DEMYSTIFYING THE INDIAN SMART CITY

An empirical reading of The Smart Cities Mission*

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"The conceptualisation of Smart City... varies... depending on the level of development, willingness to change and reform, resources and aspirations of the city residents... there is no universally accepted definition of a Smart City.'

Government of India, 2015[1]

"I only want to stress on one thing...smart cities require smart people. They must be willing to reform, because it is going to be (a) PPP model, people has (sic) to participate, they have to pay for the user charges and they have to follow (a) certain amount of discipline. Then only (sic) you can make your city smart."

Venkaiah Naidu (Minister of Urban Development) June 2015[2]

INTRODUCTION

The newly elected federal Government of India (GoI) launched the Smart Cities Mission (SCM) in 2015, amidst much fanfare, with the stated purpose of improving the governance and infrastructural deficiencies that plague Indian cities. Missing, however, in the pageantry of the new programme was a cohesive understanding of a smart city. While the government documentation repeatedly implies infinite liberty for cities to self-define their understanding of 'smartness', the actions demonstrate that there is a larger idea of 'smartness' that the federal government seeks to implement. It is at this disjunction, between the rhetoric and practice of the Mission, that this paper finds its core research question – 'What constitutes a smart city in India?'

The paper argues that the Mission enhances processes of depoliticisation (Ferguson 1990) by creating ambiguity around the Mission and could obscure processes of accountability and justice. Furthermore, through a detailed reading of government documentation, the paper argues that the there is a profound chasm between the professed objectives of the Mission and the strategies enacted to achieve the same. Given the sheer vagueness of the Mission, the core of the paper focuses on providing an empirical reading of the Mission and delineates the following trends – 1) in terms of projects undertaken and finances utilised i) the Mission echoes, in significant measure, the ideas of earlier urban renewal Missions and contrary to global ICT-based ideas of smart cities, the Indian smart city is one that focuses primarily on physical infrastructure with a significant focus on projects that could generate revenue and utilise finances from the debt market. 1.ii). The idea of the smart city in India is iterative and, over a period of time, there has been a swing from city proposals with ambitious budgets and market-oriented sources of funding towards more cautious city proposals with smaller budgets that utilise more traditional sources of funding like government grants. 2) in terms of the governance structure and processes of participation i). While claiming to enhance processes of decentralisation that bolster local governance, the Mission might destabilise democratic processes, aggravate inequality and lead to path dependencies that will negatively impact the lives of citizens. 2.ii) the Mission projects itself as a deeply participatory programme that values and functions off the inputs of a majority of its citizenry, however the recorded citizen participation reveals a shallow, and a largely elitist, attempt at engaging the general public.

This paper is divided into five sections, the following section will provide the conceptual framework, followed by a genealogy of the Smart Cities Mission in India, the next section will provide an overview of the methodology utilised toward gathering and organising data. The penultimate section analyses the data presented within the Mission and defines the Indian smart city and is followed by the conclusion.

CONCEPTUAL FRAMEWORK

The Mission is part of a larger rubric of urban development programmes that seek to address the challenges Indian cities face as these over-populated urban centres are ill-equipped to handle, both, their daily functioning of and their long-term planning for urban India. The SCM sought to remedy 100 cities in the country by promoting, '*...cities that require core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and the application of 'Smart'*

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[1] Ministry of Urban Development. 2015 A. Smart Cities Mission Guidelines. New Delhi: Government of India.
[2] June 25, 2015 Launch of the 3 Missions, New Delhi. <https://www.youtube.com/watch?v=GxJRiuaom2o>

Solutions'. (Ministry of Urban Development 2015 A, p. 5) The Mission employs a normative rationalisation of corporate governance. Thus, the legitimacy of the Mission is sought not only from the endgame (i.e. a city that functions efficiently) but also through the process (i.e. a city that functions efficiently and includes everyone). The Federal Government stated that it would invest a minimum of INR 48,000 crore (INR 480 billion) towards this and would use a series of competitive processes to ensure the cities chosen were truly deserving of the funds they were allocated.

The Mission shies away from the use of critical discourse and the narrative bubbles effervescently with notions of decentralisation, citizen participation, inclusion, economic growth, future-prepared cities and efficiency. The Mission offers significant clarity on its intended consequences; however, when asked what would constitute a 'smart solution' or a 'smart city', the Mission offers this as a response, '*The answer is, there is no universally accepted definition of a Smart City. It means different things to different people. The conceptualisation of Smart City, therefore, varies…depending on the level of development, willingness to change and reform and aspirations of the city residents…there is no one way to defining a Smart City.' (p. 5)* This presents a unique contradiction – a government mandated mission with a defined set of outcomes and a wilful ambiguity surrounding its definition and, by extension, accountability. The contradiction lead to the paper's research question, 'What constitutes a smart city in India?'

Given the embeddedness of ambiguity, this paper approaches the subject from an empirical standpoint and utilises government documents to identify the core characteristics of the Mission. The paper finds that in the present global crises of rising populism and in the post-truth arena of political engagement, it is imperative to base the understanding and analysis of development projects in framework that is relatively transparent and encourages accountability. This paper recognises that the empirical study is based solely on government documentation which could be limiting to the study, and is discussed in the methodology. The paper further argues that a process of depoliticisation is unfurling under the aegis of the Smart Cities Mission and portends negative consequences, including an implosion of the Mission where its means and ends are incompatible and incapable of coexisting. The Smart Cities Mission stands at a proposed budget of over INR 200000 Crore (INR 2000 billion) for 99 cities with a combined population of almost 100 million people and could have a significant impact on the lives of Indians.[3] The magnitude of the project and its potential to affect the lives of citizens as well as the governance and financial structures that regulate municipal life necessitate that the concept of the smart city in India be illuminated.

Towards answering this seemingly innocuous question, the paper attempts to reconcile the stated aims of the Mission with the, relatively more, concrete actions proposed in the Smart Cities Mission proposals at the city level. The objective of this process was to look beyond the claims of the lack of a uniform definition in India and reverse engineer a definition of what constitutes a smart city. Currently, 110 Indian cities have been provided with an opportunity to present proposals that describe their vision to upgrade their city to one that is 'smart' and 99 cities have been chosen through multiple selection rounds. This paper analyses the empirical data of the winning smart city proposals to answer the research question, with a strong focus on four aspects of the Mission for each city – 1) the projects selected 2) the modalities of finance utilised for the Mission, 3) the governance structure of the Mission and 4) citizen participation.

The Mission is currently underway and, according to a Parliamentary Committee Report, between its inauguration in 2015 and to date, under two percent of funds have been utilised. (Ministry of Housing and Urban Affairs 2018, p. 18)[4] The MoHUA has officially contested this report, stating that the Committee's calculation is based on utilisation certificates of monies spent, and these certificates are often created only two years after the implementation of a project. While these statements may be true, the Ministry has not provided any further information on the finances of the Mission (allocated or ultised) and this paper will continue to use the 2018 report from the Parliamentary standing committee. At the very least, one can argue that it is too early to have definite reading of the Mission from grounded fieldwork. However, over

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[3] CPR calculations based on documents detailed in Table 4
[4] For further details Saldana, A (2018) *Smart cities: Rs. 2 Lakh Cr Budget; 0.09% of central funds spent.* Factchecker website
<http://factchecker.in/smart-cities-rs-2-lakh-cr-budget-0-09-of-central-funds-spent>

the three years the Federal, State and Local governments have provided thousands of pages of data that were analysed through an iterative process that recorded and categorised information pertinent to the four research sub-categories (See table 4). These documents were critical to delineate an empirical reading of the Indian smart city, in conjunction with a discourse analysis of the Smart City policy documents. Through this process the paper demonstrates that 1) the projects undertaken in the Mission draw heavily from the legacy of the previous urban redevelopment programme in India and contrary to global ICT-based ideas of smart cities, the Indian smart city is one that focuses primarily on physical infrastructure with a significant focus on projects that could generate revenue and utilise finances from the debt market. Furthermore, the idea of the smart city in India is iterative and, over a period of time, there has been a swing from city proposals with ambitious budgets and market-oriented sources of funding towards more cautious city proposals with smaller budgets that utilise more traditional sources of funding like government grants, 2) the Mission promoted a recentralisation of power to state governments and could disempower local governments and contribute towards processes of path dependency, and the citizen participation was inadequate and the Mission seemed to skew access to privileged sections of urban populations.

These results contradict much of the envisioned utopia of the Indian Smart City that seeks to be unique, decentralised and participatory. The Smart Cities Mission states that, '*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 light house to other aspiring cities.*' These provide us with legends that illuminate the objectives of the Mission – sustainability, inclusive development and finally a compact prototype that can be replicated across cities. This paper describes the Mission's current structure and raises doubts regarding its ability achieve these goals. Finally, the paper concludes that similar global practices of focusing urban development on sectors that potentially provide economic gains and an increase in the quantum of private investment could lead to path dependencies that undermine the very objectives of the Mission. (Cugurullo 2018) (Cardullo, P., & Kitchin, R. 2018) (Wiig 2017) (Grossi, G., & Pianezzi, D. 2017) (Wiig, A., & Wyly, E. 2016) (Shelton, T., Zook, M., & Wiig, A. 2015) (Dierwechter 2013)

GENEALOGY AND LITERATURE REVIEW

This paper will trace the recent evolution of the Smart Cities Mission in India and contextualise it within the larger discourse on the Mission and the concept of smart cities globally. The SCM is part of a larger project of urban regeneration and can trace its lineage to the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) is a federal investment programme that was launched in 2005 by the previous coalition government – the United Progressive Alliance (UPA) upgrading urban infrastructure including water supply and sanitation, solid waste management, roads and transportation and integrated development of informal settlements. (KC Sivaramakrishnan 2011) (Khan 2017) In 2014, the Bharatiya Janata Party (BJP) formed a coalition government (the National Democratic Alliance) and sought to create a new set of urban development missions. These included the Smart Cities Mission, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and the Heritage City Development and Augmentation Yojana (HRIDAY). SCM focused on innovative changes in urban development, AMRUT on basic services, and HRIDAY on cultural and heritage aspects of urban regeneration. (Ministry of Urban Development 2015 A) (Ministry of Urban Development 2015 B) (Ministry of Urban Development 2015 C)

The current SCM was first mentioned as greenfield developments in the BJP election manifesto in 2014 which promised the construction of '*100 new cities; enabled with the latest in technology and infrastructure - adhering to concepts like sustainability, walk to work etc, and focused on specialized domains*'. (Bharatiya Janata Party 2014, p. 18) In May 2014 the BJP formed its coalition government and by July 2014, they shifted from greenfield to, smart cities as '*...satellite towns of larger cities and by modernizing the existing mid-sized cities*'. (Ministry of Urban Development 2015 A) (Sarbeswar Praharaj 2018) In 2015 the smart cities draft was circulated with a larger focus on retrofitting projects in existing cities and moved further away from both greenfield and satellite cities. (Bharatiya Janata Party 2014) (Hoelscher 2016) (Sarbeswar Praharaj 2018) (Bhattacharya 2015)

The GoI utilised a competitive structure and selected 98 cities that could be a part of the Mission.[5] These cities were not *de facto* provided with funding and were expected to submit proposals to compete for a position in a hierarchy of smart cities. While the government would provide uniform funding to all cities, irrespective of their rank in the Mission, a higher ranking offered cities symbolic prestige and could positively impact a city's ability to access market-based sources of capital.[6]

Table 1: Comparing 3 schemes

No	Mission	Federal Funding INR Cr	State/ULB Funding INR Cr	Private Investment	Duration	Cities
1..	SCM	48000	48000	Allowed	2015-2019	100
2.	AMRUT	50000	4000	Allowed	2015-2019	500
3.	HRIDAY	500	NA	Allowed	2014-2018	12
4.	Total					509[7]

Source: Calculations made by CPR based on public government documentation on the three missions[8]

Figure 1: Demonstrating the various rounds & no. of cities chosen

- June 25, 2015 · Smart Cities Mission launched
- January 28, 2016 · Round I - 20 cities selected
- May 24, 2016 · Fast Track - 13 cities selected
- September 20, 2016 · Round II - 27 cities selected
- June 24, 2017 · Round III - 30 cities selected
- January 19, 2018 · Round IV - 9 cities selected

The only definite fiscal advantage to a higher ranking was earlier access to government capital. The number of cities competing in the Mission increased from 98 to 110 between 2015 and 2017 and 99 cities were chosen over 5 rounds of selection (See Figure 1)[9]

In terms of funding, each city would get INR 500 crore (INR 5 billion) from the central government. This would be provided over a period of 5 years and would need to be matched by the state government or the local urban body (ULB). Through the Mission each city could potentially access a corpus of INR 1000 crore (INR 10 billion), over a period of 5 years. (Ministry of Urban Development n.d.) The central government has budgeted for INR 48,000 crore (INR 480 billion) towards funding the Mission. The onus of raising funds at the state or local level has bolstered the need to create competitive cities that could raise funds for their own development projects. (ibid) (Ministry of Urban Development 2015 A) These funds are channelled through a Special Purpose Vehicle (SPV) that is created, in each city, to manage the smart city projects. The Smart Cities Mission necessitates that each city create an SPV under the Companies Act (2013), a limited company, that will manage the implementation of the projects under the Mission. According to the Mission guidelines, the majority holdings of the SPV must be retained by the government bodies[10] and the remainder of up to 40% of shareholdings could be held by private investors. (Ministry of Urban Development 2015 A)

The Mission outlines three basic geographic modalities of development– area-based development (ABD), pan-city and greenfield developments. (ibid) The Mission Guidelines view area-based development as select portions of the city that are enhanced as a more realistic means of urban development and has encouraged cities to concentrate their finances on

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[5] This was later updated to 110 cities.
[6] This is one of the new ways people were supposed to access funding as we shall see later
[7] The 3 missions have cities in common, the ones not included in AMRUT include – Vishakhapatnam, Bhagalpur, Dharamshala, Nagpur, Imphal, Namchi, New Town Kolkata Amaravati (Andhra Pradesh)
[8] See Footnote 9
[9] The initial 98 cities excluded several state capitals from competing in the Mission and increase to 110 cities allowed for the state capitals to enter the competition.
[10] This is a combination of Federal, State and Local government

this methodology of urban renewal. The Guidelines state that 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 light house to other aspiring cities.*' (Ministry of Urban Development undated)   Pan-city developments are smart solutions that could enhance the entire city. Greenfield developments refer to extensions to an existing city that are built from scratch and require heavy capital investment. The significance of the economic investment has potentially reduced the enthusiasm for the third modality. (Hoelscher 2016)

The concept of smart cities gained traction in India as it concomitantly gains currency in the global discourse of urban development and regeneration. The last 10 years have seen a profusion in the literature around Smart Cities globally and more recently in India. The global debates have focused on defining the notion of a smart city, the varying criteria that constitute a smart city, the corporate interface with city governance and the role of internet technology and consultants in designing and administrating smart cities. (Khan, S., Taraporevala, P., and Zerah, M.H. Forthcoming) (Sarbeswar Praharaj 2018) (Bhattacharya 2015) (Shapiro 2006) (Batty 2013) (Hollands 2008) (Ravi, Shamika, et al. 2016) The literature addresses the role of citizen participation in decision making, the modalities of accessing and using mega-data, and the larger normative questions surrounding data privacy. (Kitchin, 2014) (Kitchin 2015) (A. Greenfield 2013) (Townsend 2013)The global debate has concluded that there is no one definition of a smart city, however there are patterns of greater use of data-based technologies towards creating efficiencies in urban management, along with the role of community in decision making. (Sadoway, D., & Shekhar, S. 2014) (Vanolo 2016) In the Indian context, the academic writing on smart cities has focused on larger theoretical readings of case studies, whether they are part of the 100 smart cities or of 'spaces of exception' that parade as smart cities. (Datta, 2015a) (Datta 2015b) There has also been extensive reportage and policy documents on the smart cities mission in India, however they do not present a reading of a large sample of the cities. More recent papers have addressed sectoral components of the Mission like the genealogy and the evolution of the smart city policy in India, (Hoelscher 2016) the role of citizens participation and the potential effects of the Mission on the economic health of the city or particular development sectors like transportation and housing among others. (Gupta 2017) (Kumar 2017) (Russell M. Smith 2018) (Sarbeswar Praharaj 2018) (Housing and Land Rights Network 2017) (Housing and Land Rights Network 2018)These grounded studies have provided a range of opinions on the Mission which valorise or criticise the Mission deeply. Within this labyrinth there lies one stark gap – an overarching empirical reading of the Mission to articulate as definitively, as is possible, what constitutes an Indian Smart City. This paper endeavours to bridge this chasm.

