

How Inclusive are Smart Cities?

A Case Study of the Tumakuru Smart City Project

Siddharth Joshi

Centre for Financial Accountability and
Thamate - Centre for Rural Empowerment

CFA
Centre for Financial Accountability

How Inclusive are Smart Cities?

A Case Study of the Tumakuru Smart City Project

Author: Siddharth Joshi, Independent Researcher, Bengaluru

For: Centre for Financial Accountability and Thamate - Centre for Rural Empowerment

Published by: Centre for Financial Accountability
R21, South Extension Part 2, New Delhi-110049
info@cenfa.org | www.cenfa.org

September, 2021

Copyleft: Free to use any part of this document for non-commercial purpose, with acknowledgment of source.

For Private circulation only.

CFA
Centre for Financial Accountability

Table of Contents

Table of Contents **01**

List of Figures **03**

List of Tables **05**

Acknowledgment **06**

Foreword **07**

Executive Summary **09**

Chapter 1 Introduction **11**

1.1 The Smart City Mission in India 12

Chapter 2 **17**

2.1 Implementation Status of Smart City Projects in Karnataka 20

Chapter 3 **27**

3.1 Tumakuru: City Profile 27

3.2 The Smart City Proposal (SCP) Preparation and the Political Economy of Area-based Development 32

3.3 Citizen Engagement 32

3.4 The Selected Smart City Proposal for Tumakuru 47

Chapter 4 **49**

4.1 Institutional Structure and Delegation of Powers 49

4.2 Divergence from the Smart City Proposal 57

4.3 Physical and Financial Progress of Smart City Mission in Tumakuru 65

4.4 Projectivisation of the Smart City Proposal 69

4.4.1 Development of Road and Parking Infrastructure 69

4.4.2 Amanikere Lake 76

4.4.3 Affordable Housing 80

4.4.4 Education Infrastructure 81

4.4.5 Sanitation and Solid Waste Management 85

4.4.6 Parks and Green Spaces 88

4.4.7 Auto-stands 89

4.4.8 Pan City Interventions: Intelligent Transport System and Inte- grated City Management Control Center 90
4.5 Functioning of the City-level Advisory Forum and District-level Smart City Implementation and Review Committee 91
4.6 The Tumakuru Experience and Implications of the SPV Mechanism 93

Chapter 5 Conclusion **98**

Appendix **101**
A.1 Questionnaire used for Round 1 of Citizen Engagement 101
A.2 Financial Break-up of the Selected Smart City Proposal for Tumakuru 103
A.3 Tumakuru Project List 104

Bibliography **121**

Glossary **127**

List of Figures

1.1	Map indicating the 100 Selected Smart Cities in India	16
2.1	Timeline of Smart City Selection Process in Karnataka	19
2.2	Status of Projects by Source of Funds	21
2.3	City-wise Distribution of Projects by Source of Funds	23
2.4	Status of Projects in Smart Cities in Karnataka	28
3.1	Thematic Map of Tumakuru City with Relevant Statistics	30
3.2	Population Growth rate across various Wards in Tumakuru over the 2001-11 period	31
3.3	Distribution of various Modes of Citizen Engagement for across Rounds	33
3.4	Feedback from Round 1 of Citizen Engagement	35
3.5	Access to Water in Vicinity	36
3.6	Access to Treated Drinking Water Source	36
3.7	Access to Sewerage System	37
3.8	Access to Drainage Facility	37
3.9	Area selected for voting in Round 2 of Citizen Engagement	38
3.10	Map showing the wards selected for Area-based Development Projects under Smart City Mission in Tumakuru	42
3.11	Spatial Distribution of Population classified as Scheduled Castes	43
3.12	Distribution of Households owning Two-wheeler	44
3.13	Category-wise and Source of Funds wise distribution of projects proposed under Smart City Mission in Tumakuru	46
4.1	Timeline of Smart City Process in Tumakuru	50
4.2	The Institutional Structure under SCM in Karnataka	56
4.3	Changing Composition of SCP in terms of Type of Projects	59

4.4	Changing Composition of SCP in terms of Source of Funds	59
4.5	Spatial Distribution of Projects by Project Cost as per Final SCP	61
4.6	Physical Progress of Tumakuru Smart City Mission	65
4.7	Financial Progress of Tumakuru Smart City Mission	66
4.8	Map Showing roads selected for Smart Road Development in the ABD area .	70
4.9	Reduction in Right of Way on FM Cariappa Road	71
4.10	Reduction in Right of Way on M G Road	71
4.11	on-going work on MG Road creating hazardous situations for passersby . . .	73
4.12	Mandipete Main Road after completion of underground ducting works	73
4.13	Unused Parking Conservancy on FM Cariappa Road	74
4.14	Traffic Police Evicting a Street-vendor from MG Road	75
4.15	Model Vending Zone constructed under the Upparahalli Flyover	76
4.16	Walking Path along Amanikere Lake	77
4.18	Housing built under Tumakuru SCM awaiting allotment	81
4.19	The Old classrooms at the Govt PU College whose restoration was omitted	82
4.20	The New classrooms at the Govt PU College	83
4.21	Lighting arrangements being made at Banyan Tree Boulevard on Govt PU College Premises	84
4.22	Smart e-Toilets near Siddaganga Women's PU College Bus Shelter lying unused	87
4.23	Public Toilets build under SCM	88
4.24	Women's Theme Park at Upparahalli	89
4.25	Auto Stands/Bays	90

List of Tables

1.1	Cities Selected in various Rounds of City Challenges	15
2.1	Cities Shortlisted in Karnataka for Stage I Challenge	18
2.2	Cities Selected in various Rounds of Stage II of City Challenge	20
2.3	Category-wise Status of Implementation of Projects under SCM in Karnataka	22
2.4	City-wise Status of Implementation of various Categories of Projects under SCM in Karnataka	24
3.1	Growth in Area and Population of Tumakuru City	30
3.2	Increase in Coverage of ABD Projects over two Rounds of SCP submission	41
3.3	Source of Funds-wise Break-up of ABD Projects under the Selected SCP	46
3.4	Financing of Projects related to Basic Services	47
4.1	Staggered Delegation of Financial Powers under the SCM	51
4.2	Changing Size and Composition of SCP	58
4.3	Spatial Distribution of ABD Projects by Project Costs as per Final SCP	60
4.4	Details of the CLAF Meetings held	92
4.5	Comparison of the Expenditure Budgets of Tumakuru City Corporation (TCC) and Tumakuru Smart City Limited (TSCL) over the Mission Period (2017-22)	94
5.1	List of Projects included in Tumakuru Smart City Mission	104

Acknowledgment

We would like to express our gratitude to Mr. A Narsimhamurthy and Arun (Karnataka Slum Janandolana); Members of the Underground Drainage Workers' Union, Tumakuru and Mr Kadarappa and other members of the Pourakarmika Union both affiliated with Safai Karamchari Kavalu Samithi-Karnataka; Mr. M Subbarayanna and Wasim Khan, Members of the Tumakuru Town Vending Committee, Members of Sadhana Mahila Sangha; Rahul and other residents of Mariyamma Nagara; Ms. Lalitha and officials of Tumakuru Smart City Limited for sharing their insights and opinions about Smart City Mission in Tumakuru. A special thanks to Dr. K B Obalesha, Director, Thamate-Centre for Rural Empowerment and all other members of Thamate-Centre for Rural Empowerment for supporting the study effort.

We would like to express our gratitude towards the Centre for Financial Accountability for providing technical support and feedback during this study and providing an opportunity to take a critical look at the Smart Cities Mission. We would in particular like to express our gratitude towards Bhargavi Rao, Deputy Director, Centre for Financial Accountability and Gaurav Dwivedi, Associate Director, Centre for Financial Accountability for their guidance through the study and for their comments on the draft report.

Foreword

It was in November 2020, soon after cities unlocked based on the guidelines from the Ministry of Home Affairs directing states and Union Territories to take a decision on removing restrictions on travel, gatherings and opening institutions, that I had a chance to visit Tumakuru. The Covid-19 pandemic had devastated lives and livelihoods across the country and particularly for the migrants who had walked back and struggled to get some form of transport to be home to be with their loved ones. Life was far from normal with signs of sickness, death and despair lurking everywhere. The drive from Bangalore to Tumakuru was on a highway that was largely empty, which otherwise is buzzing with trucks, buses and cars being a key artery between states and part of the Chennai- Mumbai corridor.

Driving past the Amanikere, a major lake of Tumakuru, I was rather shocked to see a glass house emerging at one end of the lake and a lot of construction activities all around the lake destroying the catchment area. I also noticed the futuristic bus stands with digital boards that looked like they awaited images to display. Soon, I realized that these were on the list of Smart city projects. At a time when cities are challenged with limited resources of land, water, and greenery while experiencing extremes of weather and climate, and a large section of the population live in extremely poor conditions, how do the smart city projects help address any of these challenges? This was a question that was deeply troubling. With the many smart phones and the hundreds of apps, how can it save the people from the everyday emergencies?

Tumakuru was one of the urban local bodies selected under the smart city plan which aimed to provide improved living standards, better safety and security, better transportation, green infrastructure among others for the citizens. The list of projects includes a digital library solution, an integrated city management and control centre, intelligent transport system, a ring road, skill development, smart lounge and a number of projects for cleaning and greening the city.

Integrating technology is important, particularly when it helps save time and improve quality of life but introducing technology as part of the smart city project that will impact the lives of the residents without due process and consultation leaves one wondering as to what about it makes it 'smart'? If applying information for better communication to make cities function better remains the goal, then neglecting a large section of society that does not have access to technology makes the smart city project largely skewed to a certain section of the society. While many sensors, CCTV cameras and more may operate in the background, and everyone is tracked on accounts of safety and security, it certainly raises privacy issues and a large section of the local population may not even know about it.
Such systems largely cater to the smartphone-equipped residents who can access the public services of the city while the problems faced by the less equipped and privileged residents of the city may never be addressed.

The question then emerges about who imagines and who makes these decisions. Local

government bodies have never been able to live to the letter and spirit of the provisions made by the 73rd and 74th Constitutional Amendments in 1992. Local communities have hardly had a say in anything that happens in their neighbourhoods. All city level functions are mostly managed by parastatals and the poor service was evident during the pandemic. The pandemic has been an eye opener to the challenges of systems governed by technology. The trauma of being tested Covid positive with results uploaded on a central system with the city municipality hunting down the patients to isolate them or the difficulty of getting a slot for the Covid vaccination through technology enabled systems proved, beyond doubt, that technology may not always be the right solution for human centered problems.

This case study of the Tumakuru Smart city project walks the reader through the many drawbacks in the due process of 'consultation', and also highlights how the smart city project dodges the provisions of the 74th amendment. As a result, local governance, an important aspect of healthy city life, is jeopardized, and the choice of projects leans towards those that cater to the elite sections of the society. In addition, it draws attention to the nature of the projects that have violated numerous other laws and the status of the projects since the inception of the Special Purpose Vehicle.

The report has been based on systematic collection of information, in-depth inquiry and offers excellent analysis to the challenges of what smart city projects do to cities. The well represented facts and figures further offer impactful insights and opportunities to understand the importance of a local community and people focused collaborative approach when planning for cities. It is a must read for students, researchers, urban planners, city administrators and everyone who lives in a city/town. It is important to not stop at reading but to discuss, debate and influence our decision makers to help imagine cities that are open, affordable, accessible, and livable to all.

Bhargavi S. Rao
Deputy Director
Centre for Financial Accountability

Executive Summary

The Smart City Mission was launched by the Ministry for Urban Development in 2015 under which 100 cities were to be selected across the country. The mission was marked by several departures from earlier urban development programmes. The selection of cities, instead of being left to the states or being decided based on some objective criteria, was to be arrived at through a competitive process where the contending cities were to be scored on a detailed Smart City Proposal after extensive citizen engagement. The selected cities were required to implement the proposed projects through a Special Purpose Vehicle (SPV) (Public Limited Company) with powers of the Executive officer and the Elected Council of the Urban Local Body delegated to the Managing Director and the Board of Directors of the SPV. The Smart City Proposals were required to adopt an area-based approach where a large part of the project funds was to be directed to a specific area.

The understanding of the city which underpins the conceptualization of the Smart City Mission is one, which is devoid of class, caste and gender-based inequalities. The process prescribed for arriving at the Smart City Proposal, including the choice of areas for area-based development, did not take into account the differential power of various social groups in any given city, and the very real possibility of the proposed projects being skewed in the favour of dominant social groups, leaving out the much more urgent needs of the urban marginalized communities.

In Karnataka, 11 cities entered the first round of the City Challenge. The selection of these 11 cities did not entail any ward-level public consultations as required by the Guidelines for the Mission. Tumakuru was the smallest (population-wise) city to be shortlisted in this first round of the Challenge. The process of citizen engagement to formulate the Smart City Proposal was largely conducted through online mediums and thus left out a large section of the urban deprived communities. This exclusion was reflected both in terms of the themes chosen for the Proposal as well as the choice of areas for area-based development. Instead of focusing on basic amenities for under-served areas predominantly inhabited by marginalized communities, the proposal chose to focus on already well-endowed areas inhabited by dominant communities.

When the Tumakuru Smart City Proposal was rejected in Round 1 for low population and area coverage, among other things, newer areas which had higher concentration of marginalized communities were added, but eventually they received very low project investments. For example, Ward 19 which contributed 13.8% to the area coverage (excluding Amanikere lake area) and 20% to the population coverage under the successful Round 2 Smart City Proposal, with 30% *Dalit* population, received only 0.31% of project expenditure under area-based development component.

When it came to actual implementation of the Smart City Mission, political opposition to thoroughgoing delegation of powers to the SPV yielded only a limited and staggered delegation of administrative and financial powers of approval and sanction. In spite of only a limited delegation of powers and despite representation of only a few elected corporators of the City Council (including the Mayor and Deputy Mayor), the SPV was perceived as a parallel body operating in parallel to and outside the purview of the City Corporation leading to friction between the two institutions.

Owing to the long gap (1.5 years) between the drafting of the Smart City Proposal and the selection of Tumakuru as a Smart City, the infeasibility of few proposed projects at the implementation stage and changes in the scope and extent of projects because of demands made from various quarters, there was considerable divergence between the selected proposal and the final set of projects being implemented. Several wards which are outside the area-based development (ABD) wards received non-significant levels of investment under the Mission and few wards which were part of the ABD area, received negligible investments. The initial take-off was slow in Tumakuru because of unfamiliarity of the Project Management Consultants with the 'land and its language' and absence of a full-time CEO and MD for the SPV. The pressure from Delhi to show quick progress led to front-loading of smaller projects. Owing to question marks over the future of the SPV, all assets created under the Mission have been transferred to the City Corporation, which would bear the responsibility to maintain them. Since increase in Corporation revenues are uncertain, the City is already facing increase in general property tax and special purpose cesses. Bulk of the project spending is accounted for by road development and lake development works, while the basic needs and necessities of the urban-deprived communities have been ignored.

Chapter 1

Introduction

The term 'smart' can be thought of as playing the role of an empty signifier in the discourse around urban development and governance, in the sense that it does not really refer to any specific concept or stable meaning. The liminality of this term allows everything from a classroom equipped with projectors to a traffic signal regulated based on motion sensors and digital image recognition to be termed as 'smart'. Consequently, the term 'smart city' is notoriously difficult to define (Cocchia, 2014; Anthopoulos, 2015; Meijer and Bolívar, 2016). At a minimum level, the 'smart city' ideology is based on the assumptions that use of ICT technologies can boost economic growth and make urban services and governance more efficient and responsive, both of which would lead to improvements in quality of urban life (Kitchin, 2015). This discourse, which was largely limited to academia, business and government circles, entered the citizen sphere through the announcement of the Smart City Mission involving 100 cities in India. This case study of Tumakuru Smart City investigates the conceptualization and implementation of Smart City Mission in Tumakuru City in Karnataka state from the lens of social justice. This becomes important since while the predecessor urban development programmes of the Smart Cities Mission in India - Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and Rajiv Awas Yojana (RAY) - had specific components which focused on the needs of the urban deprived communities, the Smart Cities Mission brazenly turns a blind eye to the existing spatial and socio-economic inequalities of the city. In the absence of such a recognition and consequent lack of affirmative measures in the structure of the programme, how do inequalities in terms of the power wielded by various social groups in a city interact with the process of conceptualization and implementation of the Mission? The present case study seeks to answer such questions in the context of Tumakuru city.

Additionally, the implementation of projects under the Smart Cities Mission (SCM) through a Special Purpose Vehicle (SPV) is a novel idea which seeks to insulate the process of project implementation from political interference and government rules, both of which are seen to slow down the pace of project implementation. But on the flip-side, insulation from political pressure can also imply insulation from democratic pressures and similarly, freedom from government rules can also imply sidelining of safeguards which promote social justice and democratic accountability in public financing. This case study of

Tumakuru Smart City demonstrates how this balance was sought to be maintained in practice and the implications of the SPV model of project implementation. The study highlights the changes that the idea of Smart City undergoes upon getting refracted through the political economy of the city.

1.1 The Smart Cities Mission in India

The fuzziness of the concept of 'smart city' is also acknowledged by the Smart City Guidelines (MoUD, 2015, pp. 5). The Guidelines themselves state that there is no singular definition of Smart City

> 2.1 The first question is what is meant by a 'smart city'. The answer is, there is no universally accepted definition of a Smart City. It means different things to different people. The conceptualization of Smart City, therefore, varies from city to city and country to country, depending on the level of development, willingness to change and reform and resources and aspirations of the city residents. A Smart City would have a different connotation in India than, say, Europe. Even in India, there is no one way of defining a Smart City.
>
> 2.2 Some definitional boundaries are required to guide cities in the Mission. *In the imagination of any city dweller in India, the picture of a Smart City contains a wish list of infrastructure and services that describes his or her level of aspiration*. (Emphasis added)

Thus, there is recognition that the conception of a 'smart city' may differ for different residents based on their 'level of aspiration'. Taking this further, it can be argued that these differential scales of aspirations are experienced collectively. For example, a privately developed gated community already well equipped with basic amenities would aspire for traffic free roads, while for an informal settlement which is facing the threat of relocation, housing may be on the top of their list of aspirations. Thus, to arrive at a cities or a country's conception of Smart City, from these differentiated sets of individual and collective aspirations requires a process of inclusion and exclusion which is in turn mediated by the unequal power that these respective social groups wield in the city. In other words, if a city decides to prioritize road development over affordable housing, then instead of representing the priorities of some amorphous collective called a 'city', this choice reflects the relative dominance of certain social groups over others. The Smart Cities Mission in India ignores this intra-city power matrix, as elaborated further in the study. The stated objectives of the Smart Cities Mission reflect an attempt to strike a balance between several contradictory imperatives: -

> To promote cities that provide core infrastructure[1] and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions[2]. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create **a replicable model which will act like a lighthouse to other aspiring cities**. (Emphasis in original) (MoUD, 2015, pp. 5) (emphasis added)

Considering that most Indian cities lack comprehensive coverage of basic infrastructure and amenities like water, electricity, sanitation, housing etc., thus, an exclusive focus on application of high-end ICT-based solutions, as projected in the business and technological literature on smart cities is sought to be avoided by including core infrastructure elements which in many ways is a continuation of the urban renewal impetus of JNNURM. But given the scale of investments required for pan-city development of such core infrastructure[3] vis-a-vis the available budgetary resources, an area-based approach of developing a compact area has been chosen as a balancing act. But if the bulk of development under the mission is concentrated in a few areas, there is a possibility that at the city level, the Mission would no longer be inclusive and may lead to alienation of the rest of the residents of the city. To mitigate this possibility and to inculcate a feeling of shared ownership among the city residents over the Mission, the Smart-city feature is envisaged as a Pan-city initiative.[4]

The Smart Cities Mission was formulated as a two-stage '*City Level Challenge*'. Each state was allotted a specific number of potential smart cities based on a criterion giving equal weightage to the urban population and the number of statutory towns and cities in the state. Stage I of the City Level Challenge was an intra-state selection process, wherein each state was required to shortlist allotted number of smart cities from all the participating cities within the state, based on existing performance of the cities on a set of 15 governance

---

1 The core infrastructure elements in a smart city would include: i. adequate water supply; ii. assured electricity supply; iii. sanitation, including solid waste management; iv. efficient urban mobility and public transport; v. affordable housing, especially for the poor; vi. robust IT connectivity and digitalization; vii. good governance, especially e-Governance and citizen participation; viii. sustainable environment; ix. safety and security of citizens, particularly women, children and the elderly; and x. health and education.

2 The Guidelines provide a illustrative list which includes ICT-based solutions like Smart Parking, Smart Meters, Integrated Traffic Management etc.

3 The Report on Indian Urban Infrastructure and Services prepared by the High-Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services in 2011, pegged the required investments at Rs 39.2 lakh crore at 2009-10 over the next 20 years period (HPEC, 2011, pp. 80). The Smart Cities Mission on other hand, has made available budgetary funding of Rs 96,000 crore from Union and State budgets (MoUD, 2015, pp. 13).

4 The Guidelines mention the following with respect to Smart Solutions: 'Since Smart City is taking a compact area approach, it is necessary that all the city residents feel there is something in it for them also. Therefore, the additional requirement of some (at least one) city-wide smart solution has been put in the scheme to make it inclusive. (MoUD, 2015, pp. 9)

and institutional benchmarks. These shortlisted cities then entered Stage 2 of the City Level Challenge (inter-state), wherein participating cities were required to submit a Smart City Proposal (SCP), based on which 100 smart cities were to be selected. After each round, the unsuccessful cities were asked to revise and resubmit their proposals. The Smart City Proposal was to comprise of two components: an area-based component and a pan-city component. For the area-based component, the cities were required to choose from following three broad strategies or a mix of these three (MoUD, 2015, pp. 8): -

1. City Improvement (Retrofitting) involving improvement and development of an existing built-up area (consisting of more than 500 acres).

2. City Renewal (Redevelopment) involving replacement of an existing built-up area (consisting more than 50 acres).

3. City Extension (Greenfield Development), involving development of a new area at the periphery of the city (consisting more than 250 acres).

The Pan-city component involved application of smart solutions to existing infrastructure. Each city had to include at least one or, if they desired, more such solutions in their proposals. A belief that the existing city governance set-up and its capacity is inadequate for executing this mission, pervades several structural elements of the Mission. For example, both for preparation of the Smart City Proposal (SCP) and for projectivization of the proposal, extensive engagement of private consultants was envisaged. Additionally, the projects were to be implemented by SPVs which were to be public corporations registered under Companies Act 2013 with substantial statutory powers of the elected Urban Local Bodies (ULBs) delegated to them.

In terms of funding, the Union government committed to providing Rs 96 crore per year per city for a five-year period as a tied grant and conditional on a matching contribution to be made by the State government/ULB. In addition to these SCM grants, the SPV could leverage these funds to raise additional finance through convergence with other existing Union/State government schemes, from private entities through Public Private Partnerships (PPP), by raising equity from private investors (while maintaining majority stake of State government and ULB in proportion of 50:50) or debt financing through municipal bonds or as loans from government-owned or government-promoted domestic lending institutions or external bilateral/multilateral institutions.

The Mission was to be monitored at the national level by an apex committee headed by secretary of Ministry of Urban Development (MoUD)/Ministry of Housing and Urban Affairs (MoHUA); at the state-level by a State Level High Powered Steering Committee (HPSC) headed by the Chief Secretary and at the City-level by a City-level Advisory Forum (CLAF) convened by the CEO of the SPV.

After 5 Rounds (Round 1-4 and a Fast-track Round) of Stage II City-level Challenge, 100 cities were selected for the Smart Cities Mission in India. Table 1.1 shows the round-wise number of cities selected in India and Figure 1.1 shows the location of these 100 cities. Karnataka was allotted 6 cities but eventually with the addition of Bengaluru, Karnataka is implementing the Smart City Mission in 7 cities.

Table 1.1: Cities Selected in various Rounds of City Challenges

Round	India
Round 1 (Jan 2016)	20
Fast-track (May 2016)	13
Round 2 (Sept 2016)	27
Round 3 (June 2017)	30
Round 4 (Jan 2018)	10
Total	**100**

Source: Various Press Releases of MoUD/MoHUA.



Figure 1.1: Map indicating the 100 Selected Smart Cities in India

Chapter 2

The Smart Cities Mission in Karnataka

In April 2015, Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC) was appointed as the State Nodal Agency (SNA) for the Smart Cities Mission in Karnataka.[5] A High Powered Steering Committee (HPSC) was constituted in July 2015, with the Managing Director, KUIDFC as the State Mission Director for the SCM.[6] At Stage 1 (intra-state) of the City-level Challenge, the 11 City Corporations (see Table 2.1) with a population of above 3 lakh persons were asked to submit their applications.[7] Five of these cities (Bengaluru, Hubballi-Dharwad, Mysuru, Davangere and Vijayapura) were JNNURM cities while six were non-JNNURM cities. All the eleven cities were also selected under the AMRUT program.

The applications submitted by these eleven City Corporations were scrutinized by KUIDFC and placed before the HPSC. Based on the scoring criteria prescribed by the Guidelines, following six cities were selected for Stage 2 of the selection process: Belagavi, Davangere, Hubballi-Dharwad, Mangaluru, Shivamogga and Tumakuru.[8] One of the scoring criteria required submission of 'Table with dates, specific agenda and number of people in attendance in ward consultations held with residents of the city'.[9] No scores were provided for any of the participating cities thus indicating that no ward-level consultations were conducted in any of the participating cities. In fact, as per the Guidelines issued by the Ministry of Urban Development (MoUD), the HPSC was tasked with 'oversee(ing) the process of first stage intra-State competition on the basis of Stage 1 criteria'.[10] But in Karnataka, the HPSC was formed on July 23, 2015 and it held its first meeting five days later on July 28, 2015 wherein the applications submitted by the 11 ULBs were scrutinized and approved. Clearly, the HPSC was in no position to oversee the first stage process and the whole exercise was guided by KUIDFC, which had been appointed the State Nodal Agency even before the issuance of the Guidelines for the Mission (see the Timeline in Fig 2.1). In fact, KUIDFC was appointed as SNA even before the Government had committed to implementation of SCM through a resolution passed by the HPSC to this effect.

5 Government order No. UDD 208 CSS 2014 Bengaluru, Dated 04-05-2015.
6 Government order No.: UDD 130 CSS 2015, Bangalore dated 23.11.2015.
7 The format of these applications has been prescribed as Form 2 in the Guidelines (MoUD, 2015, pp. 29).
8 Proceedings of the 1st Meeting of HPSC held on 28-07-2015.
9 Part 6 in MoUD, 2015, pp. 30.
10 MoUD, 2015, pp. 17.

Table 2.1: Cities Shortlisted in Karnataka for Stage I Challenge

Sl.No.	Corporation	City	Population (2011 Census)
1	Bruhat Bengaluru Mahanagara Palike	Bangalore	84,25,970
2	Hubballi-Dharwad City Corporation	Hubballi	9,43,857
3	Mysuru City Corporation	Mysuru	8,87,446
4	Mangaluru City Corporation	Mangaluru	4,84,785
5	Davangere City Corporation	Davangere	4,35,128
6	Belagavi City Corporation	Belagavi	4,88,292
7	Ballari City Corporation	Ballari	4,09,644
8	Vijayapura City Corporation	Vijayapura	3,26,360
9	Kalaburagi City Corporation	Kalaburgi	5,32,031
10	Shivamogga City Corporation	Shivamogga	3,22,428
11	Tumakuru City Corporation	Tumakuru	3,05,821

Source: Proceedings of the 1st Meeting of HPSC held on 28-07-2015.

Since the whole process of Stage I selection was compressed within a month's period, no consultation was carried out with the residents of the cities. At Stage I of the City Level Challenge Process, for cities to qualify, certain 'Conditions Precedent' were specified in the Guidelines.[11] One of these Conditions Precedent was: 'Consultations held with residents on city development priorities.'[12] Clearly both at the level of the HPSC and MoUD, these requirements of the Guidelines were set aside. The list of six cities submitted by GoK was approved by MoUD in August 2015 and an initial amount of Rs 2 crore was released for preparation of Smart City Proposals (SCPs). The SCPs that were submitted in December 2015, were scored by the MoUD on both city-level as well as proposal-level criteria.[13] In each round, cities scoring more than 55 points were selected and the unsuccessful cities were asked to revise and resubmit the proposal for the next Round. Table 2.2 shows the

11 MoUD, 2015, pp. 25.
12 *Ibid.*
13 See MoUD, 2015, pp. 33-36.

final list of cities selected in Karnataka across the 5 Rounds. Bengaluru was added to the list of Smart Cities during Round 2 based on a special request by the Chief Minister of GoK, but its proposal was found to be inadequate and was only accepted in Round 3.[14]

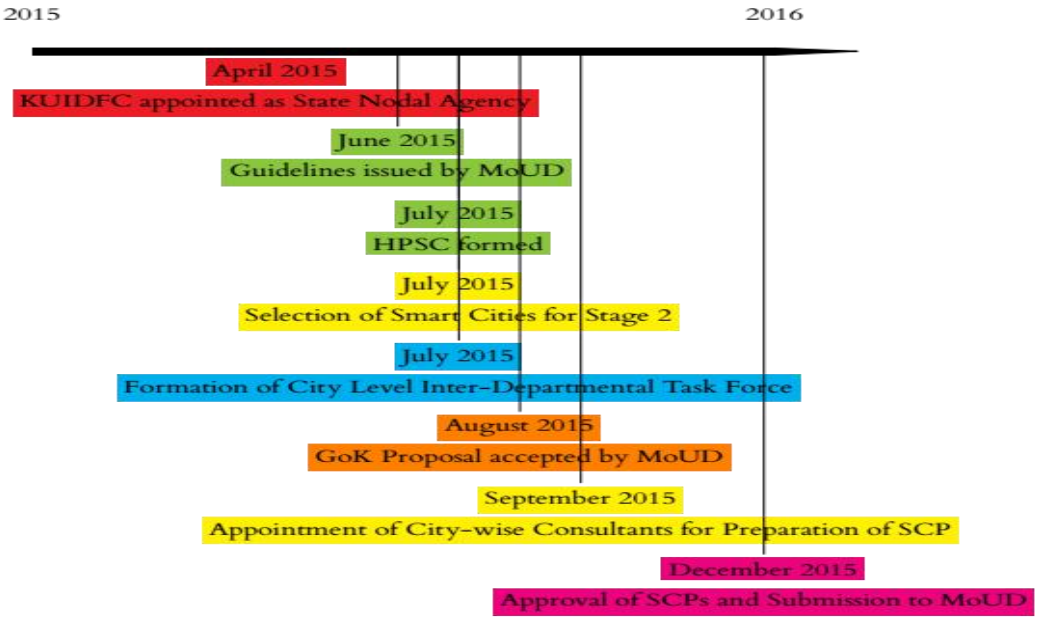


Figure2.1: Timeline of Smart City Selection Process in Karnataka

After the selection of the first six cities based on the prescribed technical criteria, the issue of intra-state regional representation was raised by political representatives. While the initial shortlist of 11 cities had two cities from the Kalyana Karnataka (Ballari and Kaalburgi)[15] region, the final shortlist did not include any of these districts. A letter from the Member of Parliament (Kalaburagi) to the Chief Minister, forced the KUIDFC to seek permission of the MoUD to add Kalaburagi to the Challenge and subsequently, a proposal for inclusion of Kalaburagi was sent to MoUD. Eventually, Kalaburagi was not included in the final list of 7 Smart Cities in Karnataka as shown in Table 2.2 leaving Kalyana Karnataka with no representation in the final list of Smart Cities. Subsequently, with similar demands from other districts, GoK requested inclusion of Kalaburagi, Mysuru, Hassan, Vijayapura and Ballari also as Smart cities in addition to Bengaluru,[16] but these requests were turned down by MoUD.

14 See MoUD oM No. K-15016/157/2015-SC-I (Vol, II) dated 25.05.2016.
15 The Kalyana Karnataka region popularly known as the Hyderabad-Karnataka region comprises of erstwhile Nizam Hyderabad areas which were included in unified Karnataka during State reorganization.
16 See Letter of Chief Secretary, GoK No. Do No. KUIDFC/SCP/2015-16/4561 dated 08.03.2017.

