tirupati, Nagpur, Jalandhar, Hubali Dharwad, Thiruanantpuram, Patna, Karimnagar, Shimla, Bilaspur, Tirunelveli,	15
BBB-		Belagavi, Ranchi, Tanjavur, Pasighat, Toothikodi, Moradabad, Tumakuru, Tirupur, Sagar, Amaravati, Deharadun	11
BB+		Solapur, Bhagalpur, Amritsar, Raurkela, Karnal, Erode, Bareilly, Saharanpur, Aligarh, Dharamshala	10
BB	Inadequate safety	Vellore, Salem, Mujhafarpur, Puducherry, Bengaluru, Jhansi, Aizwal, Gangatok, Satana	9
BB-		Agartala, Shrinagar, Jammu, Bihar Sharif, Agra, Guwahati	6
B+		Aurangabad, Allahabad, Shilong, Varanasi	4
B	High Risk	Kohima	1
B-		Imphal	1
C	Substantial Risk		
D	Default		
	No Information	Port Blair, Namachi, Shivamogga, Naya Raipur, Gandhinagar, Dahod, Silvassa, Diu, Karavati, Itanagar	10[12]
	Total		100

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[12] Though these ULBs' credit rating details are not available because even if it becomes available these cities are unlikely to be even in low investment grade category.

III. Smart Cities Planning – Design in Maharashtra

Overview of Maharashtra ULBs versus other smart cities

Maharashtra being one the most urbanized state and more importantly one of the most advanced state in terms of urban local government systems; it has been important part of Smart Cities Mission initiative. This paper investigates performance of Maharashtra cities/ULBs which are most developed and financially strong under the smart cities mission. Table 2 presents a comparison of Maharashtra Smart Cities with rest of smart cities of India.

Table 2 – Comparison of Maharashtra Smart Cities with rest of India smart cities

Particulars	Out of 100 cities	Maharashtra cities
No. of Cities	100	8
No. of Million Plus Cities	36	8
Cities having high Credit Ratings A- and above	22	5
Cities having moderate Credit Ratings	37	2
Cities with Non-Investment grade credit rating	41	1 (Aurangabad)
No. of cities able to contribute own share of Rs. 250 crores one way or other way	22**	8
No. of Cities having Revenue Surplus	50*or less	8
Average Per Capita Per Annum Municipal Revenue above Rs. 10000	8	5 ^
Average Per Capita Per Annum Municipal Revenue above Rs. 5000 but below Rs. 10000	19	2 #

**Only 16 cities will be able to do this if seen realistically
*Data not available, ^ PCMC tops India at INR 28038, # Nagpur and Aurangabad

Following inferences can be drawn from the Table 2 about Maharashtra ULB and rest of India ULBs:

Maharashtra ULBs have financial capacity to put in own share in SCM

Only 22 out of 100 ULBs will be contributing their mandatory share fully or partially. As remaining 78 cities do not have funds to put in their mandatory share of Rs. 250 crores in the smart city project, their respective State Governments will be contributing mandatory share on behalf of the ULBs. Out of these 76 Cities which will not be putting their mandatory share some 30 Cities have indicated that in future they will be able to put in funds for Smart Cities Projects from their own sources or from the surplus of SPV, which is clear unrealistic statement or planning. Against this national scenario Maharashtra ULBs have capacity to put their mandatory share.

Maharashtra ULBs are creditworthy

Out of 100 ULB selected to become smart cities only 22 cities have high investment grade against this 5 cities out of 8 Cities of Maharashtra cities have high investment grade credit rating while 2 have moderate credit rating, only 1 city Aurangabad has non-investment grade credit indicating that it will be difficult for Aurangabad ULB to raise funds from market.

Maharashtra ULBs have high per capita municipal revenue

Only 8 out of 100 cities have per capital municipal revenue above Rs.10000 per annum and 5 cities out of these 8 belongs to Maharashtra. Pimpri-Chinchwad at Rs.29038 tops the list of 100 smart cities in terms of per capita municipal revenue per annum. Two ULBs of Maharashtra have per capita municipal revenue between Rs.5000 to Rs. 10000 only 1 ULB Solapur has registered per capita municipal revenue less than Rs. 5000.

Maharashtra Failed to utilize its quota in Smart Cities Mission

It is really surprising that one of the most urbanized and developed States of India like Maharashtra failed to utilize its quota granted under SCM, but it is a fact now. Maharashtra was allotted quota of 10 cities as per smart cities mission guideline but in final list of 100 cities there are only 8 cities. Maharashtra Government after following very opaque/non-transparent process[13] had nominated 10 cities for Smart Cities second stage selection. Out of 10 cities selected for smart cities mission Mumbai and New Mumbai participated in first two rounds but after that did not participate in Smart City selection process while Amravati did not qualify even after participating in all four rounds of selection. Pimpri-Chinchwad city which was a surprise omission in the first list of nominated 10 cities finally was included in place of New Mumbai for submitting smart city proposal in the third round and it made grade. In the following page is the list of final 8 Maharashtra Cities/ULBs which are now designated to receive smart cities grant and to become smart cities. This paper compares performance of these 8 cities against the performance of remaining smart cities.

Smart city proposals of Maharashtra

As per Table 3, the population of 100 smart cities totals up to 985 lacs, out of this Maharashtra 8 cities constituted around 140 lacs that is 14.17 percent. These 100 smart cities have submitted in all project proposals of Rs. 2,15,500 crores out of which 8 Maharashtra cities proposal constituted 10 percent that is (Rs. 21796 crores). Thus, as compared to population share, Maharashtra cities have submitted moderate financial proposals.

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[13] Opaque and non-transparent process because as per SCM guidelines a State was to select cities for nomination to SCM on basis of certain given parameters. Maharashtra Government (for that matter all the States) never disclosed performance score of cities and why a city got selected or failed to get selected for nomination to second round. This practice non-performance based selection of cities for SCM by all the State completely killed merit based feature of the SCM in the first round and then approval of SCP of cities with any consideration for cities financial capacity and financial sustainability of SCP in second round by GoI completely killed element of merit, spirit of competition and performance.

Table 3 – Smart Cities of Maharashtra

Smart City Selection Rounds	Selection Rank	City	Popu-2011 (in lacs)	ABD Proposal (in crores)	PAN City Proposal (in crores)	Life Cycle cost O&M (in crores)	Total SCP (in cr)	Credit Rating
1st Round 20 Cities Jan 2016	2nd	Pune	31.25	1860	520	580	2960	AA+
	9th	Solapur	9.52	1947	279	0	2226	BB+
Fast Track 13 Cities April 2016	Only for those states from where no smart city got selected							
2nd Round 27 cities	35	Kalyan – Dombivali	12.47	1643	384	0	2027	A+
	38	Nagpur	24.06	(876) 3131	(126) 220	(91) 0	(1093) 3351[14]	BBB
	41	Thane	18.41	5235	169	728	6132	AA-
	44	Nashik	14.86	855.89	979.04	359.69	2195	AA-
	59	Aurangabad	11.75	1198.4	364.52	167.2	1730	B+
3rd Round 30 Cities June 2017	78	Pimpri-Chinchwad	17.28	565.4	529.1	80.4	1175	AA+
4th Round 10 Cities Jan 2018								
		Total	139.6	16436	3444.7	1915.3	21796	
% Share of Maharashtra Cities in 100 Cities (No. of Cities 8%)			14.2%					10.0%

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[14] Nagpur submitted its SCP in three phases (2016-21; 2021-2023 and 2023-26) totaling Rs. 3351 crores beyond SCM guidelines in the light of its political economy and financial health. For the first phase 2016-21 it had proposed SCP of Rs. 1093 crores only, but here all three phase figures is taken in to consideration.

ABD-Pan city components in Maharashtra

As per SCM data on website[15] ABD proposal constituted Rs. 164204 crores (80.8 %) while Pan City Development Proposals constituted Rs. 38914 crores (19.2 %) share out of total Rs. 203172. Against these 8 smart cities of Maharashtra have allocated 84.2 per cent of funds (Rs. 18350 crores) for ABD projects and 15.2 per cent of funds (Rs.3346 crores) for Pan City Solutions Projects (Refer Table 4).

Smart cities proposals comprising ABD, Pan City and other components ranged from Rs. 6199 crore (Chandigarh) or Rs. 6132 crore (Thane) to Rs. 778 crores (Port Blair) and Rs. 527 crores (Karavati). Average of 100 proposals comes around Rs. 2153 crore. 36 smart city plans are above national average of Rs. 2032 crore, while 31 outlays ranged between Rs. 1500 to 2000 crore, 22 SCPs ranged between Rs. 1000 to 1500 crore. Three cities of Namachi – Sikkim, Port Blair and Karavati submitted SCP of less than Rs. 1000 crore.

Average size of SCPs of Maharashtra Cities is Rs. 2725 crores slightly higher than national average size of SCP of Rs. 2153 crore this is because Thane city SCP is way out of range at Rs. 6132 crores and here Nagpur 10 years SCP is considered, if amount of both Cities is taken out then average size of 6 cities come to Rs. 2052 crores which is much less compare to national average in spite of the fact that all Maharashtra Cities are million plus cities. In terms of per capita cost of smart city proposal also Maharashtra Cities are much below or economical at Rs. 15613 per capita compare to national average of Rs. 21853 per capita (Please See Table 4). In the light of these figures and as explained later in the paper Maharashtra Cities submitted rational, moderate and financially viable smart city proposals.

Table 4 – Size of SCP, ABD and PCD Component of the Cities under different rounds[16]

Selection Round	No. of cities	Popula-tion (lacs)	ABD proposal Rs. In Cr	% Share	Average ABD Proposal Rs. Cr.	Pan City Deve Rs. In Cr.	Average Rs. Cr.	Total SCP Rs. Cr.	Average SCP Rs. Cr	Average Per Capita SCP cost (Rs.)
1st round	20	353.80	37334	77.2	1867	11598	580	48932	2447	14808
Fast Track	13	96.40	25090	87.2	1930	3891	299	30300	2330	31431
2nd round	27	254.83	41723	78.9	1545	11387	421	56136	2079	22029
3rd round	30	243.89	46879	81.7	1563	10515	350	62488	2083	25622
4th round	10	36.75	11549	83.7	1155	2258	226	14010	1401	38436
Total	**100**	**985.36**	**162575**	**75.5**	**1625**	**39565 18.4%**	**395**	**215325**	**2153**	**21853**
Maharashtra cities	**8**	**139.60**	**18350**	**84.2**	**2294**	**3346 15.8 %**	**418**	**21796**	**2725**	**15613**

[15] http://smartcities.gov.in/content/ and https://smartnet.niua.org/smart-cities-network
[16] http://smartcities.gov.in/content/ and https://smartnet.niua.org/smart-cities-network

- **Non-inclusive in terms of population:** Out of the 98.5 million population of 100 Smart Cities, the direct beneficiaries or the population residing in ABD area is 9.71 million. In other words, just 9.85 per cent of the total population of these 100 smart cities is covered under ABD component and will be directly benefiting under SCM.

  Maharashtra cities are more non-inclusive as average ABD population of its 8 cities stands at 7.24 percent compare to national average of 9.85 per cent. Among the 8 Cities of Maharashtra Solapur is most inclusive as its ABD constituted 17 percent population of the city. Kalyan-Dombivali comes next in terms of 16 percent population being direct beneficiaries of Smart Cities Investment. Thane stood 3rd in terms of inclusivity with 15.2 population covered under Smart cities Mission. The least inclusive city in terms of population is Pune 1.3 percent followed by Nagpur with 2.7 percent city population coverage under SCM. Population coverage under SCM may be less in Pune and Nagpur as these cities are much bigger in population terms compare to other cities but at the same time it is also a fact that inclusivity has not received special attention while formulating SCP by these cities as it has not been focus in case of 100 cities also.