METHODOLOGY
Introduction
The paper seeks to provide an empirical reading of the Mission, based solely on documentation provided by the Indian state. The paper utilised a confluence of publicly available documents from the Smart Cities Mission website (See Table 4), in association with information from the 2011 Indian census and the official government press notifications. This approach generated a database that facilitated the extrapolation of a definition of an Indian Smart City from the patterns that emerged within the Mission, despite its reluctance to commit to one. The research has created multiple datasets that provide a well-rounded understanding of the Indian Smart Cities Mission (see Table 2). The datasets provide 1) an overview of the 99 smart cities; 2) delineate the governance structure of 35 cities from the top 60 smart cities; 3) Provide information regarding the modalities of citizen participation employed in the top 60 smart cities; 4) provides detailed information of all the projects in the top 60 cities which includes over 2800 individual projects and identifies the development sector, geospatial location and budget; and 5) provide detailed financial details for the projects in the top 60 cities, however due to gaps in the information in the government documentation the sources of funding for individual projects is only available in 700 of the 2851 projects.

As was mentioned earlier, the primary question this paper seeks to answer is - What constitutes a Smart City in India? Towards answering this question, this report seeks to unpack the following components of the Mission

1.   What kinds of projects are proposed under the SCM?
2.   How are the projects financed under the SCM?

3.   What forms of governance will the Smart City Mission promote?

4.   What forms of citizen participation did the SCM utilise?

Table 2: No of Cities Researched

No.	Category of Research	No. Of cities Studied	Notes
1	Overview of Cities	99	The dataset has a detailed explanation of overarching city-based information
2	Governance Structure of SPVs	60/35[11]	At the point of the study 59 cities had created SPVs and the team studied the SPV documents that were available in English
3	Citizen Participation	60	The team studied all 60 cities, although not all cities provided data
4	Projects under the Mission	60	The team studied the top 60 cities
5	Financial Details	99/60/17[12]	The team studied the top 60 cities, there are severe gaps in data on the sources of finance at the project level

Source: CPR Calculations based on government documentation[13]

Limitations of Data

The principal source of data were the winning proposals that were submitted by cities, and thus the project and financial data in this paper is based on proposed actions and budgets rather than more traditional sources of information like government monies disbursed and utilised. When the project began in 2017, data on implementation was sparing and the information from within the Ministry of Urban and Housing Affairs in 2018 has demonstrated that under two percent of funds had been utilised[14] and reinforced the relevance of studying the proposed plans rather than the on-ground activity to get a cohesive macro picture of the Mission. The paper has verified the census data presented in the proposals, however all other data regarding the projects, budgets, forms of participation utilised, and the governance structure have been taken at face value from government documents. This paper uses the data from the proposals and government documentation as a starting point to build a cohesive database and does not endorse these statements as facts or view the data as neutral. (Davies, T.G., & Ashraf Bawa, Z. 2012) The data collected, collated, coded and presented can support future research on the Mission by bringing in a modicum of transparency into the Mission.

The team attempted to cross reference the municipal budgets to the finances of the smart city budget to understand the extent of the municipal budget to that of the funding provided under the Smart Cities Mission. However, as cities use different methodologies of calculating and accounting for their budgets, the team decided to pause this component of the study. It would be deeply interesting to understand this perspective in the future as it can relay the quantum of finances the city usually handles and because it could help map out the shift in power between the municipality and the SPV.

Process

The Mission has been positioned as a competition where only deserving cities have been awarded the title of 'smartness' and the success of a city depended entirely on the proposal submitted. The proposal was a set of ideas that delineated the core objectives, resources and action plan for the city. The first component included an extensive annexure that each city had to complete which included demographic data, information on past implementation of development projects, and

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[11] The team sought out the SPV data of the top 60 smart cities, however the details were provided in various languages and the team selected 35 cities that had presented the data in English as a sample.

[12] The project had access to the overarching city-level financial data of 99 cities and selected a sample of the top 60 cities to study the project-level finances. However, the project-level financial details were only available for 17 cities.

[13] See Table 4

[14] See footnote 5

finally the projects and processes the city envisioned as 'smart' solutions. The cities were also expected to submit more comprehensive annexures that detailed the ideas into more credible datasets including the physical plans, project details, budgetary information, citizen engagement details etc. The Federal government analysed these proposals over three years and selected 99 cities over 5 rounds (See Table 3). The federal government returned city-proposals for improvement on multiple occasions and selected cities only after they fulfilled the criterial deemed relevant by the federal government. This process of using a competition and providing cities with feedback on their proposals is crucial towards answering the core question – what constitutes a smart city in India?

Table 3: Rounds of SCM and No. of Cities selected

No.	Round	Date	No. of Cities Selected
1	Round I	January 2016	20
2	Fast Track	May 2016	13
3	Round II	September 2016	27
4	Round III	June 2017	30
5	Round IV	January 2018	9
6	Total		99

The government has not made clear the criteria upon which the cities were selected, however the process of accepting (and by extension rejecting) smart city proposals over a period of time demonstrates that there were clearly proposals that were deemed 'smart' and those that were seen as lacking in credibility. The data from the successful proposals was collated and cleaned, by a team of three people over six months at the Centre for Policy Research (New Delhi), with the assumption that these were the cities with the most coherent formulation of 'smartness' in the eyes of the Indian state. The team used an iterative process to establish the quantum of data available in the public documents and assess the ease with which these documents could be converted into clean, usable excel sheets. The team realised that while the online documents provided a wealth of information, the quality of the PDFs were often low, and it was often impossible to export the available tables and relevant data into coherent databases. Thus, the team had to resort to physically reproducing the data into excel sheets and spent a significant portion of time cross-verifying the datasets across documents. The team identified the four sub-categories of research and created the following datasets (Table 4).

Overview of top 99 cities

This data set collated information from cities that were incorporated into the Mission. The successful city proposals and annexures, census data and information from all the state government websites (See Documents A, B, D, E & F from Table 4) allowed the researchers to construct a coherent overview of the cities that were given the title of 'smart cities'. The dataset provided information on the original ranking of the city in the first round of selection and the final rank awarded to the city when it was officially accepted into the Mission. The data set also provides information on the geographic, demographic and political information on the city. This was sourced from a variety of government data sources. The overview discusses the size and sources of the budget for the city. The dataset also reveals the quantum of funding allocated for ABD and pan-city developments. The data was relatively easier to collate and is thus available for all 99 cities.

Projects and Finances of top 60 cities

While the sub-questions around projects and finance are separate in the paper, during the process of creating the database it became clear that these two features of the study were inextricably linked. The data on projects and finance constitute the mainstay of the paper and demonstrate the development sectors that the Mission values and invests in. The dataset, constructed from the proposals and annexures of 60 cities, provided the researchers titles of 2851 projects. The project data also details the geospatial characteristic of the project (I.e. whether the project was part of the ABD or pan-city development) and the budget for the individual project. The proposals and annexures (See Documents B in Table 4) were categorised projects under headings which were utilised as the first source of information on the overarching development sectors that the cities were focusing on. The team organised over 100 such sectors into 10 sectors. The development categories offered by the proposals were not consistent and often used different words or phrases that were

synonyms, or could be clubbed together. One negative impact of reducing over 100 disparate categories into 10, is the creation of a very large 'miscellaneous' category which is now the 6th highest category (See Graph 9). This category primarily consists of projects that include a confluence of categories (eg. Sanitation, roads and housing), and cannot be combined under one of the other 9 categories.

Table 4: Sources of Information

No	Research Area		Sources of Data					
	Category	Sub-category	DOC A[15]	DOC B[16]	DOC C[17]	DOC D[18]	DOC E[19]	DOC F[20]
1	City-level information	Original rank in Competition	Y					
		Final rank		Y				
		Name of State		Y				
		Political Party in power[21]						Y[22]
		Demographic Data					Y	
		Size of Area-Based Development		Y				
2	Governance Structure of SPV	List of all political Rep				Y		Y[23]
		List of all bureaucrats				Y		Y[24]
		Other appointees				Y		
3	Participation	Modalities & population reached through social media		Y				
		Feedback from people through social media		Y				
		modalities & population reached through non-digital		Y				
		feedback from people through non-digital		Y				
4	Projects	All names of projects in city		Y	Y			
		Identify project sector		Y	Y			Y[25]
		Identify if the project has an IT component		Y	Y			Y[26]
		Project geospatial details		Y	Y			
		Budget for each project		Y	Y			
		Sources of finance for project		Y				
5	Finances	City level budget		Y	Y			
		City-level source of finance		Y	Y			
		City-level Budget for ABD		Y	Y			
		City-level budget for Pan-City		Y	Y			
		Project level budget		Y	Y			
		Project level source of funding		Y				

[15] Documents A - List of Winning Cities
<http://smartcities.gov.in/upload/city_challenge/58dfa4cb13064582318f5d6d8eRankingofSmartCities(1).pdf>
[16] Documents B - Proposals and Annexures <http://smartcities.gov.in/content/city_challenge.php>
[17] Documents C - Project Data < http://smartcities.gov.in/content/innerpage/city-wise-projects-under-smart-cities-mission.php>
[18] Documents D - SPV 'Certificates of Incorporation' <http://smartcities.gov.in/content/spvdatanew.php>
[19] Documents E- Census Data 2011 < http://www.censusindia.gov.in >
[20] Documents F - Miscellaneous Documents (see footnotes 24-27)
[21] When the city was successfully inducted into the Mission
[22] State government websites
[23] Municipal Acts of relevant cities
[24] Municipal Acts of relevant cities
[25] Data sourced from Doc B&C and analysed by CPR
[26] Data sourced from Doc B&C and analysed by CPR

A small portion of the digital copies of the proposals were either corrupt or did not have project-level data detailed out in them. In order to access these details, the team then used the 'project level data' (see Document C in Table 4) which detailed the projects and budgets for projects. A fraction of the cities provided detailed data on the sources of funding for the projects in their city. These 17 cities with detailed data were the most robust proposals, however the vast majority of the project proposals, annexures and allied project details (See Documents B & C from Table 4) did not provide information on the sources of data for individual projects. This has proven to be quite problematic when analysing the feasibility of projects, and one would urge future researchers to complete the existing dataset by seeking this information.

Table 5: Example of Project and Data

City Information				Project data												
Rank	City	State	Round	ABD/ PAN	Amt. INR Cr	Category	Sub-Category	Project Title	IT	SCM Funding	ULB Funding	Other Government Funding	PPP/ CSR	Loan	Bond	User Charges
Source: CPR Smart Cities Database, 2018																

From the data at hand, the team studied each project to determine whether or not it had a component related to internet technology or mechanisation. The smart cities Mission underscores the fact that IT is not the primary focus of the Mission, and only through a reading of all the projects in the top 60 cities is it possible to determine whether this is a possibility. The team studied the 2851 projects, individually, in order to categorise them as ones with or without an IT component. It must be noted that the data accumulated and cleaned was from government data sources and none of the claims made in the proposals was cross-verified with fieldwork. All the data from the Mission has been consolidated and the hope is that the clarity of the structure will enable further critique and act as a base for deeper studies on the ground.

Governance structure of 35 SPVs

As has been discussed above, the Smart Cities Mission necessitates that each city create a limited company under the Companies Act, 2013 to administer the implementation of all the projects, route finances to relevant departments and make decisions with regard to the Mission. This company is known as a Special Purpose Vehicle (SPV) and is intended to have both state and non-state shareholders. While the SCM guidelines state that the majority of the shareholdings must rest with government authorities, they allow for up to 40% of all SPVs to be held by non-public stakeholders. The ownership by the government is a combination of state and municipal government. The objective of the SPV is to utilise corporate methods of functioning and improve the efficiency of implementing government projects. This move towards corporate governance is not new to the landscape of Indian urban-government, however earlier SPVs focused on a particular sector (like transportation)[27] while the SCM SPV will control the implementation of a multitude of projects and multiple development sectors in a city.

Table 6: Example of governance database

No	City	Bureaucrat (Number)			Politician (Number)			Other (Number)	
		National	State	ULB	National	State	ULB	Private Sector	Unknown
Source: CPR Smart Cities Database, 2018									

This integrated control to governance is traditionally undertaken by municipal corporations as they have the mandate to decentralise power and make decisions on urban renewal and growth. Municipalities normally have a mix of elected political representatives, nominated bureaucrats and hired staff. Thus, for the purposes of this study there was an attempt to identify the assortment of people holding office in SPVs. The team studied the top 60 cities and their SPVS, and at the time of the study only 59 SPVs had been created. The team went on to choose the 35 cities as a sample of the SPVs. The team studied the 'certificates of incorporation' (See Document D in Table 4) and identified the various stakeholders as

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[27] For example, the transportation SPVs in Pune (Pune Mahanagar Parivahan Mahamandal Ltd) and New Delhi (Delhi Integrated Multi-Modal Transit System)

politically elected representatives, nominated bureaucrats and independent people hired by the SPV. The first two categories were further subdivided as party to Federal, State and Municipal structures to provide a more definite idea of the concentration of power within the SPV. This break up was helpful in determining whether the creation of the SPV enhanced its stated objective of bringing greater decentralisation. The team studied the municipal acts of the relevant cities, as well as relevant documentation on Indian bureaucracy to clearly categorise members of the SPV (See Documents F in Table 4).

Citizen Participation in top 60 cities

One of the primary means of legitimising the Mission is the rhetoric of citizen participation. The Mission emphasised the need for crowd sourcing the primary problem areas of cities from their principal users – citizens. Towards this paper, the team studied the outreach and feedback mechanisms and processes to understand the depth of citizen engagement employed by cities available in the successful proposals. The citizens were expected to choose not only the area for the ABD but also the core grievances in the city that required attention. Towards this end, the city was expected to undertake both physical and digital means to engage with citizens and record their individual feedback. The study approached the data by dividing the information into Media-based and Physical outreach and calculating the individual responses recorded in the proposals (See Table 7). While the team studied the top 60 proposals, as the following section of analysis will demonstrate, only a portion of these cities could provide cohesive data on outreach and feedback on and from the Smart Cities Mission at the city-level due to severe under-documentation within the proposals (see section V.2.ii).

Table 7: Example of a recording of citizen engagement

Methodology/ Population	Media-Based					Physical		
	Website	Twitter	Facebook	Cell Phone	TV & radio	Surveys	Meetings	Competitions
Outreach								
Feedback								
Source: CPR Smart Cities Database, 2018								

ANALYSIS

This paper finds that the Smart Cities Mission in India is an urban regeneration programme that draws heavily from JNNURM, with a strong focus on physical infrastructure. In terms of its finances, the Mission encourages Indian cities to move towards market-based mechanisms of accessing funding. The 'smart city' need not provide detailed information while formulating financial capacities of the city as cities are expected to state the quantum of finance required for the city and the sources of funding. Smart Cities in India are not required to provide this data for each project in the city. The trends in the finances across rounds indicates a move towards more conservative budgets and greater reliance on public sources of funding. The Smart Cities mission re-centralises power with state governments and shifts power away from local democratic institutions. Furthermore, with the potential private investment in the city-level SCM governing body further skews power away from the local municipal body and weakens democratic processes. Finally, this study finds that the processes of citizen engagement are not recorded precisely in the proposals and indicate that despite the extensive rhetoric of public participation, most of the proposals do not provide a strong argument to justify the claims of citizen participation. The following subsections detail out the data to support the above reading of the Indian Smart Cities Mission.

Projects and Finance

The Smart Cities Mission is an urban regeneration programme and as we discussed in our methodology the paper has access to varying number of cities for data (see table 2).[28] The Smart Cities Mission currently stands at INR 203314.6 Crore (over INR 2000 Billion) and consists of 99 cities across 28 states and 7 union territories in the country.[29] The Mission was structured as a competition and cities were chosen over 2 years (2016-2018) based on the proposals they submitted (See Figure 1 and Table 3). Over the course of the selection rounds, certain patterns have become stable. This section will study the 99 smart cities and offer patterns on the quantum, modality and geo-spatial allocation of finance of the Mission.

Reduction in city-budgets over rounds

The range of budgets for the top 99 cities vary between a little over INR 500 Crore (Kavarati, Lakshwadeep) to almost INR 6000 Crore (Chandigarh, Chandigarh). Within this scale, cities primarily focused on budgets under INR 2000 crore (57 cities), followed by those between INR 2000 – 4000 Crore (38 cities) and only a handful opted for budgets above INR 4000 crore (see Graph 1).

