

Smart City Mission Status Report



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Introduction

What is a Smart City?

- ✓ No universally accepted definition of a Smart City
- ✓ It varies from city-to-city and country-to-country, depending on the level of development, willingness to change and reform, resources and aspirations of the residents.

What makes a city Smart?

- ✓ Upgrade of Basic infrastructure and Smart' solutions to make infrastructure and services better and it relies on Area based development

Need for Smart City in India?

- ✓ Nearly 31% population lives in cities and contributes 63% of India's GDP
 - 42 Cities with population in excess of 1 Million, likely to cross 68 by 2030.
 - By 2030, 590 Million People will live in Cities
- ✓ Current City Conditions
 - Poor Urban Infrastructure, electricity , water, gas, sewerage system, solid waste disposal, etc. need to be addressed urgently
 - All this leading to deteriorating quality of life in Cities



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Smart City Initiative

- **100 smart cities mission was launched** on 25th June 2015:
 - ✓ To promote **sustainable and inclusive cities** that provide **core infrastructure** and give a **decent quality** of life to its citizens, a **clean and sustainable environment** and application of **'Smart' Solutions**.
- **Upgrade Core Infrastructure and ensure:**
 - ✓ Adequate water supply
 - ✓ Assured electricity supply
 - ✓ Sanitation, including solid waste management
 - ✓ Efficient urban mobility and public transport
 - ✓ Robust IT connectivity and digitalization
 - ✓ Good governance, especially e-Governance and citizen participation
 - ✓ Sustainable Environment
 - ✓ Safety, Security of citizens
 - ✓ Health and Education
- Ministry of Urban Development (MoUD) is responsible for implementing mission is collaboration with state government



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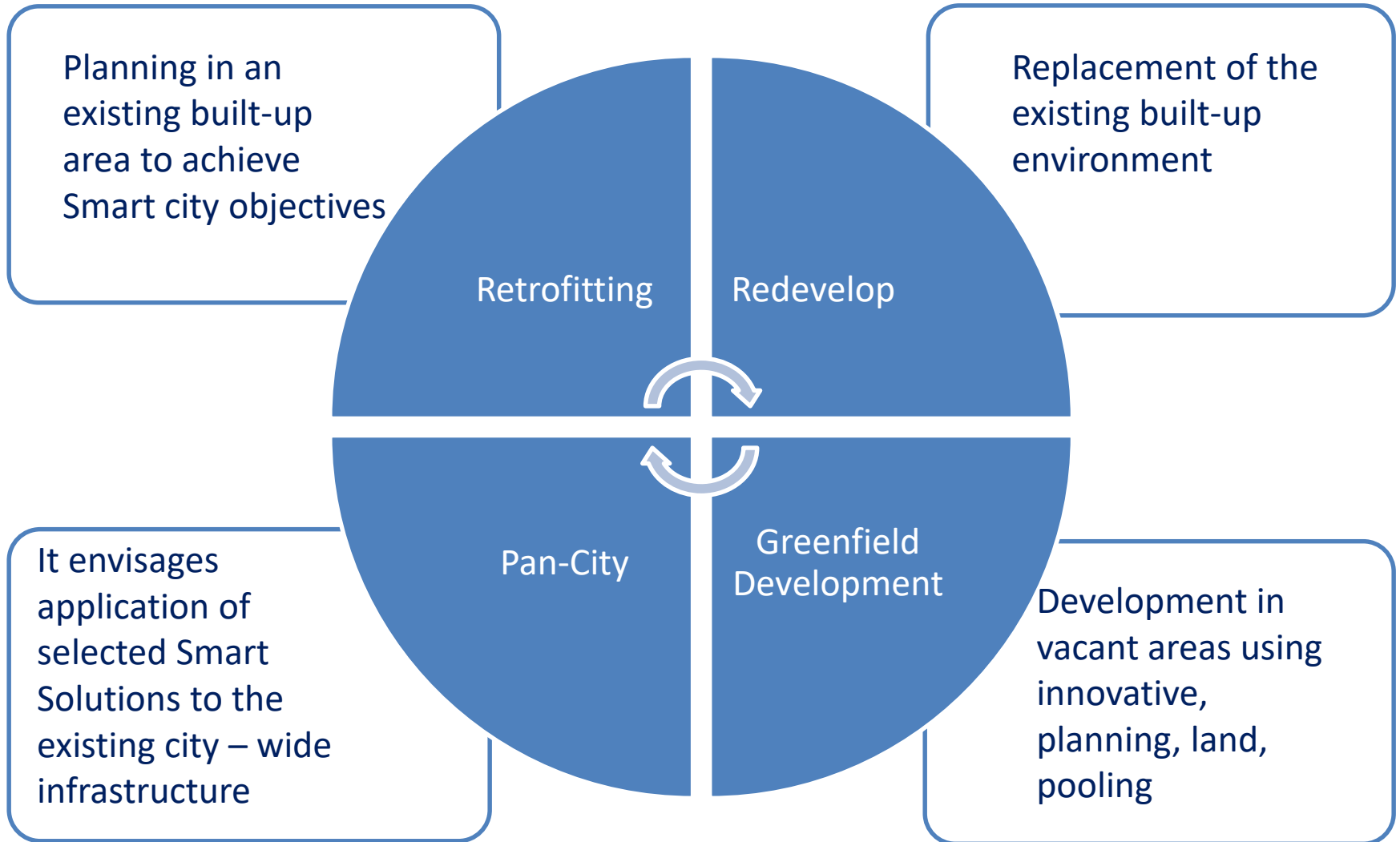