Table 2.2: Cities Selected in various Rounds of Stage II of City Challenge

Selection Round	Karnataka	
	Number	Cities
Round 1 (Jan 2016)	2	Davangere, Belagavi
Fast-track (May 2016)	0	-
Round 2 (Sept 2016)	4	Hubli-Dharwad, Tumakuru, Mangalore, Shivamogga
Round 3 (June 2017)	1	Bengaluru
Round 4 (Jan 2018)	0	-
Total	7	

Source: Various Press Releases of MoUD/MoHUA.

2.1 Implementation Status of Smart City Projects in Karnataka

We first assess the overall progress made by Karnataka under the Smart Cities Mission and then we look at the progress made by individual cities selected under the mission. Figure 2.2 shows the share of various categories of projects across all the projects undertaken and those completed under the Smart Cities Mission in Karnataka as on February 2021. Projects financed through SCM funds comprise 69% of all projects, but in terms of total cost of the projects, their share is much lesser at 44.2%, indicating that a larger share of big-ticket projects is being financed through PPP and Convergence funds, which is also reflected in the fact that PPP and Convergence projects constitute a greater proportion of projects costs as well. While PPP projects comprise only 5% of total projects in terms of numbers, their share in total project cost is much larger (18%). Similarly, Convergence projects, while being 26% in terms of total projects, contribute 37.6% to the total project costs.

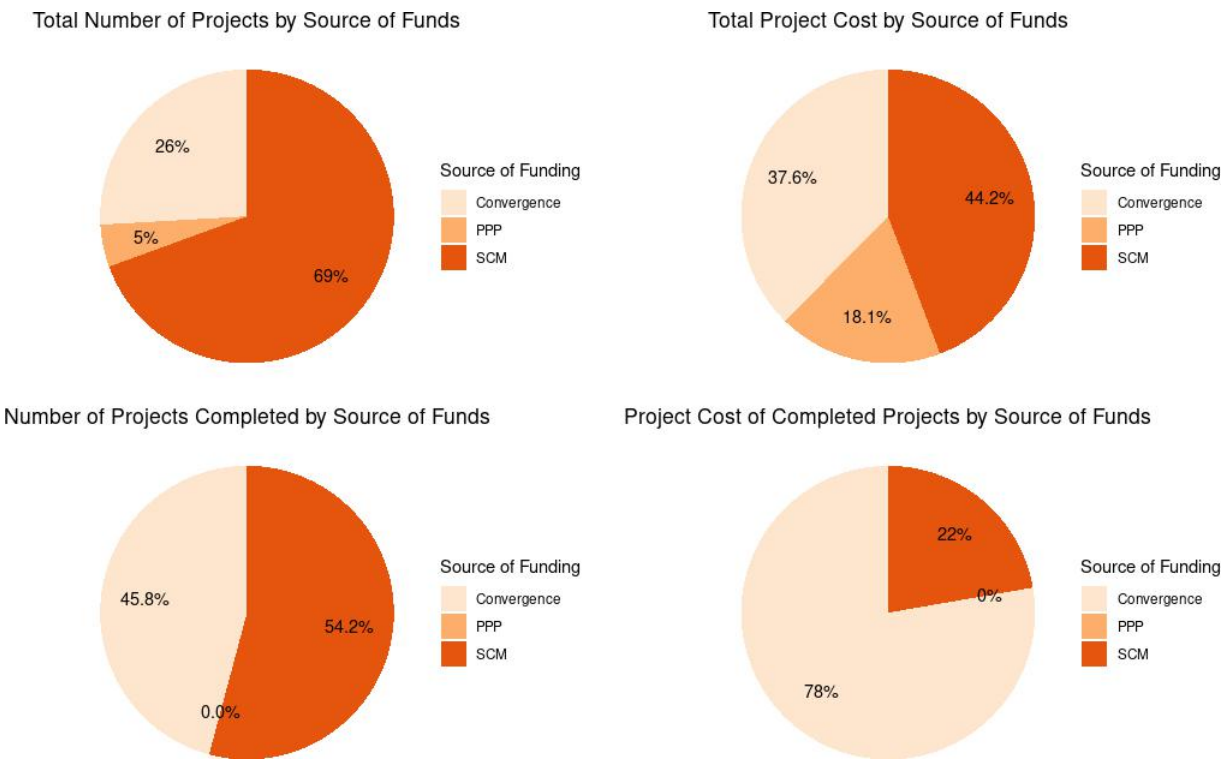


Figure 2.2: Status of Projects by Source of Funds

Table 2.3 shows the overall progress made under the Smart City Mission in Karnataka. Out of total 772 projects/sub-projects being implemented, 43.5% have been completed, while about half of the projects are at various stages of implementation. In terms of project costs, the completed projects represent only 14.2% of the total project cost, indicating that the larger projects are yet to be completed, while the smaller projects have been front-loaded. If we look at category-wise statistics, we find that the convergence projects have a higher rate of completion both in terms of number of projects completed (77%) as well as the cost of completed projects (29.3%). Convergence projects are essentially those which are being carried out under separate Union/State government schemes and thus have a different implementation and monitoring structure. The projects financed from SCM grants have a much lower completion rate when compared to convergence projects both in terms of number of projects completed (33.9%) and the cost of the completed projects (7.1%). The PPP projects have the worst completion rates, since so far not a single PPP project has been completed across all the cities in the state. In terms of completion rates for projects, while the share of SCM projects in the number of completed projects is 54.2%, in terms of project cost they constitute only 22%. In terms of the cost of projects completed, Convergence projects contribute a disproportionate share of 78% (see Fig 2.2).

Table 2.3: Category-wise Status of Implementation of Projects under SCM in Karnataka

Category	Total Projects		Completed Projects		ongoing Projects		Projects in Tender Stage	
	No	Cost (In Rs Crore)	No	Cost (In Rs Crore)	No	Cost (In Rs Crore)	No	Cost (In Rs Crore)
SCM	536 (100)	6,207.79 (100)	182 (33.9)	442.913 (7.1)	326 (60.8)	5,029.11 (81.1)	25 (4.66)	405.77 (6.54)
PPP	36 (100)	2,542.3 (100)	0 (0.0)	0 (0.0)	16 (44.4)	1,467.59 (57.7)	16 (44.4)	870.71 (34.2)
Convergence	200 (100)	5,279.33 (100)	154 (77.7)	1,545.96 (29.3)	38 (19.0)	2,950.78 (55.9)	6 (3.0)	690.39 (13.1)
Total	**772 (100)**	**14,029.42 (100)**	**336 (43.5)**	**1,988.873 (14.2)**	**380 (49.2)**	**9,447.48 (67.3)**	**47 (6.1)**	**1,966.87 (14.0)**

SCM: Smart Cities *Mission; PPP: Public Private Partnership*; *Convergence*: *Convergence with other Schemes.*

Note: Figures in parentheses are percentages of total (no. and cost of) projects.

Source: Information provided by KUIDFC under Right to Information (RTI) Act 2005.

Since the seven cities included under the SCM in Karnataka were selected at different stages of the selection process, it is to be expected that they would be at the various stages in the implementation process. Belagavi and Davangere were selected in the first round and are in their fifth year, while Tumakuru, Mangaluru, Hubballi-Dharwad and Shivamogga are in their fourth year and Bengaluru is in its third year of the Mission. Thus, it is more appropriate to look at city-wise project implementation status to gauge the progress made under the Mission. Figure 2.3 shows the city-wise distribution of projects by source of funds. Belagavi has been able to leverage funds from other Union/State schemes to the greatest extent, since Convergence projects comprise more than 55% of the projects undertaken and their contribution to the project cost is three times that of the SCM grants. For Davangere, although the Convergence projects comprise only 12.04% of the total number of projects, their contribution to the total project cost under the Mission is around 55% for the city. Convergence projects contribute around one-third of the total project cost for Tumakuru and Hubbali-Dharwad while for Shivamogga their contribution stands at around 25%. Their share in the total project cost is much lower in Mangaluru (12.74%) and Bengaluru (2.83%).

In terms of share of PPP projects, around half (49.95%) of the Smart Cities Mission in

Bengaluru is being funded through PPP projects, while for Mangaluru PPP projects contribute 36.27% percent of the total project cost. For other cities this proportion is relatively lower: Tumakuru (18.5%), Shivamogga (13.59%), Hubballi-Dharwad (7.429%), Belagavi (5.87%) and Davangere (2.28%).

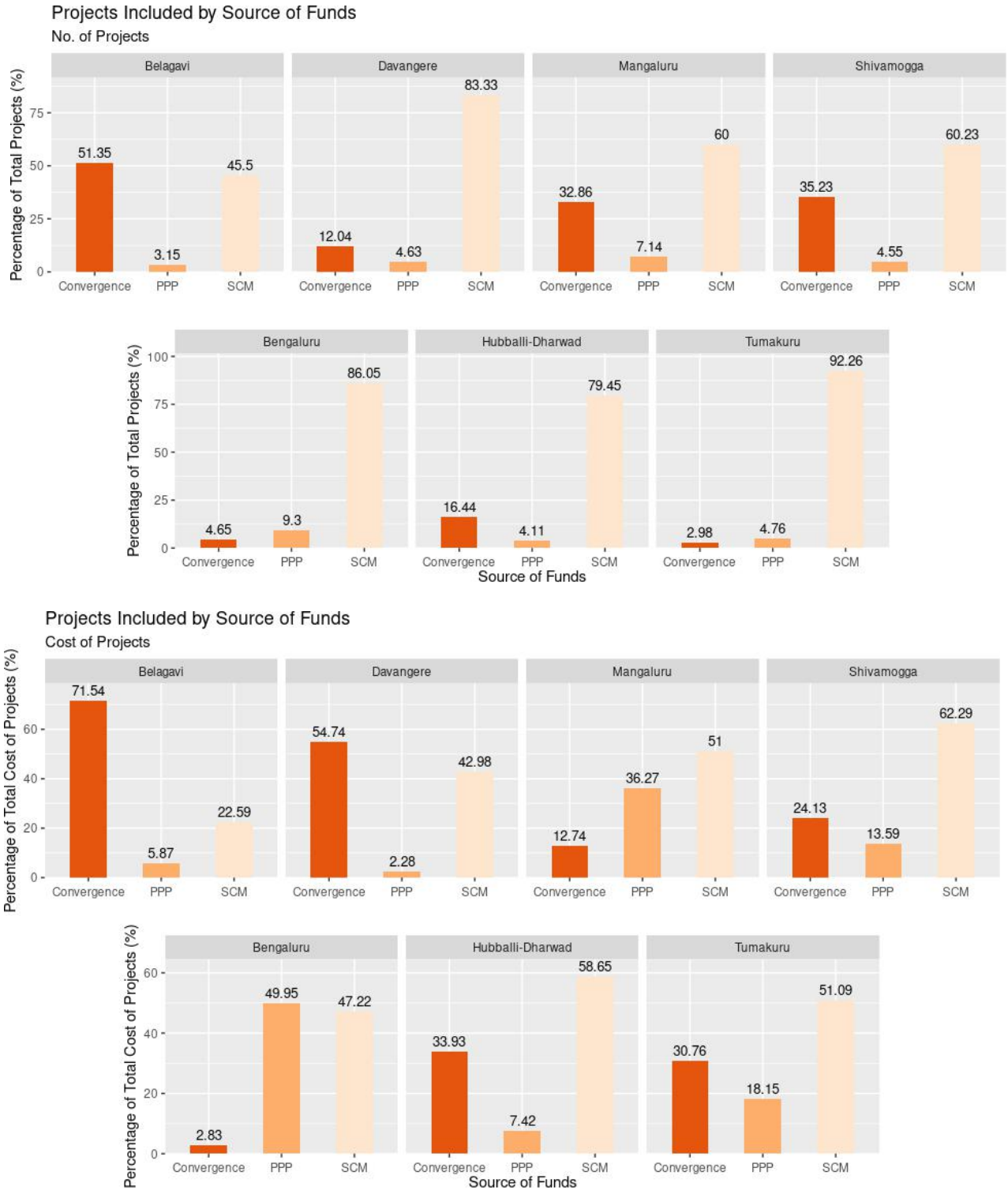


Figure 2.3: City-wise Distribution of Projects by Source of Funds

Table 2.4: City-wise Status of Implementation of various Categories of Projects under SCM in Karnataka

City	Category	Total Projects		Completed Projects		Ongoing Projects		Projects in Tender Stage	
		No.	Cost (In Rs Crore)	No.	Cost (In Rs Crore)	No.	Cost (In Rs Crore)	No.	Cost (In Rs Crore)
BELAGAVI	SCM	101 (100)	795.2 (100)	31 (30.69)	90.81 (11.42)	67 (66.34)	698.64 (87.86)	3 (2.97)	5.75 (0.72)
	PPP	7 (100)	206.62 (100)	0 (0.00)	0 (0.00)	1 (14.29)	58.9 (28.51)	6 (85.71)	147.72 (71.49)
	Convergence	114 (100)	2517.95 (100)	93 (81.58)	1075.27 (42.70)	15 (13.16)	736.5 (29.25)	5 (4.39)	687.98 (27.32)
	Sub Total	**222 (100)**	**3,519.77 (100)**	**124 (55.86)**	**1,166.08 (33.13)**	**83 (37.39)**	**1,494.04 (42.45)**	**14 (6.31)**	**841.45 (23.91)**
DAVANGERE	SCM	90 (100)	817.5 (100)	24 (26.67)	53.36 (6.53)	59 (65.56)	703.38 (86.04)	7 (7.78)	60.76 (7.43)
	PPP	5 (100)	43.33 (100)	0 (0.00)	0 (0.00)	5 (100.00)	43.33 (100.00)	0 (0.00)	0 (0.00)
	Convergence	13 (100)	1,041.26 (100)	8 (61.54)	119.36 (11.46)	5 (38.46)	921.9 (88.54)	0 (0.00)	0 (0.00)

	Sub Total	**108 (100)**	**1,902.09 (100)**	**32 (29.63)**	**172.72 (9.08)**	**69 (63.89)**	**1,668.61 (87.73)**	**7 (6.48)**	**60.76 (3.19)**
HUBBALLI-DHARWAD	SCM	58 (100)	920.88 (100)	12 (20.69)	19.97 (2.17)	43 (74.14)	695.91 (75.57)	2 (3.45)	55 (5.97)
	PPP	3 (100)	116.5 (100)	0 (0.00)	0 (0.00)	1 (33.33)	50 (42.92)	2 (66.67)	66.5 (57.08)
	Convergence	12 (100)	532.83 (100)	8 (66.67)	220.79 (41.44)	4 (33.33)	312.04 (58.56)	0 (0.00)	0 (0.00)
	Sub Total	**73 (100)**	**1,570.21 (100)**	**20 (27.40)**	**240.76 (15.33)**	**48 (65.75)**	**1,057.95 (67.38)**	**4 (5.48)**	**121.5 (7.74)**
MANGALURU	SCM	42 (100)	995.31 (100)	7 (16.67)	12.89 (1.30)	31 (73.81)	771.38 (77.50)	2 (4.76)	31.04 (3.12)
	PPP	5 (100)	707.79 (100)	0 (0.00)	0 (0.00)	4 (80.00)	262.79 (37.13)	1 (20.00)	445 (62.87)

	Convergence	23 (100)	248.61 (100)	18 (78.26)	82.86 (33.33)	5 (21.74)	165.75 (66.67)	0 (0.00)	0 (0.00)
	Sub Total	**70 (100)**	**1,951.71 (100)**	**25 (35.71)**	**95.75 (4.91)**	**40 (57.14)**	**1,199.92 (61.48)**	**3 (4.29)**	**476.04 (24.39)**
SHIVAMOGA	SCM	53 (100)	860.21 (100)	14 (26.42)	29.36 (3.41)	38 (71.70)	827.66 (96.22)	1 (1.89)	3.19 (0.37)
	PPP	4 (100)	187.63 (100)	0 (0.00)	0 (0.00)	1 (25.00)	44.42 (23.67)	3 (75.00)	143.21 (76.33)
	Convergence	31 (100)	333.23 (100)	27 (87.10)	47.68 (14.31)	4 (12.90)	285.55 (85.69)	0 (0.00)	0 (0.00)
	Sub Total	**88 (100)**	**1,381.07 (100)**	**41 (46.59)**	**77.04 (5.58)**	**43 (48.86)**	**1,157.63 (83.82)**	**4 (4.55)**	**146.4 (10.60)**

Tumakuru	SCM	155 (100)	915.943 (100)	90 (58.06)	225.85 (24.66)	61 (39.35)	677.45 (73.96)	4 (2.58)	12.64 (1.38)
	PPP	8 (100)	325.43 (100)	0 (0.00)	0 (0.00)	3 (37.50)	208.15 (63.96)	4 (50.00)	68.28 (20.98)
	Convergence	5 (100)	551.41 (100)	0 (0.00)	0 (0.00)	3 (60.00)	475 (86.14)	1 (20.00)	2.41 (0.44)
	Sub Total	**168 (100)**	**1,792.783 (100)**	**90 (53.57)**	**225.85 (12.60)**	**67 (39.88)**	**1,360.6 (75.89)**	**9 (5.36)**	**83.33 (4.65)**
Bengaluru	SCM	37 (100)	902.75 (100)	4 (10.81)	10.67 (1.18)	27 (72.97)	654.69 (72.52)	6 (16.22)	237.39 (26.30)
	PPP	4 (100)	955 (100)	0 (0.00)	0 (0.00)	1 (25.00)	800 (83.77)	0 (0.00)	0 (0.00)

	Convergence	2 (100)	54.04 (100)	0 (0.00)	0 (0.00)	2 (100.00)	54.04 (100.00)	0 (0.00)	0 (0.00)
	Sub Total	**43 (100)**	**1,911.79 (100)**	**4 (9.30)**	**10.67 (0.56)**	**30(69.77)**	**1,508.73 (78.92)**	**6 (13.95)**	**237.39 (12.42)**
GRAND TOTAL		772 (100)	14,029.423 (100)	336 (43.52)	1,988.87 (14.17)	380 (49.35)	9,447.48 (67.34)	47 (6.08)	1,966.87 (1.19)

Note: The figures in parenthesis are row percentages. *SCM: Smart City Mission; PPP: Public Private Partnership*

Source: Information provided by KUIDFC under Right to Information (RTI) Act 2005.

Table 2.4 shows the city-wise progress made in terms of implementation of projects of various categories. Between the two cities selected in the first round and nearing completion of the 5-year Mission period, Belagavi has completed 55.86% of projects while 37.39% projects were on-going. In terms of cost of the projects, we can see the overall pattern being repeated here: while half of the projects have been completed, they represent only one-third of the total project cost under the Mission. Davangere on the other hand, has completed just 26.63% projects which constitute 9.08% of total project costs. Among the four cities selected in the second round and nearing four years under the Mission, Tumakuru has made the fastest progress in terms of number of projects completed (53.57%). In fact, Tumakuru while in its four-year of project implementation, comes quite close to Belagavi (fifth year under the Mission) in terms of percentage of projects completed and thus, it is safe to say that in terms of number of projects completed, Tumakuru has made the fastest progress among all the cities selected under the Smart Cities Mission in Karnataka. In terms of the cost of completed projects, Belagavi leads the pack with

completed projects constituting 33.13% of the total project cost, followed by Hubballi-Dharwad (15.33%), Tumakuru (12.60%), Davangere (9.08%), Shivamogga (5.58%), Mangaluru (4.91%) and Bengaluru (0.56%). Bengaluru seems to be making very slow progress given that it has completed 3 years under the Mission, but only 9.3% of projects comprising a meager 0.56% in cost of all the projects have been completed. We can also see that there is a significant variance between the seven cities in terms of the total size (in terms of project costs) of the final Smart City Proposals. While the size of the Belagavi SCM is Rs 3,519.77 crore (over 3.5 times the Rs 1,000 crore SCM funds) the size of Shivamogga SCM is Rs 1,381.07 crore (1.38 times the Rs 1,000 crore SCM funds). Thus, while cities like Belagavi have been able to leverage SCM funds to implement a much larger plan, others like Shivamogga have been conservative in their ambitions. In terms of the strategy, while most cities have relied on Convergence strategy to expand the project scale (e.g Belagavi where Convergence projects comprise over 71% of the total SCP), some have relied much more heavily on PPP projects (e.g. Managluru where PPP projects comprise 36% of the total SCP).

Figure 2.4 shows the completion rate of projects by source of funds. Across Belagavi, Davangere, Hubballi-Dharwad, Shivamogga and Mangaluru, the completion rate of convergence projects is higher than the completion rate of projects funded out of SCM grants both in terms of number of projects as well as the project cost. In Tumakuru and Bengaluru on the other hand, the SCM grant projects show a higher rate of completion. The variance in the distribution of projects by source of funds and the differential rates of overall project completion and those across various sources of funds indicate interplay of city-specific and SPV-specific dynamics, since while the project cycle for the SCM funded projects is within the overall control of the SPV, under the Convergence projects, the project cycle is co-determined by the line department. We now turn to the specific experience of conceptualization and implementation of Smart Cities Mission in Tumakuru city.

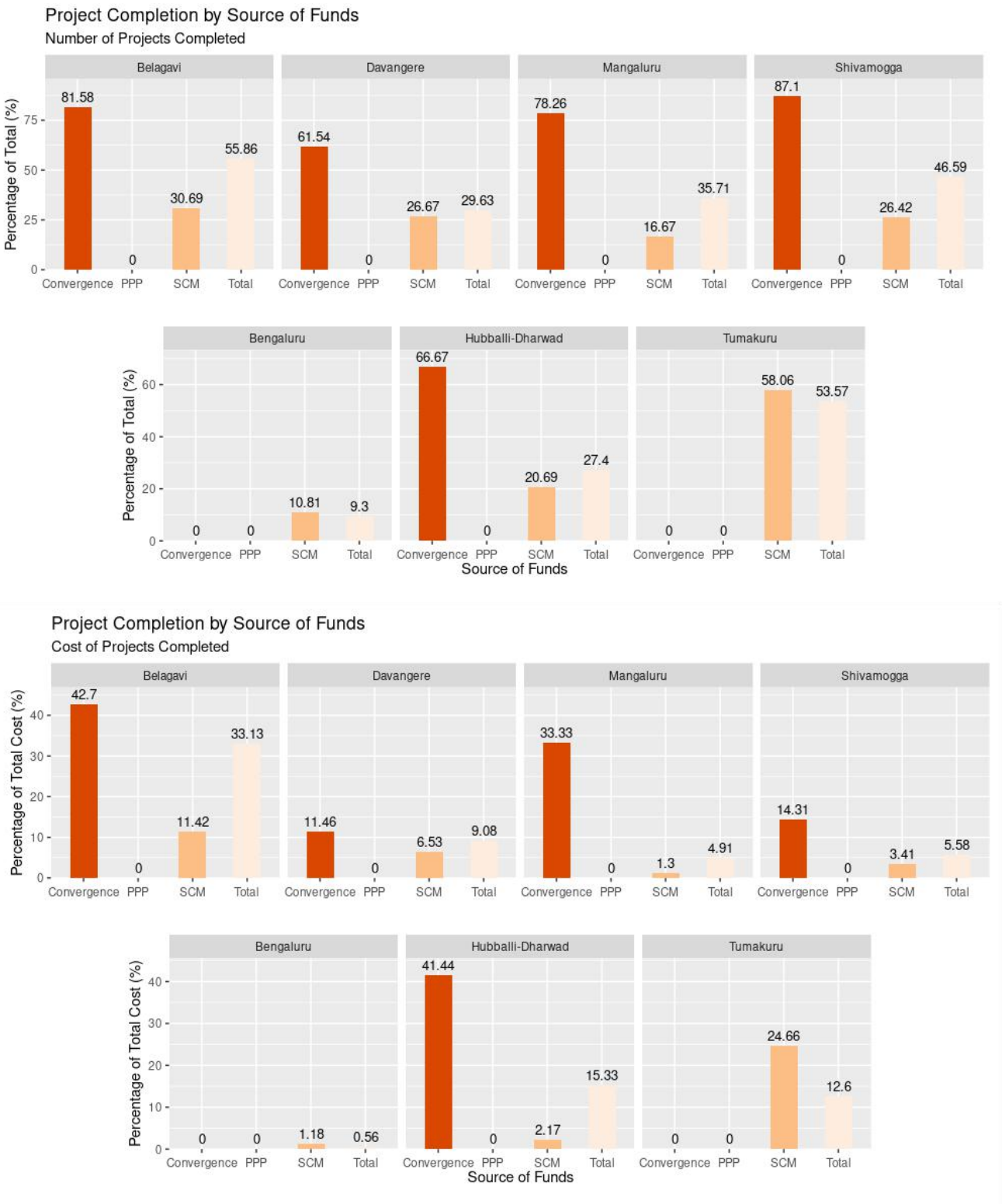


Figure 2.4: Status of Projects in Smart Cities in Karnataka

Chapter 3

Smart Cities Mission in Tumakuru: Preparation of the Smart Cities Proposal

3.1 Tumakuru: City Profile

There are two competing origin stories about the name of Tumakuru city. The popular one associates the city with those who used to beat the drum (tumuke meaning a drum in Kannada), the city being called Tumuke-ooru (City of Drum-beaters), unequivocally associating it with Dalit traditions. The competing explanation, which is more acceptable to the post-independence imagination of the city (District Census Handbook, 2011a, pp. xvii) holds that the name of the city is derived from its earlier name Tummegooru, which means the place of the tumme or tumbe, a common fragrant flower (Leucas aspera) commonly found in the area (Tumakuru District Gazetteer, 2017, pp. 1). In the days when the city was surrounded by large tracts occupied by coconut trees, the city sported the moniker of 'Coconut city'. Subsequently, the city developed into an educational and an industrial hub (with the setting up of HMT factory) and has since tried to gain prominence as an alternative to Bengaluru as an investment destination, being located 70 kms from Bengaluru. The city is also known as a gateway to Karnataka since it provides access to 15 districts to the state capital of Bengaluru and has become a transit hub for the routes in and out of Bengaluru. Two National Highways (NH-4 (Mumbai-Bengaluru-Chennai) and NH-206 (Bengaluru-Honnavara Road)) pass through the city. For a long time now, Tumakuru is being projected as a possible satellite town to Bengaluru (see Map 3.1). The city is bounded by various entrances and exits to and from the city referred to as Bengaluru Gate, Sira Gate, Gubbi Gate and Kunigal Gate. The city is spread across a 5 km radius around two intersecting axes, one along the Bengaluru-Honnavara (BH Road - NH 206) running from east (Bengaluru) to west (Honnavara) and the other axis along the road connecting Sira Gate and Kunigal Gate running from north to south.

The present day Tumakuru city is a medium-sized town spread over 48.60 sq kms with a population (2011) of over 3 lakhs. The city grew rapidly during the decades of 1951-1991. This was the period when Mysore Cements Ltd., a private cement factory and HMT Watch factory were set up in the city along with ancillary units giving a fillip to employment and population growth in the city. With the expansion of population, the city expanded from a geographical area of around 20 sq kms in 1961 to 48.60 sq kms presently (see Table 3.1). The Siddaganga Matha which was established in the 15th century to propagate the Lingayath faith, and myriad educational, technical and medical institutions managed by the Sree Siddaganga Education Society established in 1962, dots the geography and the imagination of the city because of the sheer influence it has on the lives of the residents of the city.

Having seen growth and expansion on account of proximity with Bengaluru, Tumakuru has been aspiring to break out of Bengaluru's shadows and become an investment and in-migration destination in its own right.

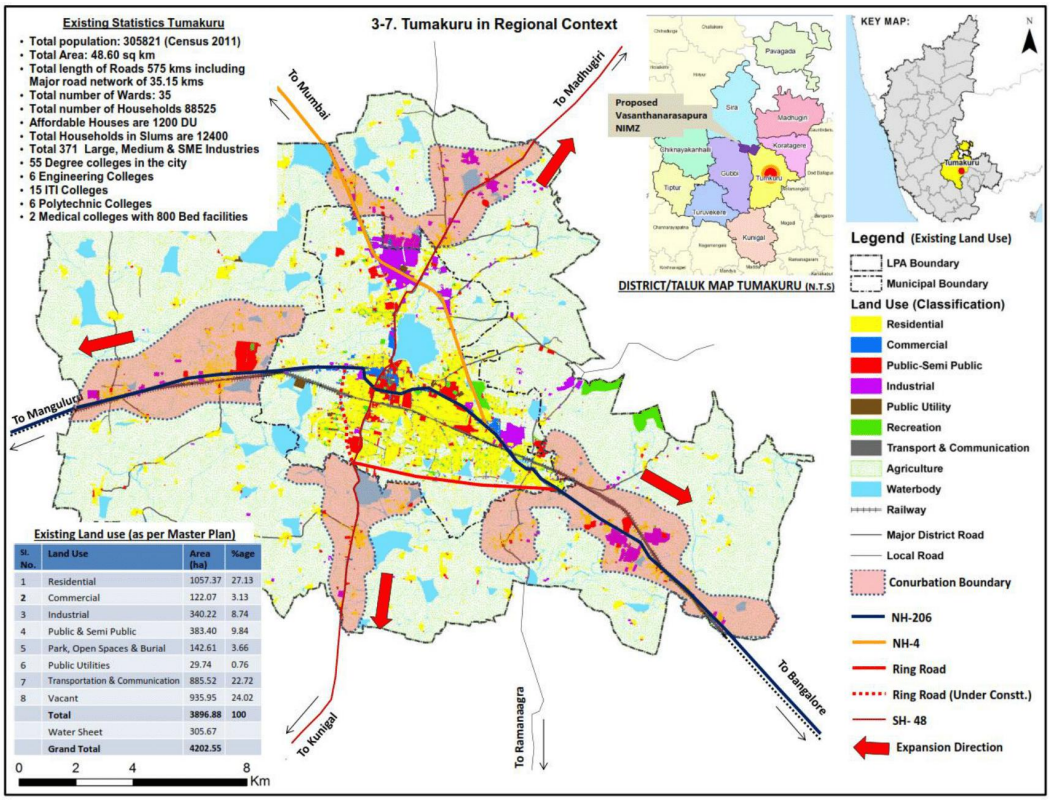


Figure 3.1: Thematic Map of Tumakuru City with Relevant Statistics

Table 3.1: Growth in Area and Population of Tumakuru City

Year	Urban Status	Area (Sq Kms)	Population	Population Growth (%)
1921			14,246	
1931			18,196	27.73
1941			21,893	20.32
1951			35,999	64.43
1961	M	19.43	47,277	31.33
1971	M	12.95	70,476	49.07
1981	M	15.32	1,08,670	54.19
1991	CMC	36.71	1,79,877	65.53
2001	CMC	48.60	2,48,929	38.39
2011	CC	48.60	3,02,143	21.38

Note: M: Municipality; CMC: City Municipal Corporation; CC: City Corporation

Source: Census 2011, *Towns and Urban Agglomerations Classified by Population Size Class In 2011 With Variation Since 1901, Class I Towns.*

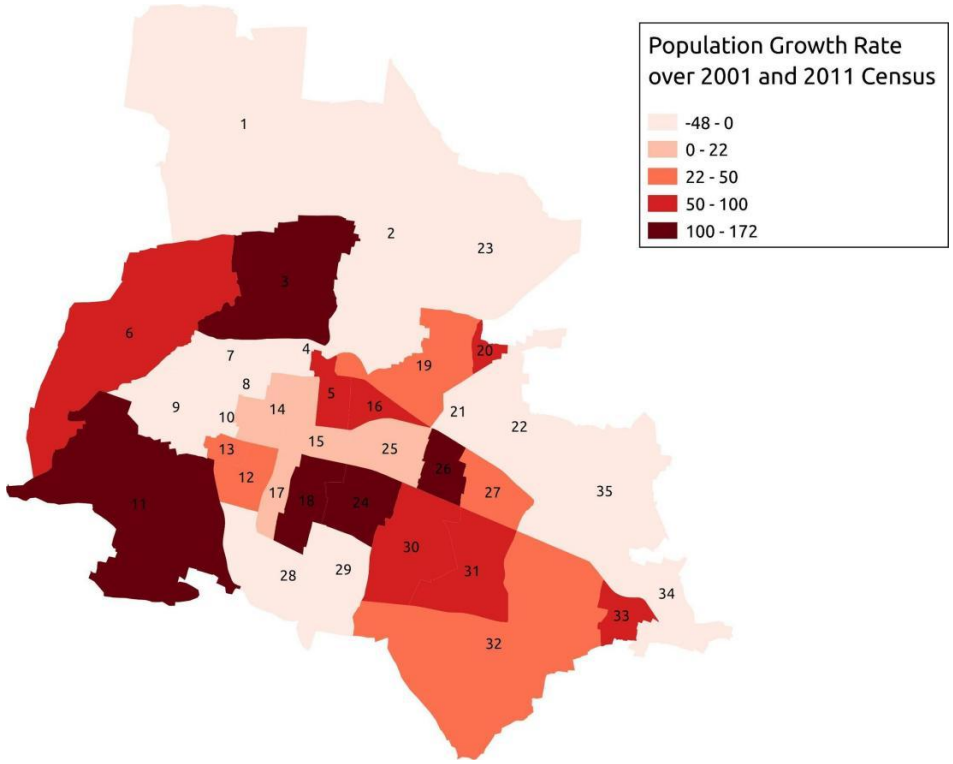


Figure 3.2: Population Growth rate across various Wards in Tumakuru over the 2001-11 period

The twin decades between the 1991 and 2011 censuses saw a deceleration in the population growth rate of the city as shown in Table 3.1, but this deceleration was not evenly spread across the geography of the city. Figure 3.2 shows the rate of change in the population across the 35 wards of the city over the intervening period between the two decadal censuses in 2001 and 2011. The peripheral wards on the north and eastern flank of the city actually saw depopulation during this decade, while population expansion was seen in the central, western and south-eastern areas of the city. Apart from the resident population, the city also hosts an estimated floating population of 5000-6000 per day which includes students and transit commuters (TCC, 2016, pp. 12). As per the *Slum Free City Plan of Action* for Tumakuru prepared under the RAY scheme, 16.56% of the population of the city resided in 37 'slums' (22 declared slums and 15 un-declared slums). 30% of those living in these inadequate housing conditions were SC, while the share of SCs in the city's population was 12.33%. Out of the remaining residents, 4.90% were STs, 55.7% were OBCs and 49.21% came from religious minority groups.[17] These class and caste-based socioeconomic inequalities also map onto the spatial dimension as discussed in the next section.