  Percentage of city population covered under Smart City Proposal indicator is subjective to some extent as each city has different total population. Irrespective of total population of city if we consider population cover under SCP in absolute number then emerging picture is little different – Maharashtra cities on an average covered 126415 people under smart city proposal which is better than national average for 100 cities of 97079 people. Though this figure is more but it does not make Maharashtra cities inclusive because as noted earlier Maharashtra cities are with million plus population while there are 30 cities out of 100 smart cities having less than 300000 population, pulling down national average.

- **Non-inclusive in terms of area of the City:** The aggregate municipal area of 100 cities is 13585 sq. kms. and these cities together have proposed area-based development of 490 sq. kms., that is just 3.60 per cent area of the cities have been proposed for smart development under Area Based Development component of smart cities scheme. The area coverage is less than the national average of 3.60 per cent in case of 43 cities out of 100 smart cities.

  Seven out of eight cities of Maharashtra have less area coverage than the national average of 3.60 percent of the city. Maharashtra cities together averaged 2.60 percent city area coverage under smart city proposals. Only Kalyan-Dombivali Municipal Corporation has covered 8.5 percent area of the city as ABD under SCP. One of the reasons for Maharashtra cities having smaller percentage area compare to national average could be size of the cities of Maharashtra which are bigger in size.

  Percentage of city covered under smart city proposal indicator is subjective to some extent as each city has different size or total area. Irrespective of size of city if we take only size of the area taken for Smart City development then also picture is not different. National average for area taken for ABD under SCP by 100 cities is 4.88 sq. kms or 1220 acres against this Maharashtra 8 cities have average of 4.91 sq. kms or 1227 acres. Thus Maharashtra cities irrespective of their size are equally non-inclusive like all other smart cities.

- **Long period required to make entire City a Smart City:** Even if non-inclusiveness issue is kept aside, such a low coverage (2.60 per cent of area or 7.24 per cent of population of Maharashtra Cities) of area and population under five-year smart city program means a very long period to convert entire city in to a smart city. Even if area coverage under Smart City

development is assumed at 20 per cent (five times compare to actual covered in proposals) and 20 per cent population (two times compare to population proposed under SCP) coverage in five years, it will require 25 years to develop all the area of the city or it will require 25 years to cover entire population of the city under Smart Cities Mission.

- **Grant funding dependent and Unrealistic Resource Plans:** Against the total smart cities' cost proposals of Rs. 203172 crores[17] (Rs.215325 crores[18]), the winning 100 smart cities have submitted /developed resource plan of Rs. 205000 as per MoHUA (Rs. 215500 crores as per this study). Various resources identified for funding smart cities proposals/which formed resource plan are presented in Table 5. It can be observed from the consolidated resource plan based on data of 100 cities that while ULBs are going to contribute only 6 percent funds, 64/66 percent of the funds are projected to come from higher level governments as a capital grant, thus it is highly dependent on grant funding. Further table 5 shows that the resource plan is dependent on PPPs to the extent of 21 percent and another 5 percent funds will be augmented from land monetisation and sale of additional but track record about PPPs in urban service development/delivery and other two resources is very poor, therefore it unrealistic.

Table 5 –Summarised Resource Plan proposed by 100 Cities for Smart City Proposals

Particulars (Rs. crore)	Amount (as per this study for 100 smart cities)	% share	Amount (as per SCM)	% share
GOI and State Government Assistance (100 ULBs)	91976	43%	92250	45
Convergence with GOI/State Schemes (98 ULBs)	45937	21%	43050	21
GOI and State Contribution Sub-total	**137913**	**64%**	**135300**	**6**
ULBs contribution as mandated under SCM (24 ULBs)	4539	2%		
Addl contribution by ULBs from own funds (20 ULBs)	3423	1.6%		
From surplus of SPV created (25 ULBs)	4797	2.2%	**16400**	
ULBs Contribution Sub–total	**12759**	**5.8%**		
Land Monetisation (6 ULBs)	8303	3.85%		
Sale of additional FSI/FAR (3 ULBs)	2066	0.95%		
Land Based Revenue sub-total	**10369**	**4.8%**		
Public Private Partnership (88 ULBs)	44693	20.7%	43050	21
Corporate Social Responsibility Funds (12 ULBs)	632	0.3%		
Beneficiaries Contribution (10 ULBs)	902	0.4%		
Others (community share, Donor Agencies) (6 ULBs)	791	0.3%		
Funds from Market and People Sub-total	**47018**	**21.7%**		
Loans and Borrowings (27 ULBs)	**7441**	**3.7%**	**10250**	**5**
Total	**215500**	**100%**	**205000**	**100%**

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[17] This figure is as per MoHUA / Smart Cities Mission website
[18] This figure is as per the study of 100 SCP carried out by author of this research paper.

Compared to the National Scenario, Maharashtra Cities have submitted resource plans which are less dependent on government grants and which are more realistic. It can be observed from the Table 6 that the resource plan of Maharashtra cities is only 45 percent dependent on GoI and GoM grants compare to national average of 64 percent. This is because Maharashtra cities will be putting in their mandatory funding share of Rs. 250 crore and additional funds from the revenue source and financing their SCP to the extent of 12 percent which is double than national average of 5.8 percent. This less dependency on grant funding clearly indicates better financial health of Maharashtra Cities.

Resource plans submitted by Maharashtra cites are more realistic but not fully realistic because these cities have proposed to raise 23 percent from PPP and another 10.6 percent funds through land monetisation.

Table 6 –Summarised Resource Plan proposed in SCP by 8 Smart Cities of Maharashtra

Particulars (Rs. crore)	Amount (100 Smart cities)	%share	Amount (Maharashtra)	%share
GOI and State Government Assistance SCM (100 ULBs)	91976	43%	6156	28
Convergence with GOI and State Schemes (98 ULBs)	45937	21%	3785	17
GOI and State Contribution Sub-total	**137913**	**64%**	**9441**	**45**
ULBs contribution as mandated under SCM (8 ULBs)	4539	2%	1983	9
Addl contribution by ULBs from their funds (1 ULBs)	3423	2%	182	
From surplus of SPV created (2 ULBs)	4797	2%	380	
ULBs Contribution Sub–total	**12759**	**6%**	**2545**	**12**
Land Monetisation (2 ULBs)	8303	4%	2323	10.6
Sale of additional FSI/FAR (3 ULBs)	2066	1%	514	2.4
Land Based Revenue sub-total	**10369**	**5%**	**2837**	**13**
Public Private Partnership (4 ULBs)	44693	21%	5085	23
Corporate Social Responsibility Funds (1 ULBs)	632	0%	200	1
Beneficiaries Contribution (1 ULBs)	902	0%	457	2
Others (community share, Donor Agencies) (0 ULBs)	791	0%	--	--
Funds from Market and People Sub-total	**47018**	**22%**	**5742**	**26.3**
Loans and Borrowings (27/1 ULBs)	**7441**	**3%**	**812**	**3.7**
Total	**215500**	100%	**21877**	100%

- **Highly Leveraged SCPs:** These 100 smart cities, as per guidelines, are expected to receive maximum grant (funding resources) of Rs. 75000 crores (Rs. 50000 crores from GOI and Rs. 25000 crores from the State Governments) against this smart cities' resource plans have proposed to Rs. 215000 crores. Thus smart cities have proposed convergence and leveraging of 2.87 times and that too when the cities will be contributing only 6 to 8 percent.
  The Maharashtra smart cities also have proposed high convergence and leveraging of 3.5 times only difference is Maharashtra smart cities will be contributing 12 percent of funds from their own sources as they are financially much better than other cities (See Table 2).

- **Financially weaker cities have submitted unsustainable SCPs:** Though 46 cities totally lacked financial robustness or capacity to put in their 25 % share toward smart city proposal, these cities were allowed to submit their SCP without any financial cap or restriction. The result is disastrous and lack of financial sustainability. It can be observed from the Table 7 that the 46 ULBs which do not have capacity to fund their SCP, contrary to rational expectations, have submitted SCPs which are bigger in terms of financial outlay of SCP, per capita SCP investment or cost, per capita ABD cost, per sq. km. ABD cost than the cities which are capable of funding their SCP. Even within 54 cities one can see the 33 ULB which will putting a partially share or very less share have submitting SCPs which are certainly less unrealistic figures compare to 46 ULBs which are not capable of putting any share but have more unrealistic figures compare to 21 financially viable cities.
  As noted earlier (table 2) Maharashtra Cities are financially strong (high per capita per annum municipal revenue and revenue surplus), creditworthy (have higher credit ratings) and capable of putting in their own share of funding and it can be observed from the table 7 that Maharashtra cities have submitted financially reasonable / moderate and more realistic SCPs compare to 46 ULBs which are not capable of funding SCPs but also compare to other 21 ULBs which are capable of putting in their own share of funding fully or 33 ULBs which are capable of putting in their share partially.

Table 7 – Per Capita and Per Sq. Km. ABD cost with respect to ULB's Own Source funding of SCP

	Particulars	Per Sq. Km. ABD Cost (Rs. in crore)	Per Capita ABD cost (Rs.)	Average size of SCP (Rs. In Crores)	Per Capita SCP cost (in Rs.)
1	All Maharashtra ULB (8) are contributing their full share to SCP	419	135686	2725	15613
2	21 ULB which are contributing their share of Rs. 250 crore or more amount than Rs. 250 crores	267	113896	2602	17272
3	33 ULB which are contributing Rs. 240 crore or less as their share (as less as Rs. 1 crore as share)	327	166009	1851	25034
4	ULBs not contributing toward SCP in any form (46 ULBs in all)	384	218805	2165	29381
	Average for 100 ULBs	333	167467	2153	21853

The fact that weaker cities have submitted more unrealistic and unsustainable SCP can further be observed from the table 8. It clearly shows that per capita ABD cost goes on increasing as one moves from bigger cities to smaller cities and it is highest in case of smallest cities. Similar trend with some changes can be observed about per Sq. Km. ABD Cost. Same trend is also true about per capita SCP investment or in other words per capita SCP cost or burden. Average SCP financial outlay does get reduced as one move from bigger to smaller cities but this reduction in the financial outlay of SCP is disproportionate to reduction in the financial robustness /capacity of smaller cities.

Table 8 – SCP size, per capital and per sq.km. ABD cost etc.

Population (Size) of the City	No. of cities	No. of Cities Putting own share	Popula tion (in Mn)	Average SCP size (Rs. Cr.)	Per capita SCP cost /burden (Rs)	Per Capita ABD cost (Rs)	Per Sq. Km. ABD Cost (Rs. Cr.)	ABD Popu as % of total popu	ABD area as % of total city area
Above 1 million	35	12	72.39	2610	12621	129307	358	7.48	2.39
0.5 to 1.0 million	24	14	17.12	2223	31159	174665	302	13.22	4.19
0.3 to 0.5 million	12	6	4.38	1831	50152	207624	286	20.07	9.30
0.1 to 0.3 million	22	9	4.43	1714	85131	258875	346	23.38	5.25
Less than 0.1 million	7	5	0.21	1561	509754	711586	388	51.81	15.07
Total	**100**	**46**	**98.54**	**2153**	**21853**	**167467**	**333**	**9.85**	**3.59**

There is a clear behavioural trend that is the ULBs which are financially viable know the value of being financially viable and have submitted financially viable SCPs but the ULBs which are in very poor in terms of financial health or viability have not bothered for financial viability of SCPs and as a result have submitted unrealistic and unsustainable SCPs.

If entire selection process would have insisted that ULBs will get smart city funding in the proportion of their ability to put in their own share of resources maximum to Rs. 500 crores from GOI and Rs. 250 crores from the State then ULBs would have submitted realistic and financially more sustainable SCP.