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Strategies



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Selection Process

- Competition based selection process: Smart City Challenge Program
- Cities to compete for the 100 spots and through 2 stage process
- ✓ **Stage I : Shortlisting of cities by the States:**
 - Intra-State city selection.
 - ✓ State/UT shortlist their potential cities based on scoring criteria
 - ✓ Cities with highest scores recommended for Stage II selection by Union Ministry (MoUD)
- ✓ **Stage II: Final Round of Selection by Union Ministry**
 - Recommended cities to prepare Smart City Proposal (SCP)
 - SCP to provide details on preferred model for Area Based Development, smart solutions, proposed financing, etc.
 - SCP to be evaluated by national & international experts/ institutions
 - Post evaluation winning smart cities are announced.
 - Remaining cities to improve their proposal to be considered for the next round.



Implementation of Smart Cities

Creation of Special Purpose Vehicle (SPV)

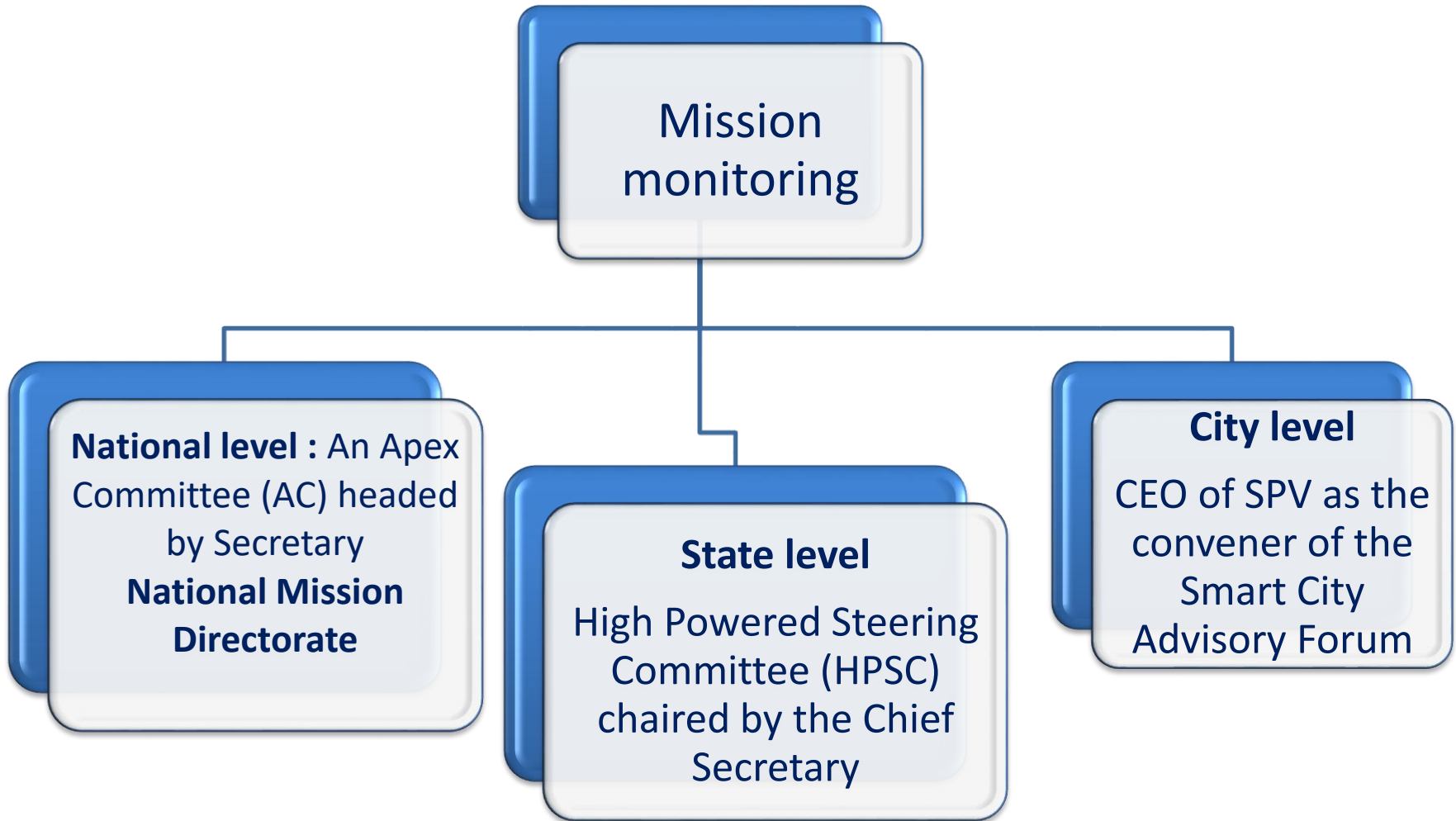
- SPV is responsible for implementing the mission at state level
- SPV to plan , appraise, approve, release funds, implement manage, operate, monitor and evaluate Smart City development
- SPV headed by a full time CEO and have nominees of central Government, State Government and ULB on its Board.