17 There is an overlap between OBC and Minority categories since several religious minority groups have been included under the OBC classification in Karnataka.

3.2 The Smart City Proposal (SCP) Preparation and the Political Economy of Area-based Development

The Guidelines for the Smart Cities Mission had prescribed only the minimum elements that should be present in the Smart City Proposal: an Area-based Development (ABD) component based on the chosen model (retrofitting, redevelopment or greenfield development) and a Pan-city component with application of Smart Solutions (MoUD, 2015, pp. 11-12). A standardized template for SCP was developed and circulated to the cities[18] which were required to engage external entities to prepare the SCP.[19] Additionally, in Karnataka, senior IAS officers were appointed as City advisors to guide the process of preparation of the SCP.[20] Extensive engagement with citizens was prescribed to formulate the vision, the ABD strategy and the choice of pan-city solutions.[21]

3.3 Citizen Engagement

The SCP provides lofty figures about the nature of citizen engagement. It is claimed that there were over 1,75,000 citizen engagements over four Rounds of the citizen engagement process.[22] For an estimated population of 3,05,821 persons, this implies that every second person was engaged with as part of the consultation process. But our interviews with members of urban deprived communities in Tumakuru including *Pourakarmikas*, Underground Drainage (UGD) workers, street-vendors and leaders and activists of organizations working across various low-income settlements suggest that most of the members of the marginalized communities were not involved in any such survey or outreach programme. A leader of the *Pourakarmika Sangha* (Sanitation Workers Union) stated the following about the meetings that were held in various zones of the City Corporation: -

> We came to know from others that the Corporation was organizing some discussion about Smart City but we were not specifically invited to those

18 Ministry of Urban Development OM No. K-15016/61/2015-SC-1 dated 14-09-2015 and OM No. K-15016/61/2015-SC-1 dated 12-11-2015.
19 Cities were required to choose from the following three options: 1) Consulting Firms from the Panel prepared by the MoUD; 2) Consulting Firm outside the panel by following a fair and transparent process as per State Financial Rules; and 3) Handholding Agency. See, Ministry of Urban Development OM No. K-13014/5/2015-SCM-III-V dated 10-07-2015.
20 For Tumakuru, Dr. Shalini Rajneesh, who was the district in-charge secretary was appointed as the City Advisor (see Government order No. UDD 153 CSS 2015, dated 18.09.2015.) Dr. Shalini Rajneesh was later appointed as the Chairperson of the Board of the SPV formed for implementation of smart-city projects in Tumakuru.
21 See MoUD OM No. K.14012/101(28)/2015-SC-III-A dated 23-09-2015.
22 Appendix 3.03 of TCC, 2016.

> meetings. We thought those meetings are for officials. Being Pourakarmikas, how can we go for those kinds of meetings?[23]

Mr. Kadarappa, another leader of the *Pourakarmika Sangha* (Sanitation Workers Union) also confirmed the above observation: -

> We all work for the Corporation and we keep visiting the offices almost every week, but we were never called for any consultation regarding Smart City. The first time we came to know about Smart City was when Mr. T Bhoobalan, the Corporation Commissioner was given additional charge as MD of TSCL.[24]

Similarly, UGD workers who also work for the City Corporation were not involved in any of the consultation.[25]

Fig 3.3 below shows the break-up of citizen engagement by various modes.[26] A large number of these citizen interactions were one-way information streams wherein the citizens were informed about the candidature of Tumakuru as a Smart City. A majority of such interactions were carried out through online media, and could have been the reason why its reach within the urban deprived communities of the city was limited.

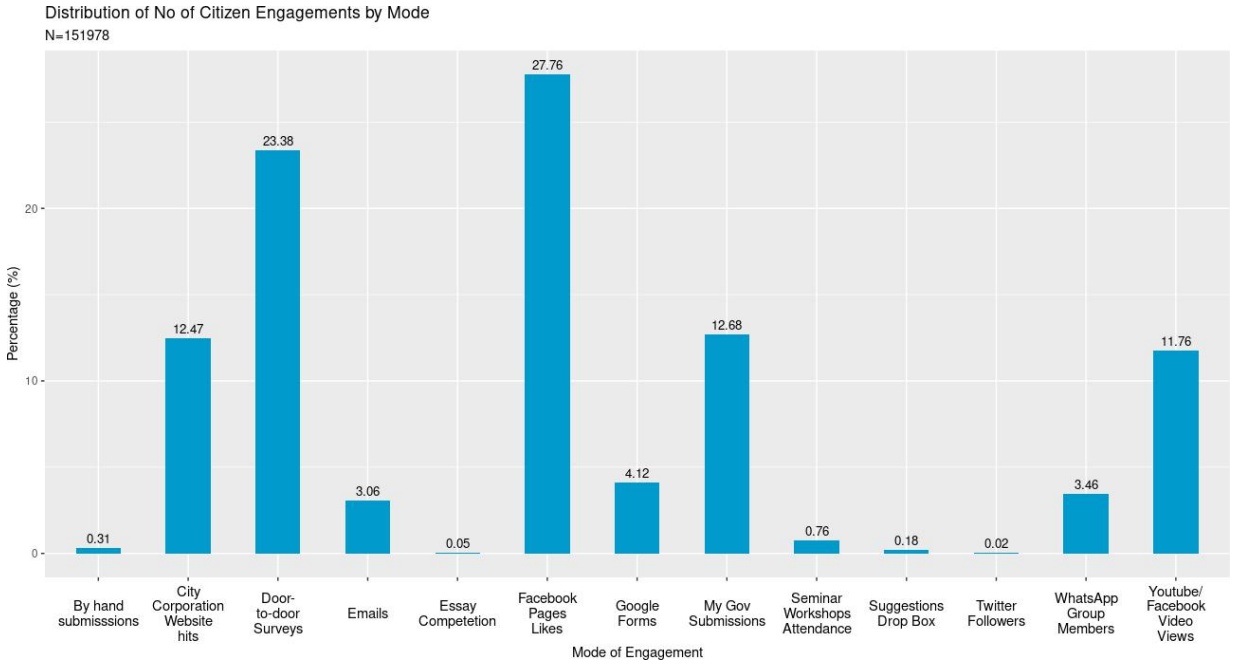


Figure 3.3: Distribution of various Modes of Citizen Engagement for across Rounds

23 Interview conducted on March 31, 2021.
24 Interview conducted on March 30, 2021.
25 Interviews with two leaders of UGD Workers's Union conducted on 18-03-2021. Names withheld for fear of repercussions for the workers.
26 Based on a Presentation dated December 14, 2015 made by LEA Associates South Asia. These interactions were conducted till the formulation of the first SCP.

To arrive at the vision statement of Tumakuru Smart Cities Mission, an initial round of engagement, mainly with students and professors of various universities and educational institutions was conducted in the form of a competition to solicit ideas. The winning vision statement - **KIND** (**K**nowledge and **I**ndustrial **N**ew **D**estination) City - was suggested by a University Head (Shankavaram, 2016, pp. 38). Subsequently, there were two significant rounds of citizen engagement initiatives. In Round 1, surveys and meetings were conducted focusing on soliciting citizens' opinion on their level (dis)satisfaction with basic (core) services.[27] The feedback and suggestions received during Round 1 of Citizen Engagement were then translated to overall vision and goals and specific options for the strategy and area selection for ABD component and pan-city projects. These specific choices were then put to vote in the Round 2 of citizen engagement. The level and nature of participation during Round 1 and the feedback received is shown in Figure 3.4. As the first panel in Figure 3.4 shows, only 3% of the respondents who participated in this Round of Citizen Engagement were residents of 'slums', while over 16% of the city's population resides in 'slums. Rest of the respondents were students, academics, members of religious groups, resident welfare associations, taxpayers' association or industry/trade associations. The limited participation of urban deprived communities created a middle-class bias in the responses which got reflected in the issues identified during Round 1 of the citizen engagement process. Irregular power supply was identified as the biggest problem facing the city by the largest percentage of respondents, followed by solid waste collection, drainage, pedestrian facilities and parking facilities. Issues like affordable housing, health infrastructure, street vending zones, auto-rickshaw stands, etc. did not even figure in the list of priorities.

Nevertheless, dissatisfaction with basic services and infrastructure came out very clearly from the feedback, and although not all communities had equal access to these services in the city, improvement in the existing level and quality of services was an aspiration shared across all social groups, and more so by those who had limited or no access to services like piped water supply, drainage, solid waste collection, public transport, etc. Thus, the feedback from the citizens, however skewed, would have suggested a strong focus on improvement of these basic services and associated infrastructure. In case, pan-city improvement was not feasible owing to limited availability of funds, a distributional justice approach would have warranted a focus on those areas where such infrastructure was inadequate or non-existent. As Figures 3.5-3.8 show, the core areas of the city fare much

27 The Survey Questionnaire used for Round 1 of Citizen Engagement is annexed as Appendix 5.1.

better in terms of access to services like water supply, sewerage system and drainage facilities, while the wards on the periphery have inadequate access to these services.

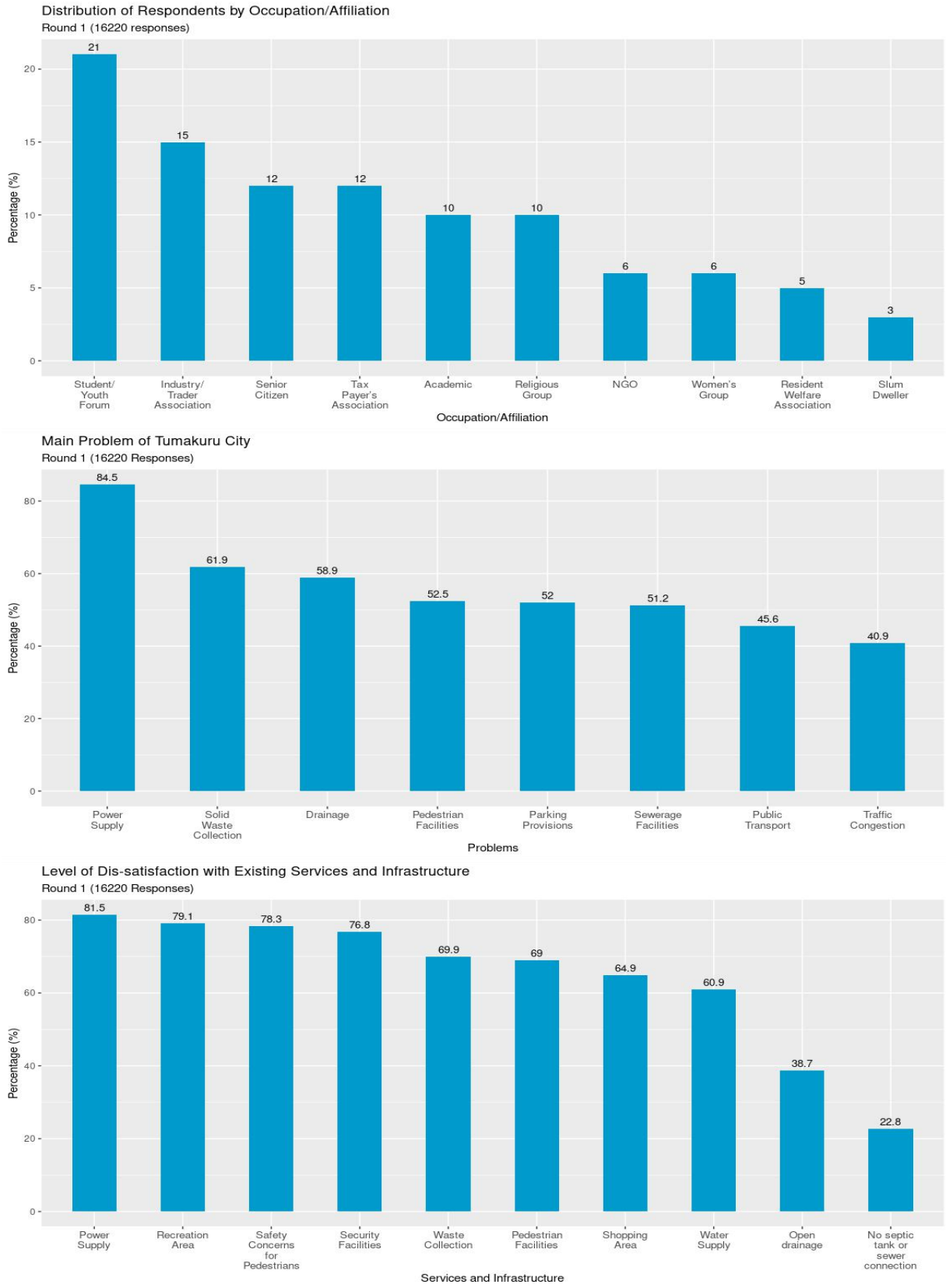


Figure 3.4: Feedback from Round 1 of Citizen Engagement

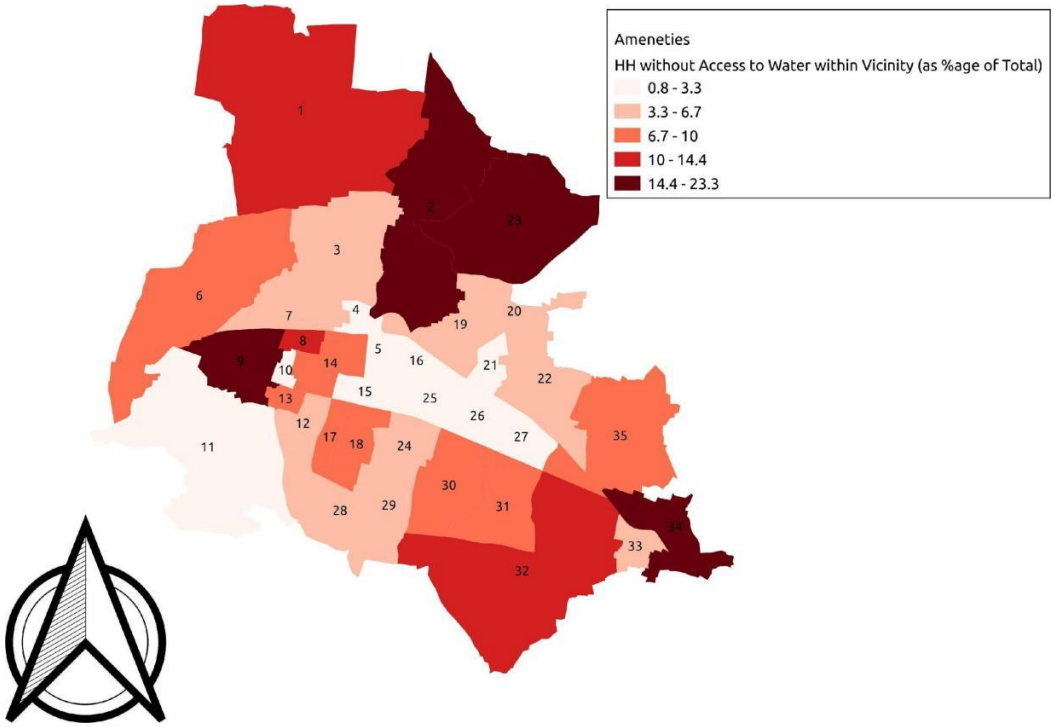


Figure 3.5: Access to Water in Vicinity

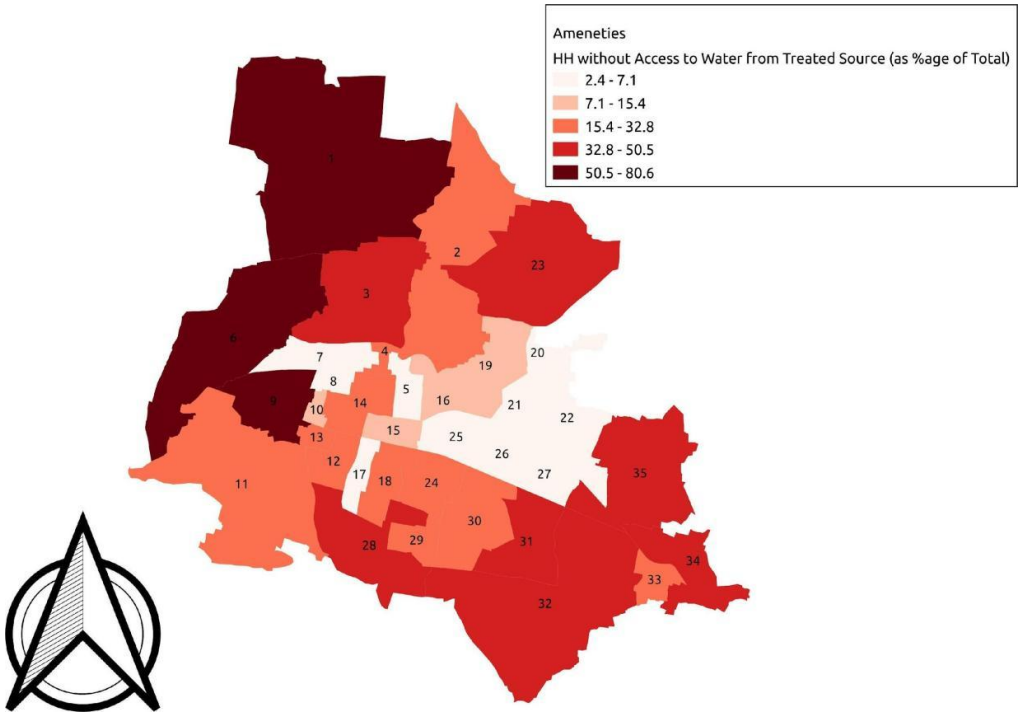


Figure 3.6: Access to Treated Drinking Water Source

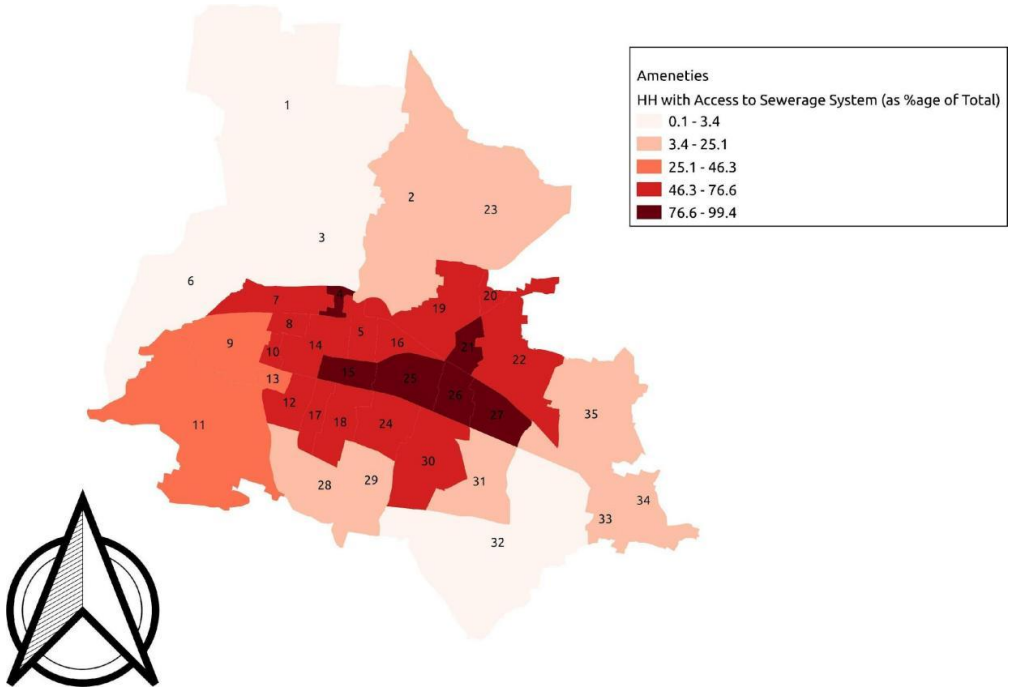


Figure 3.7: Access to Sewerage System

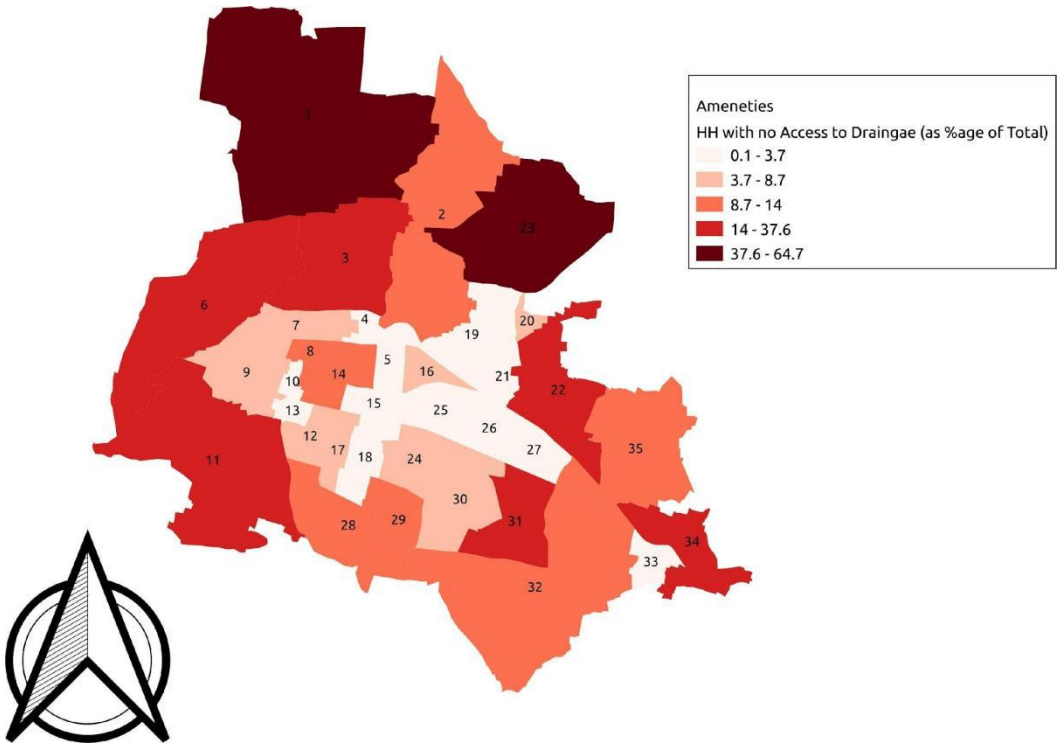


Figure 3.8: Access to Drainage Facility

Yet, the vision that was put to vote in Round 2 of citizen engagement, offered a choice between three options: Making Tumakuru:

1) An Industrial City; 2) A knowledge city/education hub; or 3) Both 1 & 2. In terms of choice of the mode of development (Greenfield, Redevelopment and Retrofitting) and the areas for these respective modes of development, seven clusters were identified for Area-Based Development as listed below and depicted in the map in Figure 3.9.

- RETROFITTING
  1.Railway station area, Town Hall area, Bus station area, MG road as city center.

- REDEVELOPMENT ('Slums')
  2.Indira colony, Maralur Dinne slums.
  3.NR colony slums.
  4.Shanthinagara slums.

- RETROFITTING (Residential)
  5.Jayanagar (E), Maruthinagar, Nrupathunga Extn, Siddarameshwara Extn, Manjunatha Nagar, Gokula Extn.
  6.S S Puram, SIT Area Vidhya Nagar, Nrupathunga Ext 2.

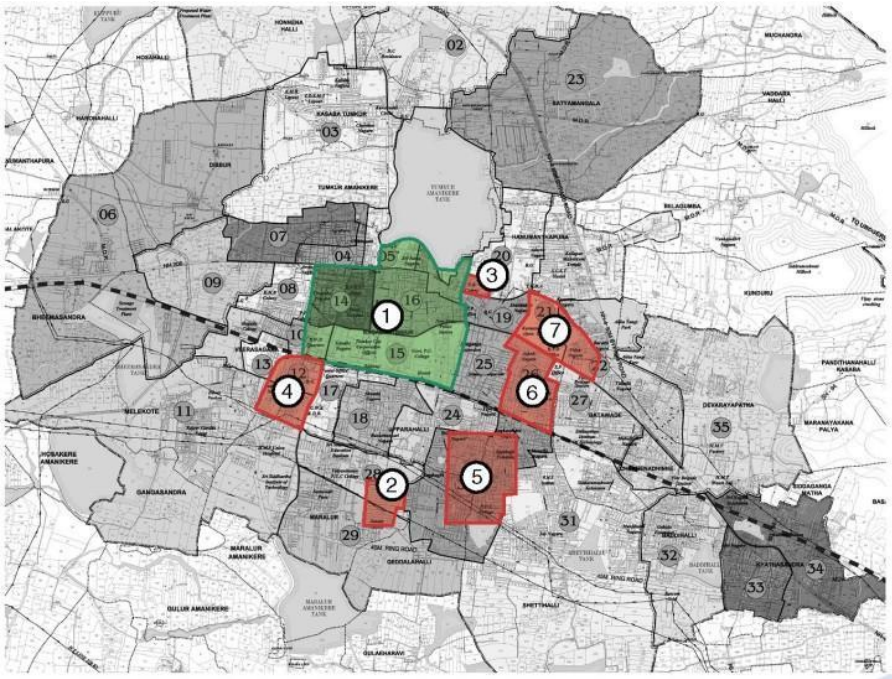


Figure 3.9: Area selected for voting in Round 2 of Citizen Engagement

Out of these clusters, three clusters - 1, 4 and 5 -were selected based on the responses received and put to vote again, which yielded 1 and 5 as the final contenders. The option of redevelopment projects in 'slums' was quickly voted out of reckoning, and the eventual choice was between city core areas (1) and the residential cluster in Jayanagar and Maruthi Nagar (5). Eventually, at the third selection stage Cluster 1 (Railway station area, Town Hall area, Bus station area, MG road as city centre) received 77.63% of the votes and was selected based on just 1,101 votes, a majority of which were polled online (Shankavaram, 2016, pp. 45). The combined result of the exclusionary nature of the Citizen Engagement

process in terms of non-participation of large sections of urban deprived communities in the city; the fact that redevelopment of identified slums (Cluster 3-5) was proposed as a standalone option; the incongruence of standalone redevelopment of slums with the overarching vision for the Smart Cities Mission ensured that inclusion of these areas was a losing proposition right from the beginning. Mr. A Narsimhamurthy, President of Karnataka Slum Janandolana and member of Tumakuru Smart City Forum, while speaking at one of the workshops as part of Citizen Engagement, raised the issue of social justice and the need to prioritize the development needs of urban deprived communities but these concerns were not taken on-board.[28] According to him, the final shape that the SCP took was born in a 'Visioning Exercise' conducted by urban experts.[29] The SCP submitted for Round 1 of the Stage 2 of City Level Challenge had included only Ward 5, 14, 15 and 16 and Amanikere lake area under Area-Based Development. Mr. A Narsimhamurthy, pointed out the exclusionary nature of the citizen engagement process: -

> They say that they carried an extensive citizen engagement process but the participation of people was not at a level as is being projected. Some meetings were held at the Corporation level where mostly officials participated. Some meetings were held in Tumakuru University and some selected colleges like SIT...Siddhartha Engineering College. There was no door-to-door survey in the area we work. A workshop was held in Gubbi Veeranna Kalakshetra where some community-based organizations and citizen's forums were invited. I was also present in the workshop. They showed us two models: Bhindi Bazaar in Mumbai and one more European city. We told them that instead of going by these models, we should choose something which is appropriate for Tumakuru. They asked us which areas could be selected under the Mission. Different people gave different suggestions. Eventually, the core area of the city was selected. Instead of people, this choice was driven by technical experts. There was a big technical consultation at Sridevi Engineering College called Vision 2025 where all these technical experts had come. After that there were several consultations at the Corporation level but these processes never reached marginalized communities. From the marginalized communities no feedback was sought. We questioned this on several occasions. Even in the workshop held in Gubbi Veeranna we asked

28 Interview with A Narsimhamurthy, President, Karnataka Slum Janandolana conducted on March 20, 2021. A recording of his intervention at this workshop is available at: https://www.youtube.com/watch?v=1Qt48oidoWo&t=18s&ab_channel=SmartcityTumakuru

29 A Ravindra, Former Chief Secretary of Karnataka & Founder of India Smart Cities Foundation and Prof R K Mishra (Environmentalist).

> them about the number of slums that would be included. They said that some Rs 90 crore of funds would be spent on slums out of the proposed Rs 2000 crore funding. We questioned this. We told them that they should allot funding based on the percentage of the city population living in slums to ensure social justice. They said that slum development would be undertaken under Pradhan Mantri Awas Yojana (PMAY). So far, some 1,450 houses have been tendered under PMAY which is much lower than what was included in the proposal as a convergence project. In terms of projects, there were several suggestions that were provided by citizens during the feedback process but only 20-25% were included. Rest of the 70-75% projects were provided by consultants to suit the narrow criteria for selection of the Proposal. So instead of projects that were needed by the people, the projects which would have helped in scoring high on those selection criteria were taken up.[30]

Tumakuru did not figure in the 20 cities selected in the First Round of Stage 2 of the CityLevel Challenge. The main reason as stated by the consultants[31] hired for revision of the SCP was the absence of a linkage between the vision with the project proposal[32] and the limited impact of the projects on the people of Tumakuru (Shankavaram, 2016, pp. 44-45). In the first version of the SCP, only the Railway station area, Town Hall area, Bus station area and MG road area along with Amanikere were chosen for ABD covering 8% area of the city and just 2.5% of the city population. To overcome the first shortcoming, the Vision statement of the SCP was revised to: -

> Transforming Tumakuru from a mere EDGE CITY OF BENGALURU to the MOST PREFERRED DESTINATION within the region with a strong focus on economic development and provision of enhanced CONNECTIVITY, high QUALITY OF LIFE, ECOLOGICAL integration and INCLUSIVE development' (TCC, 2016, pp. 16).

To address the second shortcoming related to the limited population coverage of the Round 1 SCP, in Round 2, the area chosen for ABD was expanded to all the wards of the Central Business District area (CBD) (Ward 4, 5, 14, 15, 16, 19 and parts of Ward 7) and Amanikere Lake.[33] The increase in coverage of the ABD projects from Round 1 to Round 2

30 Interview conducted on 20-03-2021.
31 The SCP for Tumakuru was prepared by LEA Associates South Asia Ltd for the First Round and was revised by Infrastructure Development Corporation (Karnataka) Ltd.
32 The projects were not seen to be contributing to the building of Tumakuru as a Knowledge or Industrial Hub.
33 CBD: 3.62 sq Kms and Amanikere Lake: 1.86 sq Kms.

is shown in Table 3.2. In addition to the expansion of population and area coverage, the size of the SCP in terms of project costs was also increased, and on-going projects related to Natural Gas Pipeline (a GAIL-Meil PPP Project), 24x7 Water Supply Project (UIDSSMT and AMRUT), development of Underground Drainage (UIDSSMT and AMRUT), development of 'slums' (PMAY), etc. were included with little or no funding from SCM grants.