- **Size of SCP disproportionate to Financial Capacity of ULBs -** Size of SCP has been found disproportionate to existing finances of the ULBs. If annual expenditure of smart city plan implementation comes equivalent to average annual expenditure[19] of a ULBs (that is if ratio is 1), it will still mean doubling of resource flow and doubling of the present performance by

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[19] Annual revenue could have been better indicator but the secondary data which is available does not clarify whether it is made up of revenue and capital revenue together or only revenue receipts, also there are other distortion in the form of inclusion or exclusion of extra-ordinary receipts.

the ULB. 24 ULBs have 1 or less than one. In case of more than 74 cities the ratio of annual cost of smart city plan and annual revenue of the ULB is more than 1 by big margin. Out of these 74 cities in case 21 cities ratio of annual smart city expenditure to total expenditure of ULB is more than 1 and less than 2; while in case of 25 cities ratio is more than 2 and less than 5 which clearly indicates that implementing Smart City Proposal will be a very daunting or uphill task for ULBs. In case of remaining 28 cities this ratio more than 5 times and in many cases, it is more than 50 times also. For example, in case of Dharmashala City annual cost of its smart city proposal implementation is whopping 36.7 times[20] of average annual revenue of the Dharmashala City, while it is 50 times in case of Gangtok and 86 times in case of Kohima. This clearly indicates size of SCPs are disproportionate to financial capacity of ULBs in case 74 cities.

In case of 8 cities of Maharashtra size of their SCP is not disproportionate to their financial capacity. Except for Solapur (ratio of 1.38 times) the ratio of annual smart city plan expenditure to average annual expenditure of ULB is less than 1. Pimpri-Chinchwad has the lowest ratio at 0.06, while Pune has ratio of 0.10 and Nagpur has ratio of 0.17 (table 9).

Table 9 – Comparison of SCP financial outlay and income and expenditure of ULBs

Name of City	SCP Rs. Crores	Annual Revenue Rs. Crores	Annual Expenditure Rs. Crores	Annual SCP / annual income	Annual SCP /annual expenditure	Per capita municipal income (Rs)
Pimpari Chincha	**1175**	4892	4118	0.05	0.06	28308
Pune	**2960**	5912	5910	0.10	0.10	18918
Nagpur	**3351**	1895	1844	0.17	0.18	7875
Nashik	**2195**	2176	2170	0.20	0.20	14643
Thane	**6132**	2381	2429	0.52	0.50	12934
Kalyan – Dombi	**2027**	1445	1163	0.28	0.35	11586
Aurangabad	**1730**	596	595	0.58	0.58	5070
Solapur	**2226**	322	321	1.38	1.39	3377

- **The per capita ABD cost appears to be very high -** The cost estimated under ABD component as noted earlier is Rs. 162575 crores for estimated 98.54 lacs direct beneficiaries of the ABD. The average per capita cost of proposed ABD is thus around Rs. 167467 ranging from minimum of Rs. 23467 for Ludhiana City to Rs. 1256636 for Chandigarh City. 59 ULB have average per capita ABD cost more than average cost of Rs. 167467 for 100 cities.
There are not many benchmarks available about ideal per capita urban infrastructure development cost, the most recent and exhaustive per capita urban development cost index available is that of HPEC at Rs. 43386 for the year 2009-10. If it is converted to current year (2018-19) then it is roughly around Rs. 60000. In HPEC benchmark there is absence of various other non-municipal urban services like electricity, use of renewable sources of energy, education, health etc. which Smart City Plans have included in their ABD proposals.

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[20] Dharmashala – SCP of Rs. 2318 crore = annual expenditure = Rs. 463 crores. Annual average operating revenue of Dharmashala Rs. 6 crores = Rs. 463/6 = SCP 77 times larger than operating revenue.

if we calibrate HPEC figure on these two counts then it will come around Rs. 85000 but the average per capita cost of Rs. 167467 is double than HPEC norm at current prices.

In case of Maharashtra Cities also per capita ABD cost appears very high in case of some cities though they have submitted reasonable and sustainable SCP this is because population covered under ABD is small. It can be observed that Pimpari – Chinchwad or Kalyan-Dombivali have reasonable per capita ABD cost of Rs. 56540 and Rs. 82150 if compared to the benchmark of Rs. 85000 per capita as discussed above.

Table 10 – Per Capita ABD cost and Per Sq. Kms. ABD cost for Maharashtra Cities

Name of City	Population in million	Area sq. kms.	ABD Population as % of total population	ABD per capita proposed cost (Rs.)	ABD Areas as % of total area of City	ABD per Sq. kms Proposed cost (Rs. in Crore)
Pimpari Chinchawad	1.728	177	5.79	56540	3.10	103
Pune	3.125	276	1.28	465000	1.30	517
Nagpur	2.406	218	11.4	113854	1.75	824
Nashik	1.486	259	3.70	155616	1.42	233
Thane	1.841	128	15.20	187086	3.34	1223
Kalyan – Dombivali	1.247	137	16.04	82150	8.47	141
Aurangabad	1.175	139	9.36	108942	1.91	453
Solapur	0.952	179	16.96	120557	2.33	468
100 Cities Average	**98.536**	**13585**	**9.85**	**162575**	**3.59**	**333**

- **The per capita ABD cost appears to be very high -** The 100 cities together have proposed a total ABD area of 490 sq. kms., out of total municipal area of 13585 sq. kms., at the cost of Rs. 162575 crores. This translates in to average per sq. km. ABD cost of Rs. 333 crores. 47 cities out of 100 cities have per sq. km. cost above the average per sq. km. cost of Rs. 333 crores. Within this average cost there are wide variations - Indore City tops with per sq. km. ABD cost of Rs. 1505 crore[21] while Coimbatore City is at the second last with proposed per sq. km. ABD cost of Rs. 85 crores and Bengaluru at bottom with Rs. 78 crores per sq.km. ABD Cost
  - o In case of per capita urban development cost at least a HPEC Report benchmark was available but about per sq. km. urban development cost no such official benchmark is available, but some studies indicate cost per sq. km. ranging from Rs. 80 to 100 crores based on green field development at the assumed density of 100 people per hectare.[22] Another study about green field development cost at various places around Bengaluru City indicates Rs. 75 to 80 crore per sq. km.
  - o In earlier point per capita infrastructure development cost discussion showed that it can be assumed at Rs. 85000 per capita after escalating HPEC norm to current year price and including non-municipal services development cost. The average density of 100 cities is 73 persons per hectare. Even if we assume it at 100 persons per hectare

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[21] In fact, Bhopal tops the list with Rs. 1752 crore per sq. km. but Bhopal has submitted redevelopment and green field development with real estate development component in it, so it is not mentioned.

[22] Ramgopal Agarwala – India 2050: A Roadmap to Sustainable Prosperity – Sage Publication

for future then per hectare cost would be Rs. 850000 and per sq. km. urban development cost would be Rs. 85 crores. Even if Rs. 100 crores are taken as infrastructure development cost per sq.km. one can note that 97 out of 100 cities have proposed per sq. km. ABD cost more than Rs. 100 crores; and 84 cities out of 100 have proposed per sq. km ABD cost at more than Rs. 200 crores.

It can be observed from the Table 10 that in case of Maharashtra Smart Cities only Pimpri – Chinchwad has proposed reasonable Per Sq. Kms. ABD cost at Rs. 103 crores but other cities of Maharashtra have proposed very high Per Sq. Kms ABD cost. This is because 6 out of 8 Maharashtra ULBs have opted for smaller Area for ABD. Thane ULB tops this list with absurd cost of Rs. 1223 crores per sq. kms because of unreasonably high SCP of Rs. 6132 crores which is second largest in financial terms among 100 smart cities.

IV. SCM implementation in Maharashtra

Foregone discussion has clearly pointed out that that the Maharashtra cities like rest of the 92 smart cities are not inclusive (in terms of number of direct beneficiaries of ABD); are not cost effective (in terms of per capita and per sq. kms. ABD costs) and are also grant dependent with quite a leveraged resource plan but in terms of all these indices (costs, grant dependency, leverage ratio) they are little better than national average.

On other hand Maharashtra smart cities are bigger (in population and area), financially stronger in all terms (credit ratings, per capita municipal revenue, revenue surplus, capacity to put in own share etc) and most importantly these cities (except Thane) have formulated and submitted financially sustainable (ratio of annual smart city expenditure to average annual expenditure of a ULB) smart city proposals compare to rest of the 92 smart cities. Beside this, Maharashtra cites are known for their developed governance systems, so it becomes important to see whether they have performed above, equal to or below national average in past four years, and also need to know what information these ULBs or their smart city SPVs have put in public domain? and whether that information is useful for evaluating performance of these cities? Transparency also depends on how much? and what kind of information? a government agency is putting in public domain. Next section looks information available about smart cities mission implementation by cities of Maharashtra.

Implementation performance in number of projects and financial terms

Information in Public Domain by 8 Smart Cities of Maharashtra[23]
A review of 8 cities of Maharashtra revealed that all cities have their own web site through which information is placed in public domain. Smart City SPV is a company incorporated under Companies Act so it is expected and necessary that it should also be putting information about its activities and progress in public domain but 5 out of 8 ULBs have independent web site for Smart City SPV while 3 ULBs have created a separate web page on their ULB web site.

Before we examine what information ULB or its smart city SPV is placing in public domain about its Smart City Project, let us look at what information it is placing in public domain about its regular operations. Review of websites of Maharashtra Smart City ULBs (see Table 10) reveal that 5 out of 8 ULBs have not placed their annual accounts, , latest annual budgets, and the progress of development works undertaken and no ULB has placed its auditor's report in public domain (on

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[23] This review of information in public domain through official web site is as of 1st January, 2020.

website). Beside this in general web sites of all ULBs are inadequately developed, difficult to navigate logically and whatever information they have placed has gaps or are disjointed.

Table 10 – Information placed in public domain by the Maharashtra Smart City ULBs

Name of City	Existence of website	Annual Accounts	Annual budget	Audit Report	Projects' Progress
Aurangabad	Yes	No	No	No	No
Kalyan-Dombivli	Yes	No 2014-5	No	No	No
Nagpur	Yes	No 2017-8	No	No	No
Nashik	Yes	No	No 2018-9	No 14-15	No
Pimpari Chinchawad	Yes	Yes 18-19	Yes 19-20	No 12-13	Yes
Pune	Yes	Yes 18-19	Yes 19-20	No 17-18	Yes
Solapur	Yes	Yes 18-19	No	No 14-15	No
Thane	Yes	No	Yes 19-20	No 16-17	Yes

Table 11 – Details about information placed in public domain about Smart City Project by the ULBs

Name of City	Separate Website	Board of Directors informa-tion	Memorandum & Article of Association	Achieve-ments / best practices	Annual Accounts	Audit Report	Smart City Projects' progress
Aurangabad	Part of ULB site	Yes but indirectly	No	No	No	No	Yes but indirectly
Kalyan Dombivli	Part of ULB site	Yes but indirectly	No	No	No	No	Yes but indirectly
Nagpur	Yes	Yes but indirectly	Yes	No	No	No	Yes but indirectly
Nashik	Yes	No but indirectly	Yes	Yes	Yes	Yes	Yes but indirectly
Pimpari Chinchawad	Yes	No	No	No	No	No	No
Pune	Yes	Yes	No	Yes	Yes but 2017-18	No	Yes but indirectly
Solapur	Part of ULB site	No	No	No	No	No	No
Thane	Part of ULB site	Yes	No	No	No	No	Yes

Review of information shared by ULBs/SPVs through websites about smart city project implementation (Table 11) clearly shows that except Nashik and Pune, other cities have shared very minimal or no information with the people. 4 out of 8 smart cities have independent website for the SPV created for implementing smart cities program, rest of the 4 cities have provided a web page for Smart City Program in their main ULB website, but only 2 cities Nashik and Pune have shared real information.