Project Management Consultant (PMC)

- Feasibility study of project, preparing RFPs depending on the scope of work and Project monitoring



Mission Monitoring



Financing of Smart Cities

- ✓ Smart Cities Mission is Centrally Sponsored Program
- ✓ State Govt & Urban Local Bodies (ULB) to contribute funds for project implementation and Central govt – Funds on equal basis
- ✓ Budget for the Smart Cities Mission over five years
 - Central Govt. funds: Rs.500 cr (62.5M Euro) per City
 - State Govt./ ULBs: Rs.500 cr (62.5M Euro) per City
- ✓ States to seek funds for smart cities from multiple sources e.g.
 - User fees from telecom, gas, power, water, parking fees etc.
 - Municipal bonds (debt financing), Tax increments
 - Other sources of finance:
 - Borrowings from bilateral and multilaterals (World bank, ADB, financial institutions)
 - National Investment and Infrastructure Fund (NIIIF)
 - Convergence with other Govt schemes (AMRUT, HRIDAY, Digital India etc.)



Current Status of Smart Cities Mission



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Selected cities with proposed investments 1(2)

City Challenge (Year)	Selected Cities	Total cost of projects (bn. euro)	ABD (bn euro)	Pen city solutions (bn euro)	Total urban population impacted (Cr.)
Round 1 (2016)	20	6.02	4.65	1.37	3.74
Fast track (2016)	13	3.73	3.25	0.48	0.94
Round 2 (2016)	27	6.75	5.32	1.42	2.55
Round 3 (2017)	30	7.18	5.87	1.32	2.37
Round 4 (2018)	99	1.6	1.33	0.27	0.35
Total	99	25.28	20.42	4.86	9.95

- Total winning proposals – 100=> One more City Shillong (Meghalaya) gets selected as the 100th Smart City
- Total Cost of Projects – 25.28 billion euro
 - ✓ Area based development (ABD) investment - 20.42 billion euro
 - ✓ Pan city solutions investment - 4.86 billion euro
- Total impacted urban population – 99.5 Million

Projects completed and under progress 1(2)

According to [report released](#) by Ministry of Urban & Housing Affairs (MoUHA):

- ✓ As on 17th January 2018, 2,948 projects worth Rs. 1,38,730 crore (17.36 billion euro) are in various stages of implementation
- ✓ 189 projects have been completed
- ✓ 495 projects projects have started work
- ✓ Tenders have been floated for 277 projects and
- ✓ 1,987 projects are at detailed project report (DPR) stage.