Table 3.2: Increase in Coverage of ABD Projects over two Rounds of SCP submission

Round	ABD Coverage		Total Project Cost (Rs. Crore)	Break-up of the SCP	
	Area (Sq Kms)	Population		ABD	Pan city
Round 1	3.72 (8%)	7,645 (2.5%)	1,052.73	58.21	41.79
Round 2	5.48 (11%)	44,038 (14.4%)	2,227.00	84.95	15.05

Source: Proceedings of 2nd and 7th HPSC Meeting.

The changes made to the SCP during this revision process were completely a product of expert-driven bureaucratic and political processes, and no citizen feedback was sought during this revision cycle. A meeting of the CLAF was called before the submission of the revised SCP, where additions to the revised SCP were suggested by the MLA, MP and the district in-charge minister.[34] Tumakuru was eventually selected as a Smart City in September 2016 in Round 2 of the selection process.

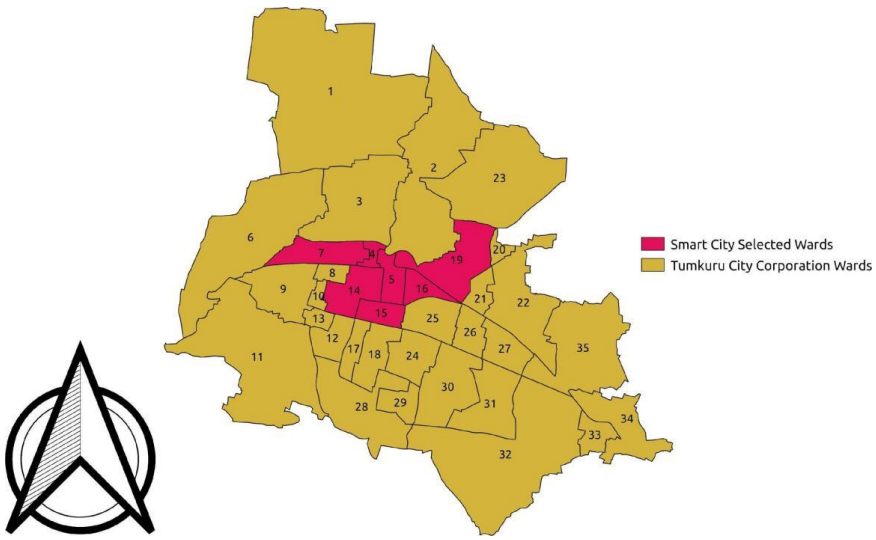


Figure 3.10: Map showing the wards selected for Area-based Development Projects under Smart Cities Mission in Tumakuru

34 Minutes of the meeting of CLAF held on 09-06-2016.

Figure 3.10 shows the wards that were selected for ABD interventions in the selected SCP. A comparison between the selected wards under ABD and Figure 3.11, which shows the ward-wise concentration of SC population, indicates that the selected wards have the least concentration of *Dalit* residents or in other words, have the highest concentration of non-*Dalit* population, which indicates that the selected SCP reinforces the caste-based spatial inequalities of the city spread along the core-periphery dichotomy. Even within the selected ABD areas, several disadvantaged areas with inadequate housing and basic amenities were excluded as Mr. A Narsimhamurthy points out: -

> Even in the selected ABD areas itself there are so many slums which could have been taken up for development. For example, Ward 19 which was selected under the ABD area has a large concentration of 'untouchable' SC population.[35] You can find over 500 families residing in *kutcha* houses there. But those areas have been left out. N R colony, one of the biggest slums falls under Ward 19...Ashraya colony in Nirvani Layout which was built for *hamalis* (head-load workers) has *kutcha* houses built several years back...Srirama Nagara which falls under Ward 19 has majority touchable SC communities, those should have been included.

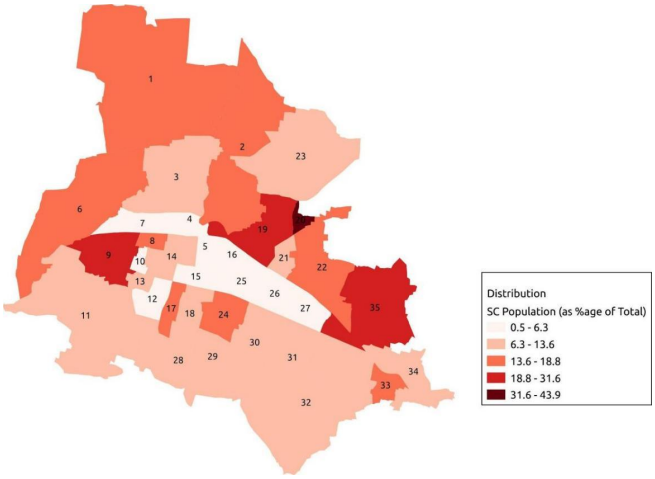


Figure 3.11: Spatial Distribution of Population classified as Scheduled Castes

Ward 19 which was added to the ABD area in the Round 2 to expand the area and population coverage of the ABD component of the SCP, contributes 13.8% to the area coverage (excluding Amanikere lake area) and 20% to the population coverage, yet large

35 In Karnataka, a distinction is often made between 'untouchable' SC and 'touchable' SC communities based on whether the communities are victims of untouchability.

parts of the ward were left out of project coverage. A social justice approach to project selection would have warranted prioritizing development of these areas. Mr. A Narsumhamurthy goes on to elaborate on the spatial class-caste matrix of the city whose presence would have warranted selection of a different part of the city if distributional concerns were prioritized: -

> Most of the development under Smart Cities Mission is happening in the areas selected for area-based development. Among these areas, Chikkapete, Garden Road, Mandipete (Ward 4, 5 and 7) are all upper caste areas, where the value of their properties, the rent income has increased because of the development in those areas. Similarly, CSI Extension and Gandhinagara are all areas where business and trading communities reside. In the ABD areas, only Srirama Nagar and NR Colony (Ward 19) are semi-slum and slum areas where marginalized communities reside. That is why we had suggested that the wards on the western periphery where majority *dalits* and minority communities reside should be taken up for ABD development, because the core areas are already seeing a lot of development anyways. Along the western periphery of the city, the residents are mostly poor, who come from marginalized and minority communities. But that was left out and the core areas were selected.

Since ward-wise poverty estimates are not available, we map two-wheeler ownership as a proxy for economic status in Figure 3.12. As the Figure shows, the wards at the western periphery of the city have one of the lowest levels of ownership of two-wheelers, indicating lower overall economic status. The same wards also have higher concentration of SC population as shown in Figure 3.11 earlier.

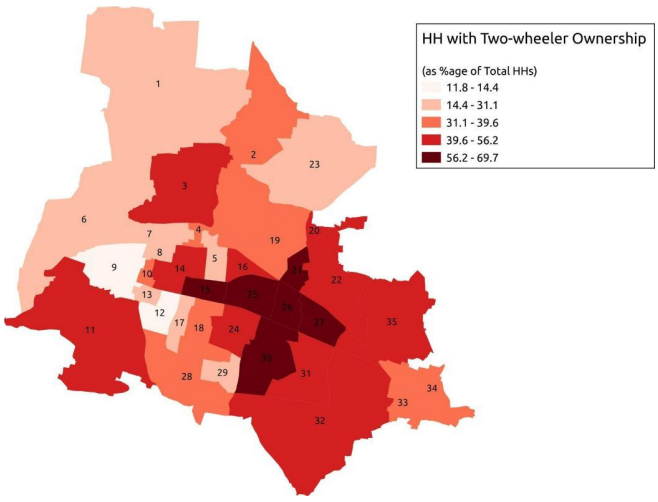


Figure 3.12: Distribution of Households owning Two-wheeler.

3.4 The Selected Smart City Proposal for Tumakuru

The overall vision projected by the selected SCP for Tumakuru city was to 'leverage its strategic location (proximity to Bengaluru), connectivity within the region and its reputation as a growing industrial and knowledge hub, to transform itself from a mere transitory edge destination and into the most preferred destination for living' (TCC, 2016, pp. 14). This vision was sought to be achieved through area-based development projects clubbed in four broad categories (see Appendix 5.2 for break-up of the Selected SCP)

1. **Mobility and Accessibility** (Integrated Bus Terminus, Junction Improvements, Road- widening, e-vehicles, footpaths etc.)

2. **Quality of Life** (Improvements in Water Supply, Underground Drainage System, Solid Waste Management System, Creation of Vending Zones, Piped Natural Gas Supply, EWS Housing, Lake Front Development, Addition of Trauma Center to Multi-specialty Hospital, etc.)

3. **Ecology and Environment** (Amanikere Lake Development, Rooftop Solar Lighting, Rain Water Harvesting); and

4. **Business Innovation and Governance** (Smart Lounges, Innovation Centers, Tumakuru one Centers, etc.).

An Integrated City Control Room equipped with CCTV Surveillance, Emergency Response system, Solid waste management tracking system etc. was proposed as a Pan-City Smart Solution. The break-up of project costs across ABD projects and pan-city projects is shown in Fig 3.13 below along with the break-up based on source of funds. ABD projects comprise 85% of the total projected costs under the SCP. In terms of source of funds, 45% of the funds for the projects proposed SCP were expected to come from SCM funds, while 39% funds were leveraged through convergence with on-going Union and State schemes (AMRUT, UIDSSMT, PMAY, KHSDRP) channelized through Tumakuru City Corporation (TCC) and other agencies like Tumakuru Urban Development Authority (TUDA). 15% of the project cost of the SCP was sought to be financed through investments under PPP projects. But if one takes a closer look at the selected SCP, one can observe that the SCM grants available under the Mission were proposed to be used largely for projects other than those related to the provisioning of basic services. The projects related to basic services were largely being financed through funding from existing schemes of line departments or agencies with little or no contribution from Smart Cities Mission.

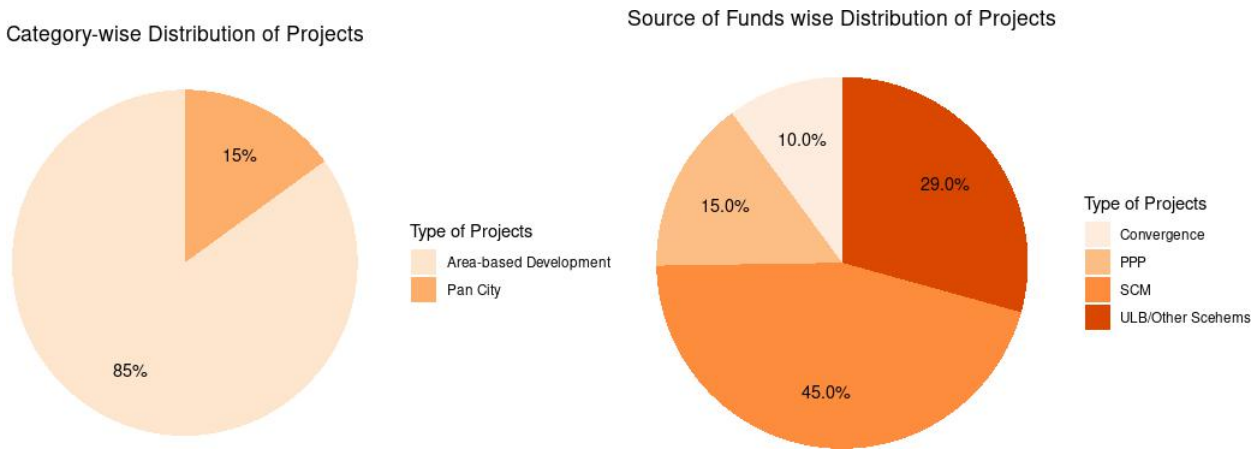


Figure 3.13: Category-wise and Source of Funds wise distribution of projects proposed under Smart Cities Mission in Tumakuru

Table 3.3: Source of Funds-wise Break-up of ABD Projects under the Selected SCP

Sub-Component	Project Cost (Rs Crore)			
	SCM	Convergence	PPP	Total
Mobility & Accessibility Improvements	263 (80.67)	7 (2.15)	56 (17.18)	326 (100)
Improvement in Quality of Life	390 (29.89)	825 (63.22)	90 (6.90)	1,305 (100)
Ecology and Environment	116 (57.71)	31 (15.42)	54 (26.87)	201 (100)
Business Innovation and Governance	18 (30.00)	0 (0.00)	42 (70.00)	60 (100)
Total	**787 (41.60)**	**863 (45.61)**	**242 (12.79)**	**1,892 (100)**

Note: The figures in parenthesis are row percentages.

Source: Selected Smart City Proposal (SCP) for Tumakuru City.

Table 3.3 provides a summary of the contribution of each source of fund for the projects under each sub-component under the SCP.[36] While 'Quality of Life' constitutes the largest sub-component of the selected SCP, nearly two-thirds of the project cost under this sub-component is being met through convergence schemes. On disaggregating the data further (see Table 3.4), we see that within this sub-component, the proposed contribution of SCM grants towards projects related to services like water, sewerage facility, drainage, gas supply, affordable housing, etc., was a minuscule 4.21%, the remaining funds coming from Convergence (83.15%) and PPP (12.64%) route. Hence, although projects pertaining to provision of basic services were included under the SCP, the Mission contributed precious little to them in terms of additional funding.

Table 3.4: Financing of Projects related to Basic Services

Project	Project Cost (Rs Crore)			
	SCM	Convergence	PPP	Total
24x7 Water Supply	14 (5.41)	245 (94.59)	0 (0.00)	259 (100)
Underground Drainage System	12 (5.38)	211 (94.62)	0 (0.00)	223 (100)
Storm Water Drains	3 (4.84)	59 (95.16)	0 (0.00)	62 (100)
Piped Natural Gas Supply	0 (0.00)	0 (0.00)	90 (100)	90 (100)
Solid Waste Management	1 (25.00)	3 (75.00)	0 (0.00)	4 (100)
Public Toilets	0 (0.00)	1 (100)	0 (0.00)	1 (100)
Affordable Housing	0 (0.00)	73 (100	0 (0.00	73 (100
Total	**30 (4.21)**	**592 (83.15)**	**90 (12.64)**	**712 (100)**

Note: The figures in parenthesis are row percentages.

Source: Selected Smart City Proposal (SCP) for Tumakuru City.

36 The project-wise break-up can be seen at Appendix 5.2.

Before we proceed to look at the implementation of the selected Smart City Proposal in Tumakuru, we can summarize the following conclusions that can be drawn from the foregoing analysis:

- The nature and the mode of citizen engagement process carried out to arrive at the SCP was exclusionary and left out large sections of urban deprived communities.
- This exclusion was reflected both in the themes that emerged from the process as well as the choice of areas for area-based development.
- Issues like affordable housing, skill development, etc. received little or no attention in the SCP. Even when projects related to these sectors were included in the SCP, they were largely funded through convergence schemes and not through direct funding from the SCM.
- In terms of the wards chosen for area-based development, instead of the wards characterized by substantial population of urban deprived communities (both in caste and class terms) and lack of access to basic services, already well-endowed wards with substantial middle-class and non-*dalit* population were selected.
- When certain wards with substantial population of urban deprived communities were included to expand the population coverage of the SCP for Round 2 of the Challenge, the localities of these communities were not included in the project coverage.

In the end, the existing inequalities in the power wielded by various social groups in the city and the mode of citizen engagement carried out for the Tumakuru Smart Cities Mission yielded a Smart City Proposal which focused on an already well-endowed area with a high concentration of dominant caste communities, and in terms of the projects undertaken under the Mission, the improvements of basic services and infrastructure was left to existing convergence schemes, while most of the investments under the Mission was directed towards development of road, transport, parks and lake infrastructure. Were the final outcomes as skewed as the proposal itself? The next chapter seeks to answer this question through an analysis of the implementation of the Smart Cities Mission in Tumakuru.

Chapter 4

Implementation of Smart Cities Mission in Tumakuru: Institutional Structure and Financing Mechanism

4.1 Institutional Structure and Delegation of Powers

Tumakuru Smart City Limited (TSCL) was incorporated on February 06, 2017 under the Companies Act 2013 as a public limited company with GoK and TCC as 50:50 promoters with an authorized share capital of Rs 200 crore and an initial paid up capital of Rs 10 lakh.[37] The ULB was allowed to use the grant from GoI for its share in paid up equity capital. The Board of the TSCL has the following composition: -

- Director Nominated by MoUD - one
- Directors Nominated by GoK - Eight (8)
    - Chairperson - Secretary-level officer of GoK[38]
    - CEO/MD - IAS/Selection scale KAS/KMAS
    - Managing Director, KUIDFC - Director
    - Directorate of Municipal Administration - Director
    - Managing Director, KUWS&DB - Director
    - Managing Director, Bangalore Electricity Supply Company (BESCoM) - Director
    - Independent Directors (2)
- Deputy Commissioner of Tumakuru district[39]
- Directors Nominated by ULB (TCC) including Commissioner - Six (5)[40]

Karnataka rejected the option of separating the positions of MD and CEO and hiring the CEO from the open market, and limited the selection pool for these combined posts to IAS and KAS/KMAS officers. In February 2017, the district in-charge secretary was appointed

37 Initially, authorized share capital was pegged at Rs 500 crore, but to reduce initial incorporation expenses, the authorized share capital was brought down to Rs 200 crore. See Government Order No UD 56 CSS 2016 dated 30-04-2016 and the Corrigendum No. UDD 257 CSS 2016 (P-1) dated 20.12.2016.

38 Till Jan 2020, the Chairperson of the TSCL was Dr. Shalini Rajneesh, ACS, Department of Planning, GoK. After Jan 2020, the Chairperson of the Board has been Sh. Rakesh Singh, Principal Secretary, Department of Water Resources, GoK.

39 The Board Structure was modified to include the Deputy Commissioner of the district as a director. See Government Order No. UDD 56 CSS 2016 Part-5 dated 15.09.2017.

40 On the Board of TSCL, TCC is represented by the Commissioner, Deputy Commissioner, the Mayor of the City Corporation and two Corporators.

as the Chairperson of the Board.[41] The SPV was to be assisted in the implementation of the projects by a Project Management Consultant (PMC). For Tumakuru, a consortium led by IPE Global Ltd, New Delhi along with Grant Thornton India LLP and Aryavartha Design Consultants LLP was appointed as PMC in April 2017 (see the Timeline in Fig 4.1).

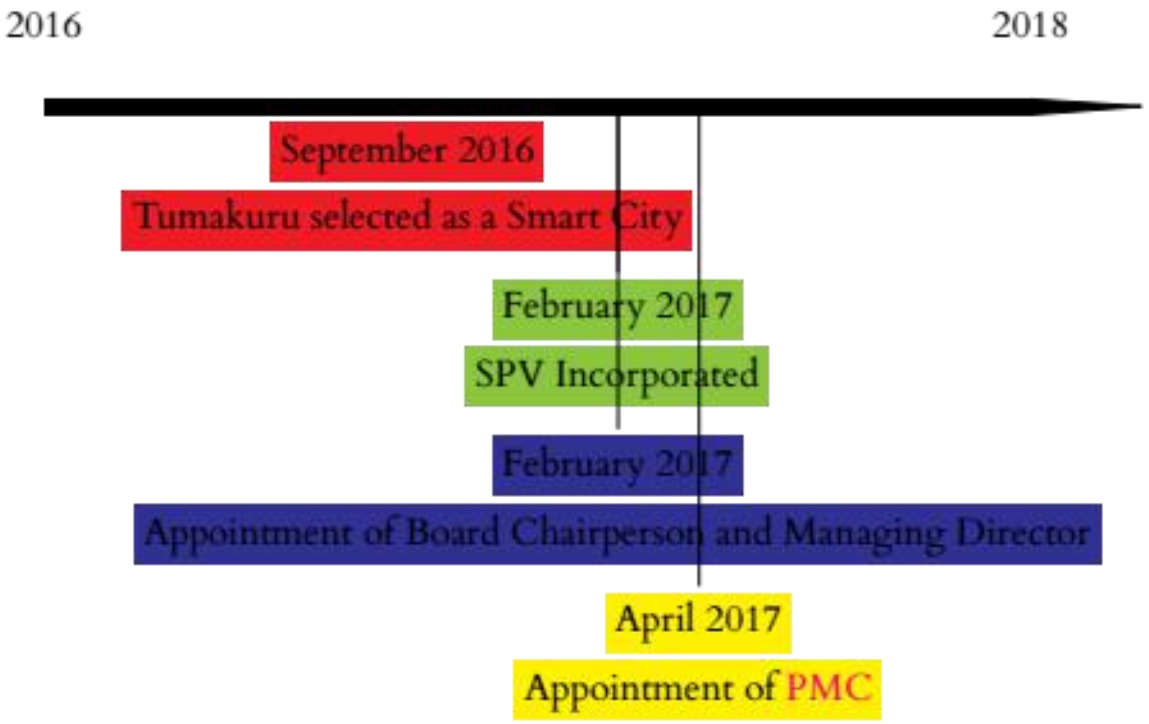


Figure 4.1: Timeline of Smart City Process in Tumakuru

The primary rationale behind implementation of the SCM through creation of City-level Special Purpose Vehicles was to provide operational independence and functional autonomy. It was envisaged that the SPV would operate within the framework of the Companies Act 2013 with following extensive delegation of powers as envisaged in the guidelines: -[42]

- Rights and obligations of the municipal council with respect to the Smart City project to the SPV.
- Decision making powers available to the ULB under the Municipal Act/ Government rules to the Chief Executive officer of the SPV.

41 Dr. Shalini Rajneesh who in her capacity as the City-level advisor, had played pivotal role in formulation of the SCP was also the district in-charge secretary and was thus appointed as the Chairperson of the Board of Directors (BoD). Another IAS Officer, Anirudh Sravan was given the concurrent charge of CEO and MD of TSCL apart from the charge of CEO of Davangere.
42 See Appendix 5 of MoUD, 2015.

- The approval or decision making powers available to the Urban Development Department/Local Self Government department/Municipal Administration department to the BoD of the SPV.

Under the Karnataka Municipal Corporations Act 1976, the executive powers are vested in the Commissioner of the City Corporation who works under the overall supervision of the Directorate of Municipal Administration (DMA) under the Urban Development Department (UDD) of Government of Karnataka (GoK). The political decision-making at the Corporation level is exercised by a City Council comprising an elected Corporator from each ward of the City Corporation. Under the Smart City Guidelines, the powers of both the city council and that of the city commissioner were to be delegated to the CEO of the SPV. And the oversight powers of the DMA were to be delegated to the Board of Director (BoD). The Board of Directors of the SPV was envisaged as the primary decision-making body as far as the implementation of the SCM at the city level was concerned. Most states appeared to be wary of such extensive delegation of powers to the SPVs which prompted the MoUD, to write to the state's governments in May 2016, emphasizing the following: -[43]

> 2. It has come to the notice of MoUD that powers of the Board are being exercised by other entities. ln this connection, it is brought to the notice of all Principal Secretaries (UD)/Mission Directors and Board of SPVs that the SPV established under Companies Act, 2013 will function under provisions of the Companies Act, 2013. Section 179 of the Companies Act prescribes that,
>
> > *"Board of Directors of a Company shall be entitled to exercise all such powers, and to do all such acts and things, as the company is authorized to exercise and do; provided further that in exercising such power or doing such act or thing, the Board shall be subject to the provisions contained in that behalf in this Act, or in memorandum or articles, or any regulations no inconsistent therewith and duly made thereunder, including regulation made by the company in general meeting."*
>
> 3. The Company therefore, has full autonomy to discharge its functions as prescribed under Article of Associations (AoA) to meet objectives written in MoA including exercise of financial powers within the framework of Companies Act, 2013.

43 See MoUD OM No. K-15016/61/2015-SC-I dated 27-05-2016.

4. It is, therefore, advised that States/ULBs may strictly follow the provisions of the Companies Act, 2013, for operationalization of SPV in the Smart Cities.

The Model Article of Association (AoA) circulated by MoUD had an enabling clause which allowed the SPV to exercise the above powers if and when delegated to it by the state government. In terms of administrative and financial autonomy, the following provisions were suggested for inclusion in the AoA:-[44]

2. KEY FUNCTIONS AND RESPONSIBILITIES OF THE COMPANY

The key functions and responsibilities of the Company will include:

i) Approve and sanction the projects including their technical appraisal.

It was assumed that representation of various line departments on the Board of the SPVs and those of elected corporators including the Mayor and Deputy Mayor should serve the twin purpose of accountability to the political system and coordination across various agencies and line departments. The Members of Parliament (MPs) and Members of Legislative Assembly (MLAs) from the city were accommodated in the City Level Advisory Forum CLAF. But these prescriptions of extensive autonomy ran into political bad weather as the elected representatives started getting concerned about the lack of any role for them in the planning and implementation of SCM.[45] Contrary to the model AoA circulated by the MoUD, the AoA of the incorporated SPV for Tumakuru read as following:-

4. KEY FUNCTIONS AND RESPONSIBILITIES OF THE COMPANY

The Company will plan, implement, manage and operate the Smart City Development projects. The key functions and responsibilities of the Company will include:

i. Get approval and sanction of projects including their technical appraisal.

As a balancing act, a staggered delegation of financial and administrative powers of approval and sanction was allowed, as shown in Table 4.1 below.

44 See MoUD OM No. K-15016/61/2015-SC-1 dated 28-01-2016.
45 See Government Order No. UDD 56 CSS 2016 Part-5 dated 15.09.2017.

Table 4.1: Staggered Delegation of Financial Powers under the SCM

	Particulars	MD, SPV	Board of SPV	HPSC
1	Administrative Approval for Procurement of works, goods & PPP	Up to Rs. 10 Cr	More than Rs. 10 Cr and Up to Rs. 50 Cr	More than Rs. 50 Cr and Up to Rs. 200 Cr. Government shall approve projects above Rs 200 Cr.
2	Approval of new Projects within SCP outlay	--	Up to Rs 20 Cr	More than Rs 20 Cr, Full Powers
3	Tender Approval Powers	Up to 5% TP	More than 5% TP and Up to 15% TP	Full Powers
4	Variations (with prior approval of Technical Committee)	Up to 5% of DPR Cost	More than 5% and up to 10% of DPR Cost	Full Powers
5	Procurement of Consultancy Services (per consultancy)	Direct entrustment – Rs 5 Lakh Through bidding – Rs 10 lakh	Through bidding more than Rs 10 lakh and upto Rs 2 crore	Full Powers

Source: Government order No. UDD 56 CSS 2016 Part-5 dated 15.09.2017

The SPV was allowed complete autonomy in hiring of personnel and functional space to execute projects but none of the powers of ULBs under the Karnataka Municipal Corporations Act, 1976 were delegated to the SPV. Administrative approval for projects up to Rs 10 crore could be granted by the Managing Director of the SPV, while projects up to Rs 50 crore could be approved by the Board. For projects above Rs 50 crore, approval powers lay with the HPSC. In terms of changes in the SCP, approval of new projects up to Rs 20 crore, which were within the SCP outlay, could be approved by the Board and projects with higher outlay had to be approved by the HPSC. Dropping of projects from the SCP required prior approval from HPSC. Changes in scope or estimated cost of projects up to 25% could be approved by the Board while those involving changes above this

threshold had to be approved by the HPSC.[46] Thus, for most big-ticket projects, the powers of approval and sanction lay with HPSC rather than with the BoD of the SPV. This became a cause for delay, since the larger projects which would have anyway had a longer take-off and implementation cycle, now required technical approval at three levels - PMC, SPV and KUIDFC - and administrative and financial approval at three levels - SPV, BoD and HPSC.

The SPVs were essentially operating with two identities: a public-owned company created under the Companies Act, 2013 and as a government-funded entity created for mission-mode project execution. Because of the constrained autonomy granted to the SPVs, these dual identities often came into conflict. The following instance illustrates this point: after the selection of cities under Stage 2 of the City Challenge, each city was provided a sum of Rs 194 crore by GoI after deduction of initial SCP preparation advance and the A&OE expenses for MoUD. A matching contribution was to be made by the GoK. Most cities selected in Round 1 were not able to utilize these funds in the initial years, since most projects were in concept/feasibility/DPR stage. In the first year, the only set of expenses incurred by the SPVs included cost of incorporation, administrative expenses and PMCs consultancy fees. Hence, for the Round 2 cities, funds were released at a slower pace. TSCL for example, received Rs 216 crore as the first tranche of grants from GoI (Rs 111 crore) and GoK (Rs 105 crore). At the end of one year, the expenses of TSCL only amounted to a little over Rs 5.5 crore and just the interest accrual itself was Rs 5.56 crore.[47] Several SPVs including TSCL wanted to invest these idle funds in interest bearing instruments and undertake additional projects to be funded out of the interest earned on GoI/GoK grants. Now the question arose as to whether the BoD had discretion over the use of the grants and the interest accruals. Within the framework of the Companies Act, 2013, the BoD should have been able to exercise the necessary discretion. In fact the MoA of TSCL granted such powers to the Board vide sub-section 17 of Clause B: -

> ***Clause B***: With prior approval of BoD to invest any moneys of the Company not immediately required for the purposes of its business in such manner as may be deemed fit and to lend money to such parties and on such terms, with or without security, as may be thought to be in the interests of the Company and in particular, to customers of and persons having dealings with the Company or to companies, firms or persons carrying on any

46 See Government Order No. UDD 56 CSS 2016 Part-5 dated 15.09.2017.
47 Letter of TSCL to KUIDFC No. TuSmaSi/LeSha/CR/38/2017-18/833-(2) dated 25-01-2018 and the Annual Financial Statement for Year 2017-18 for TSCL.

business which may be useful or beneficial to this Company, along with the prior approval of Government.