Graph 1: No. of Cities According to budget (All 99 cities)
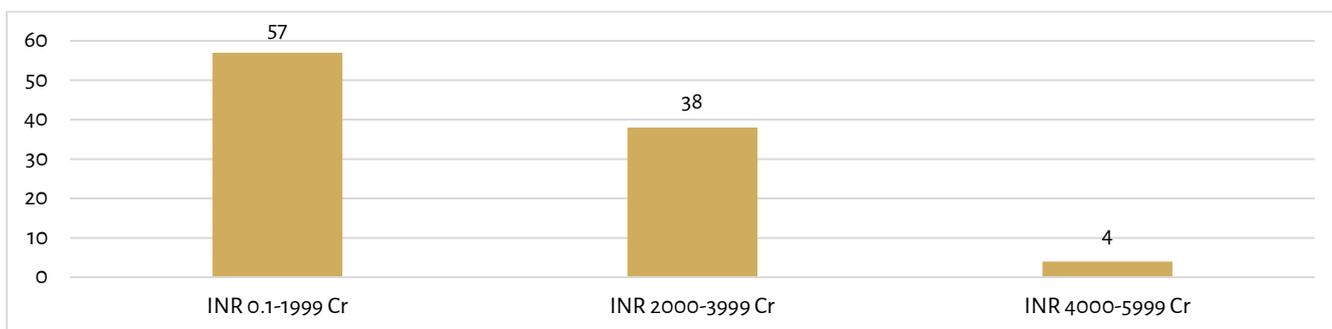
Source: CPR Smart Cities Database, 2018

On average, cities had a budget of INR 2051 Crore for the 99 cities. A reading of the budgets across the 5 rounds demonstrates that a greater emphasis was placed on reducing the size of the budgets across the rounds. The first round in 2016 had the most diverse set of budgets, after this round the budgets became more conservative with a stronger focus on smaller budgets (See Graph 2 & 3). The average budget for each city dropped with each round.

Graph 2: Size of budgets chosen by round (all 99 cities)
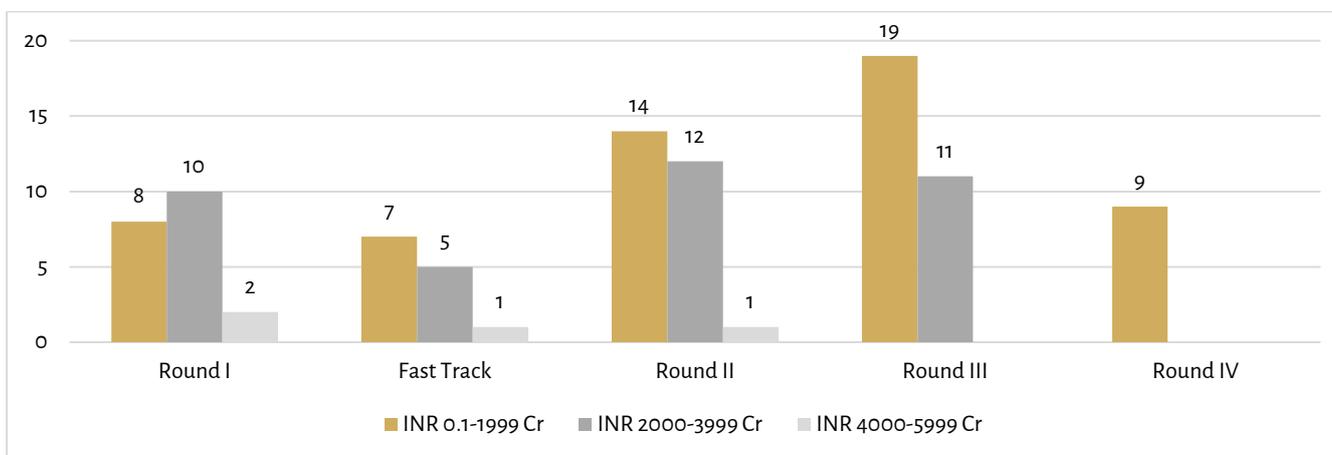
Source: CPR Smart Cities Database, 2018

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[28] 99 cities for overview, 35 cities for SPV, 60 cities for participation, 60 cities for projects and finance
[29] Meghalaya is the one state that does not have a city in the Mission

Graph 3: Average budget by round in INR Crore (all 99 cities)
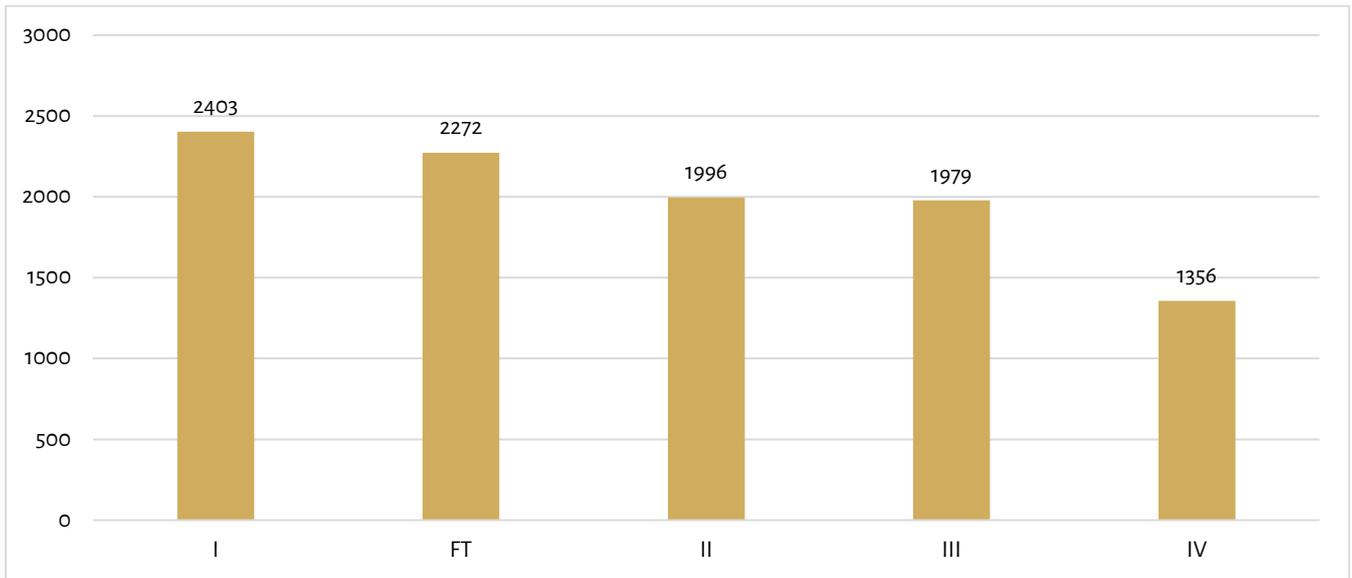
Source: CPR Smart Cities Database, 2018

### *Reduction in reliance on market-based sources of finance over rounds*

The sources of finance for the SCM are varied and the study finds that the bulk (almost 70%) is sourced from public sources. This includes the smart cities mission funding, State government or ULB funding and other public schemes like AMRUT, JNNURM, Swachh Bharat Abhiyan etc which is known as Convergence (See Graph 4). The next largest contributor is the private sector through PPP initiatives and CSR (approximately 25%), followed by loans (under 5%) and user charges (under 1%). While JNNURM had also stipulated that user charges and greater private investment were possible sources of funding, a majority of the funding was still based on government grants. (Khan 2017) The following graph (See Graph 5) demonstrates the sources of finance for all 99 cities by round, as an average. The act of averaging the finances by number of cities per round[30] demonstrates a clear pattern of not only depending heavily on public funds for financing the mission, but a movement away from private sources of capital, both PPP and loans. While there may be several reasons for this shift, one clear statement could be input from the federal government. One reading of this shift was a recognition from the federal government that implementing high-value urban development projects and finding private investment for these projects, especially in smaller cities, might prove challenging and encouraged cities to develop more feasible budgets and funding sources.

This is important at two levels, as it demonstrates that while the Mission exemplifies the notions of corporate governance and market-based financing of smart cities, in reality this constitutes only a fraction of the sources of funding. Furthermore, the reliance on market-based funding wanes as the Mission proceeds. (See graphs 4 & 5).

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[30] Dividing the absolute value of finances per source by number of cities per round – 20 for round I, 13 for fast track, etc
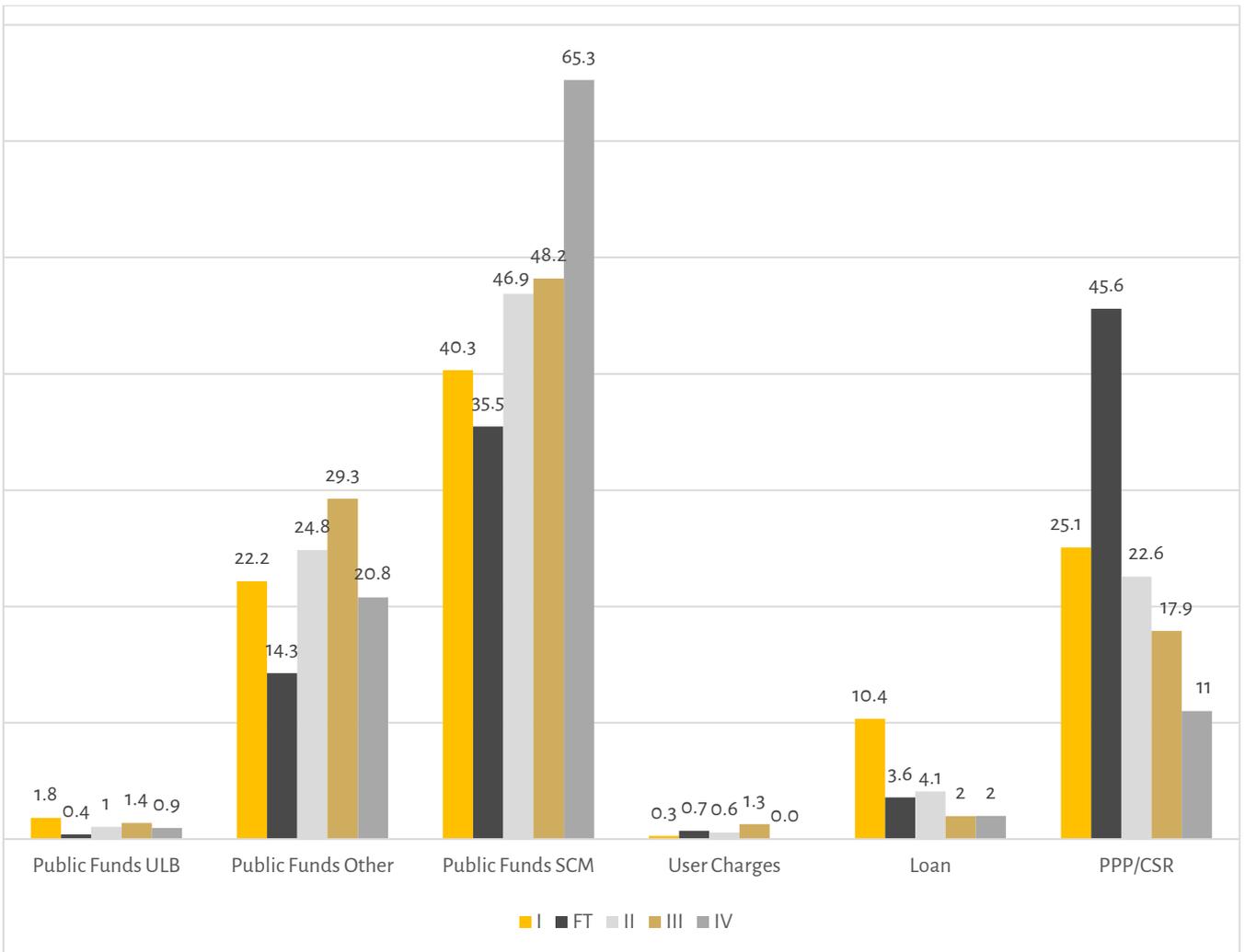
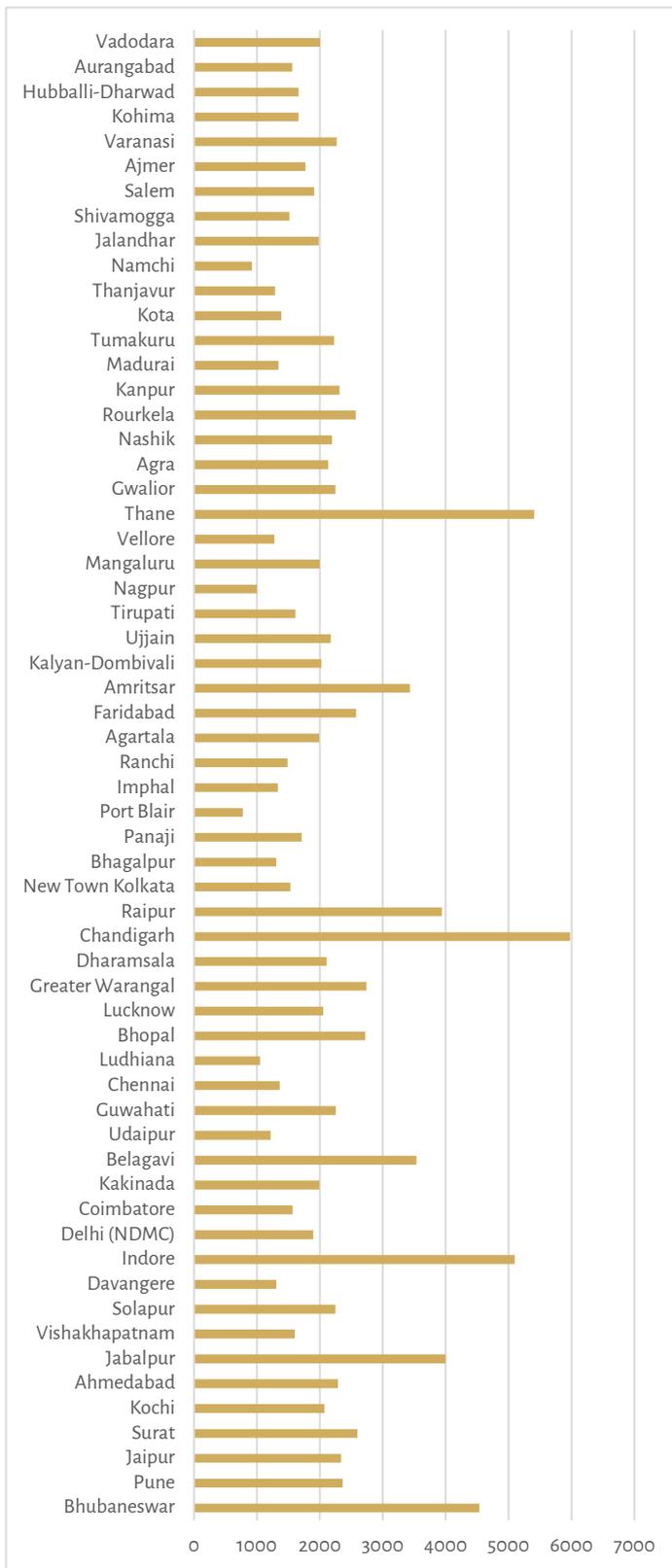*Graph 4: Sources of Funding for SCM cities as a percentage (all 99 cities)*
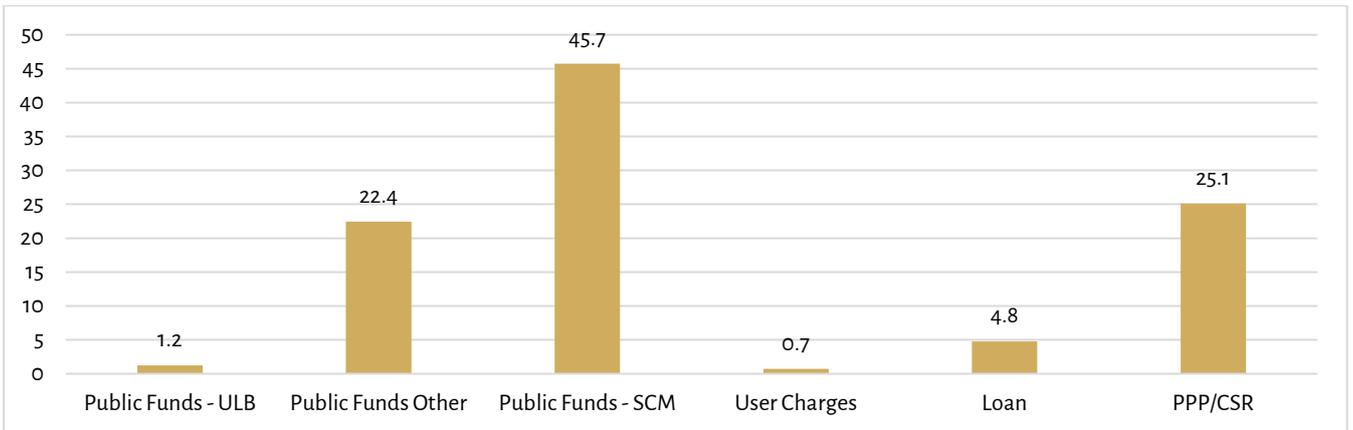
Source: CPR Smart Cities Database, 2018

Graph 5: Average Source of funding, categorised by round in percentage (all 99 cities)

Source: CPR Smart Cities Database, 2018

Graph 6: Budgets of Smart Cities with Average budget, in INR Crore (all 99 cities)

Source: CPR Smart Cities Database, 2018

Use market-based finances but source of funding for projects are not be clear

As we discussed earlier, the first two rounds (Round I and Fast track) had some of the most ambitious budgets, both in terms of quantum of funding and the proportion dependent on private sources of funding (See Graph 5). This report studied the financing patterns of the cities and found that while the top 60 cities have reported all their projects (over 2800) and the costs of most projects are stated in the project proposals (94%),[31] only 17 cities[32] can identify the sources of finance at the level of each project. This constitutes only 17%[33] of the budget of the top 60 cities. Of these cities, 15 cities are from round II and have relatively low budgets (approx. between INR 1000 crore and INR 2500 Crore). It is interesting to note that there may have been greater leniency with cities in the first two rounds (Round I and Fast Track) and proposals that had larger budgets and with less clarity on the sources of the budgets were accepted. The following graph (see Graph 6) demonstrates the budgets of all the cities in the five rounds, along with the average budget of all these cities. It is interesting to note that the cities with the largest budgets (Bhubaneshawar, Jaipur, Indore, Raipur, Raipur, Faridabad and Thane) do not have detailed information about the source of funding for their projects. In fact, Bhubaneshwar, which topped the SCM list, did not give detailed information of the exact projects when they submitted their project proposal and has one of the largest budgets in the Mission. Thus, a smart city clearly does not need to have detailed information about its funding sources for proposed projects.