As far as sharing of information with public is concerned, Nashik ULB is the only ULB which has placed maximum information on its website. It has placed Memorandum and Article of Association of the Smart City SPV in public domain and it has placed comprehensive annual reports of the Smart City SPV for all the three years (2016-17 to 2018-19) on the website, and as a part of annual reports has put in public domain information about the various decisions taken, progress in project implementation, annual accounts and most importantly independent audit report on annual accounts.

Pune comes second in terms of sharing of information about smart city program implementation. It has placed annual reports containing information about various decisions taken, progress made and annual accounts for the year 2016-17 and 2017-18, but all this information is not available for the year 2018-19 as annual report for the year 2018-19 is not placed in public domain. Compared to Nashik, Pune has not placed independent auditor's report for any of the year in public domain but it has placed information about its board of directors in a better and user-friendly manner on the web site.

Website of Pimpri-Chinchwad ULB is nicely designed and informative but when it comes to the website of Pimpri-Chinchwad Smart City SPV, it is totally underdeveloped and provide no information. Main website of Nagpur ULB is itself not informative (Table 10) and same is story with the Smart City web site.

Among the 4 ULBs which do not have independent website of the Smart City SPV, Thane ULB has shared some relevant information like board of directors, progress of projects but it has not shared vital information like annual accounts of SPV and independent auditor's report about annual accounts.

Physical and Financial Progress of Smart City Program in Maharashtra Cities

As noted above only 2 ULBs/SPVs have provided annual financial statement of the Smart City SPV. So for rest of the cities not financial progress data available. Out of two ULBs Pune SPV financial statements are 2017-18 and not for current year so even it is not possible to evaluate its performance, so only Nashik Smart City performance is reviewed as follows –

As per Nashik SPV Balance Sheet for the year 2018-19 – Smart City SPV received Rs. 478.72 crores in the form capital, Smart City Grant from GoI and GoM, transfer of own share from NMC (GOI – Rs. 203.85 crores; GOM Rs. 101.90 crores; NMC Share Rs. 159.77 crores) etc. against that Works completed and capital work -in-progress is of Rs. 6.70 crore. Thus financial progress by end of 2019 amount less than 1.5 % of the resources available and almost nil against the total SCP of Rs. 2195 crores. The annual report at other places mentions that projects of Rs. 45.5 crore have been completed and the projects of 265.4 crores are on-going. Even if these figures are considered Nashik Smart City Project performance does not go beyond 10 percent.

As there is no data about progress of smart city program from implementing ULBs an attempt was made to see what information Government of Maharashtra has placed in public domain about Smart Cities Mission implementation in the state by 8 ULBs. It is surprising that there is not simple mention of smart cities mission on web site of urban development department of Maharashtra. Not only this no information about SCM implementation is put in public domain in any other form by GoM or its any department or office.

Table 12 – Number of Projects tendered and grounded or completed as of March 2019$^{\$}$

Name of City	No. of Projects[#] proposed	Value Rs. Cr.	No. of Projects Tendered	Value Rs. Cr.	No. of Projects Grounded	Value Rs. Cr.	% perf No. of Projects	% perf Proj. value
Aurangabad	21	1730	7	431.2	6	426.2	33	25
Kalyan Dombivali	30	2027	12	1087.19	6	228.48	20	11
Nagpur	30	1093	9	1957.00	7	1879.03	20	172
Nashik	25/50	2195	50	2370.55	36	1228.24		56
Pimpari Chinchawad	48	1175	20	1198.76	16	1081.73	33	92
Pune	53/62	2960	62	4037.17	43	1616.85	81/69	55
Solapur	31/40	2226	40	1923.33	29	445.99	93/72	20
Thane	20/42	6132	42	5480.7	38	1253.7	190/95	20

as per http://smartcities.gov.in/content/innerpage/list-of-projects.php
$MoHUA – Annual Report 2018-19 http://mohua.gov.in/cms/annual-reports.php

As noted, earlier MoHUA has published and shared its Annual Report for the year 2018-19 and Chapter 6 of report[24] has provided information about Smart Cities Mission and its progress. In this MoHUA report though city wise actual expenditure / progress has not been given but it does provide information about number of projects tendered and grounded or completed (please see Table 12). It can be observed from the Table 12 that by end of March 2019 Maharashtra Smart Cities were able to start work on 33 % of projects comprising 20% value of the SCP. At the same time problem with the data (which has been taken from MOHUA's two sets of data) can be found in the table 12 marked with red highlight. There is a mismatch between projects proposed in SCP and their value and projects tendered or grounded and their value. No one has corelated different set of data and no explanation has been provided.

In recent months Smart Cities Mission Dashboard has started providing progress information for each smart city on basis of which table 13 has been formulated. It can be observed from the Table 13 Maharashtra as a whole is equal to national performance in number of projects terms but less than national average in financial terms (14.3 % against 19.5%). The national performance of 19.5 % at the end of sixth year is in itself very poor.

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[24] http://mohua.gov.in/cms/annual-reports.php

Table 13 – Smart Cities' Performance as of 31/03/2021 in number of projects and financial terms

Name of City	SCM Proposal Amount	Tenders Issued No. of projects	Tenders Issued Amount	Work Order Issued No. of Projects	Work Order Issued Amount	Works Completed No. of Projects	Works Completed Amount	No. of Projects completed %	Projects completed Amount %
Aurangabad	1730	20	727	12	452	10	440	50.0	25.4
Kalyan Dombivali	2027	18	1546	15	1382	3	5	16.7	0.2
Nagpur	3351	10	1997	7	1879	3	994	30.0	29.7
Nashik	2195	46	3053	43	2749	26	649	56.5	29.6
Pimpari – Chinchwad	1175	22	1448	21	1400	9	104	40.9	8.9
Pune	2960	60	3946	48	1806	19	704	31.7	23.8
Solapur	2226	46	1991	35	903	23	114	50.0	5.1
Thane	6132	42	6140	41	5901	20	101	47.6	1.6
Maharashtra Total	**21796**	**264**	**20848**	**222**	**16472**	**113**	**3111**	**42.8**	**14.3**
India Performance	**205018**	**5577**	**172998**	**4876**	**139991**	**2388**	**39953**	**42.8**	**19.5**
Maha Share	10.6	4.7	12.1	4.6	11.8	4.7	7.8		

It can be seen from the Table 10 that four cities – Aurangabad, Nashik, Nagpur and Pune have performed little better (around 25%) than national average of 19.5 % while rest of four cities Kalyan – Dombivali, Pimpri-Chinchwad, Solapur and Thane have performed poorly in terms of actual expenditure.

Summing Up

It is clear from the various aspects examined in this article that though Maharashtra ULB are far better in financial terms and considered to be most developed ULB system in governance and implementation capacity terms, but their SCM implementation is not better than national average. Not only this Maharashtra ULBs SCPs have been found non-inclusive, irrationally costly in per capita and per Sq. Kms terms and finally and most importantly non- transparent when it comes to sharing of basic and progress information about ULB and Smart Cities Mission is concern.

Smart Cities Mission in Maharashtra: What is so smart about it?
Dr. Amita Bhide

Dr. Amita Bhide is Professor and Dean at the School of Habitat Studies, Tata Institute of Social Sciences with nearly 20 years of teaching experience. Keeping her research focus centred on urban poverty alleviation, slum sanitation, housing, slum rehabilitation and urban governance, Amita has contributed to counter existing narratives on the role of the state in governing Mumbai and other towns of Maharashtra. She has also actively researched and engaged actively in broader issues including urbanisation, decentralisation and state of urban local bodies, community participation, gendered governance and regional development. As a key part of the Smart City coalition, Amita helped designed the early city report templates and tools, and reflects here on the social metrics of Maharashtra's smart cities.

I. CONCEPT OF SMART CITIES

The concept of 'smart cities' has risen to the agenda of international urban development in recent years. The rise is reflected in the creation of new cities such as Songdo in North Korea, Masdar in Abu Dhabi, Tianjin in China, HOPE city in Ghana or new initiatives in Barcelona, Singapore and Dubai. The proponents of the smart city are information technology majors such as CISCO, IBM (International Business Machines) etc who take it for granted that cities aspiring to 'smartness' already stand on a bedrock of basic administrative, infrastructural and informational efficiency in terms of human resource and technical hardware as well as quality of services and built environment. 'Smartness' is thus a layer added on this foundation to prod cities towards greater 'sustainability' and 'efficiency', taking advantage of the huge leap in smart telephony and big data analytics. Often taken for granted is also the preparedness of society in terms of access to and widespread use of mobile telephony and information services in everyday life. Smartness however, acquires different meanings when applied to an emerging economy like India where the base conditions are entirely different.

Documents pertaining to smart city mission emphasize a convergence of all urban development schemes and challenge cities to develop in such a manner that can 'act as light houses' for others. This can be interpreted as smart cities developing trajectories that can be blueprints for other parts of the city and for other Indian cities. It is from this perspective, that we study the developments in these 'light houses' and their interface with urban societies and their underlying social dynamics. Smart city mission comprises a range of projects identified by every city; it also involves some significant changes in the tools, technologies of urban governance. Both these aspects impact the social fabric of cities through changes which may be short-term or more enduring. We attempt to delineate such

implications for the social fabric of cities and particularly for the vulnerable sections in the cities. The key question at the heart of such a study is to examine whether and how the smart city mission contributes to making cities more inclusive, resilient and just.

The focus is on the review of Smart Cities programme-its design, operationalization in Maharashtra and implementation through a set of social metrics. The questions underlying these metrics are:

a) What is the SCM understanding/assumptions of the Indian city? Its societal attributes, social relations, citizenship, access to services; axes of vulnerability and exclusion?

b) Did the operationalization of the mission at the state level or city level make corrections /changes to the above understanding or assumptions? Did it add any newer assumptions?

c) What is the trajectory of implementation of projects undertaken in the SCM? Do they retain the current social fabric? Do they improve it and make it more inclusive? Is it disturbed?

II. URBAN MAHARASHTRA: THE BASELINE

Maharashtra is one of the most urbanized states in the country. Moreover, it houses Mumbai- the commercial hub – a city of immense scale which has spurred varied urban development projects. The state government has also undertaken several urban governance reforms since the decade of 1990s. The urban scene of Maharashtra represents several positive as well as negative aspects of urbanization in the country. We divide the baseline into two parts. The first part examines the overall trends in urbanization, urban society and urban governance in the state. The second does a specific SWOT analysis informed by a perspective of inclusion and justice. Some of these notable features are:

a) Centralised economy with the triangular area of Mumbai -Pune – Nasik as the hub. The differences between lowest urbanized district ie Gadchiroli and highest urbanized district ie Mumbai are very high. Urbanisation in the state is also positively correlated with economic development and high per capita incomes. Uneven development has produced highly concentrated pockets of urban development which attract migrants from all over the country and are highly dense.

b) Maharashtra is one of the states where demographics indicate a tilt towards urban dominance at nearly 50%; the state's overall population grew at 2.0% compound over the 1990s while its urban population grew at 2.9%. However politically the urban even now presents a fairly rural tilt with only 110 of the 288 legislative seats being urban.

c) Historically, Maharashtra presents a picture of strong and financially healthy civic bodies. This has however, begun to change in the last two decades with poor tax applicability and recovery, increase in non-taxed properties, withdrawal of octroi and now implementation of GST. As a result, several medium and small-scale cities are grant-dependent; some of the larger corporations like Mumbai and Pune, though continue to be financially strong.

d) Changes in the economic relationship with the state government also correspond with greater centralization of recruitment; higher control over sectors such as land, planning, housing, building control regulations and slums; water supply and infrastructure. Some of the examples include standardization of recruitment in different classes of cities, standardization of building control rules in all cities, final approval to city development plans by state planning directorate, creation of state level institutions and templates for water supply etc.

e) In contradiction to the directions of the 74th Constitutional amendment, Maharashtra has actually seen a greater centralization and control of state government after the 1990s. The centralization has been facilitated by the introduction of urban reforms which have demanded greater managerial skills and skilled human power in key positions.