But as per the existing rules of the Finance Department, GoK, PSEs were not allowed to park idle funds received as government grants in interest bearing instruments. On request from various SPVs and HPSC, the Finance Department carved out an exception, and allowed placing of unutilized funds in the accounts of SPVs in fixed/flexi deposits at scheduled banks, selected through competitive bidding process.[48] But on the question of what use this income could be used for, the HPSC directed all the SPVs not to undertake any new projects from these interest accruals. As on December 2019, TSCL was sitting on a sum of Rs 20.87 crore earned as interest accruals.[49] The only use these interest accruals were put to, was for making payments to the PMC when there was a delay in transfer of A&OE related grants from the government given that its contract with the PMC had a penalty clause for delayed payments.[50]

To address the concern regarding lack of adequate political oversight over the functioning of the SPVs, as a *modus vivendi* measure, a ***District level Smart City Implementation and Review Committee*** (SCIRC) was constituted for each Smart City in Karnataka which was co-chaired by the Minister for Urban Development, District in-charge Minister, the Member of Parliament from the city, the Member of Legislative Assembly, the Mayor of the City Corporation, the leader of opposition in the City Corporation, the Deputy Commissioner of the district, the Commissioner of the ULB, the Commissioner of the Urban Development Planning Authority and the MD of the SPV.[51] This forum, which established oversight of political representatives over the functioning of the SPV was given the powers to review the decision of the SPV and also deal with any public grievances.[52] Figure 4.2 summarizes the eventual institutional structure of the Mission Implementation that emerged in Karnataka.[53]

But this mechanism still left out the Corporators of City Council. Several members had already started to feel alienated because their wards had been left out from the areas

48 See, FD NOte NO FD 86 FR 2017: F 156 Exp-9/2017: UDD 30 CSS 2017 dated 15-05-2017 and Minutes of the 5th Meeting of HPSC held On 30-10-2017.
49 Figures from Agenda Notes of 21st Meeting of HPSC held on 09-01-2020.
50 See Minutes of the 6th Meeting of the Board of Directors of TSCL held on 15-02-2018.
51 See Agenda Note for 4th HPSC Meeting on 30-10-2017.
52 See Government Order No. UDD 56 CSS 2016 Part-5 dated 15.09.2017.
53 The implication for this institutional change for the city-level institution called City-Level Advisory Forum CLAF is discussed later in the chapter.

chosen under ABD. Further, objections were raised by several corporators that works were being carried in their area without them being kept informed.[54]

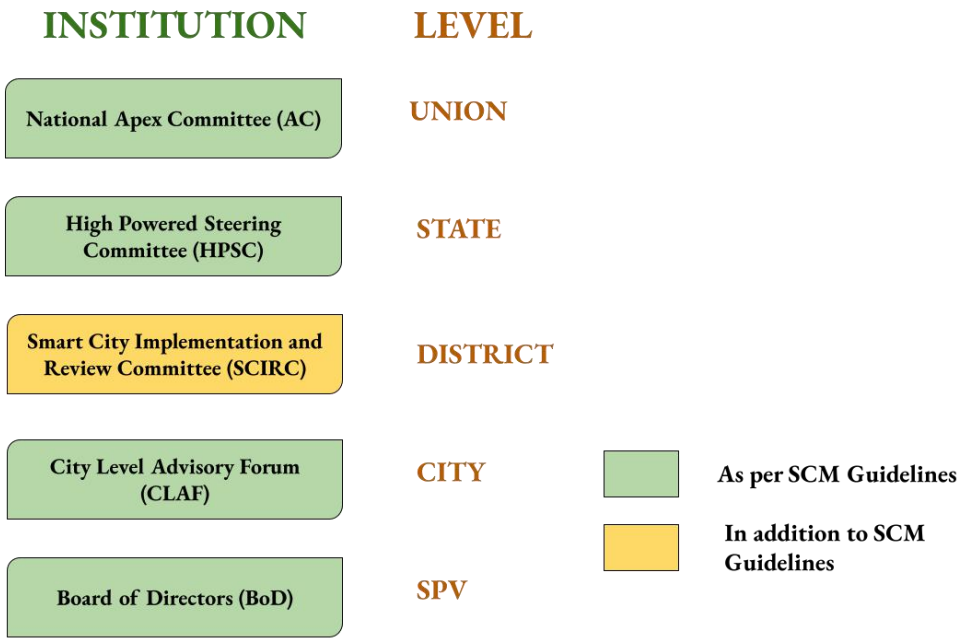


Figure 4.2: The Institutional Structure under SCM in Karnataka

Mr. A Narsimhamurthy, Member, Tumakuru CLAF described this institutional friction that developed over the years: -

> Initially the elected representatives in the City Council were under the impression that the Smart City Projects would be implemented across the city. But once these 7 wards were selected under ABD, the friction started. Till the implementation phase, they thought the process would be under their control. But once the implementation started, they realized that they had very little control over the process. Even the corporators of the selected wards would not have information about the works being carried out under Smart City in their wards. Then the citizens also started raising questions and raising complaints. All these came to a head in 2020. The corporators started saying that despite being elected representatives, their opinions were not being taken into consideration. The issues were discussed in the Council several times. Once the TSCL was asked to make a presentation to the Council also. Eventually, the corporators realized that the Mission itself is structured in this way and if they

54 Interview with Mr. B T Rangaswamy, MD and CEO of TSCL conducted 03-03-2021; Interview with Mr. A Narsimhamurthy, Member, Tumakuru CLAF conducted on 20-03-2021. See also, Praja Pragathi, '*Nagarabhivruddhi Sachivare, Smart City Avyvasthe KoneganNisi*', January 6, 2021.

> oppose it, then the grants would stop. So, after that they have been keeping quiet.[55]

Dr. Shalini Rajneesh who served as the Chairperson of the Board of Directors of TSCL has also noted that:

> The smart city companies are established as a parallel entity to the City Corporations, which are elected bodies as per the Constitution. Although the Corporation Commissioner and Deputy Mayor are made the Directors of the company, the other corporators feel alienated. Goel and Rajneesh (2018, pp. 521)

In the very first meeting of the ***District level Smart City Implementation and Review Committee*** (SCIRC), the elected Corporators were invited as special invitees and the Minister for Urban Development also made an appeal to the elected Ward Corporators to bring issues related to the Smart Cities Mission to the notice of the Mayor and Deputy Mayor who would then place them before the Board of the Directors of TSCL. But the continued friction indicates that the representation of Mayor, Deputy Mayor and two other corporators on the BoD of TSCL, was perceived to be an inadequate oversight mechanism by the elected corporators.

4.2 Divergence from the Smart City Proposal

Throughout the implementation process, the list of projects included in the Tumakuru SCP and their scope, kept on undergoing changes. The initial SCP for Round 1 was prepared by one consultant agency, it was revised for Round 2 by another agency and a third agency was appointed as the PMC. The selected SCP was formally revised in September 2018. The final projects being implemented currently also show some divergence from the revised SCP.

Table 4.2 and Figures 4.3 and 4.4 compare the Selected SCP, the Revised SCP and the Final SCP being implemented currently. While in the selected SCP, 85% of the total project cost was that of ABD projects and the remaining 15% was that of pan-city projects, and the same proportion was more or less maintained in the revised SCP, the eventual list of projects have a very different mix of ABD and pan-city projects. In fact, strictly speaking, the category of pan-city projects in the final list of projects is more like a residual category.

55 Interview with Mr. A Narsimhamurthy, Member, Tumakuru CLAF conducted on 20-03-2021.

The projects classified under pan-city category in the final SCP are not all smart solutions as envisaged originally in the Smart City Guidelines. They include several projects like development of parks or construction of public toilets which are spread over several areas of the city (and not just the wards selected for the ABD component) and thus cannot be allocated to any one single area. Then there are projects like development works at the landfill site at Ajjangondanahalli, which are pan-city in the sense that the site caters to waste collected from across the city but the projects themselves do not involve any application of smart solutions *per se*.

Table 4.2: Changing Size and Composition of SCP

Source of Funds	Selected SCP[1]			Revised SCP (Sept 2018)[2]			Final Implementation (Jan 2021[3])		
	ABD	Pan City	Total	ABD	Pan City	Total	ABD	Pan City	Total
Smart City Grants	789	212	1001	896.98	282.4	1,179.38	674.12	226.03	900.14
Public Private Partnership	242	102	344	146	62	208	120.28	203.15	323.43
Convergence Projects	862	21	883	544	5	549	79	472.41	551.41
Total	**1,893**	**335**	**2228**	**1,586.98**	**349.4**	**1,936.38**	**873.40**	**901.59**	**1,774.98**

Source: (

1) Selected SCP for Tumakuru City; (2) Proceedings of the 7th HPSC Meeting held on 23-10-2017; 3) Based on information provided by TSCL under RTI Act 2005.

In terms of the source of funding for the SCP, we can see a significant scaling down of projects funded out of SCM grants in absolute terms, but since the scale of convergence projects has also decreased, in proportionate terms SCM grants still contribute around 50.7% of the funding for Smart City projects in Tumakuru. Table 4.2 overstates the extent of the final SCP being funded through PPP and Convergence projects since part of the cost for these projects is being met out of SCM grants. If these costs are correctly classified, as per the author's calculation, the contribution of SCM grants to the final SCP would climb to around 56%. Even in terms of the spatial distribution of the final set of projects being undertaken in the city, there is a wide divergence not just with the areas selected for ABD projects, but away from the concept of ABD itself.

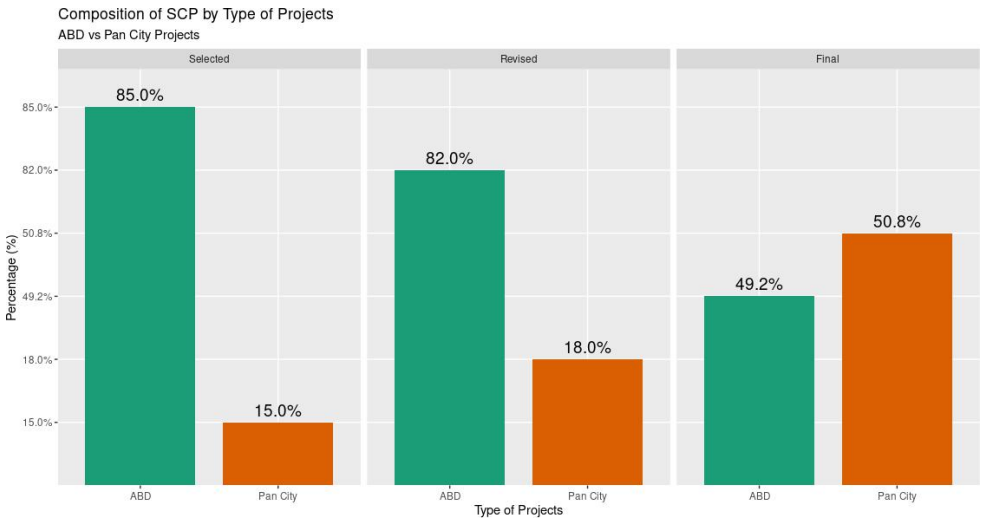


Figure 4.3: Changing Composition of SCP in terms of Type of Projects

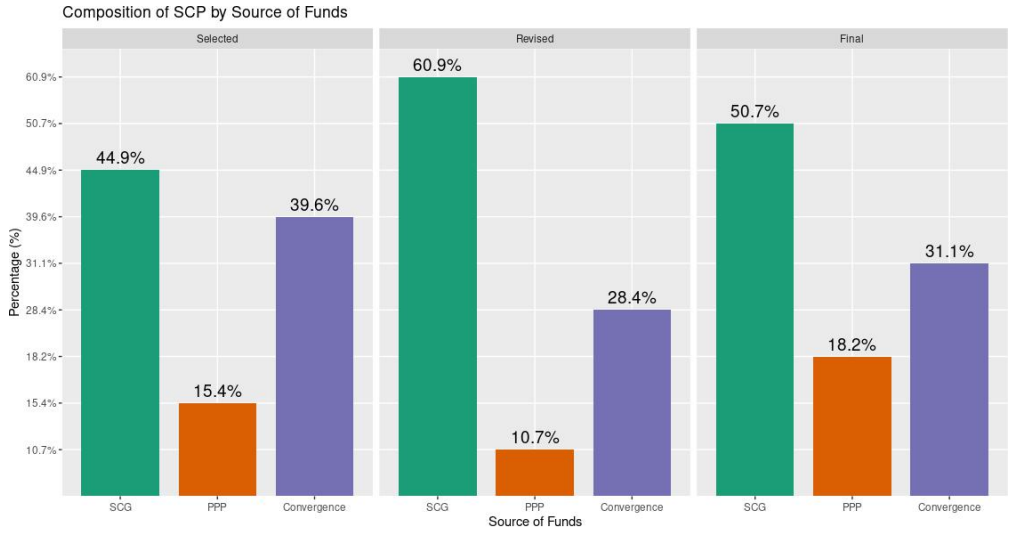


Figure 4.4: Changing Composition of SCP in terms of Source of Funds

Table 4.3 and Figure 4.5 show the final spatial distribution of ABD projects funded out of SCM grants. While the Central Business District area selected for ABD projects (highlighted in green in the Table) received the largest share of the investments, areas which were outside of the selected ABD wards received no-zero investments even when they were not part of the selected ABD area. Some areas like Ward 4 which was part of the ABD area in the selected SCP has received no investments under the ABD component while Ward 20 and 26, both outside the ABD area, received significant investments. The ABD wards (including Amanikere) received 90.75% of the investments under the ABD component while the wards outside the ABD area received 9.25% of the investments. Within the ABD area also, the bulk of the investments were concentrated in Ward 5 (25.68%), Amanikere

(18.23%), Ward 14 (17.74%) and Ward 15 (22.66%). Ward 19, as mentioned in the last section, contributed 13.8% to the area coverage (excluding Amanikere lake area) and 20% to the population coverage of the proposed SCP, and has urban deprived communities residing in substantial numbers including those in inadequate housing conditions, but it received only 0.31% of project funds.

Table 4.3: Spatial Distribution of ABD Projects by Project Costs as per Final SCP

Ward	Project Cost (Rs Crore)	Percentage (%)
2	0.76	0.11%
3	1.89	0.28%
4	0.00	0.00%
5	173.08	25.68%
6	17.12	2.54%
7	17.12	2.54%
11	0.56	0.08%
14	119.62	17.74%
15	152.78	22.66%
16	24.20	3.59%
17	0.49	0.07%
19	2.11	0.31%
20	16.17	2.40%
21	2.38	0.35%
22	0.39	0.06%
24	0.76	0.11%
25	2.07	0.31%
26	13.46	2.00%
27	1.17	0.17%
28	0.48	0.07%
29	0.61	0.09%
30	0.86	0.13%
31	1.55	0.23%
32	0.45	0.07%
33	0.73	0.11%
35	0.42	0.06%
Amanikere Lake	122.90	18.23%
Total	**674.12**	**100.00%**

Source: Author's calculation based on the information provided by TSCL under RTI Act 2005.

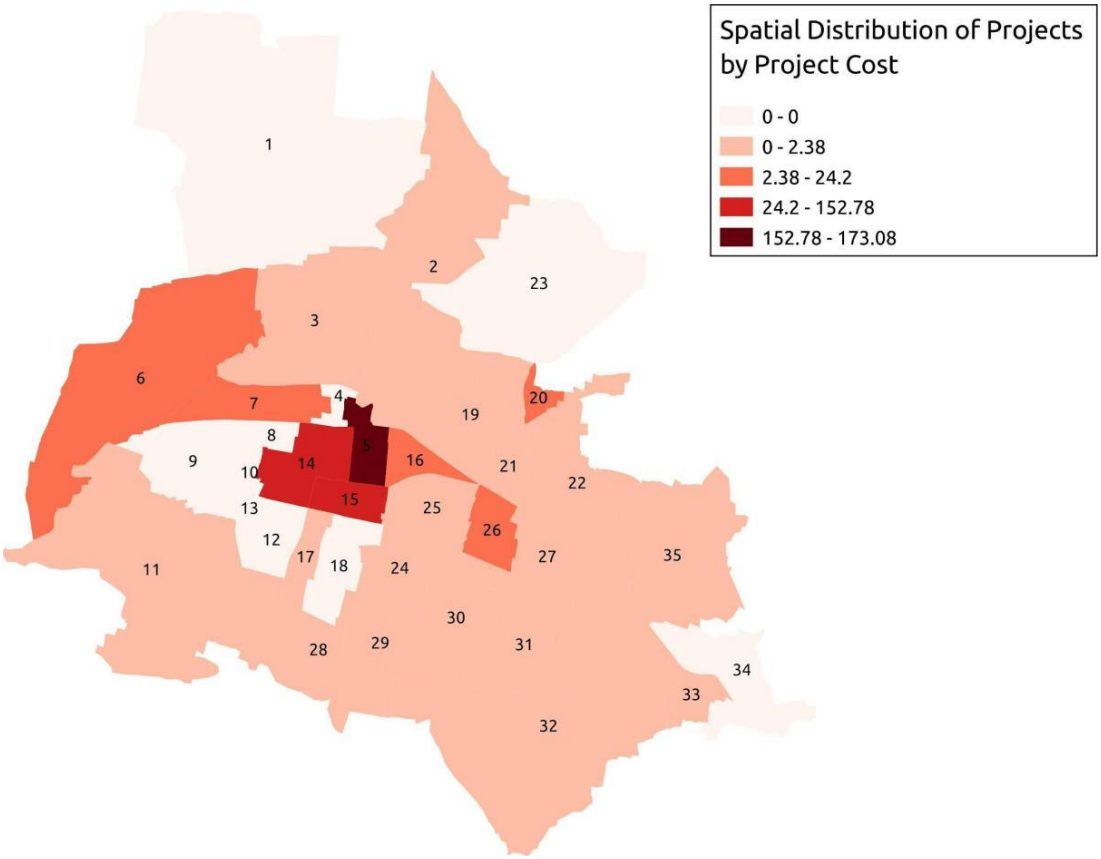


Figure 4.5: Spatial Distribution of Projects by Project Cost as per Final SCP

There were several reasons for such thorough going changes in the SCP. ***Firstly***, some of the projects were envisaged during Round 1 of Stage 2 City Challenge selection process. By the time the TSCL was incorporated and started functioning, around one and half year had already passed and several line departments had commenced some of the proposed projects on their own (Goel and Rajneesh, 2018, pp. 515). For example, the project which included purchase of SWM vehicles had to be dropped since the TCC was already in the process of procuring such vehicles under SBM. Another example was the proposal to build a Water Ballet at Amanikere Lake which had to be dropped since a Musical fountain was already being implemented by TUDA.[56]

Secondly, when feasibility studies were carried out, several of the projects were found to be infeasible or unviable, especially those listed in the PPP category and either had to be dropped or their scope had to be revised. The proposed flyover from Town Hall to

56 See Minutes of the 22nd Meeting of the Board of Directors of TSCL held on 14-02-2020.

Kodibasweshwara circle was such an example. During the pre-feasibility study, it was discovered that the traffic on the stretch was not high enough to warrant a flyover and would in fact cause bottlenecks, and hence the project was dropped.[57] The proposed AYUSH hospital had to be dropped since the land made available for the Hospital already had two such hospitals in the vicinity and the revenues from the hospital would not have been enough to cover estimated O&M costs. Similarly, several components of the pan-city projects like Intelligent Transport, Intelligent Signaling, Integrated Ticketing, etc. had PPP components which were later found to be unattractive for bidders and hence shifted out of PPP category.[58] The Redevelopment of KSRTC Integrated Bus Terminal was listed in the selected SCP as a PPP project but at the implementation stage, KSRTC was not agreeable to PPP mode of development which involved development of a part of the land as commercial space. KSRTC instead preferred development of the Integrated Bus Terminal as a convergence project on EPC basis, hence requiring a change to EPC mode.[59]

Thirdly, some of the projects fell in the jurisdiction of other departments which raised objections to the project being undertaken by the SPV. For example, one of the flagship projects in the domain of health services was building of a 200-bed multi-specialty health facility at the District Hospital premises. The project was included in SCP as a Convergence project with an estimated cost of Rs 300 crore (SCM: Rs 111 crore; KHSDRP: Rs 189 crore). Subsequently, the board decided to convert this into a PPP project with an estimated cost of Rs 254.83 crore on a Design-Build-Finance-operate and Transfer (DBFOT) basis for a concession period of 30 years. The feasibility study projected a Viability Gap Funding of Rs 53.38 crore which was deemed to be too high and opposition to location of a PPP model hospital in the District Hospital premises led to dropping of the project altogether from the proposal.[60] This case also highlights the tangled nature of delegation of powers to SPVs. The development of multi-specialty hospitals, whether in PPP mode or otherwise, falls under the 'secondary and tertiary care' charge under the Karnataka Government (Transaction of Business) Rules, 1977 and thus comes under the purview of the Medical Education Department. But the Additional Chief Secretary, Medical Education Department,

57 See, Minutes of the 12th Meeting of the Board of Governors of TSCL held on 05-01-2019 and Agenda Notes of 11th Meeting of HPSC held on 12-02-2019.

58 See, Minutes of the 4th Meeting Board of Directors of TSCL held on 23-10-2017.

59 See Agenda Notes for the 7th Meeting of HPSC held on 23-09-2018.

60 The HPSC in its 6th Meeting had directed TSCL to drop the proposal, but the TSCL requested the TSCL to reconsider its decision. This was examined in the 7th Meeting of the HPSC wherein TSCL was asked to drop this as a PPP project and convert it into a convergence project and the Rs 54 crore budgeted for the project was directed to be transferred to the Medical Education Department which would be the implementing agency. Subsequently, a Trauma Center and Oncology Unit was approved in convergence mode, with TSCL contribution of Rs 56 crore. See, Agenda Notes and Proceedings for 6th Meeting and 7th of the HPSC held on 06-03-2018 and 22-09-2018, respectively.

GoK became aware about these plans only later, in one of the Karnataka Development Programme (KDP) meetings, and shot off a terse letter to TSCL stating that:-

> The concerned Smart city corporations should not take up establishment of super- specialty hospitals without the concurrence of the Medical Education Department as the Department would have to take into account the recurring costs for managing a super-specialty hospital. Even if the proposal is to run the hospital on PPP basis, the concurrence of the Medical Education Department may be taken on the proposed PPP framework.[61]

The jurisdiction and powers of various authorities and line departments are governed by the Karnataka Government (Transaction of Business) Rules, 1977 and the parent Acts under which those bodies are created. On the other hand, SPVs have been created as public limited companies who have been tasked with carrying out project implementation without allotment of any functional jurisdictions, leading to functional overlaps. For example, the attempt of TSCL to create decentralized solid waste management (SWM) system on a pilot basis in one Ward ran into a problem because the TCC which has the functional jurisdiction over solid waste management under the Karnataka Municipal Corporations Act, 1976 has city-wise centralized tendering process for SWM services.[62]

In view of these frequent changes, MoHUA wrote to all the states in August 2018, asking all cities to revise their SCPs by September 2018.[63] This opened up doors for demands from elected representatives and various organized groups for revising the SCP to include projects proposed by them. Meanwhile, the Tumakuru City Assembly Constituency changed hands from Congress to Bharatiya Janata Party. The political consensus on the SCP which had been built during the selection stages, had to be renewed again, and what was envisaged to be a one-time minor revision exercise, turned into a political overhaul. The incoming MLA of Tumakuru City asked for wide-ranging changes in the project matrix. In his letter sent to KUIDFC, regarding revision of project list for Tumakuru, he made detailed comments about every project proposed under the existing SCP, based on his 'detailed consultations with the public, organizations and department officials during

61 See Letter OF ACS, Health and Family Welfare Department (Medical Education) bearing NO.HFW(ME)/302/ACS/2018 dated 24-08-2018.
62 See, Minutes OF the 4th Meeting Board of Directors of TSCL held on 23-10-2017.
63 Secretary, MOHUA D.O. Letter NO. K-15016/157/2015/SC-I dated 07-08-2018.

development tours across the city'.[64] While agreeing to some existing projects, he suggested changes to most of the existing projects and asked for consultation before any project was finalized. With a coalition government headed by Janata Dal's H D Kumaraswamy coming to power in the state, the Tumakuru district president of Janata Dal also demanded inclusion of service-oriented projects in the mission.[65] Apart from elected representatives and civil society organizations, requests for inclusion of new projects also came in from line departments and especially the Tumakuru City Corporation. The revised SCP which was eventually approved by the HPSC and MoUD in September 2018, was a product of balancing act between these pressures from different quarters. Thus, certain projects like Street-lighting for dark spots in the city were included at the request of local MLA while construction of new model Anganwadi Centers and redevelopment of existing ones was added based on the request from Department of Women and Child Development and TCC.[66]

One of the implications of this balancing act was that the estimated project cost for the SCM funded projects crossed the Rs 930 crore mark, which was the quantum of project grants to be provided by Union and State governments under the Mission. The SPVs had the option of raising funds from domestic or external sources to meet the shortfall. The option of raising equity was infeasible since except for the grants the TSCL did not have any reliable revenue stream. All the completed projects and assets including those which were expected to yield returns were, as a policy, transferred to the TCC, which was party to all revenue sharing arrangements.[67] The option of debt financing through Municipal Bonds was also closed since TCC received a non-investment grade (BBB-) credit rating from CRISIL. The request for additional grants from the State government was turned down.[68] Hence, the HPSC in its 13th Meeting held on 18.03.2019 directed all SPVs to trim down projects to final tender value of Rs 930 crore. Subsequently, the TSCL dropped several projects including the interlinking and development of all 20 lakes in the city.[69] Eventually, this led to fragmentation of the overall thrust of the SCP. Instead of being components of a holistic and comprehensive plan, the final SCP became a fragmented assemblage of myriad standalone projects under the influence of the pushes and pulls from

64 Letter of Sh. G B Jyothi Ganesh NO. SmartCity/KaMaGaaRi/2-2018 dated 30.08.2018 and Letter bearing same no. dated 03.09.2018.
65 Letter of Sh. N. GOvindaraju, State General Secretary, Janata Dal (Secular) dated 20-12-2018 tO Chief Minister H D Kumaraswamy.
66 See Minutes of the 22nd Meeting of the Board of Directors of TSCL held on 14-02-2020.
67 Further implications of this policy are discussed in Section 4.6.
68 As per information provided by General Manager (Admin), TSCL.
69 See Minutes Of the 13th Meeting of HPSC held on 18.03.2019.

elected representatives, organized social groups and government departments.

4.3 Physical and Financial Progress of Smart Cities Mission in Tumakuru

Figures 4.6 and 4.7 show the pace of physical and financial progress made by Tumakuru under the Smart Cities Mission since inception. The Mission was slow to take-off as the progress in the initial years was quite slow and the TSCL came under severe criticism for this.[70] By September 2018 i.e. after about one and a half year after the incorporation of TSCL, projects worth just 1.63 crore (<2% of total SCM grants) had been completed and just 7.93 crore worth of projects were under execution. An Audit Report for the period up to 2017-18 showed that across 15 listed projects, there was an average delay of over 5 months in preparation of concept/feasibility reports and across 8 projects where DPRs had been approved, there was an average delay of close to 4 months.[71] The TSCL contested these figures while not disputing the fact of the delay itself. It cited 'changes in project priorities because of changes in local political representatives' and delays in getting requisite approval from line departments and government authorities as the reasons for delay.[72]

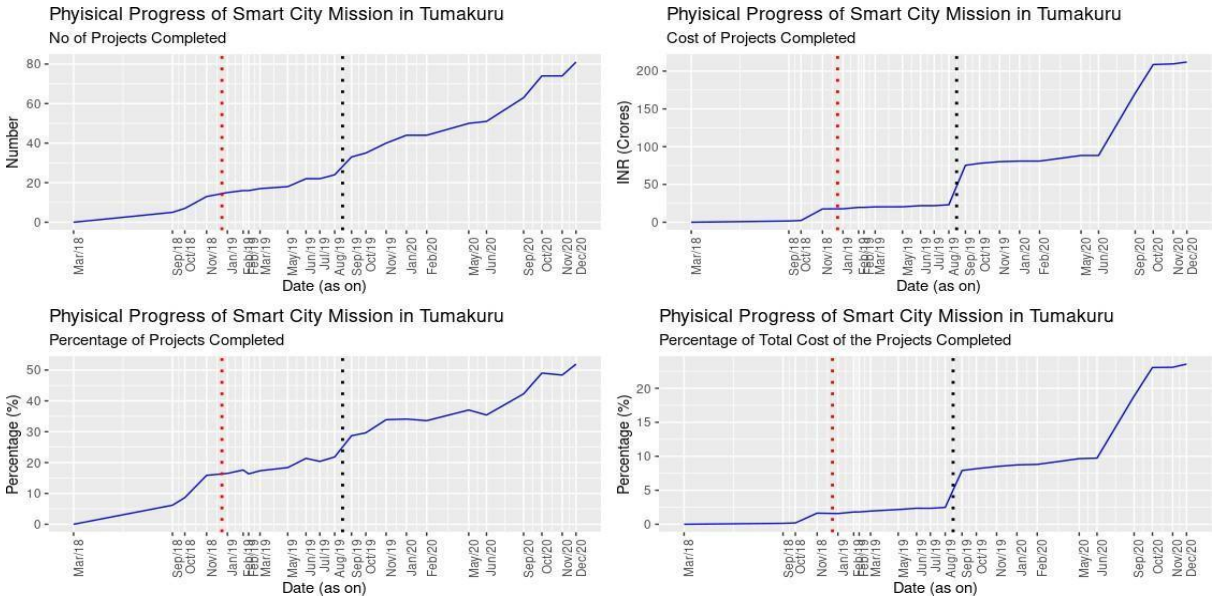


Figure 4.6: Physical Progress of Tumakuru Smart Cities Mission

70 See for example, the Front-Page Story in Vijay Karnataka on 16-09.2018 titled '*EddeLada Smart City?*'.
71 See Indian Audit and Accounts Department, '*Inspection Report on the accounts of the Managing Director, Tumakuru Smart City Limited, Tumakuru for years upto 2017-18*' dated 19-02-2019. In fact, similar concerns regarding delay in starting projects were also raised by an associate partner of the PMC itself, see Letter of MD & CEO of TSCL No. TSCL/ADMN/CR/134/2017-18/101/18-19 dated 03-07-2018.
72 Letter from MD, TSCL No. TuSmaSi/Aa.Sha/CR/34/2017-18/180/18-19 dated 19-09-2018 sent to MD, KUIDFC.

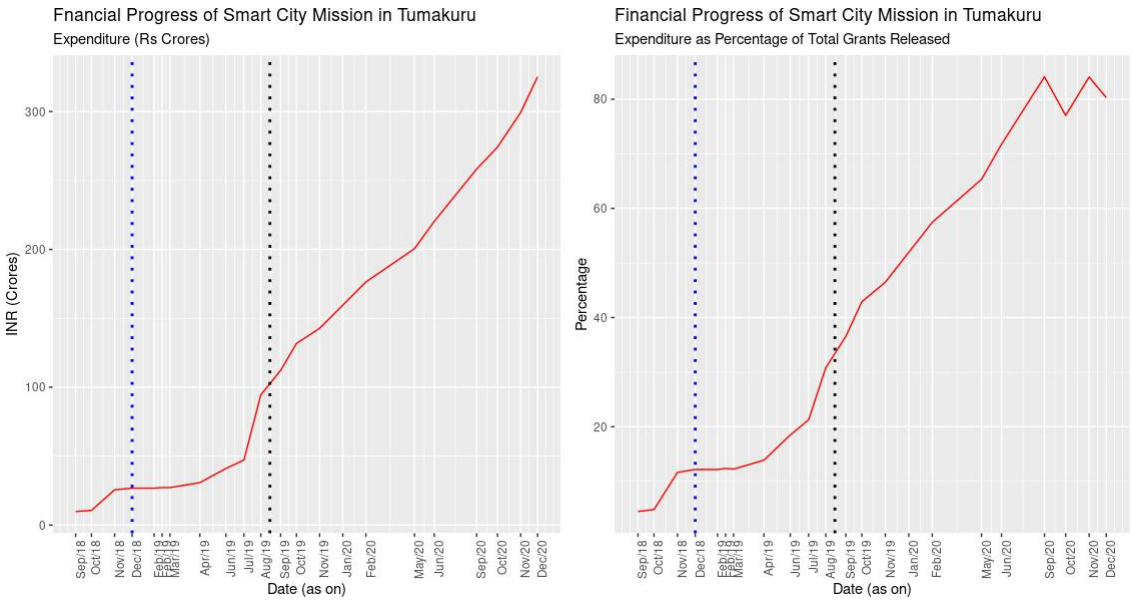


Figure 4.7: Financial Progress of Tumakuru Smart Cities Mission

Dr. Shalini Rajneesh, the Chairman of the Board of Directors of TSCL was more forth-coming in terms of the operational reasons for the delay in bootstrapping the SCM in Tumakuru, when she stated that: -

> The selection of Project Managing Consultants (PMCs) as per the centralized empanelment of agencies has been a constraint rather than a catalyst. The PMC is neither able to deploy all the required experts in time nor they have local knowledge of land and language, to be able to come out with practical solutions which are locally acceptable. Their main focus is on preparing concept notes and DPRs for big ticket infrastructural projects as they get 2% service charges, as per their ToR. As a result, the programs which empower the people and involve them in Smart City solutions are not being conceptualized despite repeated instructions and there is no penalizing provisions for such delays.
>
> As regards the administrative structure created by the Urban Development Department, I wish to inform you that it is working at loggerheads with the PMC. The Urban Planner of PMC prepares a concept note and the engineers of Tumakuru Smart City Limited (TSCL) raise objections, as usual and the proposal takes months together to reach the Board. I wonder why we need an engineering setup in the TSCL, when the PMC projects are being scrutinized technically by the KUIDFC team.