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[31] This report finds that approximately 171 projects of the total 2851 do not have values attributed to the cost of the project

[32] Delhi (NDMC), Bhagalpur, Ranchi, Ujjain, Nagpur, Vellore, Rourkela, Kanpur, Madurai, Tumakuru, Kota, Thanjavur, Namchi, Shivamogga, Salem, Ajmer and Hubballi-Dharwad

[33] The 17 cities have a combined budget of INR 22216 Cr out of a larger budget of INR 131508 crore of the top 60 cities

### Area Based Development and increased inequality

The Smart Cities Mission focused heavily on 'light house' or 'Area Based Development' where the Mission incentivised cities to focus the bulk of their funding on a small portion of the city. The underlying assumption is that this practical approach to development will allow cities the chance to complete the development projects in time and inspire other areas within the city to follow suit. This study finds that there is a correlation between the size of the city and the percentage allotted for area-based development in the city – the smaller the city, the larger the percentage of the city is allotted for area-based development (See Graph 8). Over the rounds, the Mission is selecting cities with smaller overall areas (see Graph 7). Nonetheless, this process of ABD could also result in severe inequalities. The report finds that on average the ABD is a little over 7 percent of the area of the 99 cities while the funding for ABD projects is over 80% of the city SCM budget. This means that, on average, over 90% of the city area is privy to under 20% of the SCM budget for the city. A further argument is made, that several of the ABDs in the chosen cities constitute parts of the city that are already better serviced thus potentially exacerbating existing inequalities in cities. (Hoelscher 2016)

Graph 7: Size of Area in Smart Cities (No. of Cities), by round (all 99 cities)
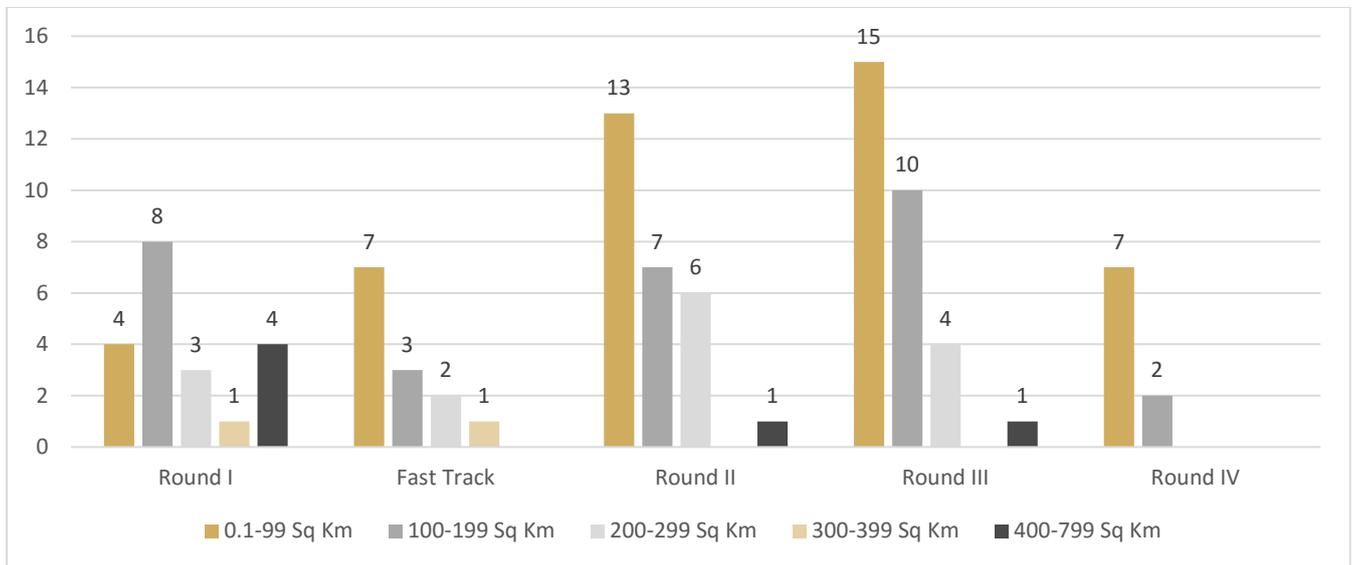
Source: CPR Smart Cities Database, 2018

Graph 8: Size of city (no of cities) and average ABD in category (as a percentage)
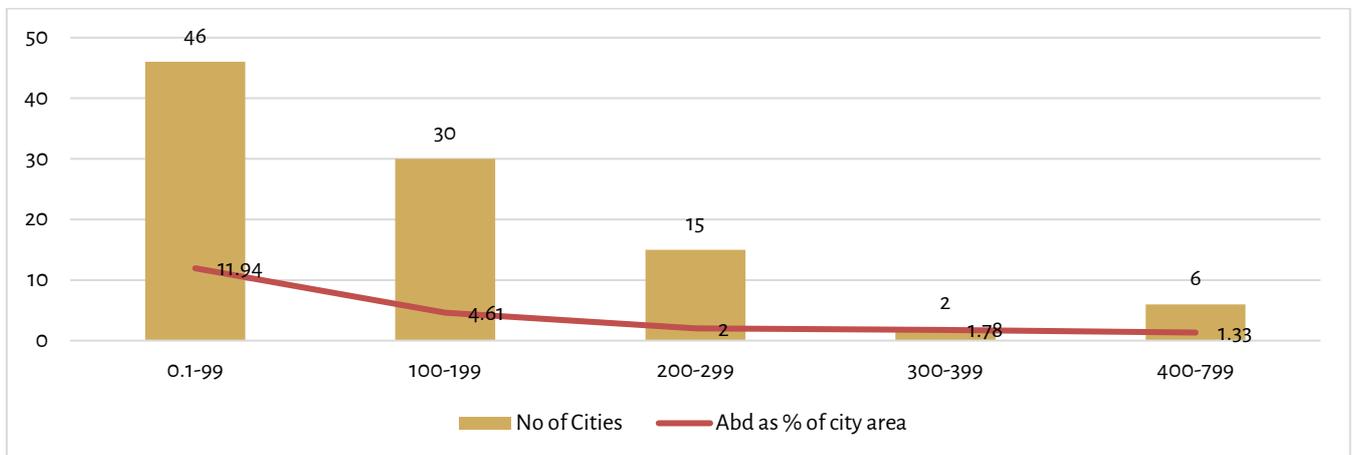
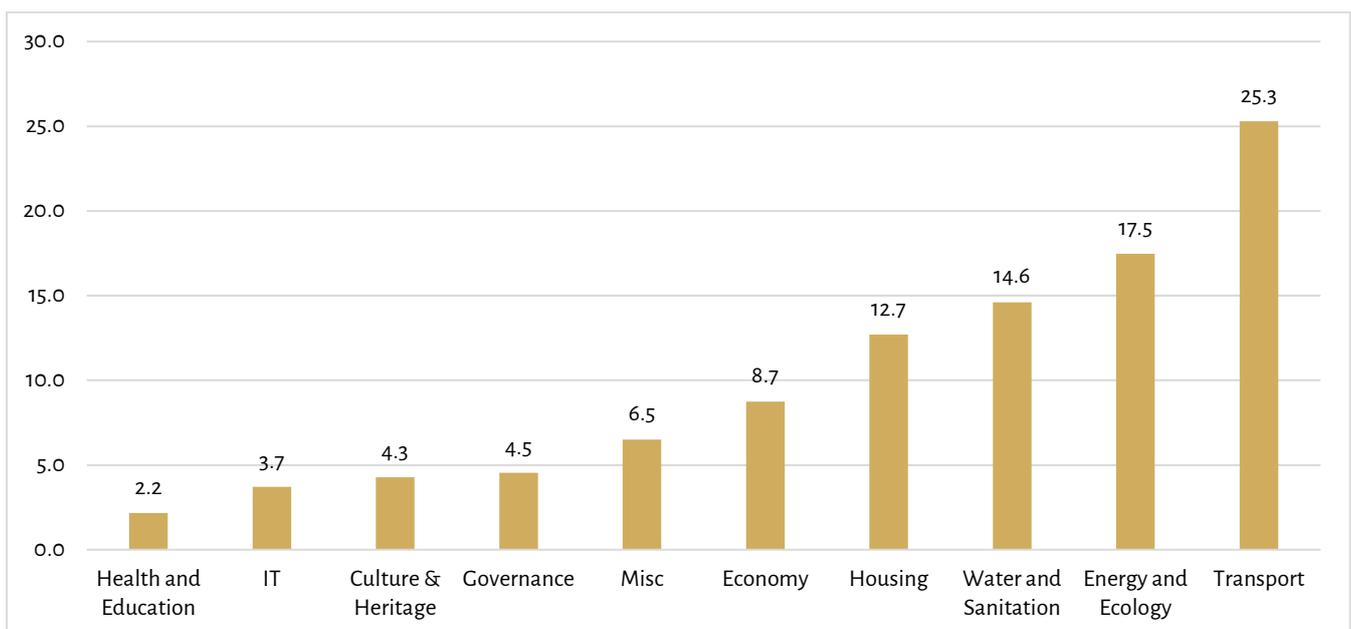
Source: CPR Smart Cities Database, 2018

Convergence and the problem of cannibalistic budgets

The final statement on the smart cities mission's funding pattern is the concept of convergence. This paper has demonstrated that public sources of finance are the primary source of funding for the Mission. (Ministry of Urban Development 2015 A, p. 17) This paper has briefly discussed the notion of 'convergence' or the process through which funds from other Missions (See section V.1.ii) are utilised to fund SCM projects. The SCM guidelines highly recommend this modality of accessing finance as the goals of various Missions often overlap. This notion of fiscal prudence was intriguing; however, it raises certain questions. A study of the budgets of other Missions demonstrates that they too assume SCM funding as a component of their financial plan and it creates ambiguity regarding which Mission is the primary source of funding and which Mission is the one that derives funding from the other, within the schema of convergence. In cruder terms, in the absence of clarity on the flow of finances between these Missions convergence seems to denigrate into a cannibalistic form of funding urban infrastructure. The second question the process of convergence raises is the issue of inequality. As the earlier section demonstrated, the SCM is liable to create inequality in cities as a bulk of the funding is spent on a small portion of the city. If SCM is utilising processes of convergence to fund these ABD projects, then the effects of the potential inequality caused by the SCM spill out of the boundaries of one Mission and into all the other Missions that the SCM is relying on for funds. In order to answer these questions, further details on the sources of funding for each project are required, and as we have mentioned earlier this is not yet publicly available.

Development sectors similar to older programmes but with a stronger focus on economic returns

Like the work of Shelton et. al. (2015) this report states that there is nothing revolutionary in the kinds of development projects that the smart city attempts to create. Urban planners, engineers and politicians have used scientific methods, rationality and 'grand solutions' to solve the problems of urban existence for over a 100 years (ibid) and have had varying degrees of success when attempting to do so. Shelton states that what is disturbing is not the smart city in itself but 'the fact that similar discourses are uncritically recycled…is troubling' (p.15). In the Indian context, this report states that while the forms of development projects have not changed significantly, the modality of implementing and funding these projects has shifted (See Section V.1). A reading of the projects proposed under the smart cities Mission, in the top 60 cities, provides development sectors that are common with JNNURM, with a few additions.

Graph 9: Budgets of Development Sectors as a percentage of whole budget (Top 60 cities)

Source: CPR Smart Cities Database, 2018

The top 5 development categories - Transportation, Energy and Ecology, Water and Sanitation, Housing and Economy — constitute almost 80% of the SCM budget and are similar to project headings undertaken under JNNURM. The categories IT, Governance, Culture and Heritage, and Health and Education are the newer additions within the ambit of smart cities in India and they constitute a little under 15% of the SCM funding. The rest of the projects are categorised as 'miscellaneous' and refer to projects that have components that are under Water and Sanitation, renewable, housing and IT and can thus not be placed under one category.

One of the primary takeaways is that several of the projects seek to build the financial corpus of the city, whether these are parking facilities under transportation, real estate development under housing, commercial real estate for economic growth, implementing meters to measure the usage of water and a host of other projects. While there are projects that focus primarily on the social welfare of the city, the SCM's focus on (speculative) economic growth is a movement away from earlier projects. For the purposes of this study, we will describe the top 5 development sectors which constitute 78.9% of the SCM budget for the top 60 cities. For a more comprehensive overview of the projects in the top 60 cities, refer to Annexure I.

a. Transportation

This sector has a proposed budget of INR 32,600 Crore (INR 326 billion), almost a quarter of the entire budget for the top 60 cites. In keeping with the Smart City guidelines, the sector is primarily focused on the ABD as 71.6% of transportation projects are area-based projects. The IT component in this sector is higher than the average of the Mission at almost 30%, due to the focus on traffic systems and information systems in public transit. The bulk of transportation projects are focused on roads and parking lots (almost 40%), while only 20% of the budget is focused on public transportation, only 2% of the entire transportation budget is focused on buses themselves.[34] The rest of public transit focuses on BRT systems, hard infrastructure and communication systems. The Mission focuses 13% of the budget on non-motorised transportation, the rest is largely devoted to supporting motorised transportation systems. Given that one of the purposes of the Smart Cities Mission is enhancing sustainability, this particular project is better suited for owners of private transportation. The materiality of the Mission seems to be in conflict with the goal of sustainability, and increasingly focused on economic returns.

b. Energy and Ecology

This sector has a budget of INR 22535.8 Crore and the bulk of these projects are area based at 77.5% In Energy and Ecology, the majority of funding is available for energy-based projects including renewable energy, gas, metering and distribution and constitutes 23.3% of the budget. The IT component of this project comes primarily from the metering, smart poles and allied projects. in terms of ecology, the project focuses on ecological restoration of land and water bodies. 'Beautification' is often considered a component of these projects and it is important to note that a few cities have budgeted slum demolitions under this initiative.

c. Water and Sanitation

The budget of this sector is INR 18861.1 Crore and is also largely area-based at 71.1%. The bulk of the projects focus on hard infrastructure, like sewerage, solid waste management and allied projects. IT involvement in this sector primarily consists of meters and other forms mechanisation of labour at 26%.

d. Housing

The housing sector is the third largest development category with a budget of INR 16381.2 crore. The very nature of this sector is area-based and thus Housing is 99.4% ABD, with only a smattering of projects with an IT component (0.2%). It is important to note that almost half the projects are devoted to real-estate development, while the other half is a motley of mixed and lower income housing. The rental market, hostels and night shelters play a very small role in this vision of

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[34] INR 661 Crore for 18 projects

smartness. *In-situ* and other forms of slum redevelopment have almost a fifth of the total value of the project. It is important to note, that redevelopment projects often result in significant dispossession as not all residents are able to prove tenure in the informal area and thus the project could result in making people homeless. (Dupont, V., et al. 2014) (Zérah 2009) While this is one of the largest sectors in the Mission, in terms of the budget, the sector is unevenly distributed over the top 60 cities with 5 cities accounting for over 65% of all housing projects.[35]

e.   Economy

This sector focuses clearly on projects with a strong focus on economic returns and has a budget of INR 11275.4 Crore. The primary focus of economy is commercial and retail activity, with a strong focus on market redevelopment projects and the new construction of offices, homes and allied institutions. Like housing, almost the entire budget is devoted to area-based projects at 99.2% and only 0.3% of the projects have an IT component. Furthermore, 5 cities account for over 67% of all the projects under this sector.[36]

Governance and Citizen Participation

Towards getting a more detailed understanding of the Mission from the perspective of governance and citizenship, this report focused on documenting the modalities of the top 60 cities of the Mission. This section will demonstrate that the Mission is moving against the tide of decentralisation and concentrating power in the hands of the state government, that the form of participation and citizenship empowerment employed by the Mission was flawed and that the Mission focuses primarily on traditional forms of urban development with a small proportion of IT-based projects seeping in. The last finding is the strong suit of the Mission as it focuses on core issues of the city, however the process of recentralisation and faulty participation could undermine the positive impact of the mission.