f) Reforms that advocate participation of larger public, formation of participatory and decentralized governance forums, transparency and accountability to citizens have received

significant resistance in the state and their implementation has either been completely bypassed or done in a diluted fashion. This pattern can be seen in the case of ward committees in cities of more than 200,000 population; formation of area sabhas, implementation of public disclosure law etc. There are few, experimental initiatives undertaken in some cities towards more participatory governance such as the participatory budget in Pune.

g) Urbanisation in Maharashtra is equated with rising levels of employment in informal sector, high levels of urban poverty, rise in unauthorized housing and slums, incomplete urban plans with poor implementation and rising levels of shortage of infrastructure.

h) Large cities such as Mumbai metro region, Pune and Pimpri Chinchwad, Nagpur, Aurangabad, Nashik exhibit significant conflicts between infrastructure and popular settlements. In fact, the trend towards monetization and real estate development of land, and infrastructure projects has deepened, creating new threats for the popular settlements. In such cases of displacements, resettlement remains the policy of choice. Urban resettlement does not follow an institutionalized policy but usually compensation is in the form of alternate housing; distances of relocation are high except in cities where in-situ redevelopment in the form of slum redevelopment occurs. There has been some experimentation with alternatives such as the innovative resettlement node created by Shelter Associates in Sangli, experiments with in-situ upgradation by MASHAL in Pune but this remains marginal to relocation.

i) Implementation of several pro-poor laws and reforms remains poor in Maharashtra. For example, the National Street vendor bill has only been implemented in bits and parts. Surveys of vendors haven't been completed, town vending committees have been formed but not in the spirit of the law and demarcation of vending zones remains incomplete. Meanwhile localized initiatives for inclusion or for driving away vendors from particular spots continue. A similar lackadaisical approach is seen in the implementation of policies for homeless under NULM (National Urban Livelihoods Mission) and for disabled which calls for reservation of 3% amount in the budget.

j) Gender budget in Maharashtra could potentially have received a huge boost with a 50% reservation for women in the city councils and corporations. However, it is seen that the reservation for women is simultaneously accompanied by moves such as combination of electoral wards to create joint electorates, informal division of the mayoral term to a year to forge alliances between political parties which make active political participation and participation in decision –making more difficult for women.

k) Caste is a critical axis of inequality in cities of Maharashtra. A majority of inhabitants of slums and informal settlements in cities are Dalits. As per the Census 2011, 57.8% urban residents in Maharashtra were Dalits, more than 32% of them stayed in slums. Similarly, there is a preponderance of Dalits in the some of the most unsafe and waste/sanitation linked occupations.

l) Maharashtra has emerged as a highly exclusionary state in relation to migration and migrants. Schemes linked to food security and the PDS system, higher education are limited to migrants within the state and largely exclude those from outside the state due to their operationalization. Further, there have been anti-migrant agitations in Mumbai, Nashik in recent past, impacting the safety of migrants in the cities.

III.   Assessing the social in urban Maharashtra

Cities in Maharashtra thus, exhibit the following attributes in a SWOT analysis done from the perspective of inclusion, justice, safety and resilience. It is a highly chequered picture where the vulnerable sections undeniably get opportunities to access cities but there is significant and rising inequality that limit the same. Overall, recent trends show that there are many exclusionary developments in recent past that significantly crunch the opportunities and possibilities for the poor in cities of Maharashtra. Some specific features of the same are as follows:

A. Strengths
- Large economies and employment markets enable absorption of unskilled/inappropriately skilled labor due to the segmentation and opportunities linked to presence of a large bottom layer
- Land, housing and planning are porous and can enable footholds in cities, albeit fragile
- Highly politicized local governance system that creates some support and enables access to basic services
- Politics increasingly populist and hence potent with possibilities of inclusion
- Presence of strong, specialized and democratic local governments and state government institutions
- Presence of strong civil society –unions, associations and voluntary organisations with growing interest in urban issues

B. Weaknesses
- Economies have become less flexible as large industries have begun to shift out of state, new industries do not have large labour requirements, reforms have meant reduction in employment in public sector
- Emphasis on real estate and land development emerging as the key economies, leading to some inclusion in housing terms but overall making housing unaffordable
- Emergent urban politics is segmented, sectarian and lacks strategy and foresight, hence falls prey to greater state control
- Politicization of local governments and state systems have reduced the reliability of policy to deliver
- Investment in the urban is extractive and not directed towards making cities more liveable places
- Several cities in the state demonstrate the presence of significant exclusion of Dalits, Muslims and women who are preponderant in informal settlements. As a result, the cities score very poorly on work participation, education, health indicators and basic services, and do not benefit adequately from infrastructure improvement projects. Experience suggests that infrastructure projects not only bypass these segments but also often adversely impact them.
- Civil society is highly segmented and competitive as well, several positive experiments do not result in actual policy changes

C. Opportunities
- Several micro experiments in the country and a few in the state bringing out the importance of people –centered, local governance processes, knowledge of the same increasing

- Presence of senior bureaucrats who are experienced in dealing with urban issues, and are committed to more inclusive development agendas
- Awareness of urban exclusion and how it leads to unsustainable urbanization is growing
- Emergence of some inclusive policy precepts for few vulnerable segments at central level

D. Threats
- Lack of template for more self-sustaining cities
- Large cities seen as sources of revenue for state government, hence no possibility of reduction of control or greater decentralization
- Real estate led development distorting the possibility of cities emerging as liveable and more equal places
- Reduction in direct central government support
- Opportunity to create spatially more balanced template of urbanization increasingly seems improbable

This is the baseline from which one can examine the unfolding impacts and costs/benefits of the smart cities mission.

I.   Expectations from Smart Cities in Maharashtra

The baseline above gives us an insight to outline what genuinely smart urbanization and cities in Maharashtra would be like. Some of these expectations are:
- Can the smart cities mission attempt to change the focus on the large cities and focus on urban peripheries or small cities?
- Within the selected smart cities, can the areas chosen for area based development be those that require most attention?
- Will the smart city choice of projects and programme be participatory and consultative?
- What is the content of the projects? Do they promise to create opportunities for all? Is there any attempt to negotiate and minimize adverse impacts on vulnerable segments, if any?
- Does the pan-city intervention cover critical areas of improvement? How does it combine the intelligence-technology- governance aspects? Is there any attempt to make such technology accessible?
- What is the trajectory of implementation of smart city projects? Have they been significant in their impact?
- Do the new governance mechanisms created by smart cities provide a template for more decentralized, local, people-responsive, transparent and accountable governance?

II.   Reviewing Smart cities in Maharashtra

A. Selection of Cities
▪ Out of the 100 smart cities across the country, Maharashtra accounts for seven. Pune and Solapur were selected in the first-round in 2016 while in the second round Thane, Nashik, Nagpur and Aurangabad were selected and in round three, Pimpri-Chinchwad found place. It is thus clear that the selection of smart cities includes one medium size city ie Solapur and two peripheral cities ie Kalyan and Pimpri-Chinchwad. The exclusion of Mumbai from the list is also interesting and attributed more towards the competitive politics between alliance partners at state and local levels. However, it is clear that the overall selection is biased

towards large urban centres of the state and thus, the project is unlikely to make a dent in the highly unequal spatial development in the state. The mode of selection at the state level that included a shortlisting of the proposals does not seem to have given thought to issues like spatial disparity and giving in to the 'merits' of competitive selection as laid out in the mission guidelines.

▪ An innovative practice in the state was to appoint mentoring officers for every city to develop their smart city proposals. However, there was a certain pecking order to the manner in which more senior officers with expertise in urban management were allotted to cities. The exact role of these 'mentors' in the preparation of proposals is not clear. If participation in the preparation of proposals is taken as a signal of the role, then only Pune shows a significant degree of participation in the form of suggestions received over web. In all other cities, even councilors often did not know the exact nature of proposals.

▪ The state government took an additional initiative to kick off the smart city projects by granting an additional Rs 100 cr each to six smart cities, excluding Mumbai and Navi Mumbai which had good financial health. This was to enable good ground work on plans. However, the poor progress of implementation of projects in all cities and the significant revision of projects indicates that this purpose was clearly not served in these cities. In fact, even though such money was invested in Amravati, the city could not make it to the final list of 100 smart cities.

B. Selection of ABD areas

Name of City	ABD areas selected	Comments
Pune	Aundh, Baner, Balewadi	The ABD selected is one of the most elite areas in Pune with few informal settlements and is experiencing rapid real estate development. The choice of area is thus, clearly not based on need.
Thane	Area around Thane station includes 1070 acres, of which 1000 acres is for retrofitting and 70 acres for redevelopment	ABD represents 3.38% area of the city; objective of the selection is premised on Thane as a dormitory city while neglecting several traditional segments of Thane city and its local economy.
Nashik	The ABD area is of 303.7 ha and is an extension of a draft DP prepared in 1994. It covers an area of 25 villages	The pocket selected for ABD is a patch of agricultural lands which are sandwiched between an industrialised periphery stretching till the Godavari and the core city. The plans do not do justice to this opportunity of developing and nurturing these greens and instead seek to predate on these lands.
Kalyan-Dombivali	Seeks to develop an area of 2904 acres in Kalyan (West)	The ABD is 17% of the municipal area. The logic behind selection is that this area stretches from waterfront to station and hence covers more than half of the existing population; real estate prospects seem the greater rationale but also challenging as this was used as a periphery in the past and houses the dumping ground, jail etc

Aurangabad	Greenfield township spread over 576 acres	The project is part of AURIC at Shendra, part of the DMIC corridor and allocated Rs 1292 cr ie 3.5 times more than the pan city projects. ABD thus feeds into a much larger speculative plan for what is envisaged as an industrial city.
Solapur	Focus on infrastructure in old city, includes creating a master plan for the old city, lake front development and improvement of streetscape	Several of the ABD projects are opposed by informal sector which has not been involved in the planning; such challenges have been bypassed by selecting small projects such as lake front development for implementation
Pimpri-Chinchwad	South –western part of city ie Pimple Saudagar and Pimple –Gurav selected as ABD	ABD represents 3.1% of city area, obtaining more than 50% of the funds. Focus is on development of infrastructure
Nagpur	1,743 acres of Pardi Bharatwada, Bhandewali and Punapur in East Nagpur	ABD is 3% of the municipal area. The selection is clearly prompted by the trends in expansion of city towards the east side, and also seeks to continue the investment in the lagged project of MIHAN.

There has been a significant critique of the ABD concept, as it represents a very small area of the city towards which an unfairly high amount of investment is targeted. In the cities of Maharashtra, ABDs represent two-three patterns –a) areas on the outside edge of municipal area with significant potential for real estate development. b) inner city areas such as gaothans, old markets and c) areas that are part of larger urban/industrial development projects. There is some care taken in ensuring a continuity between past and present development trajectories and spatialities in cities. However, the content of development in the ABD areas is largely a blueprint of past patterns. In the attempt to make ABD areas into revenue streams, the assumption is that residents are largely going to be upper middle class, expecting a higher standard of services, and who can afford to pay at substantive rates. These expectations are driven more by speculation than by data of the cities. Existing users and uses of land are bypassed and the ABD projects offer almost nothing for them. The farmers in Makhmalabad, the villages in Kalyan(West), informal settlers and market vendors in Solapur, informal labour in the peripheries of Nagpur have no place in the imagination of the ABD which is expected to be a lighthouse for the rest of the city. In Pune, the smart city project in ABD area gives some consideration to the physically challenged and to the needs of pedestrians but a similar consideration is not given to vendors (though a legislative commitment) and informal settlements (seen as encroachers). As a result, ABD developments portend of displacement and cannot be expected to create any alternate script for city development.

C. Selection of pan–city interventions

Pan-city interventions are expected to be of benefit to the entire city. In several cases, the pan city interventions are largely technological interventions; some of them use a model of convergence with other urban development projects such as affordable housing, sanitation, heritage development and so on. Establishment of command and control centres are another common facet of pan-city interventions.