> The second obstacle is the City Corporation itself. The NoCs are not given due to individual objections by Local Corporator/MLA, etc., despite Corporation Commissioner, Mayor and Deputy Mayor being part of the Smart City Board and MLAs being part of the Review and Monitoring committee chaired by the Hon'ble Urban Development Minister.
>
> Finally, Tumakuru Smart City has been suffering as there is no full time MD for the last 6 months, despite my repeated requests. As a result, the SPV is at the mercy of a contractual GM and a Corporation Commissioner, who is temporarily made as in-charge MD.[73]

Another reason for delay in executing the projects, omitted by the Chairman of the TSCL Board cited above, was the frequent changes made to the SCP and the scope of the projects by the TSCL and the Board itself. In a Progress Review, the Additional Chief Secretary, UDD noticed that projects are being changed frequently which is leading to delay in preparation and implementation of projects. He instructed that city should proceed with the tendering of projects as mentioned in the smart city competition proposal. No further changes shall be entertained, unless a project is proved to be technically/financially non-feasible, with the due approval of the Board of Directors and HPSC.[74]

The changes in the SCP did not just lead to loss of time in project implementation, but it had monetary implications as well. In just FY 2019-20, the expenditure on projects which were eventually dropped amounted to 88.56 lakh.[75] The present MD and CEO of TSCL attributed the delays in the initial years to absence of reliable utility maps for the city which made it difficult for TSCL to locate existing ducts, pipelines, wires etc.[76] The HPSC also noted the instability in the tenure of the MDs of the SPVs as an additional reason for delay in the implementation of the projects.[77]

Three strategies were adopted to increase the pace of project execution. ***Firstly***, the HPSC and the MoHUA started providing targets for tendering of projects, issuance of work

---

73 Letter of Dr. Shalini Rajneesh, Chairperson, Board of Directors, TSCL bearing No. PRS/P&S/627/2018 dated 28-09-2018 to the Additional Chief Secretary, UDD, GoK.
74 Proceedings of the Progress Review Meeting of Smart Cities Mission under the Chairmanship of the Additional Chief Secretary, UDD, GoK, held on 15-02-2018.
75 See Annual Financial Statement of TSCL for FY 2019-20.
76 Interview with Mr. B T Rangaswamy, MD and CEO of TSCL conducted on 03-03-2021.
77 See the Minutes of the 7th Meeting of the HPSC held on 22-09-2018.

orders and final completion which were to be reviewed in the subsequent meetings.[78] When the physical targets did not yield concomitant results on the financial progress front (for the reasons discussed below), the actual spending targets were given to the SPVs. The Smart City Rankings instituted by the MoUD ranked the cities based on the physical and financial progress made by them. In Karnataka, physical and financial progress made by the various cities and their rankings were regularly reviewed by the HPSC. In case inter-departmental issues were holding up project implementation, the HPSC either resolved these bottlenecks by inviting the representatives of the concerned department to their meeting or sought intervention at the highest level. The pressure to show progress was such that the HPSC even directed SPVs to '*not wait for Board Meetings but...take on-file approval from the respective Chairman and ratify it in the next Board meeting*' and it went as far as to warn that '*MDs would be held responsible for any delays on account of this reason*'.[79] ***Secondly***, the MoUD advised states on several occasions to prioritize projects with shorter execution cycles, so that these projects can be showcased on completion of various milestones of the Mission.[80] The HPSC even made a suggestion to drop convergence projects like 24x7 water supply which were likely to have a longer project cycle.[81] ***Thirdly***, individual components of the SCP were divided into projects and subprojects or spread across phases to register higher project completion rates.

The pressure to adhere to strict timelines for tendering and completion of projects had perverse consequences in some instances where impactful or financially superior projects were rejected because of the imperative to complete projects with Mission timelines. For example, the proposal of Smart Metering for both water and electricity supply were proposed in the initial SCP as a pan-city project to be implemented in PPP mode. In the revised SCP, its scope was reduced to electricity metering in ABD areas to be fully funded out of SCM funds. At a stage, when the project tender had already been floated and the lowest bid was to be finalized, Energy Efficiency Services Limited (EESL) which is a fully-owned Public Sector Enterprise (PSE) approached TSCL with a proposal to install smart meters for all 80,000 electricity connections in PPP mode, with the SCM funds deployed as

78 See the Minutes of the 8th Meeting of HPSC held on 31.12.2018 where this practice was initiated by HPSC. For the targets provided by MoHUA, see the Agenda Notes of the 18th Meeting of the HPSC held on 21-09- 2019. The beginning of the practice of fixing targets is marked by dotted red (HPSC) and black (MoHUA) vertical lines in Figures 4.6 and 4.7.
79 Minutes of the 22nd Meeting of the HPSC held on 19-02-2020.
80 For example, Letter of the Secretary, MoUD, GoI *vide* D. o. Letter No. K-14012/102(03)/2017/SC-III dated 23-02-2017 asked the cities selected in Round 1 to 'take-up projects which can be grounded by June 25- 2nd anniversary of Smart Cities Mission'. See Agenda Notes for the 4th Meeting of HPSC held on 30-03-2017.
81 See the Minutes of the 7th Meeting of the HPSC held on 22-09-2018.

Viability Gap Funding (VGF).[82] But the HPSC rejected the decision of the TSCL Board citing 'lack of details, lack of time to go for procurement, finalize and execute the work...' and directed TSCL to approve the previous bid for the limited ABD smart metering project.[83] In September 2019, the HPSC had directed the SPVs to restrict the tendered project cost to Rs 930 crore and consequently the smart metering project was summarily dropped from the SCP.[84] Additionally, because of front-loading of smaller projects at the cost of the bigger projects like the Integrated Bus Terminus, MG Sports Stadium, City Library and Incubation Centre, Trauma Centre, Ring Road Rejuvenation etc., these large-scale projects were initiated late and are thus yet to be completed.

4.4 Projectivisation of the Smart City Proposal

To examine the conversion of the SCP into on-ground projects and the translation of the SCP vision into reality, a sample of projects were selected from the list of final projects being undertaken by the TSCL (Appendix 5.3). The projects were grouped into categories based on location (e.g., Amanikere, NCC etc.) or functional domains (e.g., Health, Solid Waste Management) to be able to assess the conjoint impact of the interventions under the Mission. A sample of projects was selected from this list, so as to ensure representation across the sub-components. The field work was conducted between 20th March and 4th April 2021 and a transect walk approach was used starting from Amanikere Lake area and moving through the MG Road area down to Caltex circle. This route traversed the ABD area and allowed for visits to most project sites in the sample. The project sites which fell outside this route were visited separately. While visiting the project locations, spot interviews were conducted with those who frequent the location or are regular users of the space. The observations made during the field visits and the information gathered through the spot interviews is organized around the following project categories: -

4.4.1 Development of Road and Parking Infrastructure

Development of the Road Infrastructure is the single largest component in the final SCP accounting for approximately 45.55% of the total cost of projects being funded out of SCM grants. The three major sub-components under Road Infrastructure development are: Re-

82 See The Minutes of the 15th Meeting of the Board of Directors of TSCL held on 07-06-2019.
83 See Minutes of 18th Meeting of HPSC held on 21-09-2019.
84 See Minutes of the 19th Meeting of the Board of Directors of TSCL held on 22-10-2019 and the Minutes of the 20th Meeting of the HPSC held on 29-11-2019.

development of the Ring Round (in two phases) ring-fencing the city; development of Smart Roads (in 3 Packages) and Improvements of other roads in the ABD area. The last two components were chosen for field visits since they fell within the ABD areas (see Fig 4.8).

The FM Cariappa Road was the first road to be developed as a smart road on a pilot basis and was the first Smart Road to be completed. The development of these smart roads includes shoulder improvements, underground ducting for utilities like optic fiber, power cables etc., development of footpath and parking. But most of the shopkeepers whose shops are located on both sides of the roads complained about the reduction of the motorable part of the road, because of the space occupied on both sides by footpaths and storm water drains (see Figures 4.9). As one shopkeeper whose shop is one of the oldest on FM Cariappa Road states: -

> Initially we thought that things would improve here once the Smart City projects start. What is a Smart City? The existing infrastructure and facilities in a city should be upgraded, but after the work started, I can only say that things have degraded. The Field Marshal Cariappa Road which used to be quite spacious before, has shrunk so much after they have built these wide footpaths to accommodate underground ducts and then the parking space on both sides. They have reduced an 80 ft-wide road to 30-40 ft-wide road. The road used to be much better before this, but now it has become even more congested. MG Road has also shrunk (see Figure 4.10) in width but since MG Road is a one-way road, it doesn't see that kind of traffic problems yet. But in a few years' time, congestion on both these roads will increase. Would it be possible twiden the road then?

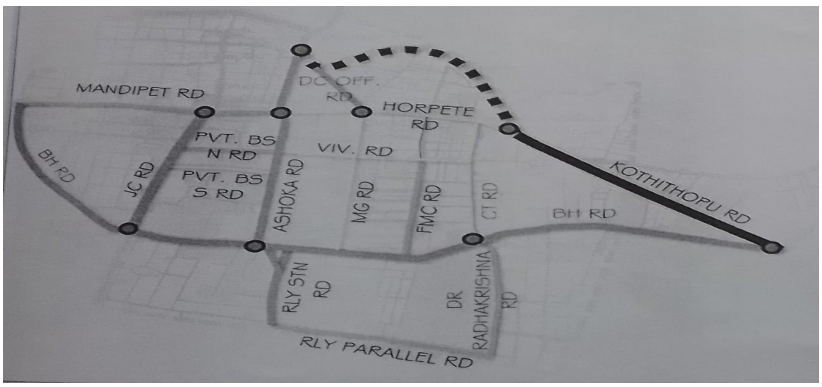


Figure 4.8: Map Showing roads selected for Smart Road Development in the ABD area

The shopkeepers across FM Cariappa Road, MG Road, JC Road and Mandipete Road described severe problems faced by them because of the development of roads, attributable to lack of coordination and planning in execution of works. A shopkeeper who owns a 30-year-old store on MG Road which was started by his father had high expectations when the work started on MG Road and exclaimed ruefully: -

> Shouldn't they have planned these interventions systematically? If we build a house, we would plan in advance, where we would build the window, the door, the ventilation, etc. We don't build the house, and then realize that things are missing and then start breaking portions of it. But this is exactly what the Smart City people have done. They completed the laying of underground ducts and covered them with tiles, and then realized that they haven't built inlets for stormwater through the footpaths. They are now digging those tiles and laying down inlet blocks. Such a waste of money and so many problems for us.



Figure 4.9: Reduction in Right of Way on FM Cariappa Road



Figure 4.10: Reduction in Right of Way on M G Road

Mr. M Subbarayanna, member of Tumakuru Town Vending Committee pointed to another glaring instance of lack of planning: -

> Take the Railway Station Road. They had finished the construction work but the road became very narrow. Now they are digging up the whole road and laying it again. In some places, the manholes and chambers have not been brought to the same level as the road. Next to the DC compound also, they are digging up the completed road again. So, the lack of basic coordination is apparent. Because of this, the general public has been inconvenienced. No signage was installed indicating the closure of roads because of project work and alternative routes to be taken. The street-vendors especially have suffered because the works were carried out without making any alternative arrangements for them. They were asked to shift to other areas leading to loss of business. The delay in completing the works has compounded these problems.[85]

Mr. A Narsimhamurthy, who is a member of the City Level Advisory Forum (CLAF), where several citizen grievances were aired[86], also points to the lack of coordination: -

> There should have been better understanding between various departments in the context of the road development in the ABD areas. Despite the Advisory Committee Meetings being chaired by the Deputy Commissioner, there was a lack of understanding between various departments. BESCoM officials would be heading in one direction, the KUWS&DB would be going in another direction. All these departments have their own hierarchy, they listen to directions of their department's minister or Principal Secretary. So, despite this coordination mechanism, there has been several lapses in the implementation.[87]

While such lack of coordination and planning is at par with the course in most cities, it is usually attributed to lack of multi-agency coordination. In the case of development of smart roads however, the works were being carried out by TSCL on its own with requisite co-operation from utilities like BESCoM, TCC etc. and hence one would not have expected such coordination issues. Additionally, several passersby raised the issue of hazardous and

85 Interview conducted on 29-03-2021.
86 For example, in the Meeting of the CLAF held on 17-08-2019, it was noted that '*while digging roads for smart roads and shoulder improvement development works, the activities should be planned properly and the works should be implemented in coordination with other departments*. Also, in the Minutes of the CLAF meeting held on 21-03-2021, the Deputy Commissioner admitted that there had been problems in implementation of the development works which have caused problems to the general public.
87 Interview conducted on 20-03-2021.

unsafe conditions being created by the works being executed (see Figures 4.11 and 4.12).



Figure 4.11: On-going work on MG Road creating hazardous situations for passersby Parking lots have been constructed along conservancies on FM Cariappa Road, MG Road



Figure 4.12: Mandipete Main Road after completion of underground ducting works

Parking lots have been constructed along conservancies on FM Cariappa Road, MG Road as well as SS Puram Main Road. These conservancies were envisaged as paid parking lots and the operation of these lots were given out to private entities on a PPP basis but none of these conservancies are operational presently (see Figure 4.13). On both FM Cariappa Road and MG Road, allowance has been made for two-wheeler and four-wheeler parking space on the two sides of the road, and in light of that, having separate conservancies for parking has proven to be redundant. As one shopkeeper on MG Road remarked when asked about the reason for non-operation of the conservancies: -

> They opened for about 5-6 months. Some private company was operating it. At that time since the road construction was going on, on both sides of the road, few people used to park in the conservancies. But then you have to go inside and park and then walk to the shops. After one side of the road construction

got over, most people started parking along the road. Why would anyone want to pay and park and then walk when they can just park in front of the shops?



Figure 4.13: Unused Parking Conservancy on FM Cariappa Road

As per the street vendors survey carried out by the TCC, there were 45 street vendors on MG Road who have now been evicted (see Figure 4.14) and relocated to Shirani Road. These vendors have been demanding that they should be allowed to set-up their stalls in those conservancies which are now lying unused, but the demand has not been acceded to yet. Wasim Akram, who used to be a vendor at MG Road before eviction and is a member of the Tumakuru Town Vending Committee explained why street vendors should be seen as part of the market area and not an obstruction:

> They had been threatening to remove us from MG Road since 2015. We didn't have any permanent place for vending; we were living in the fear of eviction for years. Then during the lockdown, they just told us orally to shift from MG Road citing CoVID concerns. Since then, they are not telling us clearly about what arrangements would be made. We had been demanding that the conservancies be given to us as permanent vending zones. They had agreed to allot those to us as well. Concrete floors were paved and poles were also erected. But then they rejected our demand saying that parking spaces would be built in those conservancies. Now that the conservancies are not being used

for parking, they should be allotted to us. Initially, there were 85 vendors but after the eviction, eventually only 45 vendors are left now.

My shop was located on the MG Road footpath earlier. Both the rich and the poor come to MG Road. Those who find the prices in brick-and-mortar shops high, come to us and those who want higher quality, go to the shops. This brings large crowds to the market. It's not just the rich who come to MG Road, people of all classes come there. Built shops and footpath shops are like head and tails. Does a market look like a market without the crowd? To give you an example, presently we have been shifted to Shirani Road. I have grown up in this area. This road never had the kind of crowd that it has now, and that is because of the street vendors. Several built shops which were not opening for several months have started to open again because of an increase in footfalls. So, they should provide us vending zones on MG Road itself.[88,89]



Figure 4.14: Traffic Police Evicting a Street-vendor from MG Road

Tumakuru City has a strong Street Vendors Union (Bidi Badi Vyaaparigala Sangha) organized by CITU. Ten representatives of the Union are members of the Town Vending

88 Interview conducted on 30-03-2021.
89 See also Praja Kahale, '*Punarvasathi NiDadE EttangaDi Kanoonu Bahira*', 25-03-2021.

Committee constituted under The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014. The Union has been working towards prevention of police harassment and provision of vending zones for street vendors ever since its registration in 2002. Based on the demands raised by Bidi-Badi Vyaaparigala Sangha and Karnataka Slum Janandolana, Rs 2 crore were allocated for creation of vending zones in the selected SCP. In the revised SCP, the funds allocation was increased to Rs 7 crore for creation of 5 vending zones. But there was a lot of delay in starting the projects because of the low priority accorded to them.[90] Construction of vending zones is yet to be completed at all the five locations. But as a demonstration model, 10 vending shops were created below Upparahalli Flyover (see Figure 4.15) which were allotted based on auctions.



Figure 4.15: Model Vending Zone constructed under the Upparahalli Flyover

4.4.2 Amanikere Lake

The Revival and Rejuvenation of the Amanikere lake is one of the flagship projects under Tumakuru SCM. The proposed works under this sub-component include landscaping, afforestation, development of walking pathway and a cycling path, an amusement park, a children's park, a science theme park and a Smart Lounge-cum-Information kiosk. While part of the lake embankment has been developed into a walking path and is visited by a steady stream of visitors in the mornings as well as the evenings, a large part of the walking path is still work in progress.

90 Interview with Mr. M Subbarayanna, Member, Tumakuru TOwn Vending COmmittee and District Presi- dent, CITU cOnducted On 29-03-2021.



(a) The developed portion of the Walking Path



(b) The incomplete portion of the Walking Path

Figure 4.16: Walking Path along Amanikere Lake

The only other amenity which is under use is the children's park. Apart from these two amenities, the rest are either still under construction or have fallen out of use. The Smart Lounge-cum-Information Kiosk, which has received several accolades and awards, has been converted to Covid-19 War room. The amusement park has been lying in disrepair for over a year now. The science theme park which is located just next to the children's play park hardly sees any visitors. When we inquired with the children playing in the adjoining childrens' park, they said that all the information sheets in the park were in English, which most of them could not understand. The cycling path is not yet ready for use. Several people who had been visiting the lake from childhood, informed us that the lake embankments built under the SCM had further shrunk the lake area, which was already being encroached upon. As Google Earth images presented in Figures 4.17a, 4.17b and 4.17c show, before the lake development was undertaken, the lake boundaries were not circumscribed by embankments and the lake was recharged by several feeder channels, especially those approaching from the north-eastern and eastern sides. After the embankments were built, two large portions of the lake area, on the southern boundary of the lake, which used to be part of the lake bed, were left out of the lake embankments.

In fact, these two portions, which were earlier part of the lake area, now host the built-up

areas like the Amusement Park, the Smart Kiosk, the Glass House, etc. some of which have been funded under the Smart Cities Mission in Tumakuru. These constructions are in violation of the recommendations made by the N K Patil Committee Report (2011) and the directions issued by the Karnataka High Court.[91] The N K Patil Committee Report, set up by the Karnataka High Court had made the following recommendations in terms of strategy for preservation of lakes in Bangalore city: -

> 1. Lake area should not be diverted for any other purpose as lakes have an increased and important role to play vis–a-vis lakes in rural areas, like ground water recharge, climate moderation, act as lung spaces, water for various purposes, urban recreation etc.
>
> 7. Effective Lake area should not be reduced by converting lake area into parks, children's playgrounds, widened bunds etc. (Justice N K Patil Committee, 2011, pp. 12-13).



(a) Expanse of Amanikere Lake (2006)

91 See the Karnataka High COurt orders in WP 817/2008 dated 11.04.2012.



(b) Expanse of Amanikere Lake (2021)



(c) Expanse of Amanikere Lake in 2021 as compared to the boundary in 2006

Based on the report, the Karnataka High Court in its final orders in WP 817/2008 dated 11.04.2012 gave the following direction which appear to have been violated by the above constructions: -

2. The unauthorized construction within 30 meters of the Peripheral area has to be removed.

4.4.3 Affordable Housing

The selected SCP had proposed to develop 3 'slums' in the ABD area comprising 353 housing units and *in situ* redevelopment of 3,802 housing units with a total outlay of Rs 73 crore in convergence with PMAY. Subsequently, this proposal was dropped and the Board decided to include construction of affordable housing for the residents of Kuripalya as a wholly SCM-funded project. But since the residents of Kuripalya were strongly opposed to any relocation, and did not want multi-storey housing to be constructed, Mariyamma Nagara was selected as an alternative. Mariyamma Nagara is an old slum which had not been notified because it was located on disputed land. The area has an estimated population of close to 500 persons. Most of the working members of the families residing here are engaged in informal work, largely related to scrap collection because of the location of scrap shops in the area. Others engage in daily wage construction work or loading-unloading work. Since Mariyamma Nagara is located in the central part of the city, it was facing the threat of relocation for several years and a movement had been going on for over 20 years against the proposed demolition. After this long struggle, a piece of land located just next to the slum was allotted for the housing project by the then Deputy Commissioner. Subsequently, the Board approved construction of 87 Dwelling Units for 367 residents of Mariyama Nagara as an Affordable Housing Project in place of the projects proposed in the SCP.[92]

Since then, the number of households residing at Mariyamma Nagara have increased to over 100, while some households have split into multiple households on account of marriages. The future of those families who have not been allotted houses in the new project remains unclear. Although, the project has been shown as completed, some of the finishing works in some of the housing units were still in progress when we visited the housing complex. While the unit cost of the Dwelling Units is considerably higher (Rs 6.5 lakh per unit) than the multi-storied housing built under JNNURM and RAY (3.5-4.0 lakh per dwelling unit), and hence the quality of construction is much superior than the Dwelling Units constructed in Dibburu under RAY, but the size of the houses still remain very small (325 sq ft). The housing complex has a community hall, an *anganwadi* center and a skill development center as well and is equipped with all necessary amenities like assured water supply and drainage system. The Mariyamma Nagara housing project is by far the best affordable housing project in Tumakuru's recent history, both in terms of the quality of construction as well as the fact that the residents have been relocated to a site

92 See the Minutes of the 6th Meeting of the Board of Director of TSCL held on 15-02-2018.

which is within 200 meters of the original settlement and is located in a commercial area. But the wide gap between the unit costs for Mariyamma Nagara and those under PMAY and other state government-funded schemes makes the replicability of this project as a model doubtful. The quantum of beneficiary contribution that the allottees would be required to pay has not been decided yet, which may also influence the possibility of this project being replicated.



(a) Mariyamma Nagara slated for shifting to allocated Housing Complex



(b) The New Mariyamma Nagara Housing awaiting Inauguration

Figure 4.18: Housing built under Tumakuru SCM awaiting allotment

Apart from the 87 housing units built at Mariyamma Nagara, no other housing project was undertaken under the Smart Cities Mission in Tumakuru. In February 2020, the HPSC had directed all SPVs to take up Slum Development Projects out of their savings or in lieu of dropped projects.[93] TSCL was asked to conduct a joint inspection with KSDB to identify areas where such projects could be undertaken. Post-inspection, TSCL informed the HPSC that since they had already undertaken one affordable housing project at Mariyamma Nagara (87 Housing Units), no further projects are envisaged.[94] Hence, from the target of developing 353 housing units in 3 slums and *in situ* redevelopment of 3,802 housing units in the original SCP, finally only 87 Dwelling Units were constructed under the Affordable Housing component of the Tumakuru Smart Cities Mission.

4.4.4 Education Infrastructure

The Education component of the final SCP can be divided into following sub-components: -

- Smart Classrooms at 19 schools/colleges and Digital Classrooms at 4 schools/colleges along ICT and English Language Labs equipped with computers and English learning

93 See Minutes of 22nd Meeting of HPSC held on 19.02.2020.
94 See the Action Taken Report on Directions issued by the HPSC in its 26th Meeting held on 09-10-2020.

software

- Development works at Govt. PU College premises
- Development works at Empress High School/PU College
- Teacher and Student Resource Center
- Digital Library
- Development of City Library and Business Incubation Center (under construction)

Under this component, the focus has been on development works at the Govt PU College and Empress Girls High School/PU College premises. Both these premises are quite old and have heritage buildings. The Govt PU College which is located in the heart of the city along the Bengaluru-Honnavara Road (NH-206) was established in 1890 by the British as a High School and was subsequently expanded in 1915 by the then Mysuru Maharaja. In 1973, the PU section was added to the High School. The selected SCP had grand plans for 'Revitalization and Rejuvenation of Govt. PU College Precinct' which included development of college library, restoration of the heritage buildings which were now in a dilapidated state, development of congregation hall, etc.[95] But eventually only a fraction of these plans have been converted to final projects. The most glaring omission from the selected SCP, and a cause of great disappointment for the College administration is restoration of the heritage section of the College Precincts (see Figure 4.19).



95 See the *Annual Report of TSCL to the Board of Directors 2017-18* for further details.

Figure 4.19: The old classrooms at the Govt PU College whose restoration was omitted



Figure 4.20: The New classrooms at the Govt PU College

Instead of restoration of older structures, new classroom blocks have been built on vacant land (work completed) and also as additional floors to existing buildings (work under progress). Hence, while a section of the classroom blocks sports a new and modern look (see Figure 4.20), another section of the classroom block looks dilapidated (see Figure 4.19). The college administration informed us that the ICT labs provided under the mission are not being used for want of maintenance. The sports facility which has been equipped with expensive gym equipment has not been used at all, since the college administration does not want to take possession of the facility. The facility has glass windows and they are afraid of break-ins and theft of equipment in absence of security arrangements. The Banyan Tree Boulevard which has been shown as completed, was still being readied for inauguration when we visited the location (see Fig 4.21). Eventually, the final set of works undertaken under the SCM amount to only a piecemeal development of the Govt. PU College precincts in contrast with the comprehensive vision projected in the SCP.

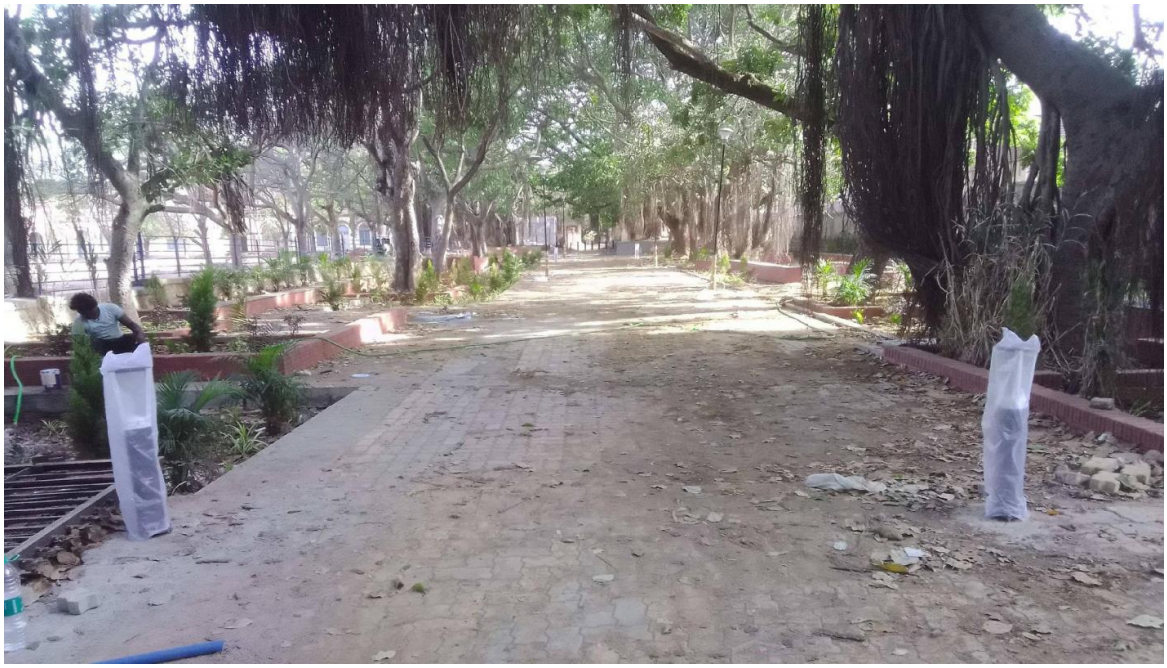


Figure 4.21: Lighting arrangements being made at Banyan Tree Boulevard on Govt. PU College Premises

At the Empress Girls High School and PU College premises, the initial ambitions were more modest and the subsequent interventions have been much more measured. A spacious three-storey building is under construction which would house an auditorium on the ground floor with a seating capacity of more than 1,000 persons, a library on the first floor and lab rooms on the second floor. Out of 38 classrooms across the High School (18) and PU College (20) premises, 10 classrooms (5 each in High School and PU College) have been converted to Smart Classrooms equipped with touch sensitive projection devices integrated with digital pen, which as per the testimonies of the teacher is proving to be a very useful teaching aid especially for mathematics and social science. The teaching staff wants all the classrooms to be converted to smart classrooms now. As a pilot initiative, a sanitary napkin dispenser and incinerator had been installed in the girls' toilet of the PU College but both of them have fallen out of use for lack of maintenance despite several complaints being made by the administration. The teachers we spoke to informed us that the female students had found the installation, especially that of the incinerator very useful and wanted the equipment to be repaired urgently. In addition to these interventions under the education sub-component, a new building for City Library which would also house a Business Incubation Center is under construction but the nature and scope of the activities of the Business Incubation Center are still being worked out. The Digital library (available as an App and a website) will also have physical presence in the City Library Building when it is ready, and is currently housed in the old City Library Building. The

Teachers and Students Resource center which is housed in the Tumakuru Science Center building is envisaged as a training center for Teachers and students but was closed when we visited it and has been closed for several months, as informed to us.

4.4.5 Sanitation and Solid Waste Management

Liquid Waste Management has been completely ignored under the Tumakuru SCM. Underground sewerage network is being built in Tumakuru under the AMRUT project and while this has been included as a convergence project in the SCP, there is no financial contribution from the SCM towards this project. There are 15 UGD workers who work for the City Corporation through contractors. Most of them reside in Ward 2 which was not included in the ABD areas. For 35 wards, there are just 3 sucking-cum-jetting vehicles provided through the contractors and 1 corporation-owned sucking machine, which serve the whole UGD network in the city. On an average the corporation received 30-40 complaints which have to be attended to by 3 teams of workers. As per the leaders of the UGD Workers Union, a minimum of 2-3 additional Jetting vehicles and requisite number of workers need to be added given the expansion of the UGD network under AMRUT scheme. Also, given that most of the UGD network being laid down has 6-inch piping, they would be prone to frequent blockages. The UGD workers had made some demands regarding improvement in their work conditions which were not included in the SCP:-

> By the time we come back after attending complaints, our gloves, hands, clothes all get soiled and smell of sewage. But we have no place to wash up, bathe and change our clothes. We go back home in the same set of clothes. All these years we have been working without any safety equipment. Only since January we have been given some gloves. Those gloves also are of very poor quality. Often, we have to work with our bare hands. We aren't in a position of being able to refuse work if that safety equipment is not provided.[96]

On the Solid Waste Management side, the selected SCP had envisaged system-level smart interventions which included RFID-tagging of all households allowing for time-stamping of waste collection and weighing of waste collected, GIS-tagging of all waste collection vehicle and integration of these integration with the Integrated City Management and Control Center (ICMCC). But the proposed system was not found to be very successful in Hubballi-Dharwad and it was felt that this system needed to be tested as a pilot in a few wards. But the TCC had already decided to float city-wide tenders for solid waste collection, so the intervention was reduced to GIS-tagging of waste collection vehicles

96 Interviews with UGD Workers Union.

which only allows for tracking of vehicles and in future, scheduling of waste collection.

Since the planned smart intervention did not materialize, development of landfill site at Ajjagondanahalli, located at a 15 km distance from Tumakuru city was undertaken. We were unable to visit the site because of lack of access to the site which has been closed off for the public. Beyond this, the projects undertaken under this sub-component comprise disparate interventions like procurement of tractor-mounted sprayers which were used for spraying disinfectant during Covid and are now not being utilized; provision of uniforms to *pourakarmikas* which is the statutory and recurring duty of the TCC and a IEC campaign around Clean Tumakuru in conjunction with installation of litter bins along major roads.

There have been some long-standing demands of the *Pourakarmikas* which the leaders of the Union interviewed suggested as projects that could have been undertaken under Tumakuru SCM:-

> Including auto drivers, cleaners and sweepers, there are around 600 Pourakarmikas in Tumakuru city. We come early in the morning for work, but there are no transportation arrangements for us. In most of the wards, the places we work at have no space for us to change our clothes, sit and eat our food, drink water, wash ourselves, there are no toilets or bathrooms. There are no arrangements for drinking water; we have to request families or hotel owners in our area of work for water.
>
> 98% of the workers don't have their own house. We have been asking for housing for Pourakarmikas for several years. There are certain areas like Kuripalya, Goodshed Colony, etc. where Pourakarmikas reside. Most of them come from the Madiga community and have been working as Pourakarmikas and manual scavengers for generations. Their children continue to work as corporation Pourakarmikas even today. Kuripalya was initially identified for development but the plan was to relocate the workers quite far from their current place of residence, hence they opposed it. Since then, that area has been left undeveloped. There are no street lights, no drainage connection, no water supply in those areas. All these could have been included under SCM.
>
> Additionally, there is a shortage of vehicles and workers in the city. The Corporation officials say that they have decided the existing numbers based

on the city's population. But being a district center and an educational hub, thousands of people come to the city and go back. So many students come to the city. Don't they throw waste? Shouldn't the number of vehicles and workers be appointed taking this into account? At least one-two extra auto-tippers are required for each ward. Currently, because of this shortage, our workers are facing a lot of extra burden.[97]

The smart waste collection that was proposed would be good if it can be implemented. But there should be some technical monitoring of the problems we face as well. For example, the responsibility of segregation is on the households, but many households are not doing it. That burden eventually falls on us. Shouldn't there be some system to ensure that households segregate waste, especially waste like sanitary pads and medical syringes?