Recentralisation of power

The Smart Cities Mission necessitates that each city create a Special Purpose Vehicle under the Companies Act 2013, which is a limited company which will manage the implementation of the projects under the Mission. The SCM Guidelines and the Certificates of Incorporation of the SPV state that the 'rights and obligations' of the local municipality be transferred to the SPV. This is a problematic statement as the exact terms of the relationship and hierarchy between the SPV and the Municipality is unknown. This ambiguity will be detrimental to collaborative efforts between SPVs and municipalities and to democratic processes.

Currently 59 of the top 60 cities have created SPVs and of this, the project could access the registration certificates of 35 cities and categorised the members of these SPV according to certain indices – whether they were – Bureaucrat or Politicians and whether they were hired at the national, state and local level. There were some people in these SPVs who were not easily identifiable, and these have been denoted as 'unknown' in (See Table 6)

The SPVs must have a majority state share between central and state government, the remainder could be held by Municipal Government or the private sector. At this point no more than 40% of shareholdings can be held by a private party. In practice however, the 35 cities had only one private individual hired and there was no private ownership in the SPVs. In fact, the primary powerhouse in the SPVs were bureaucrats from the state government (See Table 8) with only a small representation of political leadership in the SPVs. The SCM has a substantive city-budget and the decision making. Given that each city has a substantive SCM budget (relative to their own budget) the fact that much of the decision-making is being entrusted with bureaucrats and state government representatives and not elected officials is a clear movement away from the 74th amendment[37] and the push to enhance decentralisation. This is an important point

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[35] Thane, Bhubaneshwar, Indore, Jabalpur and Bhopal (In descending order of budgets for Housing Projects)
[36] Chandigarh, Raipur, Salem, Davengere and Mangalore (In descending order of budgets for Economy Projects)
[37] It is important to note that India has divided subjects of power between the Union and state governments to ensure a balance of power within the federal structure. Thus, there are three 'lists' known as the Union list, state list and concurrent list. The first two are, as their name designates, include the subjects that are purely under the governance of the union and then the state governments, while the third list consists of subjects that both the Union and state governments have a say in. Cities and their governance are under the

because much of the legitimacy of the Mission comes from the fact that it positions itself as a movement towards empowering local governments. (P. Taraporevala 2017 D)

The SPV promises stable leadership and, by extension, institutional memory in the form of the CEO that will be hired for the singular purpose of running the SPV. This is its primary strength as municipalities in India are largely run by bureaucrats who are regularly transferred and thus unable to ensure continuity in governance structures. However, the relationship between the CEO and citizens is undefined and could result in roadblocks when studying the systems of accountability.

The second benefit that SPVs offer is the promise of collaborative work and a movement away from the constricted silo-based functioning of municipalities. This call to corporate efficiency in urban governance could be beneficial, the absence of accountability and elected officials in the SPV could result in a body that is opaque and counter the objective of transparency and decentralisation of power to cities, in the SCM guidelines. The final advantage presented when arguing for an SPV is that of financial credibility. Indian municipalities have low credit ratings and the hope is that through the creation of the SPV, cities will have greater access to improving their credit ratings and access funds through the debt market. (Ministry of Urban Development 2015 A, p. 12)

It is interesting to note that of the various urban development Missions the federal government has launched, only the Smart Cities Mission necessitates the creation of an SPV that could rival the municipality. Had there been multiple SPVs for the multiple Missions, the power of the SCM SPVs might have been diffused and diminished the potential incursion into democratic governance.

Finally, it is important to remember that rules regarding company ownership are liable to change and there are examples like Lavasa in Maharashtra where the state regulations regarding local governance changed over a few years and resulted in the formation of an SPV that was almost wholly owned and controlled by a private entity. (P. Taraporevala 2015) The SPV in the city could also move in that direction. Furthermore, when private investment is allowed in the SPVs, it stands to reason that some of the most powerful (in financial and political capital) in Indian cities are real estate developers. This lobby has vested interest in changing building regulations in Indian cities and by investing in the SPVs of cities they could create a legitimate foothold into municipal governance and affect land regulation. This is a speculative assumption, and as we move into increasing private investment in urban development it is important that systems of checks and balance are also safeguarded. It is at this junction, where the Mission is viewed in apolitical terms, where a programme that will function to disrupt core democratic processes and potentially further urban inequality is sanitised into a programme of economic regeneration and civic improvement is the node where a process of depoliticization has taken root.

The discourse of citizen participation and the legitimising of the Mission

The SCM has a strong focus on creating inclusive cities through an enhancement of quality of life, environment, and access to health, education and housing for all. It is important to distinguish between rights-based discourses and inclusive cities, as the SCM banks on the latter. There is no clear mandate on what the rights of the citizens are within the SCM, only that the city must be 'inclusive'. One method of implementing the 'inclusive' strand of the Mission is through participation in planning. In fact, much of the normative justification of the SCM emerges from the argument that it is based on a participatory exercise. The creation of each city's proposal for the SCM is seen as a citizen participation process where the focus areas of development in the city are selected with the mandate of the people. The ranking of the SCM is also dependent on an ability to demonstrate that the opinions of the people were gathered and used as the basis of decision making for the project proposal. The idea of participation was left open for interpretation and no guidelines were

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purview of the 'state list' and thus while the legislative amendment or the 74th Amendment to the constitution was made in 1992, the enactment of this provision rests solely in the hands of the state governments and their willingness to devolve power from the state government down to the urban local bodies. At just a few years short of 3 decades after the enactment of this amendment, decentralisation has not taken deep root in the country and much power still rests with state governments. (Sivaramakrishnan, 2016) The SPV furthers this process of recentralization of power.

provided to ensure quality of participation. All cities used a combination of digital platforms (websites, portals, mobile-phone apps, email), as well as short messaging services (SMS) to citizens, television and radio, and some cities used newspapers and direct interactions at large gatherings or at the household level.

Table 8: Participation in top 60 cities

No.	Category	Number of Cities	% of Cities	% of population
1	Non-Digital Outreach	40	66.7	20
2	Non-Digital Feedback	24	48.3	18.16
3	Social Media Outreach	22	36.7	NA
4	Social Media Feedback	39	65	NA
5	No feedback	10	16.7	NA

Source: CPR Smart Cities Database, 2018

For the purposes of this report, the team studied the SCM proposals presented by the top 60 cities and analysed the available data on participation. This paper finds that the data provided in the proposals was negligible and insufficient to justify the claims of the Mission being a bottom-up process. In the top 60 cities only 40 could provide information on exactly how many people they reached out through non-digital processes (consultations and meetings in ward offices and public institutions and through newspapers). Only 24 could provide data on how many people provided inputs through these non-digital processes, the bulk of which were responses from students and through very limited public consultations.

In terms of digital outreach and feedback, there are two primary issues that arise. The first is digital literacy as only people with access to certain technological and language would have access to participate in these fora (MyGov websites, Facebook, Twitter, apps etc). This could potentially skew the opinions that are presented a representative of the entire city. The second issue is linked to the quantum of responses from an individual as could hypothetically have one individual providing an infinite number of responses and thus would be a weaker form of determining the quality of participation. This could have been avoided with a more rigorous process of submitting recommendations and opinions, however the Mission did not create this nuanced interface.

In terms of calculating the social media outreach and feedback, there was great ambiguity regarding what could be considered participation. For instance, anything from a 'like' to be a 'share' on social media and just 'twitter impressions' were considered positive responses to the Mission. This is highly flawed, as people can share the information put up on the city Facebook and twitter pages while being deeply critical of what they are sharing. Furthermore, the concept of using 'impressions' on twitter as a measure of participation is deeply troubling because it does not guarantee you that someone has seen the tweet, much less that the person who does see it is from the city in question or is the correct audience for the tweet. Using social media and new platforms to reach citizens is an interesting idea, however if it is not harnessed appropriately, social media is a fairly hollow means of engaging with people.

CONCLUSION

The impetus for this research stemmed largely from the ambiguity regarding the characteristics of a smart city but also from the severe divergence of opinions on the Mission. A distillation of the various arguments valorising and criticising the Mission reveal that these arguments are based on three core concepts – (In)equality, (un)democratic local governance and (im)prudent fiscal strategies. The section that extols the virtues of the Mission states that it will reduce inequality in cities by providing economic opportunities to all citizens, the Mission utilises participatory approaches to decision making and hence deepens democratic structures and the Mission uses non-traditional and diverse sources of financing urban infrastructure and thus will improve the economic health of the city. The section that remains sceptical of the Mission state that the area-based development process will exacerbate inequality in cities, that the introduction of private shareholders in the SPV will impede processes of democracy at the local level and the sources of finance will be detrimental to the urban economy.

The Smart Cities Mission offers a discursive dichotomy that is possible because of its opacity. The Mission offers a wide variety of intentions – financial health at the city-level, economic growth, a deepening of peoples' participation in decision making and decentralisation, greater accessibility and inclusion, efficiency in governance, ecological sustainability and a host of other seemingly enlightened ideas. The everyday functioning of the city must include efficiency and corporate governance with grassroots mobilisation and a heightened public awareness of civic duty. The guidelines are vociferous in their endorsement of smart cities as a realistic attempt at galvanising urban regeneration across the nation, while being deeply mindful of inequality and the lack of access within these spaces. The discourse moves between people, the city, governance while deftly avoiding one topic – rights and justice. The entire spiel of the smart city in India, while it remains vague, is positioned on the assumption that a city with a healthy economic core and quality infrastructure will inevitably allow for greater access and inclusion of its people. Such a city will effortlessly engage with and solve issues of inequality and implicitly denies the structural nature of disparity of access due to class, caste and gender. The phrasing of the smart city is purely positive. The city will inherently overcome the grave dangers of existing urban governance without reviewing the faults of older programmes or larger or structural problems in urban India. The Mission seeks to undercut the problems through a disruption to the system. If decision-making and urban regeneration seems to be out of touch with what people want – include them in the decision making. If municipalities are cumbersome and working in silos - bring in the corporate governance. However, all of these processes have a blind spot - social injustice. The problems of urban India, including basic access, infrastructure and inequality are not random fallouts of a system but necessary processes of Indian cities.

The paper states that the Mission ignores the idea of structural inequality within cities and visualises a city as an enhanced 'engine of growth' which will invariably lead to the development of all. The Mission does not entertain the idea that such increased capital accumulation may, primarily, benefit the privileged. The Mission attempts to support cities which have implemented projects better in the past, with more funding thus seemingly supporting 'merit worthy' cities without going into a detailed genealogy of the former programmes, their failures and how to avoid them. It does not explain why certain cities were relatively better or worse at implementing JNNURM. It is this push for market-driven processes (in terms of projects, financial structures and governance) without a meaningful reflection on past processes in India that directs the paper to state that the Mission is a depoliticized system of governance and participation, along with projects and systems of finance that are based on returns to investment and the international debt market.

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ANNEXURE 1: PROJECT DATA FOR TOP 60 CITIES OF SMART CITY MISSION

1) Transportation			
Budget INR CR	**% of Total Budget**	**ABD:Pan (%)**	**IT Yes :No (%)**[38]
32637	25.3	72:28	25:75

Graph 10: Transportation Sub-Category (Amount INR)
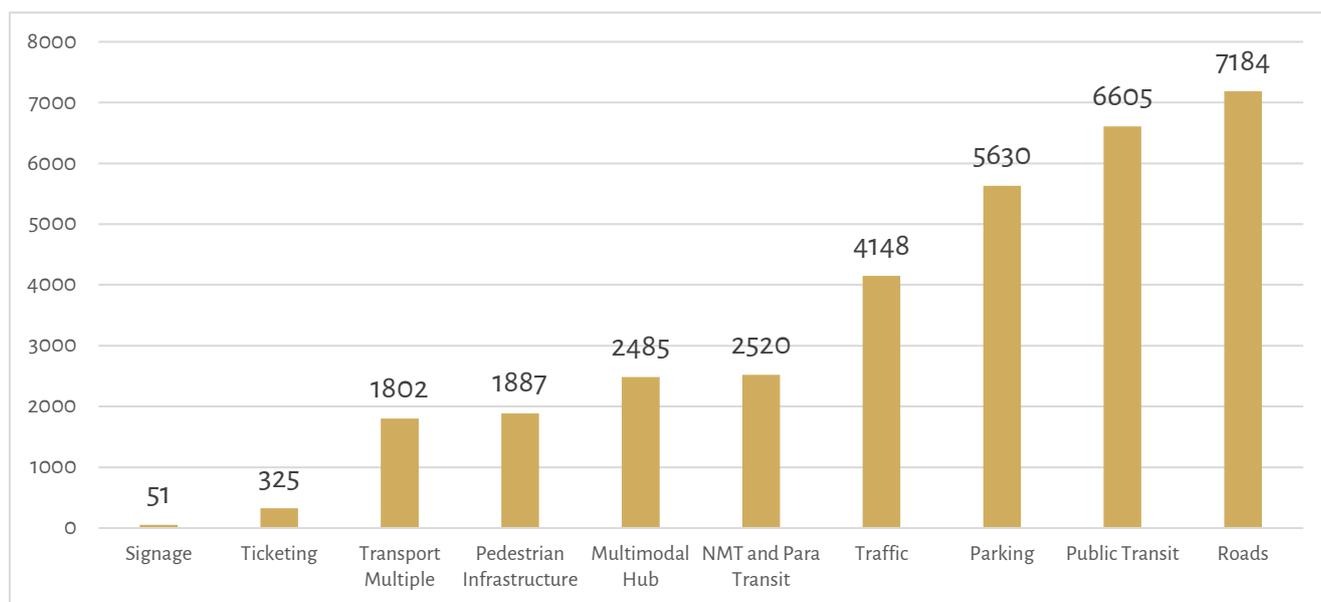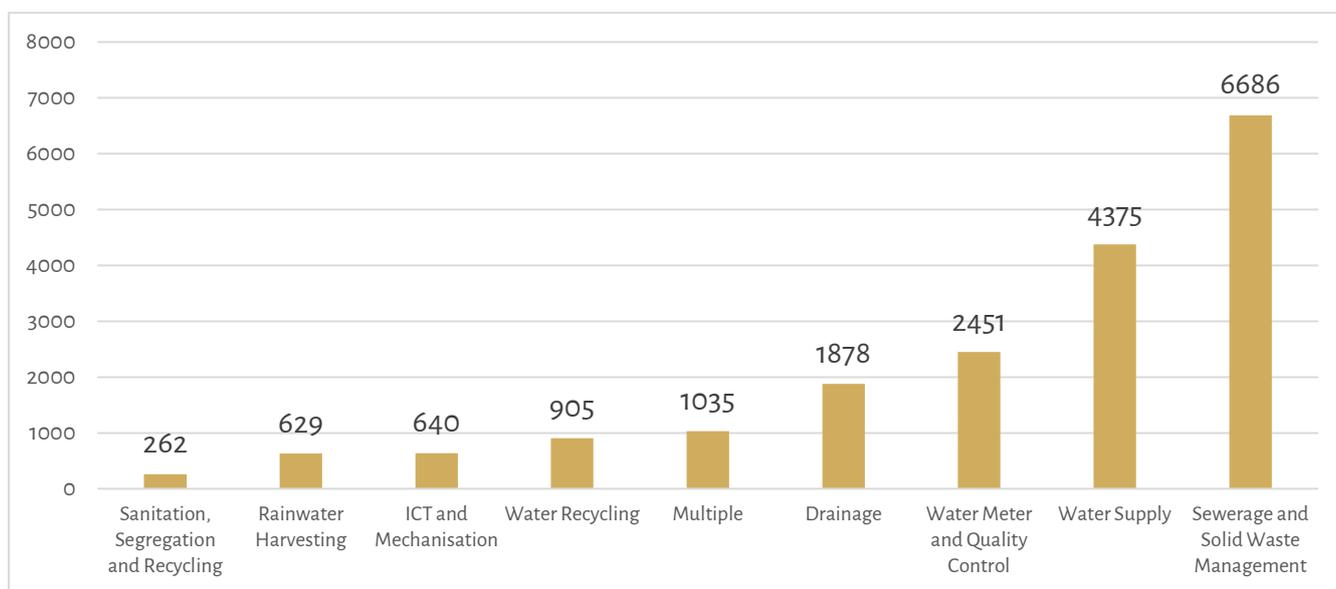