Name of City	Pan city interventions proposed
Pune	Pan city interventions in Pune focus on connecting to citizens, several elements linked to bus transport and road infrastructure; in some ways these interventions link the dots in a few sub-systems of the city
Thane	An emphasis towards real- estatization of several parts of the city while language emphasizes liveability Lake front development is also oriented towards the above objective
Nashik	Projects in several categories proposed ranging from public transport to enhancement of public spaces, improvement of infrastructure and digital service management. Revenue model not clear.
Kalyan-Dombivali	Pan city interventions are guided by the assumption that KDMC is a city of commuters with a focus on the geography of Kalyan and not Dombivali. There is some mismatch between assessment and the interventions proposed. For example, improvement of station precinct is taken to lead to improvement of mobility; there is no contradiction in creation of new growth centres and enhancing the green-ness of environment etc
Aurangabad	Pan city interventions were only allocated 364 cr as opposed to 1292 cr allocated to ABD. This has proved highly unrealistic and speculative. One project that has taken off is bus service in collaboration with MSRTC operational since 2019 with 23 midi buses, fleet increased to 80 and may increase further. I.t currently serves over 20,000 residents
Solapur	Major infrastructure works such as sewage, water supply lines and expansion of roads were proposed; however, they haven't been implemented. There is a shift to several smaller projects instead.
Pimpri-Chinchwad	Projects planned in three phases moving from improvement in physical infrastructure to second phase which focuses on social infrastructure and a third phase that focuses on soft and digital infrastructure.
Nagpur	Significant Focus on road and infrastructure development in addition to convergence with central government programmes as well as investment in metro and other state government programmes

An interesting aspect of pan-city projects is that because ABD projects have mostly taken up a bulk of funds; pan city interventions have tended to take relatively smaller space and have used convergence with other programmes as a strategy. They have often taken the form of technological interventions to digitize services or bring some element of green technology and be citizen-centric. These are therefore projects that have been the more visible face of the Smart City Mission. The implementation of these projects has been more complex, often delayed, and exposed the limitations in the imagination of attributes of citizens and users, attributes and capacities of private sector and the way in which smartness would unfold. The slow speed of implementation, choice of projects of limited scope for actual implementation and either derailing or projects getting stuck into multiple cycles of tendering and the inability to show positive outcomes despite implementation are expressions of the same.

D. Experiences of Implementation

Name of City	Experiences	Comments
Pune	57000 LED lights installed with 300 SCADA panels, some other small projects and smart streets developed in one site in Baner	The city has used about 42% funds but most concepts under development. It is one of the only cities to have a website.
Thane	projects like the construction of promenades, jogging tracks, walkways, playgrounds, cycle tracks, food courts and gymnasium on water fronts were halted last year due to petitions being filed against the irregularities involved. Progress of 60% projects is under 10%	The largest and most speculative projects in Thane are cluster development that seeks to transform the erstwhile industrial areas into large scale residential developments. However, these ambitious projects necessitating significant coordination across departments and governments have been delayed despite a supportive GR due to large scale opposition from various quarters ,especially koli and agri communities
Nashik	Several tenders issued, major projects facing resistance. Farmers in Makhmalabad and corporator opposed surveys for ABD.1.1 km smart road first phase completed but lack of coordination across various departments left citizens inconvenienced. Several informal settlements along the side present a barrier for the project.	Only three projects linked to renovation of some public spaces like auditoriums and art galleries completed. Project of public bike sharing unsuccessful, challenges in recoveries from the operator who incurred significant loss
Kalyan-Dombivali	four completed projects are solid waste management that includes automated solid waste management, 10 metric ton bio-methanation plant at Umbarde and garbage bins at household level for segregation, installation of LED street lights	major projects that are meant to decongest the city's station areas, improve parking facilities, waterfront development, lake-beautification and smart transport are still pending.
Aurangabad	Entire proposal had to be restructured and converted to a pan –city proposal. Pandemic time was used to initiate a strategic response to COVID.	An oft experienced phenomenon in Aurangabad is the initial appointment of large consultants and the subsequent engagement of smaller players. This has also been repeated in this case
Solapur	Major infrastructure works such as sewage, water supply lines and road works have not been implemented as there was no response to tenders. The Commissioner claims that the shift to small projects has produced big changes	Till Nov 2018, Solapur had only spent Rs 27.81 cr out of Rs 196 cr funds ie only 14.2 %. More critically, projects completed include very small projects such

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		as installation of e-toilets, installation of 57000 LED lights.
Pimpri-Chinchwad	Last city to enter the smart city brigade in the state but has issued and awarded several tenders, especially for road development	Most of the projects and especially their last mile aspects incomplete and hence unable to deliver benefits to citizens
Nagpur	Nagpur is considered to be one of the cities where implementation has been fairly substantive due to the political will	

An interesting pattern that emerges across all these cities is that a) they have not received their allotted funds so far. So, Pune and Solapur have received only the initial funds of Rs 194 cr. Secondly, the amount of funds that smart cities were to get were very less ie about Rs 100 cr p.a and a total of Rs 500 cr over five years. Cities were thus expected to finance the rest of the investment via PPPs. However, none of the cities have been able to use even these meagre amounts. The smart cities in Maharashtra have been able to spend less than 50% of the funds allotted and in some cases, way below this. Major reasons for this are a) inability to raise matching funds or b) tenders not receiving adequate responses or c) tender documents necessitating revision as they did not have complete data. A very major gap was that several tender documents like the projects themselves were not based on an accurate assessment of ground realities. This created barriers for those applying for the tenders or in the implementation of projects.

E. Issues of Governance: Between Worlding and Provincialism

- In all cities of Maharashtra from the selection process to the ongoing implementation; there has been a significant tussle between the attempt to corporatize governance via the formation of companies and the political wing which has been attempting to retain the status quo of local governance. This took the form of initially rejecting the opportunity of participating in the smart city challenge by passing resolutions in the corporations; followed by their accommodation as directors in the SPVs and changing the character of the SPV.
- Local corporators have opposed several projects introduced as a part of smart city. For example, in Nashik, the local corporator supported farmers in their opposition to surveys for greenfield city in Makhmalabad. In Kalyan –Dombivali, the leaders from Dombivali felt that the proposals were titled towards Kalyan and excluded Dombivali. Nonetheless, there is a significant change in the texture of local governance, especially with the coming together of local governance and law and order machinery. In cities such as Thane, local corporators actively opposed such an alliance as it was seen as undemocratic. One of the key dimensions of opposition of these local representatives was that the smart city projects did not work through the regular process of the municipal corporations and bypassed them. They were often also concerned about the scope of the smart city mission and how it would impact the regular functioning of the corporations. These apprehensions are valid but as of now there are no definitive answers.
- The instrument of the SPV has afforded consultants an extra edge and power in the city governance. Consultants had made their entry into municipal governance several years ago and have become the proxy for managerial expertise in these bodies, often holding tremendous data and knowledge of particular sectors, which municipal corporations have been outsourcing. Yet their role was till now an indirect one largely supportive to the IAS officers and tasks had to be moved through regular municipal processes. The formation of SPVs has brought consultants to

the fore and legitimated their role from envisaging and making plans to implementing plans and even monitoring them. Would participation remain only a lip service without the traditional backup of the democratic mechanisms and avenues for expression? How would the SPV prioritise revenue vs welfare, public spirit of services vs exclusion of some? These are aspects that remain to be seen.

▪ Yet consultants are not completely immune from the play of political dynamics. In Kalyan-Dombivali, consultants were changed twice. While outwardly the reason given was one of non-responsiveness and inefficiency; interviews indicate that they were victim to competitive politics in the city.

▪ Interestingly, it is also clear that at some level, there is recognition that there are significant and real barriers to implementation of urban projects. Hence, like has been done in past missions like the JNNURM, the parameters for measuring progress were significantly revised and even cities that have not been able to use all funds have been awarded.

There is thus an ongoing tussle between the attempts for worlding the cities (introducing projects that upgrade infrastructure and services with significant ring fencing of revenues, and corporatizing governance) and maintaining the provincial (opposing displacing projects, demanding those that are needed locally, use of protests, political mobilization and other disruptive tactics, retaining the importance of the local political representatives and parties). Smart cities as of now, are unable to find new avenues to counter the political force; however, they are becoming important to the overall municipal code. This was illustrated when several smart cities used their ICCS to respond to the COVID pandemic by developing dash boards, developing data points and creating surveillance mechanisms for particular zones of concentration.

F. Smart Cities as Placebos?

A review of smart city plans and their implementation raises several new questions and apprehensions. Clearly, the smart city plans are non-inclusive and point at creating islands of exclusion. None of them address core concerns of poverty, liveability, equity, sustainability in the cities. This would perhaps create several threats for the informals in the city through displacement (direct and indirect), increasing burdens on the poor through rising costs of basic services and shifting away from a practice of public amenities and services; and through changing the entire trajectory of governance and citizenship from political society to one that is corporatized. In the manner of its design smart cities are planned as business opportunities, inviting the private sector to enter hitherto unexplored areas in India. In so doing, they would disturb the modes of public governance and urban political economy established over the years, creating significant challenges for informal settlers, informal workers and their overall ability to stake claims to the city vis democratic politics.

The implementation experience reveals that several of these apprehensions have not been realized. Firstly, the existing legacy issues of the municipal governments such as poor financial health, politicized mode of decision –making and functioning, poor capacities to envisage, plan and deliver and the absence of good quality performers in the private sector have created challenges which have impacted the implementation of major projects. Overall, in the state several small projects have been implemented; these include e-toilets, installation of LED lights, e-passes for buses and beautification of few sites. None of these are classic PPP projects, the only component of private investment that they have been able to bring in is user charges- and even this has been opposed in

many cases. These services are beneficial and contribute to making the city better, albeit in minute ways. However, if smart city is going to be confined to such minor projects; it is not enough to justify the major reforms in governance vide the SPV or its status as a national flagship project. Yet in cities like Thane and Pune where some projects have been implemented, there are already indications that sections such as traditional fishers, old village settlements, informal settlements have not been placed at the centre of planning and may be excluded from benefits of developments in their neighbourhoods.

A more probable scenario is that projects are merely placebos in smart city. A placebo sweetens the way for bitter medicines to follow. On similar lines, these projects, the overall façade of clean technologies, are perhaps placebos that pave the way for more sinister developments in the near future. One of these developments is the establishment of control and command centers: All the smart cities have established command and control centres. Reading through the declarations of the purpose of ICCS in the various cities, it is apparent that at one level, the ICCS aim to increase the surveillance over citizens and at another level, hope to improve the efficiency of services and enhance revenues for implementation of smart city projects. The question is whether the nature of data, its transparency, the openness of systems to citizen participation is compatible with these seemingly contradictory objectives. In fact, indications are that the surveillance objective is far more important than facilitating services and improving data-centred governance. For example, in Aurangabad, the centre has been established in the police commissionerate and is supported by 700 CCTV cameras placed at various places through the city. Thane Municipal Corporation has decided to focus on markets and the purpose of surveillance is to avoid crowding and to keep a watch on people who are unnecessarily roaming.

Another worrying aspect about the ICCs is the gap between realities on ground and data captured and available to the ICCs. While this is partly a legacy issue linked to the inadequacy of outreach and data systems of the municipal governments; the non-use of such data and the availability of alternate avenues offset the importance of such data for regulatory, punitive and servicing aspects of governance. However, the ICCs are building blocks of data-led governance and hence this legacy issue can become a major blind-spot and impact several subaltern sections adversely in the medium and long term.