The development of Public Toilets was taken up in two phases. In the first phase e-Toilets were planned at 5 locations. As a pilot, two smart e-toilets were installed outside Siddaganga Women's PU College. The plan of installing e-Toilets at 4 other locations was dropped subsequently citing the reason that the same would be undertaken under SBM. The only set of e-Toilets installed in Phase I are no longer functional. In fact, the auto-rickshaw drivers who park their autos at the nearby stand, informed us that the e-Toilets had fallen out of use just after six months of inauguration and have now been closed for over 1.5 years despite several complaints by them.



Figure 4.22: Smart e-Toilets near Siddaganga Women's PU College Bus Shelter lying unused

97 Interview with Mr. Kadirappa on 30-03-2021 and other Interviews conducted on 19-03-2021.

Under Phase 2, public toilets have been constructed at four locations (Diploma College, Passport office, BEO office and KEB office). We visited two locations constructed at the BEO office and KEB office under the 2nd Phase of the sub-component. While the construction work had been completed, the public toilets were not in use.



(a) Public Toilets at BEO office



(b) Public Toilets at KEB office

Figure 4.23: Public Toilets build under SCM

4.4.6 Parks and Green Spaces

The initial SCP had proposed developments of green spaces like parks in the ABD area but subsequently, the coverage of this component was expanded, and a park is being built in almost every ward now under the SCM. Most of the parks fill an important gap in terms of green spaces in the city and the parks that we visited had children playing in the evening and senior citizens enjoying a leisurely walk. A noteworthy project was the Women's Theme Park in Upparahalli, which is meant exclusively for children and women. Although the park is shown as a completed project, the installation of lamps and lighting arrangements were still being carried out when we visited the park. Some of the women who were walking and exercising in the park had traveled quite some distance to come to the park. A group of women we spoke to, stated the following: -

> We like to come here because we can exercise here without the sense of people watching us. We can't go to gyms and we don't feel comfortable using exercising equipment when men are around. This Park gives us the privacy to freely exercise. That's why we come here, even when we live quite far. We want to say thanks to whoever has thought of building this park here. We wish that our area too should be provided with a space like this.



Figure 4.24: Women's Theme Park at Upparahalli

4.4.7 Auto-stands

Around 10 auto-rickshaw stands have been created at different locations in Tumakuru across three phases. These stands consist of tiled bays located on the footpath or along the foot-path (see Figure 4.25), with entrance and exit rows. We visited the auto-rickshaw bays at Siddaganga Women's College Bus stop, Caltex Circle and at Sub-registrar office and spoke to the drivers present there as well as the President and the Vice-president of the Samastha Auto Chalakara Sangathane, a union of auto-rickshaw drivers. All the drivers felt that building such bays has brought much required order to movements and docking of auto-rickshaws. But at most of the locations, there was no availability of drinking water and most of the bays were being cleaned and maintained by the auto-rickshaw drivers themselves. The impact of this small-scale intervention can be gauged from the fact that the *Samastha Auto Chalakara Sangathane* has submitted a memorandum to the TCC asking for such auto-rickshaw stands to be constructed at 132 additional locations across the city.



(a) Auto Stand/Bay at Caltex Circle



(b) Auto Stand/Bay at Sub-Registrar office

Figure 4.25: Auto Stands/Bays

4.4.8 Pan-City Interventions: Intelligent Transport System and Integrated City Management Control Center

As part of the pan-city interventions, under the Intelligent Transport System solution, the KSRTC buses have been GIS-enabled and Public Information System (PIS) Display Boards have been installed at 107 bus stops for providing Expected Time of Arrival (ETA) information to passengers. The system is yet to be made operational. The Integrated City Management Control Center ICMCC includes following sub-component: -

- **Intelligent Signaling**: Adaptive Traffic Control System (Signaling based on traffic detection), Red Light Violation Detection (RLVD) system and Automatic Number Plate Recognition (for *challans* for traffic violations) have been set-up at few of the important signals.

- **CCTV Surveillance**: CCTV cameras have been installed at 320 locations (102 in Phase 1 and 218 in Phase 2) with the monitoring center at the ICMCC building housed currently at Town Hall.
- **Locked House Monitoring System**: A system that allows police to monitor and detect break-ins in locked houses using CCTV surveillance and motion sensors based on request from homeowners.
- **Environmental Sensors**: Air and Noise Pollution Sensors installed at 5 locations with monitoring back-end made available to KSPCB.
- **Variable Messaging System**: Display boards at 6 entry points to the city.

Eventually, it is envisaged that these disparate components would be integrated into a single application. While the system can help in better policing and is being justified on this basis, there are concerns related to increasing state surveillance of citizens. A group of sex-workers who work near the bus stand area of the city described how the harassment and violence that they face from police personnel on a routine basis, has now compounded because of CCTV camera surveillance. The CCTV cameras installed around their work areas are used to harass the workers as well as their clients which has made their work riskier.[98] Thus, state surveillance is not a remote possibility as the experience of the street-based sex workers in Tumakuru shows.

4.5 Functioning of the City-level Advisory Forum and District- level Smart City Implementation and Review Committee

As per the Smart City Guidelines, the City-level Advisory Forum (CLAF) was envisaged as an advisory mechanism during the *implementation* phase of the Mission (MoUD, 2015, pp. 17), but in Karnataka, the CLAFs were constituted after Stage I of the City Level Challenge itself, for all the Cities that had been shortlisted. In addition to the constitution of CLAF, the district in-charge secretaries were appointed as 'Advisors' to the City-level Advisory Forums, who were tasked with coordination between various stakeholders, guiding the preparation of SCPs and monitoring of public consultations.[99] The CLAF for Tumakuru was constituted in Nov 2015 and its first meeting was held in July 2016, just before the finalization of the SCP for Round 2 of Stage 2 CityLevel Challenge. Apart from elected representatives (District in-charge Minister, MP, MLA, Mayor, Deputy Mayor) and government officials (Deputy Commissioner, Police officials, City Corporation Commissioner, Urban Development Authority official, BESCoM etc.), a technical expert from a private college, a youth representative from JCI, a representative from Taxpayers Association, two representatives from slum-based organizations, a representative from an NGO and a representative from Chamber of Commerce were included in the CLAF as members. Although the CLAF constituted during the proposal stage was continued after the selection of Tumakuru city under the Stage II of the City Level Challenge, but no meetings were conducted for about two years after the constitution of the SPV. Only after the tenure of the sitting MLA ended in 2018 and a new MLA was elected in May 2018 who insisted on holding of the CLAF meetings, were the meetings of the CLAF resumed. When the SCP was revised in September 2018, no consultations were held with the CLAF.

98 Interview with a group of sex workers conducted on 20-03-2021.
99 GO No. UDD 153 CSS 2015, dated 18-09-2015.

The CLAF essentially functioned as a forum where information regarding the progress of projects was shared and discussed, suggestions were sought and discussed, but eventually owing to the advisory role of the CLAF, most of the suggestions regarding inclusion of new projects in the SCP were not taken on board, and were instead either turned down or redirected to the TCC or line-departments.[100] Nevertheless, the forum provided limited opportunity to question the selection of projects and make the SCP more inclusive within the bounds set by the revised SCP. For example, one of the members representing slum-based organizations raised the question of employment generation through Smart Cities Mission. An MoU had been signed between the TSCL and Tumakuru University for development of skill development programmes but since no progress was made on this front for over a year, the MoU was canceled. After the matter being discussed in the CLAF, it was decided to have a training center as part of the City Library and Business Incubation Center and a District Committee for Incubation Center Activities was formed to chalk out the list of activities.[101] The limited representation of citizens on the CLAF, reduced its potential to act as a grievance redressal mechanism but to a limited extent, citizen grievances like inconvenience being caused by road development work, the increase in dust pollution in the city, etc. were raised at the CLAF.

Table 4.4: Details of the CLAF Meetings held

Year	Details of Meetings Held
2016	1 (09-06-2016)
2019	2 (04-01-2019 and 18-08-2019)
2020	3 (21-03-2020; 04-06-2020; and 31.12.2020)
Total	**6 Meetings**

Source: Based on Information obtained under RTI Act 2005.

As mentioned earlier, to handle the political fall-out from delegation of extensive powers to the SPV, another forum called the ***District-level Smart City Implementation and Review Committee*** (SCIRC) was created.[102] This Committee was chaired by the Minister for Urban

100 Based on Proceeding of the Meetings of the Tumakuru CLAF and Interview with Mr. A Narsimhamurthy, Member, Tumakuru CLAF conducted on 20-03-2021.
101 See the Proceedings of the Meeting of Tumakuru CLAF held on 31.12.2020.
102 GO UDD 56 CSS 2016 (Part-5), dated 15-09-2017.

Development and included elected representatives (District In-charge minister, the MP and MLA, the Mayor) and Government officials (the Deputy Commissioner, Commissioner of the Corporation, the Commissioner of the Urban Development Authority etc.) only and had no participation from civil society. To date, only one meeting of the Committee has been held, which was after the formation of the coalition government in Karnataka when the new Minister for Urban Development took charge. Because the Committee is chaired by the Minister of Urban Development who has Department-level monitoring mechanisms at his/her disposal, the Committee has lost its relevance as a *district-level* political monitoring and review mechanism.

4.6 The Tumakuru Experience and Implications of the SPV Mechanism

Following key points of observation emerge from our analysis of the Tumakuru experience of implementation of the Smart Cities Mission: -

- While the SCM Guidelines had envisaged delegation of extensive powers to the SPV, political opposition only allowed a limited and staggered delegation of administrative and financial powers of approval and sanction.
- Although the Tumakuru Smart City Ltd (the SPV) had representation of few elected representatives from the Tumakuru City Corporation (ULB) including the Mayor and the Deputy Mayor on its Board, it was still perceived as an organization working in parallel and encroaching onto the territory of the elected body.
- There was wide divergence between the Selected SCP and the Final SCP being implemented for reasons ranging from infeasibility of proposed projects, the gap between preparation of the SCP and the selection as Smart City, pressures from various quarters for inclusion of new projects, etc. While a majority of investments were focused on the selected ABD areas, some investments had to be made in projects benefiting the whole city or wards which were not included in the ABD areas. Even within the ABD areas, some areas like Ward 19 which contributed substantially to the population and area coverage of the SCP, hardly received any investments.

What does this experience imply for the SPV mechanism? In our interview with the present MD and CEO of the TSCL, Mr. B T Rangaswamy, who has a long and diverse experience in urban administration in Tumakuru, having served as Commissioner of Tumakuru Urban Development Authority and as Project Director of District Urban Development Cell, felt that the SPV mechanism was a positive innovation in urban governance since '*it allowed speedier implementation of projects without any political interference*'. Despite powers of the

TCC and the City Council not being delegated to the SPV, he felt that the staggered delegation of powers of administrative and tender approval to the MD and the Board was sufficient for the needs of the Smart Cities Mission:-

> In the government system, for project approvals above Rs 10 crore we have to approach the High-Powered Committee chaired by the Chief Secretary and for bigger projects we have to seek approval from the Cabinet. Here, most projects could be approved at the level of Managing Director or the Board of Directors and only a few had to be sent to HPSC. This autonomy was very useful in being able to execute the projects in a speedy manner. This is a good model and should be retained.[103]

But there are several apprehensions about the appropriateness of using a SPV for implementation of the projects. Table 4.5 compares the fiscal resources available with the Tumakuru City Corporation (TCC) and Tumakuru Smart City Limited (TSCL) over the five-year period of the Smart Cities Mission (2017-22). For the last two years in this period, only budgeted estimates for expenditure by TCC are available. Keeping in mind that the actual expenditure of TCC has consistently fallen short of the budget expenditure of the last few years, the actual expenditure for the five-year period is quite likely to be on the lower side as compared to the figure shown in Table 4.5. Even without taking this into account, the comparison shows that the financial footprint of the TSCL is much larger than that of the TCC.

Table 4.5: Comparison of the Expenditure Budgets of Tumakuru City Corporation (TCC) and Tumakuru Smart City Limited (TSCL) over the Mission Period (2017-22)

Fiscal Year	TCC Expenditure (Rs Crore)	TSCL Expenditure (Rs Crore)
2017-18 (AE)	133.8022	Over Five Years}
2018-19 (RE)	166.0355	
2019-20 (RE)	136.3171	
2020-21 (BE)	224.2337	
2021-22 (BE)	221.05	
Total	**881.4385**	**960.00**

AE: Actual Expenditure; *RE*: Revised Estimate; *BE*: Budgeted Estimate.
Source: Tumakuru City Corporation, Budget Documents, various years.

103 Interview with Mr. B T Rangaswamy, MD and CEO of TSCL conducted on 03-03-2021.

We also have to bear in mind that while the TCC is duty-bound to serve all the areas of the city, a large part of the investments made by TSCL was concentrated in a small area of the city (14%) despite the eventual spreading out effect of political and democratic pressures. While imbalances in area-wise budgetary allocations do exist even at the TCC level, democratic political accountability mechanisms like representation of each ward in the City Council, Standing committees and ward-wise funds allocation, offer corrective measures which are unavailable when it comes to SPVs. An argument can be made in favor of the SPV that the selection of areas and projects had gone through a process of citizen feedback and the role of SPV was limited to that of implementation of the democratically conceived SCP. But as we have seen in the preceding chapter, the process of preparation of the SCP left out several groups and demands. In any case, considering the wide divergence between the selected SCP and the final set of projects being implemented, and the role of the Board in deciding on many of these changes, the theoretical separation between SCP preparation and implementation of projects does not hold any water in practice.

Can the presence of the Mayor, Deputy Mayor and two selected corporators on the Board of Directors of the TSCL sufficiently serve as a substitute to the mechanisms of political claim-making that have taken shape after decentralization of urban administration following the 74th amendment to the Constitution? The Tumakuru experience would suggest the answer to be a negative. As seen in Tumakuru, those corporators who were not on the Board, felt alienated from the implementation process, especially when development works being carried out in their areas started causing inconvenience to the residents. Apart from the members of the city council, the local MLA, MP and the district in-charge minister, have significant *locus standi* within the power matrix of city, and as mentioned in the previous sections, they were unhappy with being assigned only an advisory role in the CLAF. In absence of representation on the Board, a separate mechanism in the form of District-level SCIRC had to be created to provide a supervisory role to them. But since this forum was chaired by the Minister of Urban Development who can independently review the Mission at the departmental level, this forum did not serve the intended purpose.

Apart from the mechanisms for political accountability that the City Corporation set-up allows for, there are statutory requirements applicable to City Corporations in Karnataka which are meant to ensure distributional justice for marginalized communities. The Scheduled Caste Sub-allocation & Tribal Sub-allocation (Planning, Allocation & Utilization of Financial Resources) Act, 2013 and Rules made under the Act reserves 24.10% budgetary funds for SC (17.15%) and ST (6.95%) in proportion to their population to the state. As per

the Act, this budget is non-lapsable and non-divertible. The channelizing of SCM funds completely by-pass this social justice measure since SPVs do not come under the purview of the Act. Considering that a total amount of Rs 930 crore (project cost excluding A&OE) is being channelized through TSCL, the notional amount that would have been available for SCP/TSP allocation if the SCM grants were routed through the TCC would have been Rs 224.13 crore! Additionally, in Karnataka all the ULBs are required to reserve 7.25% of their funds for the welfare of economically weaker sections among non-SC/ST communities.[104] Adding this to the SCP/TSP allocations, 31.35% of the funds i.e. a notional amount of Rs 291.55 crore would have been available for the welfare of urban deprived communities of the city.

Additionally, there are questions regarding accountability towards citizens and accessibility which was raised by a leader of *Pourakarmika Sangha* (Sanitation Workers Union): -

> You can't consider the Tumakuru Smart City Ltd as a government body or department. It is a company which is only concerned with project completion. If you have an issue with what they are doing, you can't go and complain there. If you do, they would ask you to go and complain to the Corporation or TUDA. Common people don't have the kind of relationship with the Smart City Corporation that they have with their corporators or the City Corporation. People find the Corporation more accessible. If the same funds were given to the Corporation, we would be able to inquire how those funds are being spent, but we can't approach the Smart City office to seek such information.[105]

Mr. Kadarappa, another leader *Pourakarmika Sangha* (Sanitation Workers Union) reiterated the above in following words: -

> Smart City Corporation's responsibility ends with the completion of the project. Once the project is over, they just hand over the project and leave. There is no continuity which leads to failure of projects. Look at the conservancies on MG Road, the Smart City just finished the projects and left. Now the conservancies are lying vacant but Smart City won't take responsibility for that. That's why I feel that an organization like the Corporation which has linkages with common people is better placed to take up these works, that way people also have rights to raise questions and hold them responsible. Who can the common people

104 See UDD Circulars bearing No. UDD 415 GEL 2011 dated 27-02-2012 and UDD 23 PNG 2018 dated 03-06-2019.
105 Interviews conducted on 19-03-2021.

question at the TSCL?[106]

A discussion on whether the SPVs would continue in one form or another was indefinitely deferred by the HPSC.[107] It has become clear that even if the Union government extends the Smart City Mission, it is unlikely that the selected 100 cities will get any additional funding under the Mission. Since there was no clear answer to the question of continuance of the SPVs, the approach adopted towards asset ownership and maintenance was to transfer all the assets created under the Mission to the Tumakuru City Corporation, which included both the claim over the revenue streams from the assets created as well as the obligation of the operation & maintenance (O&M) of these assets. While for some projects the O&M costs for 2-5 years have been built into the tenders, eventually these assets would have to be maintained out of tax revenue of the TCC, which is likely to increase the tax burden on the citizens. Already, for some projects the O&M costs are being met through special purpose taxes or cesses. A Ring Road Development cess is proposed to be levied on the properties located along the Ring Road under development. Similarly, lake development cess has been proposed for the maintenance of Amanikere Lake. Already, in the three-yearly revision of property taxes that was carried out in 2020-21 Budget of the TCC, the taxes were raised across the board by 15% which was one of the highest hikes across all the ULBs in Karnataka.[108] Among the various revenue enhancing measures suggested under the 'Reforms' category under the Smart Cities Mission like increase in advertising revenue, value capture financing, the only measure that is being taken up in Tumakuru is the effort to bring non-taxed properties within the property tax net through a drone survey. Since the survey is not yet complete, it is difficult to assess whether the increased O&M costs can be offset by the widening of the property tax base, or would it translate into an even higher burden on the citizens of Tumakuru. For now, uncertainty looms over the future of the existing SPVs in Karnataka.

106 Interviews conducted on 30-03-2021.
107 See the Minutes of the 21st Meeting of the HPSC held on 09-01-2020.
108 See, Prajavani, 'Tumakuru: ShE 15rashTu Aasti Terige HechchaLa', May 13, 2020; and Praja Pragathi, 'Tumakuru: LOckdOwn Sankashtadalli Pallikeyinda Sarwajanikarige Terige HOre', May 15, 2020.

Chapter 5 Conclusion

If through Smart City those projects are taken which fulfill the needs of the people, which increase people's income, provide them livelihood, improve their standard of living, then it would have been a good idea. But if the Smart City is built for the benefit of few consultants or companies, then it's meaningless.

Mr. A Narsimhamurthy, *Karnataka Slum Janandolana*

The key feature of an empty signifier is the indeterminacy of its meaning. Hence, it performs the function of meaning 'all the things to all the people' (Brown, 2016). That's how the Smart Cities Mission also played out in Tumakuru. In the beginning, everyone welcomed the idea of Tumakuru becoming a Smart City. Everyone had their own imagination of what a Smart Tumakuru should look like, and more importantly what a Smart Tumakuru would mean for them. But in the process of translation of a fuzzy concept into a concrete urban programme, the idea of Smart City passed through the sieve of the power structure within the city. Right at the beginning, the process of citizen engagement conducted predominantly through online media was non-inclusive and left out large sections of urban deprived communities from its fold. Consequently, the issues that got prioritized in the Smart City Proposal (SCP) and the areas that got selected for Area-based development (ABD) both had the imprint of the caste-class power matrix of the city. Basic services and infrastructure formed only a minimal portion of the Proposal and the areas which had minimal access to these services were not selected. The limited role of the citizens in the largely expert-driven process of preparation of the Smart City Proposal, was premised on a conception of class-less, caste-less, gender-less citizenry and hence failed to make allowance for existing inequalities in power and access and hence ended up excluding vast sections of the urban deprived communities. The choice of already well-endowed core ABD areas, while sidelining the disadvantaged areas, reflected and reinforced the spatial distribution of the caste-class power in the city. After the Round 1 SCP was rejected, partially because of low population and area coverage, while wards with greater presence of urban deprived communities were added to the area selected for ABD, eventually in terms of projects and investment, very little was allotted to these areas. Thus, right from the stage of formulation of the SCP, the mission was non-inclusive.

The SPVs were envisaged as nimble implementation vehicles with extensive autonomy in terms of decision making and the Board of Directors was to be the city-level coordination forum. The supra-local elected representatives (MLAs and MPs) were kept out of the Board because it was perceived that they would not have any role in the implementation of the projects once the SCP had been finalized. But these institutional mechanisms did not function as envisaged in the Mission Guidelines. To begin with, the political representatives at the state level were not prepared to grant the level of autonomy to the SPVs as was prescribed under the Mission. Only limited and staggered autonomy in terms of administrative and financial powers of approval and sanction were granted. Powers of the ULBs were not granted to the SPVs. Even then, the functioning of the TSCL as a parallel body to the Tumakuru City Corporation without any direct accountability mechanism to the citizens caused friction between the two institutions despite representation of few corporators including the Mayor and Deputy Mayor on the Board of the TSCL. The process of bootstrapping the SPV and translating proposed projects into actual work plans took longer than expected. A long time had lapsed between the drawing up of the first SCP and the initiation of the implementation of the selected SCP. These factors and demands for inclusion of new projects led to revision in the SCP. The revised SCP and the subsequent changes made to the projects undertaken reflected the demands made on the Mission from all the excluded quarters. The eventual shift in the balance between ABD and pan-city projects under the final SCP and the slightly wider spatial spread of project funds than that envisaged in the initial SCP simultaneously led to a broadening of the Mission (albeit a forced one) as well as fragmentation of the limited organized developmental thrust contained in the selected SCP. The funding mechanism under the Mission also bypassed the statutory affirmative measures which require a mandatory part of the government spending to be allotted to projects catering to the needs of the urban deprived communities.

The exclusive focus of the Smart Cities Mission on creation of infrastructure at the expense of services, livelihood generation and welfare has created differential outcomes for various class groups as suggested by a leader of *Pourakarmika Sangha* (Sanitation Workers' Union): -

> Some people have benefited from the Smart Cities Mission while others have not. Those who own property have benefited from the increase in the value of property. Those who don't have property would find it difficult to buy land at such high prices. The owners of rented property have hiked the rents saying that the property tax, the water tax and other municipal taxes have increased. They extract those taxes and more from the tenants. Those who don't own property and live-in rented houses, the working class...the common citizens are

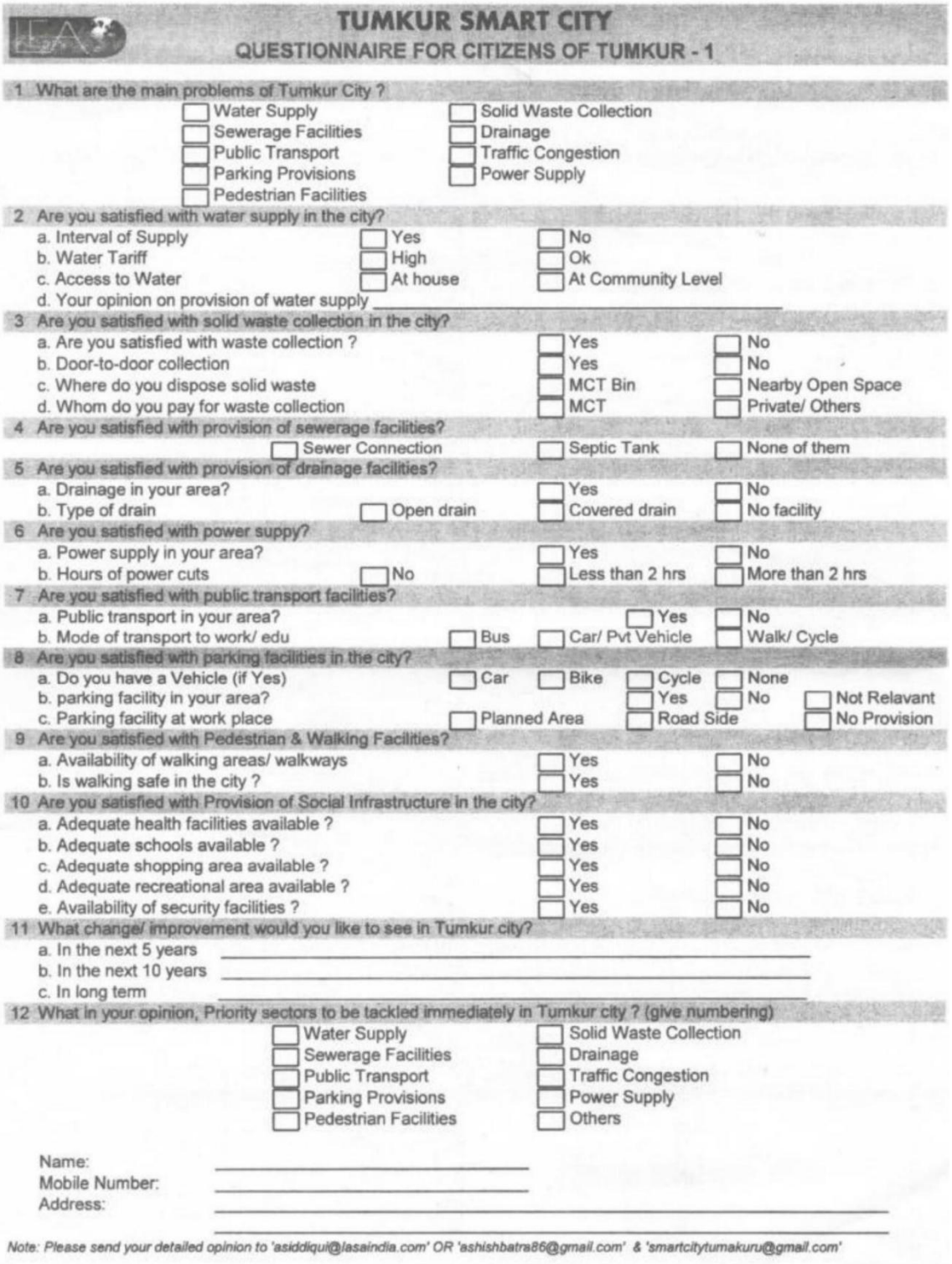
> squeezed from both sides. At one end, they have to pay higher tax, on the other hand, their wages have not increased. Smart City has not had any positive impact on the daily wage rates. Employment has not increased. The city may have become beautified but that is not going to help with poverty.[109]

Thus, while a section of propertied classes would have benefited from the infrastructure development in the core areas of the city, the needs of the urban deprived communities of Tumakuru have been sidelined. As the epigraph to this chapter suggests, the priorities of the urban deprived communities have only a marginal presence in the expert-driven, corporate-driven, and consultant-driven conception of the Smart City.

109 Interviews conducted on 19-03-2021.

Appendix

A.1 Questionnaire used for Round 1 of Citizen Engagement



TUMKUR SMART CITY

QUESTIONNAIRE FOR CITIZENS OF TUMKUR - 1

1 What are the main problems of Tumkur City ?

☐ Water Supply ☐ Solid Waste Collection
☐ Sewerage Facilities ☐ Drainage
☐ Public Transport ☐ Traffic Congestion
☐ Parking Provisions ☐ Power Supply
☐ Pedestrian Facilities

2 Are you satisfied with water supply in the city?

a. Interval of Supply ☐ Yes ☐ No
b. Water Tariff ☐ High ☐ Ok
c. Access to Water ☐ At house ☐ At Community Level
d. Your opinion on provision of water supply _____

3 Are you satisfied with solid waste collection in the city?

a. Are you satisfied with waste collection ? ☐ Yes ☐ No
b. Door-to-door collection ☐ Yes ☐ No
c. Where do you dispose solid waste ☐ MCT Bin ☐ Nearby Open Space
d. Whom do you pay for waste collection ☐ MCT ☐ Private/ Others

4 Are you satisfied with provision of sewerage facilities?

☐ Sewer Connection ☐ Septic Tank ☐ None of them

5 Are you satisfied with provision of drainage facilities?

a. Drainage in your area? ☐ Yes ☐ No
b. Type of drain ☐ Open drain ☐ Covered drain ☐ No facility

6 Are you satisfied with power suppy?

a. Power supply in your area? ☐ Yes ☐ No
b. Hours of power cuts ☐ No ☐ Less than 2 hrs ☐ More than 2 hrs

7 Are you satisfied with public transport facilities?

a. Public transport in your area? ☐ Yes ☐ No
b. Mode of transport to work/ edu ☐ Bus ☐ Car/ Pvt Vehicle ☐ Walk/ Cycle

8 Are you satisfied with parking facilities in the city?

a. Do you have a Vehicle (if Yes) ☐ Car ☐ Bike ☐ Cycle ☐ None
b. parking facility in your area? ☐ Yes ☐ No ☐ Not Relavant
c. Parking facility at work place ☐ Planned Area ☐ Road Side ☐ No Provision

9 Are you satisfied with Pedestrian & Walking Facilities?

a. Availability of walking areas/ walkways ☐ Yes ☐ No
b. Is walking safe in the city ? ☐ Yes ☐ No

10 Are you satisfied with Provision of Social Infrastructure in the city?

a. Adequate health facilities available ? ☐ Yes ☐ No
b. Adequate schools available ? ☐ Yes ☐ No
c. Adequate shopping area available ? ☐ Yes ☐ No
d. Adequate recreational area available ? ☐ Yes ☐ No
e. Availability of security facilities ? ☐ Yes ☐ No

11 What change/ improvement would you like to see in Tumkur city?

a. In the next 5 years _____
b. In the next 10 years _____
c. In long term _____

12 What in your opinion, Priority sectors to be tackled immediately in Tumkur city ? (give numbering)

☐ Water Supply ☐ Solid Waste Collection
☐ Sewerage Facilities ☐ Drainage
☐ Public Transport ☐ Traffic Congestion
☐ Parking Provisions ☐ Power Supply
☐ Pedestrian Facilities ☐ Others

Name: _____
Mobile Number: _____
Address: _____
_____

Note: Please send your detailed opinion to 'asiddiqui@lasaindia.com' OR 'ashishbatra86@gmail.com' & 'smartcitytumakuru@gmail.com'

TUMKUR SMART CITY
QUESTIONNAIRE FOR CITIZENS OF TUMKUR - 2

Tumkur is on the path of becoming a smart city. Every citizen will be a stakeholder in the bright future of the city. Your first contribution will be in the form of your good advice/ opinion on City's future vision, projects/ development priorities.