Graph 11: Transportation Sub-Category (Percentage)
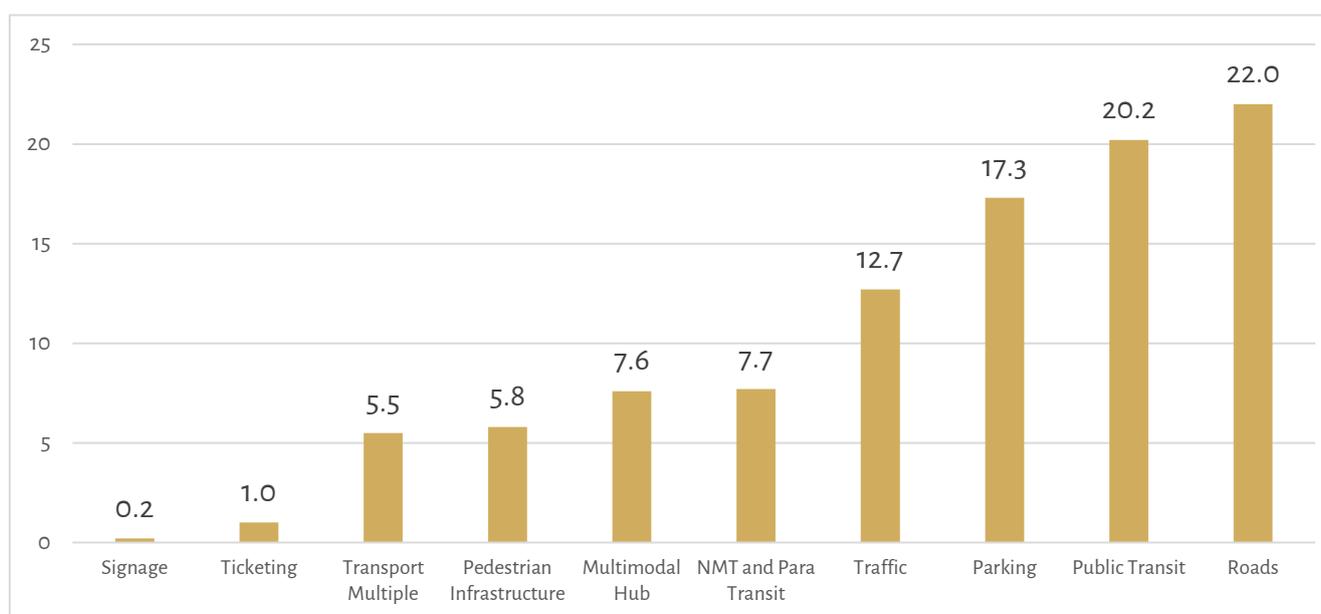
Source: CPR Smart Cities Database, 2018

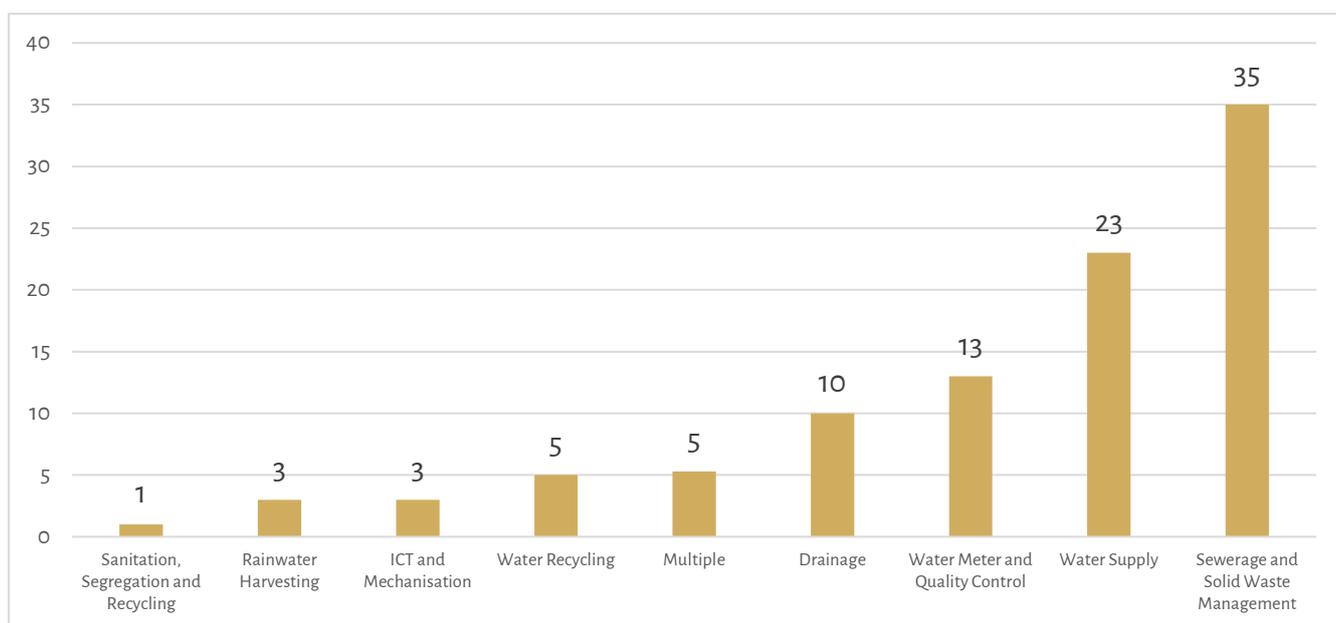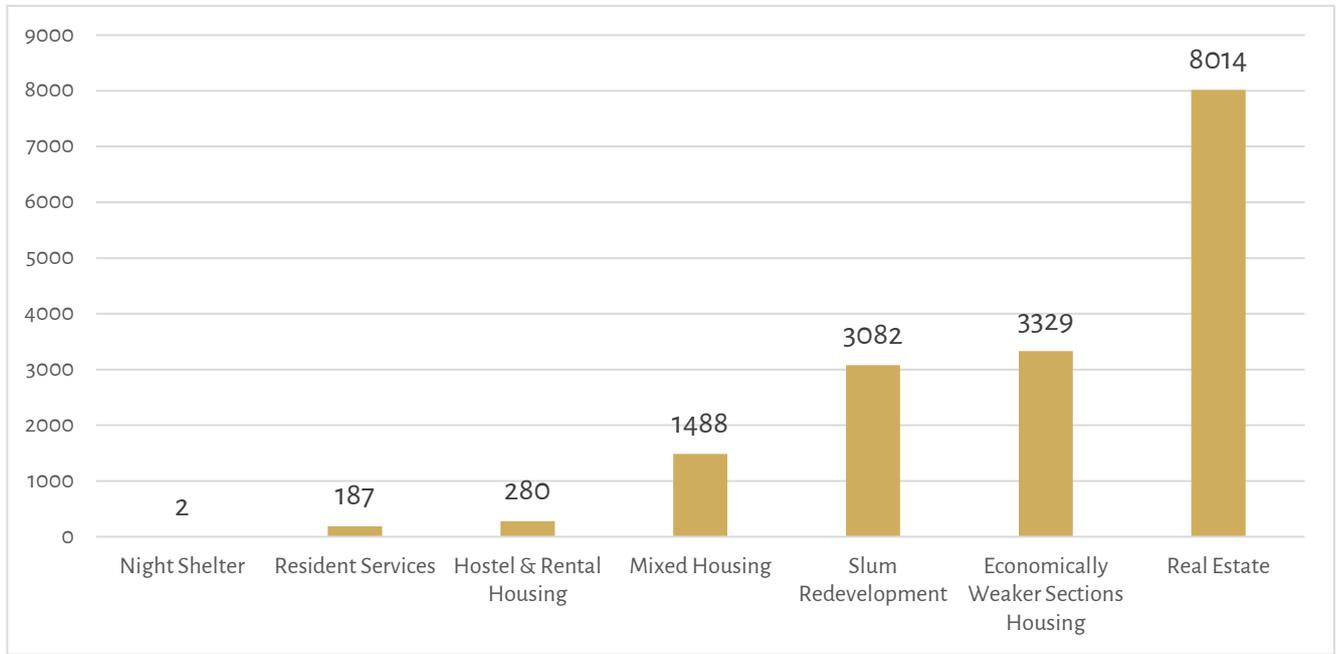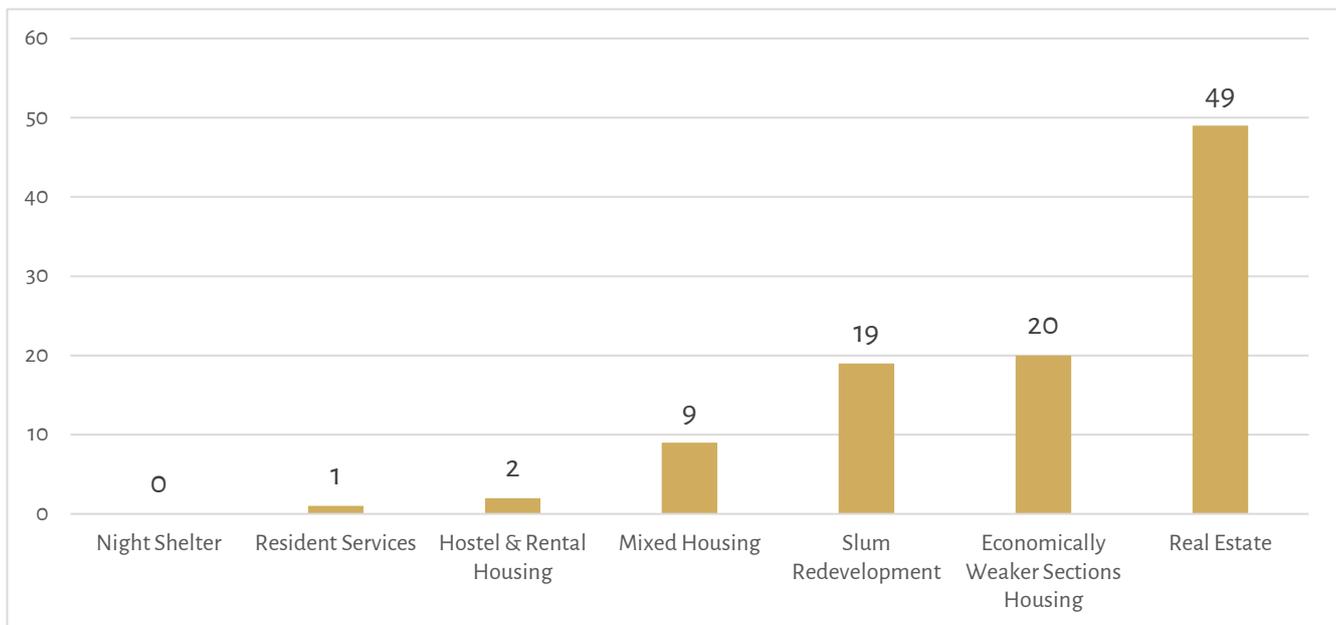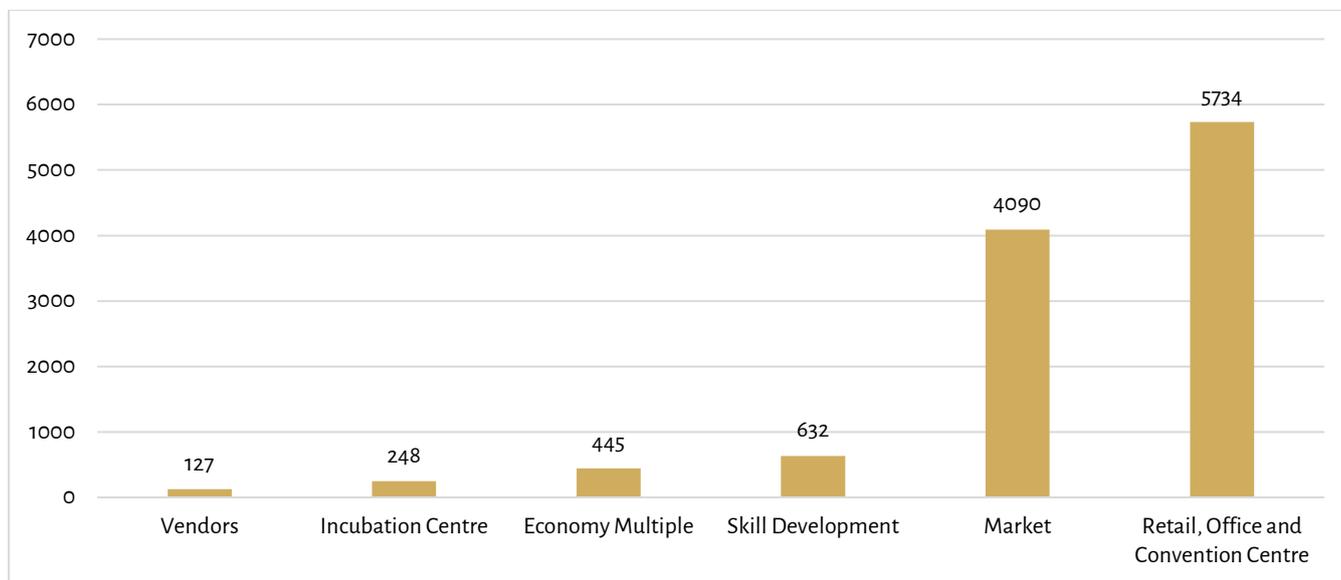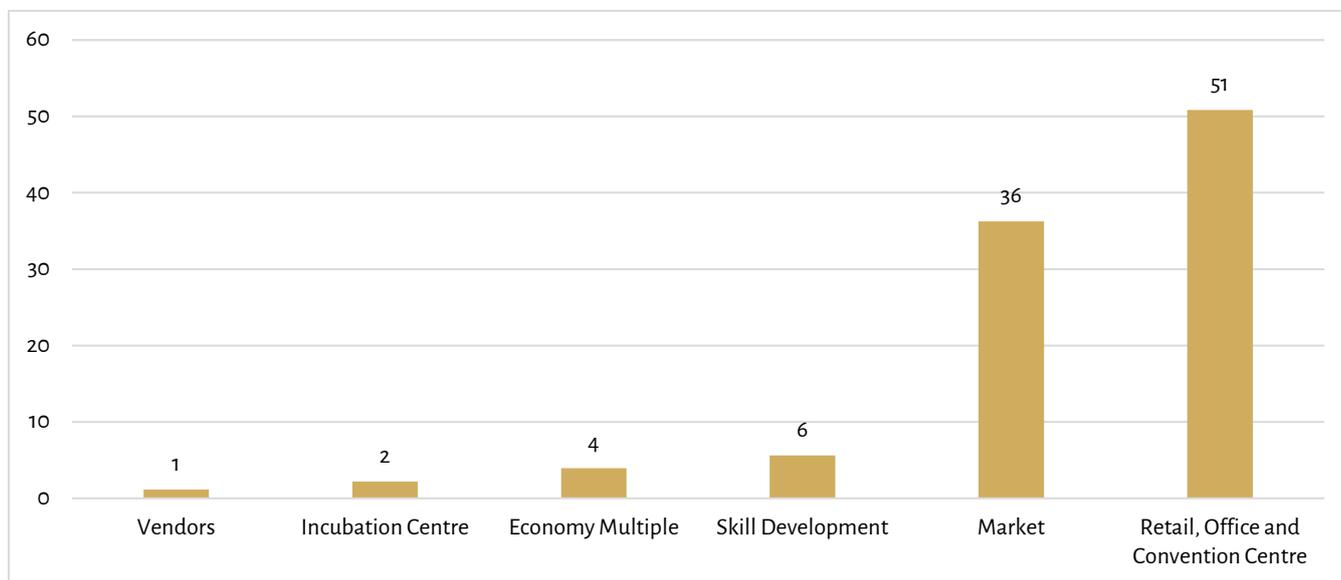[38] This is the ratio of projects with and without IT-based features within the development category.