Conclusions

While it is too early to assess the smart cities in Maharashtra through a social cost-benefit lens; some trends are becoming evident. Smart cities, by their design are not oriented towards inclusive cities. The projects and the script for governance unfairly benefits the elite and higher middle classes and exclude several vulnerable sections. There are very few projects which innovate on inclusion (disabled-friendly pathways being an exception) and some of them have adverse impacts on especially the informal groups. The reasons for exclusion range from the presence of blind-spots in data (all realities on ground not captured in data systems), to absence of mechanisms for genuine participation and redressal to aggravation of exclusionary tendencies through making public service projects cost- efficient and even profitable. Area based development is a particularly sinful exercise from this point of view as it aggravates the already iniquitous spatiality in the cities. The trajectories set off by changes in governance and ICCs are extremely worrisome as they can mean an effective insulation of cities from claims by the poor and subalterns. There is therefore a need to think through these designs for the city and apply oneself to how can one introduce course corrections for promotion of inclusion and citizen-centrism.

LIST OF REFERENCES

Primary Sources referred to were reports by coalition partners in the following cities:
Pune I Mashal: Enid Still, Neeta Chalke, Sharad Mahajan
Solapur I Netra Shirke, Atul Kota
Aurangabad I Hemant Landge
Kalyan-Dombivli I None
Nagpur I CRIUPA: Pratham Pincha
Nashik I Shweta Tambe, Symbiosis School of Economics
Thane I Mayuresh Bhadsavle, Smita Waingankar under guidance by Dr. Amita Bhide
Pimpri-Chinchwad I Symbiosis School of Economics: Dr. Jyoti Chandiramani, Dr. Debdulal Thakur, Dr. Aanchal Airy, Vaibhavi Pingale, Anjali Sri Kumari, Riva Juthani

Secondary Source List

Reports and Working Papers

Aijaz, Rumi "The Smart Cities Mission in Delhi, 2015-2019: An Evaluation", ORF Special Report No. 98, January 2020, Observer Research Foundation

Aijaz, Rumi and Kristian Hoelscher. "India's Smart Cities Mission: An Assessment". ORF Issue Brief Issue No.124 (2015)

Anand, Ashwathy; Ajai Sreevatsan and Persis Taraporewala. "An overview of the Smart cities mission in India" In Centre for Policy Research Working Paper (2018)

Bhattacharya, S. et al. "Reconceptualising Smart Cities: A Reference Framework for India" In CSTEP (2015)

Burte, Himanshu and Amita Bhide. "Smarter Urbanisation, Not (Just) Smart Cities." In NCAS Discussion paper (2015)

Datta, A "A 100 smart cities, a 100 utopias" [Response paper] Dialogues in Human Geography, vol. 5(1), p49-53 (2015)

Datta, A "The 'digital turn' in postcolonial urbanism: Smart citizenship in the making of India's 100 smart cities" Transactions of the IBG, vol. 43(3) 405-419 (2018)

Government of India, Ministry of Home Affairs. (2011) Census of India. URL: http://censusindia.gov.in/2011-Common/CensusData2011

HLRN Network *Smart Cities Mission: Smart for Whom? Cities for Whom?* New Delhi: Housing and Land Rights Network (2017)

HLRN Network *Smart Cities Mission: Smart for Whom? Cities for Whom?* New Delhi: Housing and Land Rights Network (2018)

Jha, Ramanath and Sayli Udas-Mankikar, "India's Urban Challenges: Recommendations for the New Government (2019-2024)", ORF Special Report No. 90, June 2019, Observer Research Foundation

Joshi, R. *Smart City Mission: Financial Progress, Sustainability and Impact on Urban Local Bodies* CENFA (2020)

Ministry of Statistics and Programme Implementation. *Statistical Year Book India.* GoI (2017)

Mukhopadhyay, Parth. "The Un-Smart City" (India Seminar article). Centre for Policy Research (2015)

National Building Organisation. *Slums in India: A Statistical Compendium* Ministry of Housing and Urban Poverty Alleviation, New Delhi: Government of India (2015)

Planning Commission of India, *State Development Report,* https://niti.gov.in/planningcommission.gov.in/docs/plans/stateplan/sdr_maha/ch-13-14-02-05.pdf (2005)

PwC Creating the *Smart cities of the future: A three-tier development model for digital transformation of citizen services* (Nov 2018)

Shivam, Pushkal. "For Cities to be 'Smart', They first need to work: Notes from the Aurangabad Model". EPW Vol.55 Issue No.7 (February 2020)

Taraporewala, Persis. "Demystifying the Indian Smart City - An empirical reading of the Smart Cities Mission" In Centre for Policy Research Working Paper (2018)

YASHADA. *Maharashtra Human Development Report 2012-Towards Inclusive Human Development*. 2012

Websites and Blogs

Falk, Tyler, "The Origins of Smart City Technology", accessed August 2020, https://www.zdnet.com/article/the-origins-of-smart-city-technology/

Akode, K.S. "Urban Planning Scenario in Maharashtra", accessed November 2020 http://icrier.org/pdf/kamlakar_akode.pdf

Architexturez, "Smart City Consultants Finalised by Ministry of Urban Development", October 2015, https://architexturez.net/pst/az-cf-172347-1444206090

Aurangabad Industrial City, "About", accessed November 2020, https://www.auric.city/

Delivering Change Foundation. "Smart Governance, Smart City", accessed 2020, http://www.deliveringchangefoundation.org/blog/project/smart-governance-smart-city/

Jha, Ramanath, "Urban Policy 2020 calls for modernisation and maintenance of urban infrastructure", accessed December 2020, https://www.orfonline.org/expert-speak/urban-policy-2020-calls-for-modernisation-and-maintenance-of-urban-infrastructure-59742/

Ministry of Housing and Urban Affairs, "Aurangabad Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/124

Ministry of Housing and Urban Affairs, "Kalyan-Dombivli Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/120

Ministry of Housing and Urban Affairs, "List of Consulting Firms", accessed 2020, https://smartcities.gov.in/selection-process

Ministry of Housing and Urban Affairs, "Mission Dashboard", accessed April 2021, http://smartcities.gov.in/dashboard

Ministry of Housing and Urban Affairs, "Nagpur Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/123

Ministry of Housing and Urban Affairs, "Nashik Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/121

Ministry of Housing and Urban Affairs, "Pimpri-Chinchwad Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/198

Ministry of Housing and Urban Affairs, "Process of Selection", accessed 2020, https://smartcities.gov.in/selection-process

Ministry of Housing and Urban Affairs, "Pune Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/124

Ministry of Housing and Urban Affairs, "Smart Cities Mission Guidelines (English)", accessed 2020, https://smartcities.gov.in/guidelines

Ministry of Housing and Urban Affairs, "Solapur Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/122

Ministry of Housing and Urban Affairs, "Thane Smart City Proposal", accessed 2020, https://smartcities.gov.in/selection-processhttps://smartcities.gov.in/node/119

Ministry of Housing and Urban Affairs, Annual Report 2018-19, accessed 2021, http://mohua.gov.in/cms/annual-reports.php

Ministry of Housing and Urban Affairs, Annual Report 2019-20, accessed 2021, http://mohua.gov.in/cms/annual-reports.php

Ministry of Housing and Urban Affairs, Annual Report 2020-21, accessed 2021,

http://mohua.gov.in/cms/annual-reports.php

PRS Legislative Research. "Demand for Grants 2021-22 Analysis: Housing and Urban Affairs", accessed April 2021, https://prsindia.org/files/budget/budget_parliament/2021/2021%20DFG%20Analysis-%20Housing.pdf

Media Articles

Ashar, Sandeep. "Developed cities edge out towns in the smart city race". The Indian Express. August 2015. https://indianexpress.com/article/india/india-others/developed-cities-edge-out-towns-in-the-smart-city-race/

Anon. "Smart City mission directors differ on consultants' posts". Pune Mirror. September 2017. https://punemirror.indiatimes.com/pune/civic/smart-city-mission-directors-differ-on-consultants-posts/articleshow/60314046.cms (accessed 2020)

Anparthi, Anjaya. "Maharashtra to start smart city works in Nagpur, Amravati" ET Realty TNN. June 2016. https://realty.economictimes.indiatimes.com/news/industry/maharashtra-to-start-smart-city-works-in-nagpur-amravati/52815909 (accessed 2020)

Anparthi, Anjaya. "Plan to reserve lands along Nag river draws protest." Times of India. September 2018. https://timesofindia.indiatimes.com/city/nagpur/plan-to-reserve-lands-along-nag-river-draws-protest/articleshow/65877989.cms

Anparthi, Anjaya. "Smart city SPV ignores pressure, completes housing scheme tender" Times of India. January 2019. https://timesofindia.indiatimes.com/city/nagpur/smart-city-spv-ignores-pressure-completes-housing-scheme-tender/articleshow/67616277.cms

Bari, Prachi. "Balewadi and Baner residents join the bicycle sharing ride" Hindustan Times. June 2018. https://www.hindustantimes.com/pune-news/balewadi-and-baner-residents-join-the-bicycle-sharing-ride/story-Ls9VnzLcoU1E4zOMjjUqLJ.html (accessed 2020)

Bari, Prachi. "Pune municipal corporation's smart bicycle plan hits limbo" Hindustan Times. July 2019. https://www.hindustantimes.com/pune-news/pune-municipal-corporation-s-smart-bicycle-plan-hits-limbo/story-NPCuheCYCou9GIFhxmUCcL.html (accessed 2020)

BW Online Bureau. "Civic chief Aurangabad awarded for Smart city project initiatives". BW Smart Cities. October 2019. http://bwsmartcities.businessworld.in/article/Civic-Chief-Aurangabad-Awarded-for-Smart-City-project-Initiatives/01-10-2019-176961/

Chakraborty, Proshun. "From first, Nagpur slips to 28th in Smart City rankings". Times of India. May 2020. https://timesofindia.indiatimes.com/city/nagpur/from-first-nagpur-slips-to-28th-in-smart-city-rankings/articleshow/75877812.cms#:~:text=Nagpur%3A%20From%20being%20No%201,score%20Agra%20secured%20second%20position.

Chakraborty, Proshun. "Smart City work at snail's pace, says MLA Khopde". Times of India. July 2020. https://timesofindia.indiatimes.com/city/nagpur/smart-city-work-at-snails-pace-says-mla-khopde/articleshow/76758353.cms

Deshpande, Vivek. "Amid row over Tukaram Mundhe 'taking over' as CEO, Nagpur smart city agency board meets today" Indian Express. July 2020. https://indianexpress.com/article/india/amid-row-over-tukaram-mundhe-taking-over-as-ceo-nagpur-smart-city-agency-board-meets-today-6498397/

Deshpande, Vivek. "In letter to PMO, Gadkari accuses Tukaram Mundhe of grabbing position of Smart City agency CEO. The Indian Express. July 2020. https://indianexpress.com/article/india/in-letter-to-pmo-gadkari-accuses-tukaram-mundhe-of-grabbing-position-of-smart-city-agency-ceo-6484262/

Deshpande, Vivek. "Nagpur civic commissioner removed as NSSDCL chief executive officer". The Indian Express. July 2020. https://indianexpress.com/article/india/nagpur-civic-commissioner-removed-as-nsscdcl-chief-executive-officer-6499990/

Editor. "About 11,000 structures to be razed for Nagpur smart city development". Magic Bricks. February 2018. https://content.magicbricks.com/property-news/other-cities/about-11000-structures-to-be-razed-for-nagpur-smart-city-development/97070.html

Editor. "Nagpur smart city SPV eyes R.2427 crore from citizens". Magic Bricks. March 2019. https://content.magicbricks.com/property-news/nagpur-smart-city-spv-eyes-rs-2427-crore-from-citizens/105415.html

Editor. "Owners being paid after houses razed for Smart City". Magic Bricks. November 2019. https://content.magicbricks.com/property-news/other-cities/owners-being-paid-after-houses-razed-for-smart-city/109741.html

ET Government. "Nagpur Smart City CEO Ramnath Sonawane quits". ET Government. February 2020. https://government.economictimes.indiatimes.com/news/governance/nagpur-smart-city-ceo-ramnath-sonawane-quits/74113180