1	The Vision for Tumkur city will include the following:			
a	a slum free city with good opportunity to all communities/ people	☐ Yes	☐ No	☐ Can't say
b	a prospering industrial city free of poverty	☐ Yes	☐ No	☐ Can't say
c	a city with efficient public transportation	☐ Yes	☐ No	☐ Can't say
d	a city with effective and usable public parks & amenities	☐ Yes	☐ No	☐ Can't say
e	a city free of waste on roadside & public spaces	☐ Yes	☐ No	☐ Can't say
f	a city using its own clean sustainable energy	☐ Yes	☐ No	☐ Can't say
g	a city free of encroachments	☐ Yes	☐ No	☐ Can't say
h	safe & secure city for all having smart security	☐ Yes	☐ No	☐ Can't say
i	a city caring for its future generations in resource conservation incl water	☐ Yes	☐ No	☐ Can't say

2	PI choose from the following projects for RETROFITTING [use numbers 1-6 for priority]:	
a	in-situ slum development & resettlement	☐
b	networked sewerage & drainage systems of treatment & reuse	☐
c	dual water pipeline to all houses for reuse of treated water	☐
d	compulsorily instal solar water heaters & rainwater harvesting system/ mechanism at all roof tops	☐
e	compulsorily instal solar panels for solar power in all houses	☐
f	a city using its own clean sustainable energy	☐

3	PI choose from the following projects for REDEVELOPMENT [use numbers 1-5 for priority]:	
a	mixed use redevelopment of select pockets by land assembly	☐
b	clear encroachments & build kiosks as informal markets	☐
c	recreation/ lake redevelopment project	☐
d	save lake program/ shram dan campaign	☐
e	recreational facilities/ parks around the lake	☐

4	PI choose from the following list for GREEN FIELD PROJECTS [use numbers 1-3 for priority]:	
a	a new industrial park with mixed use integrated development	☐
b	knowledge city involving various educational institutions/ facilities	☐
c	eco-tourism/ recreational facilities around the forest/ hills	☐

5	PI choose from the following list for CITY-LEVEL PROJECTS [use numbers 1-7 for priority]:	
a	dual water pipeline at city level for reuse of treated water	☐
b	rainwater harvesting and groundwater recharge pits at city level	☐
c	solar lights on streets across the city	☐
d	solar panels across government and other big buildings	☐
e	pedestrian facilties & cycling lanes throughout the city	☐
f	city wide fibre optic network for high-speed connectivity	☐
g	city level survelience for safety, security & eradication of crime	☐

Name: _____

Mobile Number: _____

Address: _____

Note: Please send your detailed opinion to 'asiddiqui@lasaindia.com' OR 'ashishbatra86@gmail.com' & 'smartcitytumakuru@gmail.com'

A.2 Financial Break-up of the Selected Smart City Proposal for Tumakuru

Project Details		Cost Phasing					Sources of Funds				
Particulars	"Est. Cost (Rs. In Cts)"	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	"Grant - Smart City (Centre/ State)"	Central Schemes	PPP	ULB Own Sources, Ongoing Schemes and Other agencies	Details
AREA BASED DEVELOPMENT											
Mobility & Accessibility Improvement											
Transit Hub											
Integrated Bus Terminal Redevelopment	174	-	52	87	35	-	122	-	52	-	
Feeder System Development - EVs, Auto stands, public e-bike systems	12	-	4	8	-	-	12	-	-	-	
Junction Improvement & Redesign	24	-	18	5	-	-	22	2	-	-	
Non Motorized Transport											"Bus Terminal & MLCP - PPP mode with Pvt. Investment along with Capex Grant"
Footpaths & Walkways	81	-	24	40	16	-	78	3	-	-	
Bicycle Lanes	9	-	3	6	-	-	7	2	-	-	
Parking Facilities											
Multi Level Car Park	26	-	8	13	5	-	22	-	4	-	
On Street Parking Lots	1	-	1	-	-	-	0	-	-	0	
Signage & Legibility - "You Are Here" Maps, Signage & Street Markings	0	-	0	0	-	-	0	0	-	-	
Improvement in Quality of Life											
Public Utility Improvement											
Water Supply System - 24/7 Water Supply	259	-	78	129	52	-	14	47	-	198	"UIDSMT - Water & Sewerage AMRUT - Water, UGD & SWD PPP - Natural Gas SPV - to support through grants"
Under Ground Drainage System	223	-	67	111	45	-	12	36	-	175	
Storm Water Drains	62	-	19	31	12	-	3	59	-	-	
Piped Natural Gas Supply	90	-	14	31	18	27	-	-	90	-	
Swach Tumakuru											
Solid Waste Management	4	-	4	-	-	-	1	3	-	-	Swach Bharat
Public Toilets	1	-	0	0	-	-	0	1	-	-	
Lively Public Space											
Lake Front Development	89	-	27	44	9	9	44	-	-	44	
City Library	5	-	1	3	-	-	5	-	-	-	TUDA & TCC - Support for Lake Front Beautification
Underground Ducting	196	-	20	59	98	20	196	-	-	-	
Creation of Vending Zones	2	-	0	1	1	0	2	-	-	-	
Affordable Housing											
Slum rehabilitation	17	-	3	14	-	-	-	5	-	12	PMAY - Slum Housing and Credit Linked Subsidy for EWS
EWS -Insitu Development	55	-	6	14	28	8	-	28	-	28	
Health & Welfare							-	-		-	
Redevelopment of Multi-Speciality Hospital with Medical College	300	-	105	120	45	30	111	-	-	189	KHSDRP - Aporoved funds as a support to the project
Trauma Centre	2	-	1	1	-	-	2	-	-	-	
Ecology and Environment											
Water Shed Management											
Amanikere Lake Basin: Revival and Rejuvenation	78	-	8	20	39	12	77	2	-	-	Support by TCC
Rain Water Harvesting	5	-	2	4	-	-	3	-	-	3	
Renewable Energy											
Roof Top Solar Panels - Govt. Buildings & Industries	77	-	23	54	-	-	-	23	54	-	"Support by MNRE under Solar City IPDS Scheme & DELP"
Energy Efficient Lighting (Solar & LED)	15	-	4	10	-	-	12	3	-	-	
Urban Tree Management											
Afforestation - 75 mtrs buffer around the Amanikere lake bed & Parks	21	-	6	11	4	-	21	-	-	-	By SPV
Lined Tree Plantation - > 15mtrs width	3	-	1	2	1	-	3	-	-	-	
Green buffer zones (at public places)	0	-	0	-	-	-	-	0	-	-	
Business Innovation and Governance											
Business Incubation & Innovation Centres	56		17	28	11		17		39		"PPP - Expected to be under PPP SPV & TCC - Land as Grant Kiosks by SPV & TCC"
Smart Lounges an Information Kiosks	4	-	1	3	-	-	1	-	3	-	
Tumakuru One Centres	0	-	0	0	-	-	0	-	-	-	
TOTAL COST – ABD	1892	0	517	850	419	106	789	213	242	649	
PAN CITY											
Integrated City Control Room											
Smart Metering - Water Supply & Energy Distribution	53	-	-	16	37	-	13	-	40	-	
Intelligent Transport	5	-	4	1	-	-	1	-	3	-	
Intelligent Signalling	8	-	6	2	-	-	2	-	6	-	
Integrated Ticketing	16	-	13	3	-	-	16	-	-	-	"PPP is Expected in projects such as - Smart Metering for water & energy - Intelligent Street lighting with LED & Solar - Intelligent traffic & Transport - Smart Parking System SPV will set up the Control room and other components"
VMS	3	-	3	1	-	-	3	-	-	-	
Smart Parking	4	-	3	1	-	-	1	-	3	-	
CCTV Camera Surveillance System	7	-	1	6	-	-	3	4	-	-	
Emergency Response System	4	-	1	3	-	-	1	2	-	-	
Solid Waste Management System	0	-	0	0	-	-	0	-	-	-	
Street-lighting control system	201	-	40	100	60	-	151	-	50	-	
Environment Monitoring	1	-	0	1	-	-	1	-	-	-	
Centralised Control Room Set-up	33	-	-	10	23	-	18	15	-	-	
TOTAL COST - PAN CITY	335	0	72	143	121	0	212	21	102	0	
TOTAL COST OF PROPOSAL	**2227**	**0**	**588**	**99 3**	**540**	**106**	**1000**	**233**	**344**	**649**	

A.3 Tumakuru Project List

Table 5.1: List of Projects included in Tumakuru Smart Cities Missions.

S. No.	Sub-Component	Name of the Project	Approved DPR Amount (Rs. In Cr)	Work Order/Revised Cost (Rs in Cr)	Status of the Project
Smart City Grant Projects					
1	**Amanikere**	Dredging, Desilting, Lining, Restoration & Reclamation Works of Upstream Feeder Channels	0.39	0.389	Completed
2		Tree Plantation Under HT Line	0.55	0.407	Completed
3		Development of Nursery for afforestation and green buffer zones at Amanikere	0.50	0.496	Completed
4		Smart Lounges and Information Kiosks at Amanikere Lake	0.29	0.27	Completed
5		Clearance of 05 nalas of Amanikere	0.24	0.183	Completed
6		Smart Lounges – Furniture Part	0.14	0.11	Completed
7		Plantation around Amanikere	0.64	0.64	Completed
8		Selection of Agency for Operation and Maintenance of Smart Lounge at Amanikere-IT Part	0.95	0.89	Completed
9		Procurement and Installation of 5 no of outdoor Gym Equipment & children	0.51	0.32	Completed

		play equipments at different locations at Tumakuru			
10		Solar Paneling of Glass House	3.19	2.93	Completed
11		Construction of Boundary Wall and chain link Fencing with MS Gate and provision of cameras and Lighting around Amanikere Lake	4.65	3.47	Completed
12		Development of Parks – Island (02) tree plantation at Amanikere	0.20	0.197	Completed
13		Supply, installation and Erection of 65 mtr high mast flag pole at Amanikere	1.06	1.02	Completed
14		Science Theme Park in Amanikere Lake	0.39	0.39	Completed
15		Lake Bank Conservation & Erosion Protection (Amanikere Lake)	31.96	22.32	WorkINProgress
16		Construction of Tunnel Walking and Yoga Retreat at Amanikere	2.30	1.67	WorkINProgress
17		Amanikere Urban Hath	2.01	1.57	WorkINProgress
18		Supply and Installation of Lake Amenities along with allied works at Amanikere Tumakuru	1.06	0.86	WorkINProgress
19		Providing, Installation & Commissioning of Garden light poles	2.80	1.93	WorkINProgress

		along the bund of Amanikere, Tumakuru			
		AMANIKERE	**53.83**	**40.06**	
20		Contribution towards improvement of Water Supply Scheme (under AMRUT)	14.00	14	Completed
21		Intervention and Additional improvement for 24x7 Water Supply – Filling of Hemavathi water to Amanikere	18.61	18.61	Completed
22		Intervention and Additional improvement for 24x7 Water Supply – Filling of Hemavathi water to Amanikere – Other Components	12.39	12.39	WorkINProgress
23	**Water Supply**	Utilization of Impounded Water in Tumakuru Amanikere by Pumping Water to the Existing 50 MLD Capacity WTP in PN Palya – Other Components	11.77	25.55	WorkINProgress
24		Filing of Hemavathi water from Gangasandra tank to Maralur Tank+other Components	16.05	12.29	WorkINProgress
25		6KW Centralized Off-Grid Solar Power Plant with LED based Solar Street lighting system	0.40	0.316	Completed
26		Development works at Vidyanagar Pump	0.50	0.276	WorkINProgress

		House			
		WATER SUPPLY	**73.72**	**83.43**	
27		Intelligent Transport System	4.63	4.69	Completed
28		Smart Road Package – 3A (Ashoka Road and DC Road)	21.19	18	Completed
29		Development of FM Cariappa Road as Smart Road	7.90	3.63	Completed
30		Plantations on Medians	1.00	0.849	Completed
31		Smart Road Package – 1 (4 Roads – MG, JC, Horpet and Vivekananda Roads)	27.57	22.7	WorkINProgress
32	**Road Infrastructure**	Smart Road Package-2 (6 roads – Mandipet Main Raod, Mandipet 1st and 2nd Main Roads, North Bus Stand Road (Gubbi Veeranna Kalamandir Road), South Bus Stand Road (KSRTC Depot Road), Bhagwan Mahaveer Jain Road, FMG Cariappa Road)	36.88	29.53	WorkINProgress
33		Smart Road Package - 3B (Chammundawasheri, Dr. Radha Krishna, Belgumba Road)	49.00	44.45	WorkINProgress
34		Smart Road Package - 3C (BH Road – SS Circle to Gubbi Gate)	47.72	41.5	WorkINProgress
35		Rejuvenation and Upgradation of Ring Road	68.40	52.47	WorkINProgress

36		Shoulder Improvement for Other than Smart Roads + Road Improvements in ABD area with Under Ground Ducting and Resurfacing	96.00	85.61	WorkINProgress
37		Redevelopment of Ring Road – Phase 2	45.80	36.4	WorkINProgress
38		Shifting of BESCOM HT line and other infrastructure in CSD-1	0.00	0.394	WorkINProgress
39		Junction Improvements at DC Office Circle in Tumakuru	1.45	1.45	Started
40		Development of SS Circle (Ward 19), Tumakuru	0.752	0.596	Started
41		Junction Improvement to Kanaka Circle in Tumakuru	1.42	1.24	Pending
		ROAD INFRASTRUCTURE	**409.71**	**343.51**	
42	**Signage**	Signage & Legibility – Digital Display Boards (at 3 locations)	0.77	0.486	Completed
43		Providing Printing, Framing, Installation of wayfinding signage, "You are Here" signage Board in Tumakuru	0.74	0.53	WorkINProgress
		SIGNAGE	**1.51**	**1.02**	
44	**Parks**	Development of Parks – Jayanagar	0.63	0.55	Completed
45		Development of Parks at TCC premises	0.18	0.176	Completed
46		Development of Parks	0.20	0.195	Completed

		– IB PWD Park			
47		Development of Parks – Amarjyothi Nagar	0.56	0.49	Completed
48		Development of Parks – Kuvempu Nagar (Ward 21)	0.39	0.34	Completed
49		Smart Park- Tumakuru University Park- (Civil)	0.62	0.617	Completed
50		Development of Women Theme Part at Uparahalli	0.94	0.68	Completed
51		Development of Parks – SS Puram (Ward 25)	0.33	0.29	Completed
52		Development of Parks – Septhagiri Nagar	0.18	0.178	Completed
53		Development of Parks – Sapthagiri Extension	0.64	0.52	Completed
54		Development of Parks – Gokul Extension	0.58	0.45	Completed
55		Development of Parks – Siddarameshwa Extension Parks	0.20	0.199	Completed
56		Development of Parks – Mahalakshmi Layout	0.52	0.42	Completed
57		Package-6, Development of park in Bharathi Nagar (ward 22), and Sanjeevani Nagar, Kyathasandra (Ward no 33)	0.96	0.77	Completed
58		Development of Kumtiah Park in IDSMT Layout & Unni Krishnan Park at Sadashiva Nagar	1.47	1.2	Completed
59		Development of Madguvana park, Shivakumara Swamiji	1.47	1.23	Completed

		park and Devarayapatna park in Tumakuru			
60		Development of Parks – Adarsh Nagar (Ward 20)	0.91	0.74	Completed
61		Package 5 – Development of Park in Municipal Layout Sy No. 60/1 (Ward 25) and Banjara Bhavana in Saraswathipuram 2nd Stage (Ward 28) Tumakuru	1.172	0.96	WorkINProgress
62		Development of Parks at Batvadi (Ward 27), Pragathi Badavane & Yadava Nagar Ward No 29 in Tumakuru	1.50	1.22	WorkINProgress
63		Package 7 – Selection of System Integrator for Installation, commissioning and operation of Smart Infrastructure at selected parks in Tumakuru – IT components	3.16	3.23	WorkINProgress
64		Package 8 – Development of Nethaji Park Ward No 21 and other parks in Tumakuru	1.71	1.451	WorkINProgress
65		Package 4 – Development of GSB Park in ward 11, Gangasandra and Development of park in ward no 27, batwadi Sy no 45/2, Gangotri Nagar Main	1.357	1.11	WorkINProgress

		Road, Near Warrier Bakery, Tumakuru			
66		Development of park near Panchamukhi Extension Anthrasanahalli bypass (Ward 2) and Development of Azad Nagar Park in Ashoka Nagar (Ward 26)	1.51	1.51	Started
67		Development of Park – Sapthagiri Park	0.16	0.16	Pending
68		Development of Park – Nrupathunga Extension	0.199	0.199	Pending
69		Development of Fitness Theme Park at Kasaba (Ward 3)	0.78	0.65	Pending
70		Development of Park – Sanjeevini Park	0.15	0.15	Pending
		PARKS	**22.46**	**19.69**	
71	**Auto-Stands**	Intermediate Para transit Stands (Auto Stands) 2 No's	0.05	0.38	Completed
72		Intermediate Para Transit Stands – Phase 2	0.04	0.04	Completed
73		Development of Auto Stands – Phase 3	0.11	0.08	Completed
		AUTO-STANDS	**0.20**	**0.50**	
74	**NCC**	Construction of Toilet Block at NCC Campus	0.14	0.103	Completed
75		Construction of Skill Development Center at NCC Cadets and Firing Simulator for NCC Building -IT Part	0.42	0.437	Completed
		NCC	**0.56**	**0.54**	
76	**Educational**	Installation of	0.01	0.008	Completed

	Infrastructure	Sanitary Napkin Dispenser & Incinerator (at Empress High School/PU College)			
77		Selection of Agency for Establishment of Smart Classrooms at different Govt Schools/Colleges at Tumakuru	0.64	0.7	Completed
78		Establishment and Operation of Teacher Resource Center and students resource center in Tumakuru City	0.23	0.16	Completed
79		Providing Toilet Block at PU College	0.13	0.101	Completed
80		Pedestrian Environment Improvement & Public Place Making at Government PU College	2.40	1.87	Completed
81		50 KW-offGrid Solar PhotoVoltaic (SPV) System at Govt PU College	0.73	0.658	Completed
82		Sports facility at PU College	0.45	0.345	Completed
83		Additional Classrooms Block at PU College	0.99	0.857	Completed
84		Gym equipments procurement for SFC at Govt PU	0.56	0.42	Completed
85		Furniture for additional classroom to Govt PU College	0.06	0.05	Completed
86		Construction of additional classroom	0.88	0.77	Completed

		– New building at Govt PU college			
87		Development of Banyan Tree Boulevard	0.98	0.88	Completed
88		Digital Library Solution	1.63	1.71	Completed
89		Selection of Agency for establishment of digital classrooms, ICT lab and language labs	2.35	2.25	Completed
90		Construction of additional classrooms on existing old building	2.49	2.39	WorkINProgress
91		CC Road +Entrance gate at PU College	1.34	1.14	WorkINProgress
92		Construction of Toilet Block at Govt PU College Premises	0.69	0.57	WorkINProgress
93		Construction of Compound Wall in PU College	1.80	1.34	WorkINProgress
94		Development of Sports Arena at PU College	4.81	4.07	WorkINProgress
95		Procurement and Installation of Furniture for PU College Including Additional Classroom, Tumakuru	1.00	0.594	WorkINProgress
96		Skill On Wheels	0.41	0.32	WorkINProgress
97		City Library + Business Incubation & Innovation Center	29.94	30.19	WorkINProgress
98		Construction of Multi-dimensional Auditorium with	12.99	11.84	WorkINProgress

		Library and Class Rooms at Empress Govt High School/PU College			
		Educational Infrastructure	**67.51**	**63.23**	
99	**Parking**	Smart Parking at MG Road Conservancies-Civil Part	0.45	0.33	Completed
100		Smart Parking at MG Road Conservancies-IT Part	0.15	0.13	Completed
101		Development of two-wheeler parking at FMC Road Conservancy – On Street Parking Lots	0.48	0.41	Completed
102		Development of parking at 7 conservancies at SS Puram roads in Tumakuru	1.62	1.3	Completed
		PARKING	**2.70**	**2.17**	
103	**Smart Poles**	Supply and installation of Smart Poles at different places in Tumakuru	**1.20**	**1.03**	Completed
104	**Sports**	Construction of Sports Complex at MG Stadium	**49.97**	**52.3**	WorkINProgress
105	**Sanitation**	Supply of Uniforms for Tumakuru City Corporation Pourakarmikas	0.11	0.052	Completed
106		Construction of Smart e-Toilets	0.21	0.175	Completed
107		Public Toilets – Phase 2	0.93	0.85	Completed
108		Solid Waste Management (IEC)	0.18	0.14	Completed
109		Replacement of street lights into LED street	0.14	0.11	Completed

		lights in Solid Waste Management unit at Ajjgondanahalli, Tumakuru			
110		Installation of 2 nos Borewells and pumps in Solid Waste Management unit at Ajjagondanahalli Tumakuru	0.15	0.11	Completed
111		Supply of tractor mounted Broom sprayer with boom and accessories besides mist blower to TCC at Tumakuru	0.21	0.21	Completed
112		Installation of CCTV in Solid Waste Management unit at Ajjagondanahalli Tumakuru	0.15	0.14	Completed
113		Construction of Administrative Office at Solid Waste Management unit at Ajjagondanahalli Tumakuru	0.10	0.12	Completed
114		Construction of Macadam Around the inner compound wall in Solid Waste Management unit at Ajjagondanahalli Tumakuru	0.09	0.08	Completed
115		Supply, installation of Litter bins, roller containers and sign board	0.37	0.32	Completed
116		Barbed wire fencing on existing compound wall in Solid Waste	0.15	0.14	WorkINProgress

		management unit at Ajjagondanahalli, Tumakuru			
117		Solid Waste Management – Construction of Landfill at Ajjagondanahalli Dumping Site	3.49	4.05	Pending
118		Solid Waste Management – Remediation of open dump and cycling of space at Ajjagondanahalli dumping site – Bio Mining	2.29	1.73	Pending
		SANITATION	**8.58**	**8.23**	
119	**Bus Infrastructure**	Repair Work of Private Bus Stand (Ward 14) at Tumakuru	0.26	0.21	Completed
120		Redevelopment of Siddaganga Bus Shelter	0.09	0.068	Completed
121		Development of Smart Bus Shelter – Phase I (5 locations)	0.44	0.38	Completed
122		Construction of 107 PIS boards at bus stands in Tumkuru	0.99	0.79	Completed
123		Redevelopment of Bus Shelters at various locations in Tumakuru	0.29	0.23	WorkINProgress
124		Integrated Bus Terminal Redevelopment	82.90	82.18	WorkINProgress
125		Construction of Bus Shelters at 15 locations in Tumakuru	1.86	1.59	Started

		BUS INFRASTRUCTURE	**86.83**	**85.448**	
126	**Affordable Housing**	Affordable Housing at Mariyamma Nagar	**13.52**	**12.33**	Completed
127	**TCC Infrastcucture**	Procurement of IT Hardware to Tumakuru City Corporation (TCC) for E-Office	**0.55**	**0.55**	Completed
128	**Health**	Procurement of Medical and Other Equipments for RT-PCR Lab at District Hospital for COVID-19 testing	0.86	0.8591	Completed
129		Supply, Installation of Furniture and Electrical Work of DiNC for PHC Tumakuru	0.16	0.13	Completed
130		Digital Nerve Center for Primary Health Centre in Tumakuru	2.27	2.27	Completed
131		Purchase of ALS Ambulance for New Trauma Center	0.54	0.54	Completed
132		Repair work required for 8 nos of buildings at PHC	0.86	0.77	WorkINProgress
133		Trauma Centre (Development and Improvement of Medical Facilities in city merged with Trauma Centre) + Other Components	56.00	55.93	WorkINProgress
		HEALTH	**60.69**	**60.50**	
134	**Vending Zones**	Upparahalli Flyover Under Space Development	0.43	0.38	Completed
135		Development of Street	0.443	0.33	WorkINProgress

		Vending Zones at Kothithopu road near SS Circle, Tumakuru, Phase 1			
136		Development of Street Vending Zones at Kothithopu road near SS Circle, Tumakuru, Phase II	0.83	0.64	Started
137		Construction of Vending Zones at Dhobi Ghat, Ashok Nagar, Tumakuru	1.679	1.34	Started
138		Construction of Vending Zones at Jaya Nagar Bus Stop, Shettihalli, Tumakuru	1.01	0.804	Started
139		Construction of Vending Zones at Mariyamma Nagar, Tumakuru	2.59	2.07	Started
		VENDING ZONES	**6.98**	**5.56**	
140	**Storm Water Drains**	Storm Water Drains	**5.00**	**5.00**	Pending
141		Repair Works of Anganwadi Centres in Tumakuru City Corporation limits, Tumakuru	0.84	0.84	Completed
142	**Anganwadi Centers**	Construction of Anganwadi centers in Tumakuru City Corporation limits, Tumakauru (Phase 1)	2.78	2.11	WorkINProgress
143		Development of Model Anganwadi Centres at Dibbur & Other locations in Tumakuru – Phase II	1.39	1.39	WorkINProgress
		ANGANWADI CENTERS	**5.01**	**4.34**	
144	**Rain Water**	Rain Water	**4.99**	**4.22**	WorkINProgress

	Harvesting and Afforestation	Harvesting and Afforestation			
145	**Energy Efficient Lighting**	Energy Efficient Lighting (LED Lighting for New Extensions)	7.95	6.9	WorkINProgress
146		Infrastructure correction in existing lighting system in Tumakuru	2.99	2.58	WorkINProgress
147		Creation of Lighting Infrastructure on the Identified dark spot in 25 wards coming under TCC jurisdiction in Tumakuru City	4.978	4.66	WorkINProgress
		Energy Efficient Lighting	**15.918**	**14.14**	
148	**ICMCC**	Interior works for Integrated City Management Command & Control Centre in Town Hall in Tumakuru	0.42	0.332	Completed
149		Appointment towards GIS Software with KUIDFC	0.60	0.6	Completed
150		Supply of UAV Systems (Drone Procurement)	0.19	0.25	Completed
151		Integrated City Management Command & Control Centre (ICMCC)	59.59	47.16	Completed
152		Locked House Monitoring System	0.25	0.22	Completed
153		ICMCC Phase 2	24.52	19.37	WorkINProgress
154		MSI (Centralized Data Center at KMDS)	30.00	12.2	WorkINProgress

155		Drone Survey	0.75	0.856	WorkINProgress
156		Construction of Building for ICMCC	13.61	11.36	WorkINProgress
		ICMCC	**129.93**	**92.35**	
Public Private Partnership (PPP) Projects					
157		Piped Natural Gas Supply	90.00	90.00	WorkINProgress
158		Street-lighting Control System	64.15	64.15	WorkINProgress
159		Public Bicycle Sharing	2.58	2.58	Pending
160		Multi utility Mall with Multi-level car parking	60.00	60.00	Pending
161		Roof top Solar Panels – Govt Buildings & Industries	54.00	54.00	Pending
162		Implementation and Maintenance of Floating Solar plant at Bugudanahalli water tank/reservoir in Tumakuru	49.00	49.00	Pending
164		Development of Smart Bus Shelter	3.70	3.70	Pending
CONVERGENCE PROJECTS					
165		Water Supply System – 24x7 Water Supply	259.00	259.00	WorkINProgress
166		Underground Drainage System	211.00	211.00	WorkINProgress
167		Ring Road -shifting of utilities	5.00	5.00	WorkINProgress
168		Cycle 4 Change in Tumakuru City	2.41	2.41	Started
169		Integrated Bus Terminal Redevelopment	74.00	74.00	WorkINProgress

Bibliography

Anthopoulos, L. G. (2015). Understanding the smart city domain: A literature review. *Trans- forming city governments for successful smart cities*, pages 9–21.

Brown, T. (2016). Sustainability as empty signifier: Its rise, fall, and radical potential. *Antipode*, 48(1):115–133.

Cocchia, A. (2014). Smart and digital city: A systematic literature review. *Smart city*, pages 13–43.

Directorate of Census operations, Karnataka (2011). *District Census Handbook: Tumkur, Series 30, Part XII-A*. Government of India.

Gazetteer Department, Government of Karnataka (2017). *Karnataka District Gazetteer: Tumakuru*. Bengaluru.

Goel, D. S. L. and Rajneesh, D. S. (2018). *Making of a Smart City*. Sapna Book House, Bengaluru.

Justice N K Patil Committee (2011). *Preservation of Lakes in City of Bangalore: Report of the Committee constituted by the High Court of Karnataka to examine the ground realities and prepare an Action Plan for preservation of lakes*. Bengaluru.

Kitchin, R. (2015). Making sense of smart cities: addressing present shortcomings. *Cambridge journal of regions, economy and society*, 8(1):131–136.

Meijer, A. and Bolívar, M. P. R. (2016). Governing the smart city: a review of the literature on smart urban governance. *international review of administrative sciences*, 82(2):392–408.

Ministry of Urban Development, Government of India (2015). *Smart City: Mission Statement and Guidelines*. New Delhi.

Shankavaram, H. (2016). The citizen: A fictional character in India's urban.

The High-Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services (2011). Report on Indian Urban Infrastructure and Services.

Tumakuru City Corporation, Government of Karnataka (2015). *Smart City Proposal: Tumakuru*. Bengaluru.

Glossary

A&OE	**:**	Administrative and office Expenditure.
ABD	**:**	Area-based Development.
AMRUT	**:**	Rajiv Awas Yojana.
AoA	**:**	Article of Association.
BEo	**:**	Block Education officer.
BESCoM	**:**	Bengaluru Electricity Supply Company.
BoD	**:**	Board of Directors.
CBD	**:**	Central Business Districts.
CC	**:**	City Corporation.
CEO	**:**	Chief Executive officer.
CITU	**:**	Centre of Indian Trade Unions.
CLAF	**:**	City-level Advisory Forum.
CMC	**:**	City Municipal Council.
DMA	**:**	Directorate of Municipal Administration.
DPR	**:**	Detailed Project Report.
EESL	**:**	Energy Efficiency Services Limited.
EPC	**:**	Engineering Procurement and Construction.
ETA	**:**	Expected Time of Arrival
GoI	**:**	Government of India
GoK	**:**	Government of Karnataka
HPSC	**:**	High Powered Steering Committee
ICMCC	**:**	Integrated City Management Control Center

ICT	**:**	Information and Communication Technologies.
IEC	**:**	Information and Education Communication.
JNNURM	**:**	Jawaharlal Nehru National Urban Renewal Mission.
KDP	**:**	Karnataka Development Programme is a high-level review Process wherein progress of key development programs is reviewed by the senior ministers and officials.
KEB	**:**	Karnataka Electricity Board.
KHSDRP	**:**	Karnataka Health System Development and Reform Project.
KSDB	**:**	Karnataka Slum Development Board.
KSPCB	**:**	Karnataka State Pollution Control Board.
KSRTC	**:**	Karnataka State Road Transport Corporation.
KUIDFC	**:**	Karnataka Urban Infrastructure Development and Finance Corporation.
KUWS&DB	**:**	Karnataka Water Supply and Drainage Board.
MD	**:**	Managing Director.
MLA	**:**	Member of Legislative Assembly.
MoA	**:**	Memorandum of Association.
MoHUA	**:**	Ministry of Housing and Urban Affairs.
MoU	**:**	Memorandum of Understanding.

MoUD	**:**	Ministry of Urban Development, Government of India
MP	**:**	Member of Parliament
O&M	**:**	Operation & Maintenance
OBC	**:**	Other Backward Classes
PIS	**:**	Public Information System
PMAY	**:**	Pradhan Mantri Awas Yojana
PMC	**:**	Project Management Consultant
Pourakarmika	**:**	Municipal Sanitation worker tasked with solid waste collection
PPP	**:**	Public Private Partnership
PSE	**:**	Public Sector Enterprise
RAY	**:**	Rajiv Awas Yojana
RTI	**:**	Right to Information
SBM	**:**	Swachh Bharat Mission
SC	**:**	Scheduled Castes
SCIRC	**:**	Smart City Implementation and Review Committee
SCM	**:**	Smart Cities Mission
SCP	**:**	Smart City Proposal
SCP/TSP	**:**	Scheduled Caste Plan/Tribal Sub-Plan
SNA	**:**	State Nodal Agency
SPV	**:**	Special Purpose Vehicle
ST	**:**	Scheduled Tribes

SWM	**:**	Solid Waste Management
TCC	**:**	Tumakuru City Corporation
TP	**:**	Tender Premium
TSCL	**:**	Tumakuru Smart City Limited
TUDA	**:**	Tumakuru Urban Development Authority
UDD	**:**	Urban Development Department
UGD	**:**	Underground Sewerage System
UIDSSMT	**:**	Urban Infrastructure Development Scheme for Small and Medium Towns
ULB	**:**	Urban Local Body
VGF	**:**	Viability Gap Funding
WIP	**:**	Work in Progress



Centre for Financial Accountability (CFA) engages and supports efforts to advance transparency and accountability in financial institutions. We use research, campaigns and trainings to help movements, organisations, activists, students and youth to engage in this fight, and we partake in campaigns that can shift policies and change public discourse on banking and economy.

We monitor the investments of national and international financial institutions, engage on policies that impact the banking sector and economy of the country, demystify the world of finance through workshops and short-term courses and help citizens make banks and government more transparent and accountable, for they use public money.

CFA
Centre for Financial Accountability