2) Energy & Ecology			
Budget INR CR	**% of Total Budget**	**ABD:Pan (%)**	**IT Yes :No (%)** [39]
22536	17.5	78:22	23:77

Graph 12: Energy & Ecology Sub-Category (Amount INR)
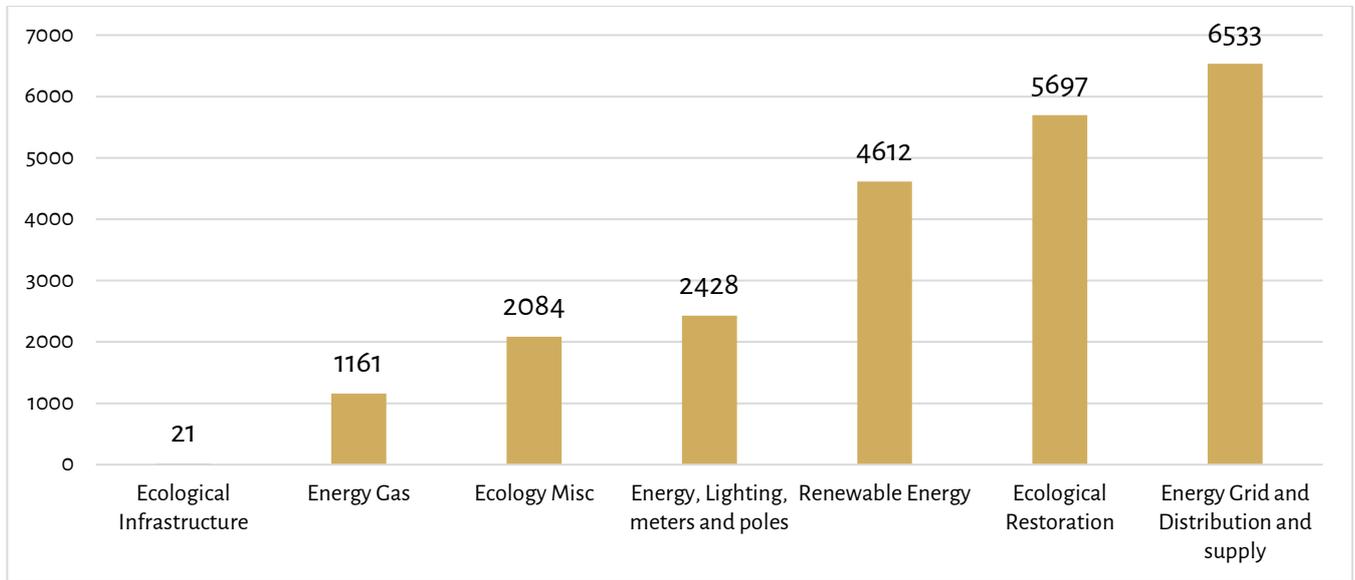
Graph 13: Energy & Ecology Sub-Category (Percentage)
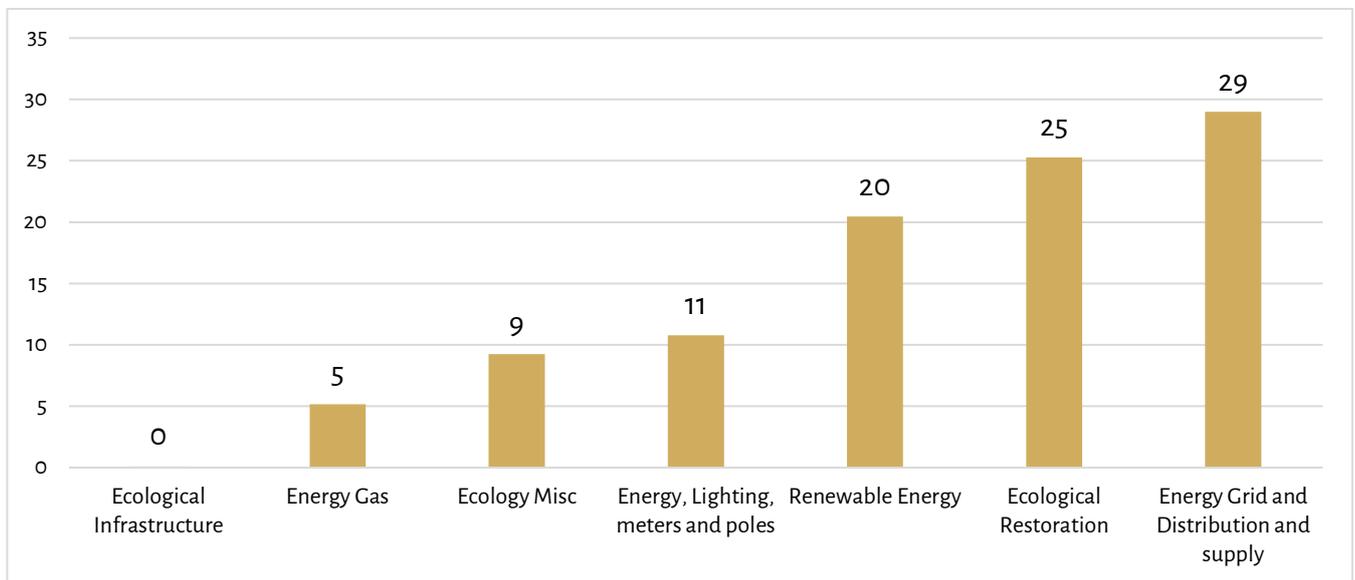
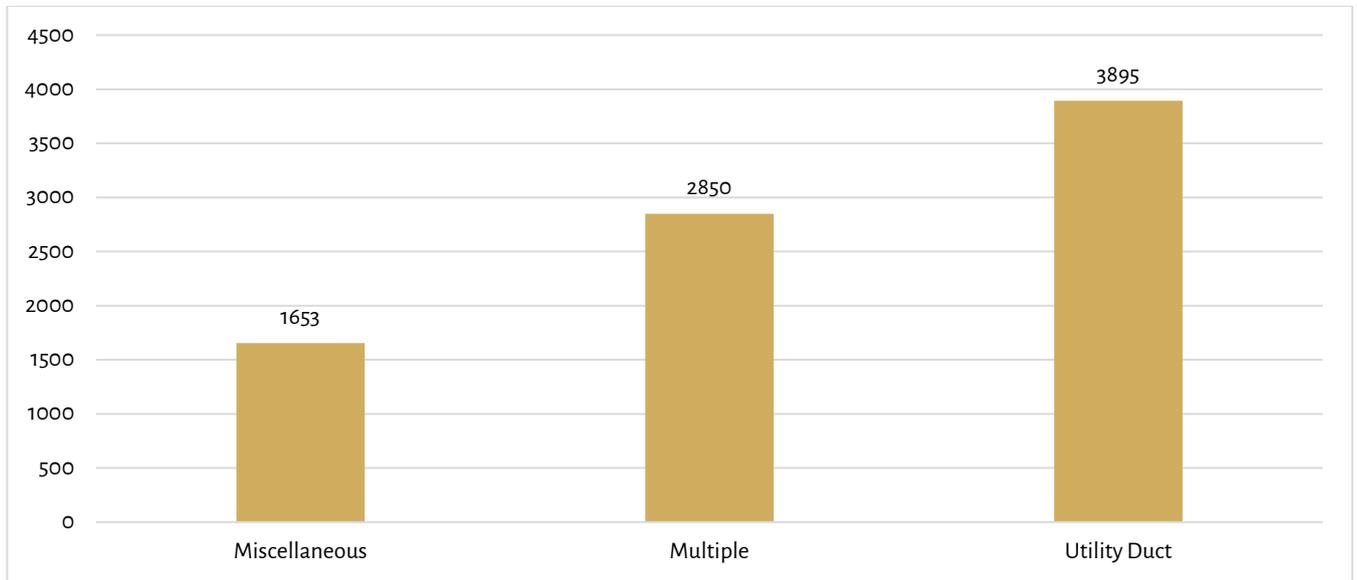**Source:** CPR Smart Cities Database, 2018

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[39] This is the ratio of projects with and without IT-based features within the development category.

3) Water & Sanitation

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes : No (%)[40]
18861	14.6	71:29	26:74

Graph 14: Water & Sanitation Sub-Category (Amount INR)

Graph 15: Water & Sanitation Sub-Category (Percentage)

Source: CPR Smart Cities Database, 2018

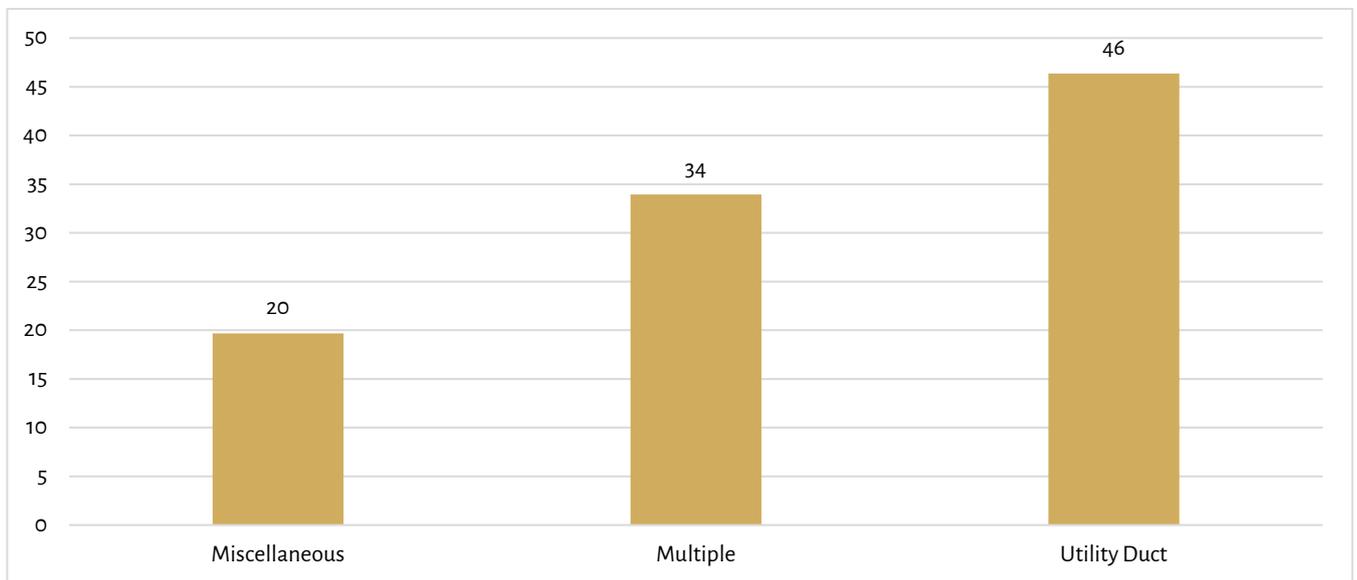[40] This is the ratio of projects with and without IT-based features within the development category.

4) Housing

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes :No (%)[41]
16381	12.7	99:1	100:0

Graph 16: Housing Sub-Category (Amount INR)

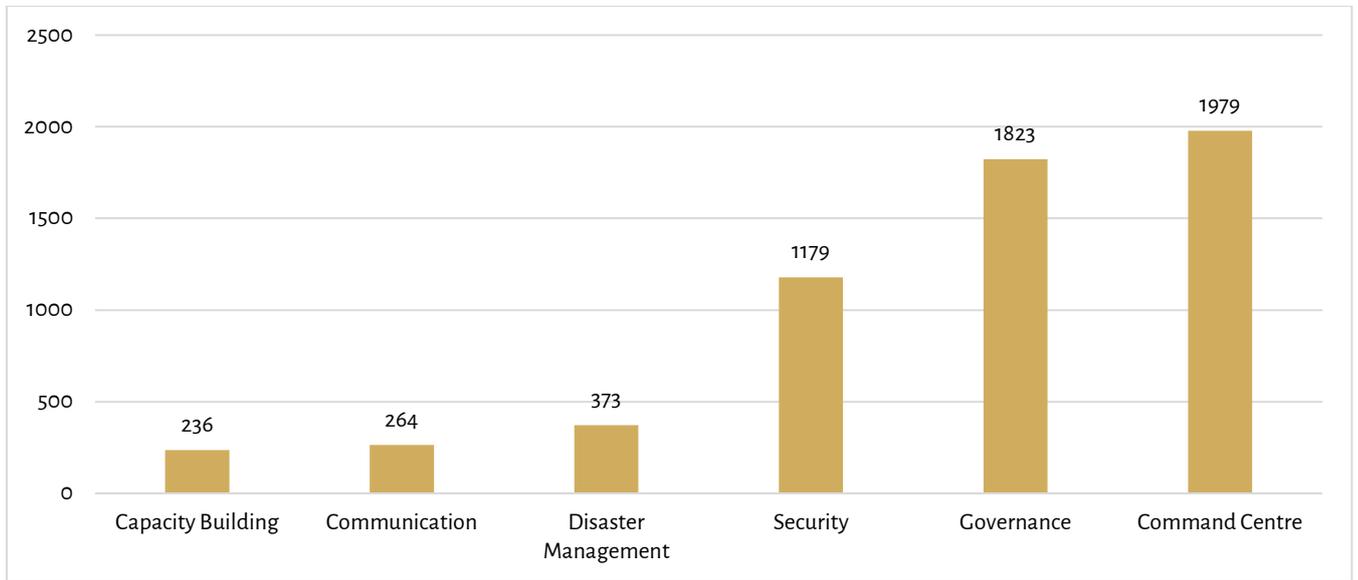*Graph 17: Housing Sub-Category (Percentage)*

Source: CPR Smart Cities Database, 2018

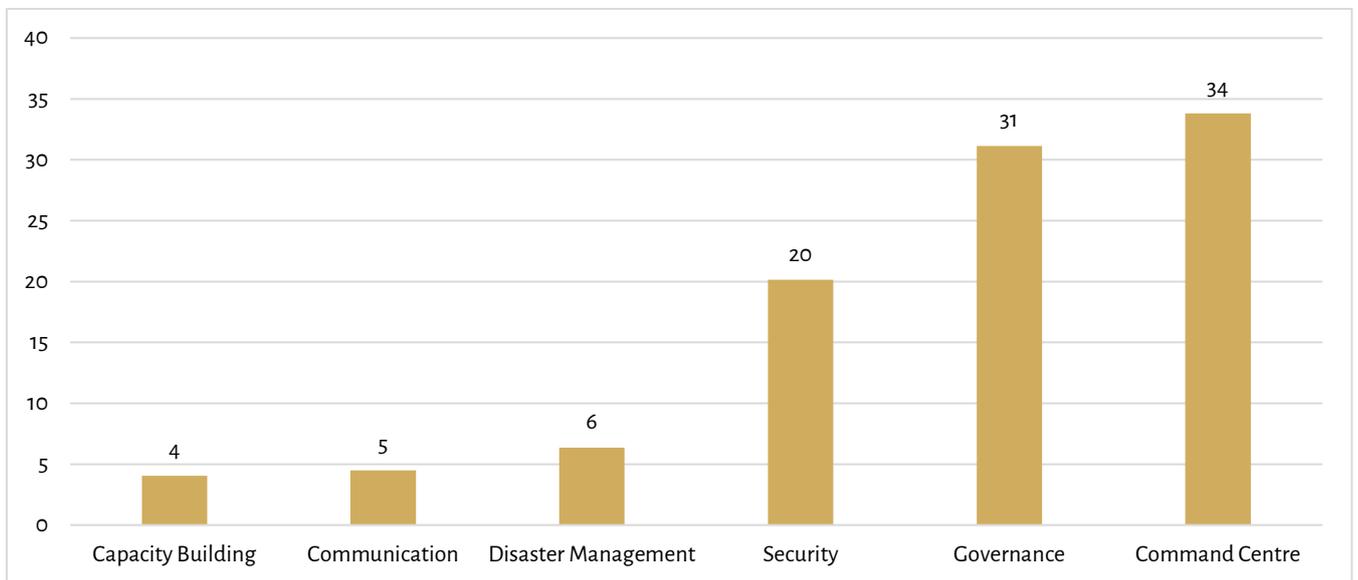[41] This is the ratio of projects with and without IT-based features within the development category.