Gangan, Surendra. "State bats for heritage status for Aurangabad". The Hindustan Times. February 2018. https://www.hindustantimes.com/mumbai-news/state-bats-for-heritage-city-status-for-aurangabad/story-Tmz8Lam9fqAdZS7GAp0i8I.html

Ghadyalpatil, Abhiram. "Maharashtra cities set unrealistic funding targets for smart city projects" Mint. Dec 2015. https://www.livemint.com/Politics/GCys66xI8YjYsE1AA4nc3J/Maharashtra-cities-set-unrealistic-funding-targets-for-smart.html (accessed 2020)

Jadhav, Radheshyam. "What's smart about Smart Cities?" The Hindu Business Line. February 2019. https://www.thehindubusinessline.com/specials/india-file/whats-smart-about-smart-cities/article26367835.ece (accessed 2020)

Jamwal, Nidhi. "Why Aurangabad's Garbage Crisis is Raising a Stink". The Wire. March 2018. https://thewire.in/environment/raising-a-stink-aurangabads-garbage-crisis

Jog, Sanjay. "Maharashtra civic bodies say not to smart city project" Business Standard. December 2015. https://www.business-standard.com/article/current-affairs/three-civic-bodies-in-maharashtra-say-no-to-smart-city-project-115121300480_1.html (accessed 2020)

Khairnar, Abhay. "Pune's riverfront development project still on paper". Hindustan Times. May 2019. https://www.hindustantimes.com/pune-news/pune-s-riverfront-development-project-still-on-paper/story-YPBndmG3bsUOep9qfXTYcL.html (accessed 2020)

Kshirsagar, Alka. "Solapur Smart City: At a crossroads, a leap of faith into the future". The Hindu Business Line. January 2018. https://www.thehindubusinessline.com/economy/solapur-smart-city-at-a-crossroads-a-leap-of-faith-into-the-future/article8264530.ece (accessed 2020)

Kulkarni, P. "A mere 5 out of 41 smart city works completed to date" Pune Mirror. December 2019. https://punemirror.indiatimes.com/pune/civic/a-mere-5-out-of-41-smart-city-workscompleted-to-date/articleshow/73000684.cms

Kulkarni, P. "Smart City looks to scrap public-private partnership projects". Pune Mirror. January 2020. https://punemirror.indiatimes.com/pune/civic/smart-city-looks-to-scrap-ppp-projects/articleshow/73281845.cms

Mudaliar, Sunitha. "Faulty DPR submitted by NMC cost Nagpur position in Smart Cities". Nagpur Today. Januay 2016. https://www.nagpurtoday.in/faulty-dpr-submitted-by-nmc-cost-nagpur-position-in-smart-cities/01291427 (accessed 2020)

Nair, Shalini. "Last list of Smart Cities to be unveiled, Mumbai not on it" Indian Express June 2017. https://indianexpress.com/article/india/last-list-of-smart-cities-to-be-unveiled-mumbai-not-on-it/ (accessed 2020)

Nambiar, Sajana. "New traffic signals in place of 18 year defunct ones in Kalyan-Dombivli". The Hindustan Times. September 2020. https://www.hindustantimes.com/mumbai-news/new-traffic-signals-in-place-of-18-year-defunct-ones-in-kalyan-dombivli/story-1oDTXNgrDV5dW7VWb0qCrK.html (accessed 2020)

Nambiar, Sajana. "Only 4 out of 20 smart projects in Kalyan-Dombivli completed; rest gaining momentum". The Hindustan Times. Nov 2020. https://www.hindustantimes.com/mumbai-news/only-4-out-of-20-smart-projects-in-kalyan-dombivli-completed-rest-gaining-momentum-says-civic-body/story-Yo6Xv9uAK6WANydfLOkqlI.html

NMTV. "Gaothans removed from cluster development in Thane". NMTV. July 2018. https://www.nmtv.tv/gaonthans-removed-from-cluster-development-in-thane/

Pardikar, Rishika. "In a first, a city frees a river using funds meant to concretise it". Science-The Wire. August 2020. https://science.thewire.in/environment/nashik-godavari-river-concrete-riverbed-embankments-flooding/

Pawar, Tushar. "Activist objects to Nashik Township". Times of India. November 2020. https://timesofindia.indiatimes.com/city/nashik/activist-objects-to-nashik-township/articleshow/79467220.cms

Pawar, Tushar. "HC tells Nashik smart corp to stop work on new township". Times of India. December 2020. https://timesofindia.indiatimes.com/city/nashik/hc-tells-nashik-smart-corp-to-stop-work-on-new-township/articleshow/79765237.cms

Pawar, Tushar. "Panel to decide on Smart City consultant's penalty" Times of India. Jan 2020. https://timesofindia.indiatimes.com/city/nashik/panel-to-decide-on-smart-city-consultants-penalty/articleshow/73675314.cms

Phadke, Mansi. "Mumbai, Navi Mumbai might not make it to Prime Minister's pet Smart Cities' project" Hindustan Times. September 2016. https://www.hindustantimes.com/mumbai-news/mumbai-navi-mumbai-may-not-make-it-to-prime-minister-narendra-modi-s-pet-smart-cities-project/story-ZwNfuETYKpiHkPhUdqQfAL.html (accessed 2020)

Phadke, Mansi. "Smart Cities Mission: Congress seeks to have more representatives on Solapur SPV board". The Indian Express May 2016. https://indianexpress.com/article/cities/mumbai/special-purpose-vehicles-congress-bjp-solapur-municipal-corporation-spv-board-2823878/ (accessed 2020)

Pol, Megha. "Cluster scheme pulls down Thane's ranking in first smart cities survey". The Hindustan Times. February 2019. https://www.hindustantimes.com/mumbai-news/cluster-scheme-pulls-down-thane-s-ranking-in-first-smart-cities-survey/story-6Oimun0G6Y6NJJc7r1wqSK.html

Pol, Megha. "Second SATIS in Thane will be bigger and better". The Hindustan Times. March 2018. https://www.hindustantimes.com/mumbai-news/second-satis-in-thane-will-be-bigger-and-better/story-K9Sn9TJJ1zKfnxSp5WpYQJ.html

Pol, Megha. "Thane Municipal Corporation wants cluster scheme to benefit residents of illegal structures. The Hindustan Times. July 2017. https://www.hindustantimes.com/mumbai-news/thane-municipal-corporation-wants-cluster-scheme-to-benefit-residents-of-illegal-structures/story-ntE2gB5xCR0PwnULdTq38K.html

Pol, Megha. "Thane waterfront project began without obtaining all permissions: Petitioner". The Hindustan Times. July 2018. https://www.hindustantimes.com/mumbai-news/thane-waterfront-project-began-without-obtaining-all-permissions-petitioner/story-DzypJvay2m2jq61Vr6eBEI.html

PTI. "IAS officers to mentor 10 Maharashtra cities for Smart City plan" Economic Times. August 2015. https://economictimes.indiatimes.com/news/economy/infrastructure/ias-officers-to-mentor-10-maharashtra-cities-for-smart-city-plan/articleshow/48592184.cms?from=mdr (accessed 2020)

PTI. "Industrial city AURIC eyes investment worth Rs.70,000 cr over 12 years". Business Standard. May 2019. https://www.business-standard.com/article/pti-stories/industrial-city-auric-eyes-investment-worth-rs-70-000-cr-over-12-yrs-119051700956_1.html#:~:text=Industrial%20city%20AURIC%20eyes%20investment%20worth%20Rs%2070%2C000%20cr%20over%2012%20yrs,-Press%20Trust%20of&text=Aurangabad%20Industrial%20City%20(AURIC)%20in,director%20Gajanan%20Patil%20said%20Friday.

Ramakrishnan, Suniya. "Smart city work begins, residents express resentment" The LIVE Nagpur. November 2019. https://thelivenagpur.com/2019/11/08/smart-city-work-begins-residents-express-resentment/

Sarkar, Sumita. "Cost escalation tears down two big smart city projects". Times of India. February 2018. https://timesofindia.indiatimes.com/city/nashik/cost-escalation-tears-down-two-big-smart-city-projects/articleshow/67905527.cms

Sarkar, Sumita. "Finally, Makhmalabad farmers allow smart city officials to conduct survey". Times of India. Dec 2018. https://timesofindia.indiatimes.com/city/nashik/finally-makhmalabad-farmers-allow-smart-city-officials-to-conduct-survey/articleshow/67234943.cms

Sarkar, Sumita. "Smart City: Nashik stands 20th in executing project". Times of India. Feb 2019. https://timesofindia.indiatimes.com/city/nashik/smart-city-nashik-stands-20th-in-executing-project/articleshow/67919026.cms

Sharad, Arpita. "Aurangabad to look for a dedicated officer for the smart city SPV". Times of India. January 2020. https://timesofindia.indiatimes.com/city/aurangabad/officer-to-be-appointed-for-smart-city-project-only/articleshow/73218666.cms

Singh, Naveeta. "RTI: Thane municipal corporation spent only20% of 203 crores under smart city plan". DNA. April 2019. https://www.dnaindia.com/mumbai/report-rti-thane-municipal-corporation-spent-only-20-of-rs-203-crores-under-smart-city-plan-2743031

Singh, Naveeta. "Thane locals raise objections to cluster development scheme". DNA. May 2018. https://www.dnaindia.com/mumbai/report-thane-locals-raise-objections-to-cluster-development-scheme-2619173

Suryawanshi, Sudhir. "Maharashtra setting up SPVs for Smart Cities". DNA. March 2016. https://www.dnaindia.com/mumbai/report-maharashtra-setting-up-spvs-for-smart-city-projects-2185633 (accessed 2020)

Thevar, Steffy. "Pune smart city to rethink outsourcing consultancy services for projects". Hindustan Times. February 2020. https://www.hindustantimes.com/cities/pun-smart-city-ltd-to-rethink-outsourcing-consultancy-services-for-projects/story-TX7pJdBEdlrzahzN3EnTvM.html (accessed 2020)

TNN. "No money in Aurangabad Municipal Corporation coffers to fund smart city projects". ET Government. October 2019. https://government.economictimes.indiatimes.com/news/smart-infra/no-money-in-aurangabad-municipal-corporation-coffers-to-fund-smart-city-projects/71607171

TNN. "Sena leads PAPs' protest against NMC's Smart City project" Times of India. July 2019. https://timesofindia.indiatimes.com/city/nagpur/sena-leads-paps-protest-against-nmcs-smart-city-project/articleshow/70386041.cms

Vidya. "PM heaps more goodies on Solapur, the worst-performing smart city". India Today. January 2019. https://www.indiatoday.in/india/story/pm-narendra-modi-heaps-more-goodies-on-solapur-the-worst-performing-smart-city-1427320-2019-01-09 (accessed 2020)

Waghmode, Vishwas. "Will request government to impose MCOCA for construction of illegal buildings". The Indian Express. February 2018. https://indianexpress.com/article/cities/mumbai/mumbai-government-mcoca-construction-illegal-buildings-5078252/ (accessed 2020)

Welankar, Parth. "Rs.267 cr development funds lie unutilised as Pimpri Chinchwad Smart City Limited fails to get projects started". The Hindustan Times. September 2019. https://www.hindustantimes.com/pune-news/291cr-development-funds-lie-unutilised-as-pimpri-chinchwad-smart-city-limited-fails-to-get-projects-started/story-tspuJAQtvEqEvNFv1DwMCL.html

Habitat Forum (INHAF), an Indian non-profit registered in 1999, is a network of professionals, civil society organizations, people engaged in academic and research work and others working in the human settlements development field, both rural and urban. Committed to better human settlements, especially the conditions of living of the poor and the low income groups, it engages in studying development action and advocates required changes, focused on inclusivity, sustainability and equity. Slums, urban and rural housing, poverty, professional education and role of civil society in development planning and action are its main areas of work.

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