5) Economy

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes :No (%) [42]
11275	8.7	99:1	9:91

Graph 18: Economy Sub-Category (Amount INR)

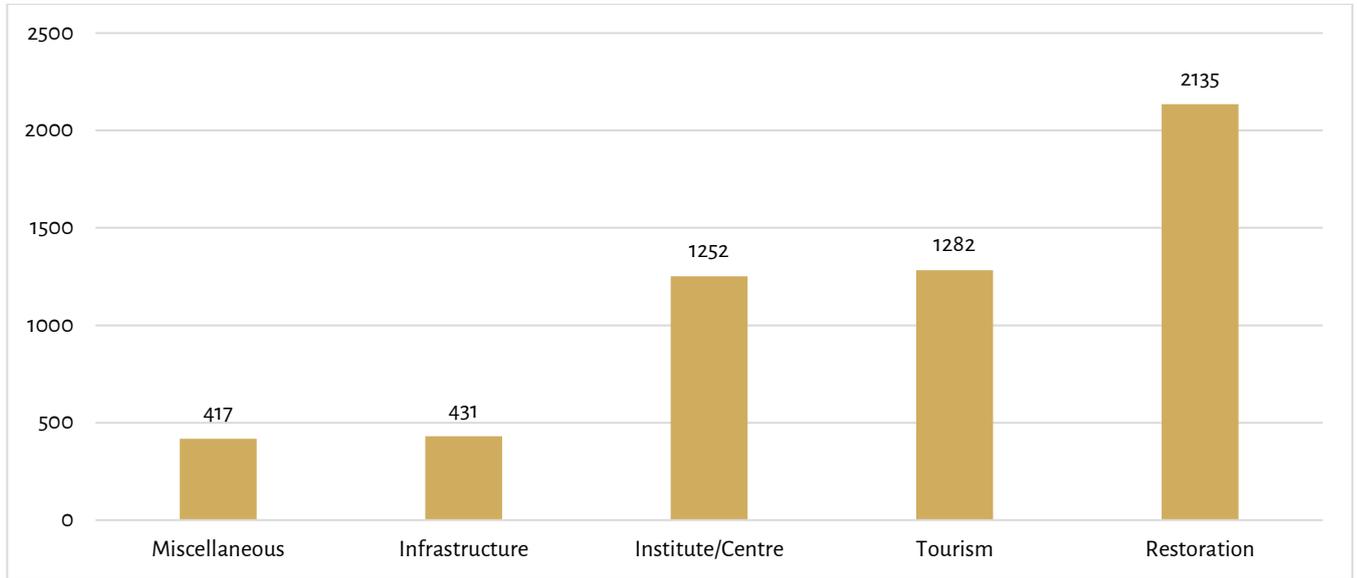*Graph 19: Economy Sub-Category (Percentage)*

Source: CPR Smart Cities Database, 2018

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[42] This is the ratio of projects with and without IT-based features within the development category.

6) Miscellaneous

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes :No (%)[43]
8398	6.5	97:3	8:92

Graph 20: Miscellaneous Sub-Category (Amount INR)

Graph 21: Miscellaneous Sub-Category (Percentage)

Source: CPR Smart Cities Database, 2018

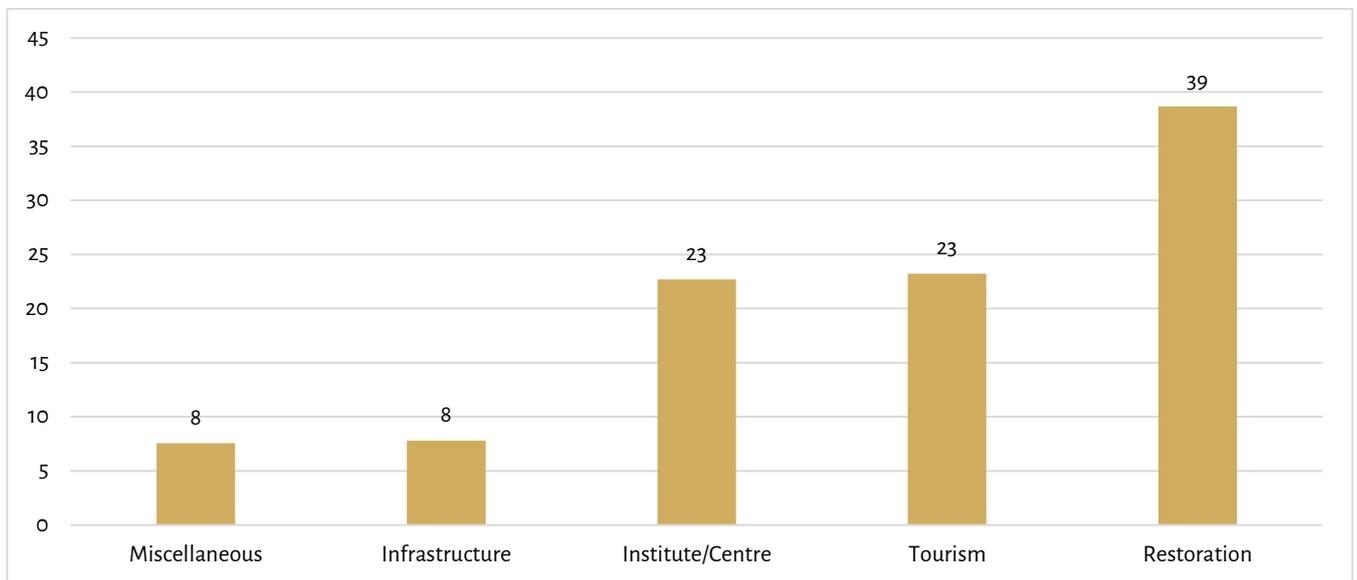[43] This is the ratio of projects with and without IT-based features within the development category.

7) Governance

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes :No (%)[44]
5854	4.5	31:69	83:17

Graph 22: Governance Sub-Category (Amount INR)

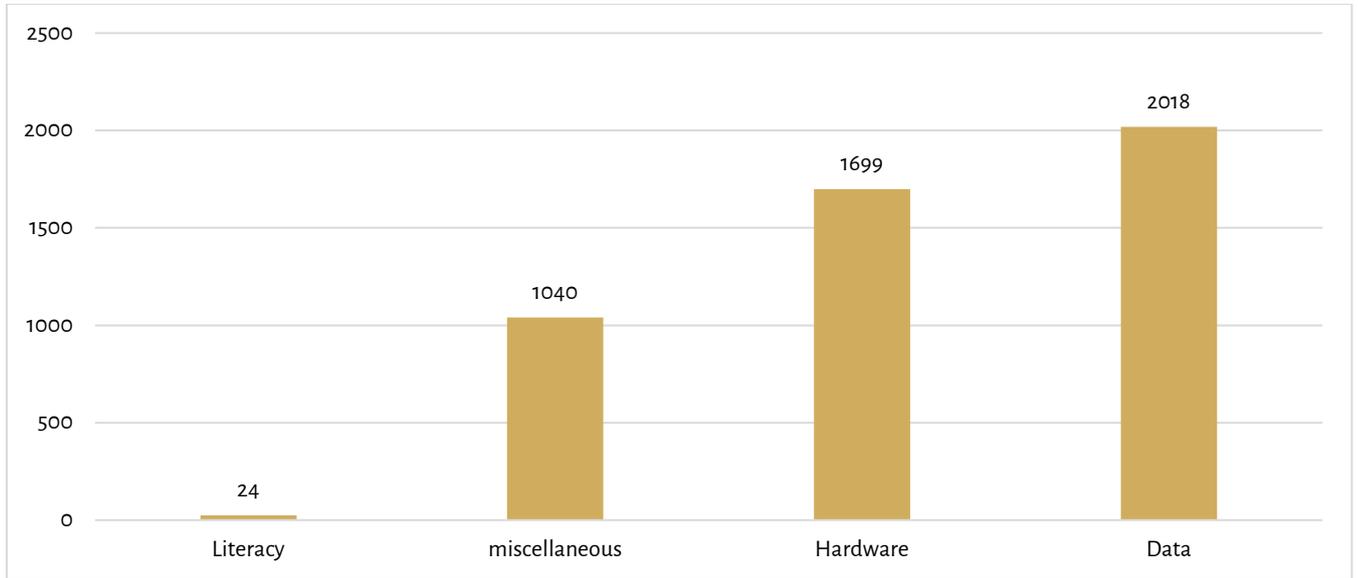*Graph 23: Governance Sub-Category (Percentage)*

Source: CPR Smart Cities Database, 2018

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[44] This is the ratio of projects with and without IT-based features within the development category.

8) Culture & Heritage

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes :No (%)[45]
5517	4.3	92:8	8:92

Graph 24: Culture & Heritage Sub-Category (Amount INR)

Graph 25: Culture & Heritage Sub-Category (Percentage)

Source: CPR Smart Cities Database, 2018

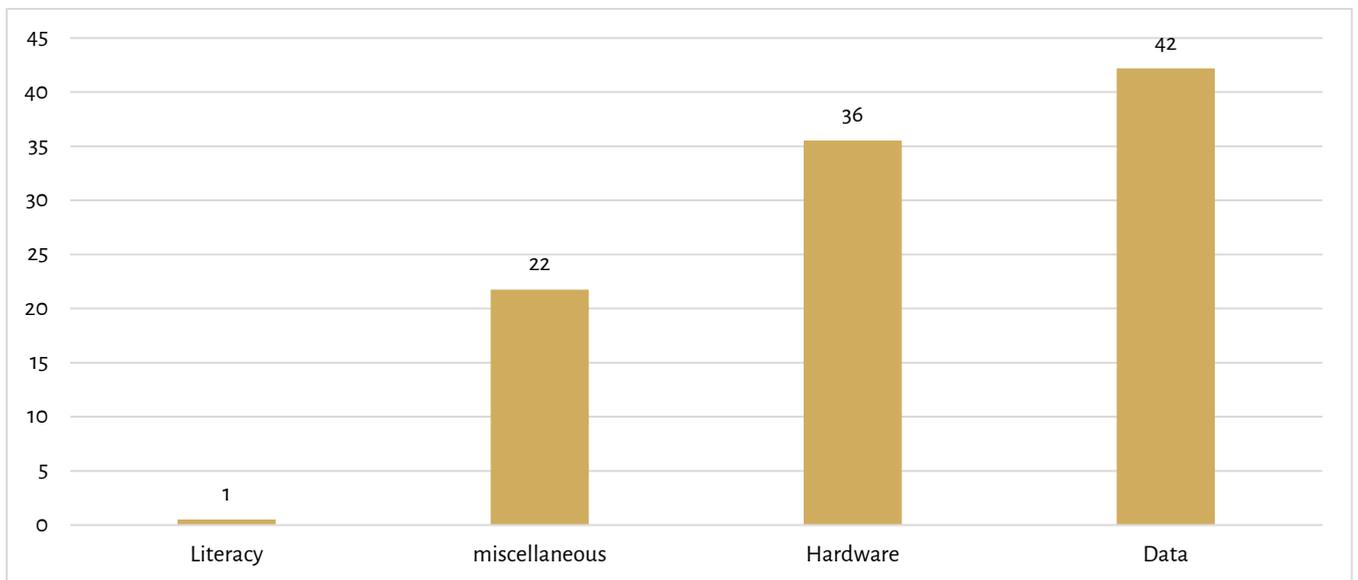[45] This is the ratio of projects with and without IT-based features within the development category.

9) Internet Technology

Budget INR CR	% of Total Budget	ABD:Pan (%)	IT Yes :No (%) [46]
4782	3.7	56.6:43.4	100:0

Graph 26: Internet Technology Sub-Category (Amount INR)

Graph 27: Internet Technology Sub-Category (Percentage)
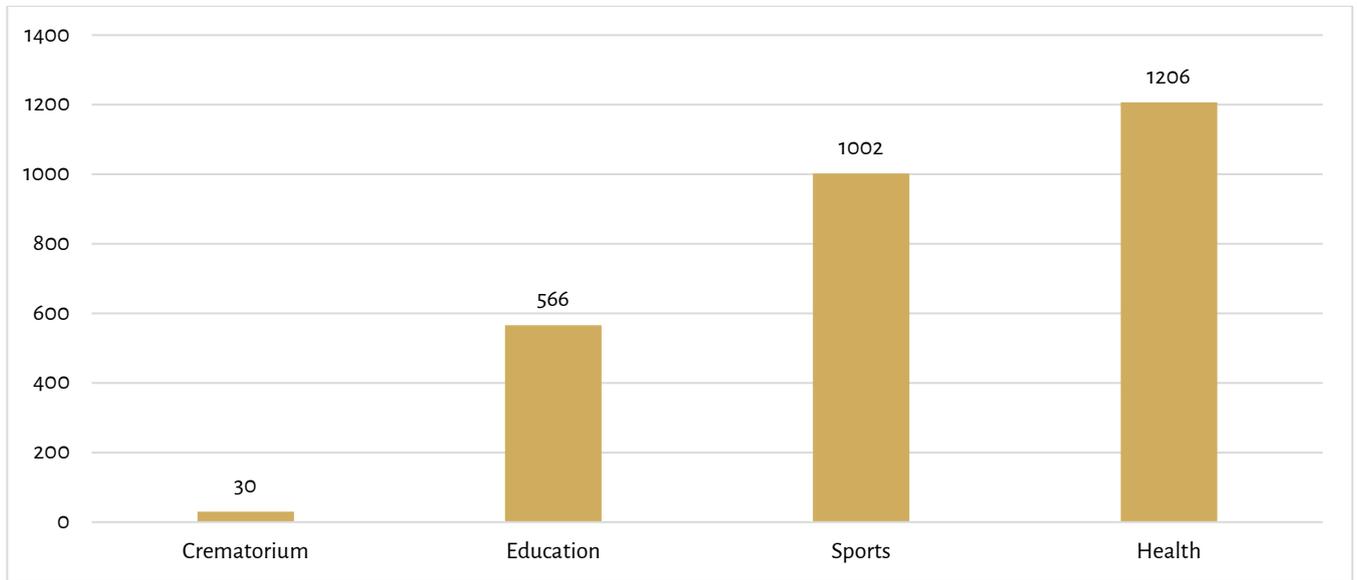

Source: *CPR Smart Cities Database, 2018*

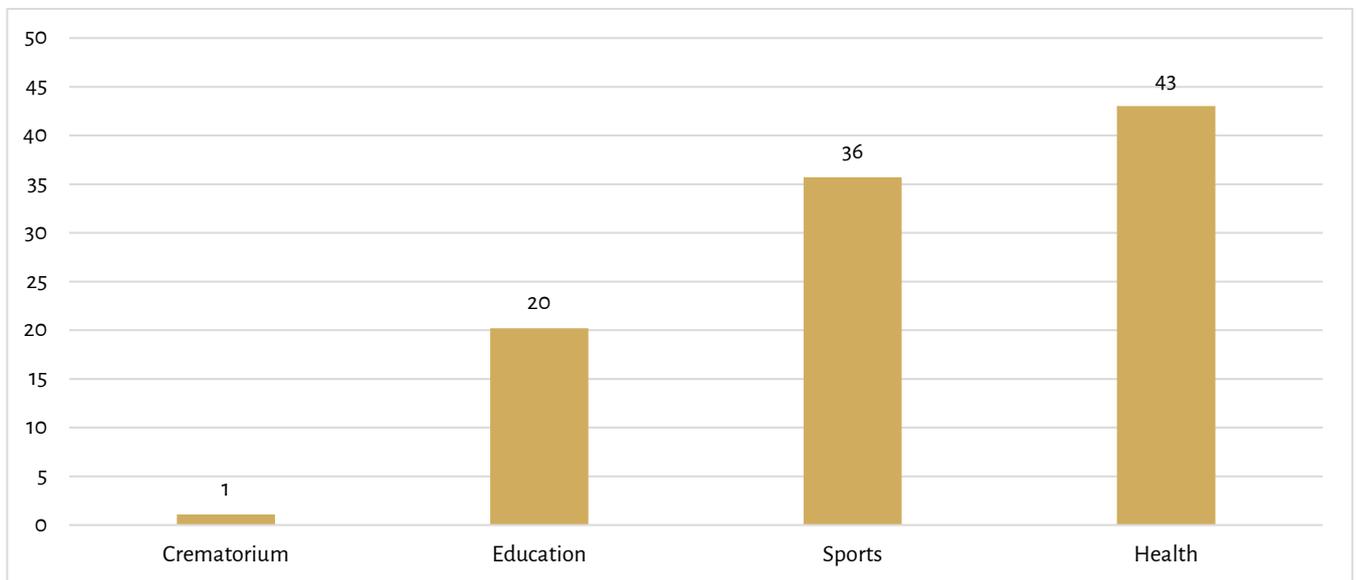[46] This is the ratio of projects with and without IT-based features within the development category.

10) Health & Education			
Budget INR CR	**% of Total Budget**	**ABD:Pan (%)**	**IT Yes :No (%)**[47]
2805	2.2	84.6:15.4	15:85

Graph 28: Health & Education Sub-Category (Amount INR)

Graph 29: Health & Education Sub-Category (Percentage)

Source: CPR Smart Cities Database, 2018

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[47] This is the ratio of projects with and without IT-based features within the development category.