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Challenges in Developing and Implementing Smart Cities



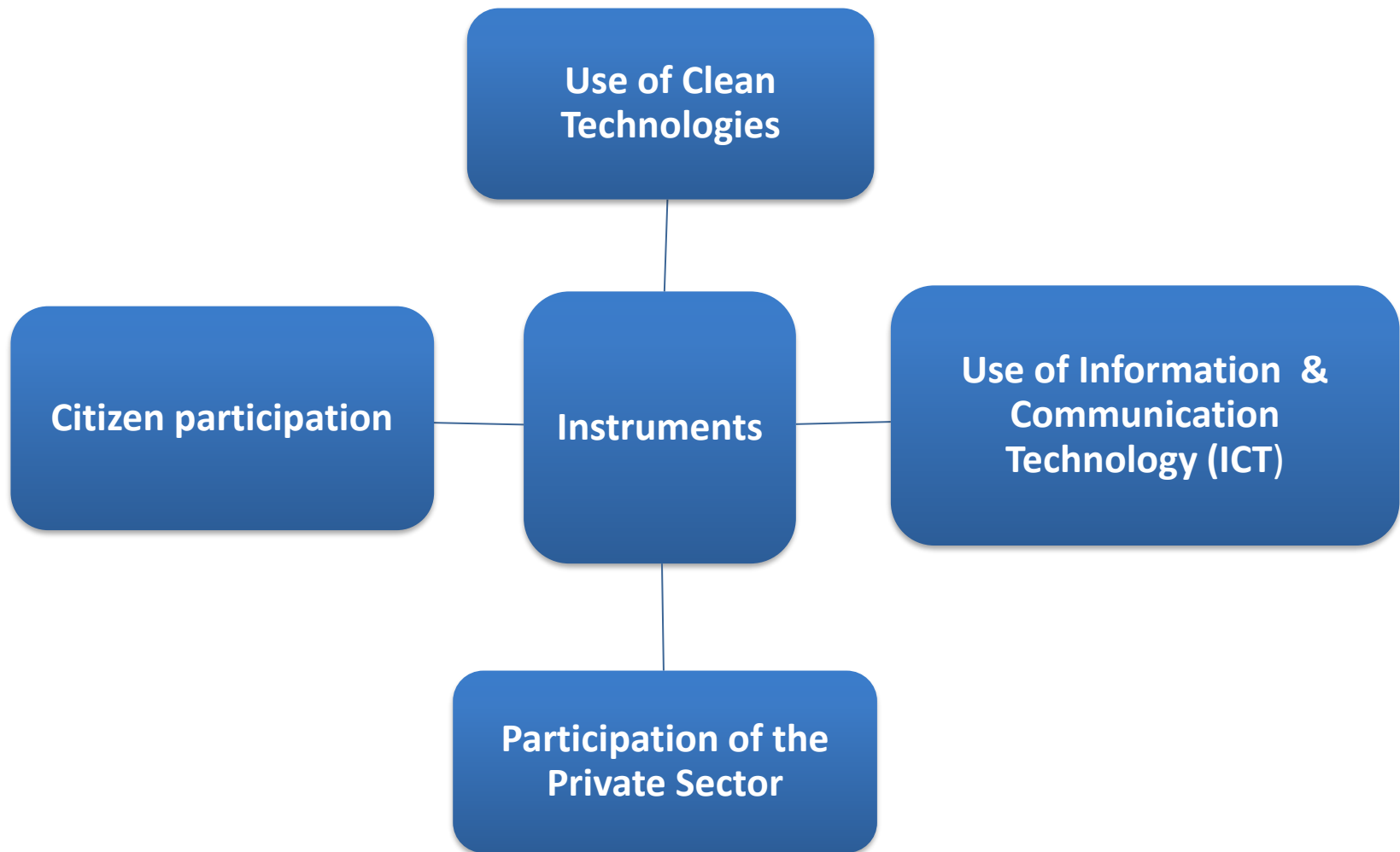
- Retrofitting of existing cities
- Financing
- Availability of master plan
- Financial sustainability of Urban Local Bodies (ULBs)
- Technical constraints
- Three-tier governance
- Providing clearances in a timely manner
- Dealing with a multivendor environment
- Capacity building
- Reliability of utility services



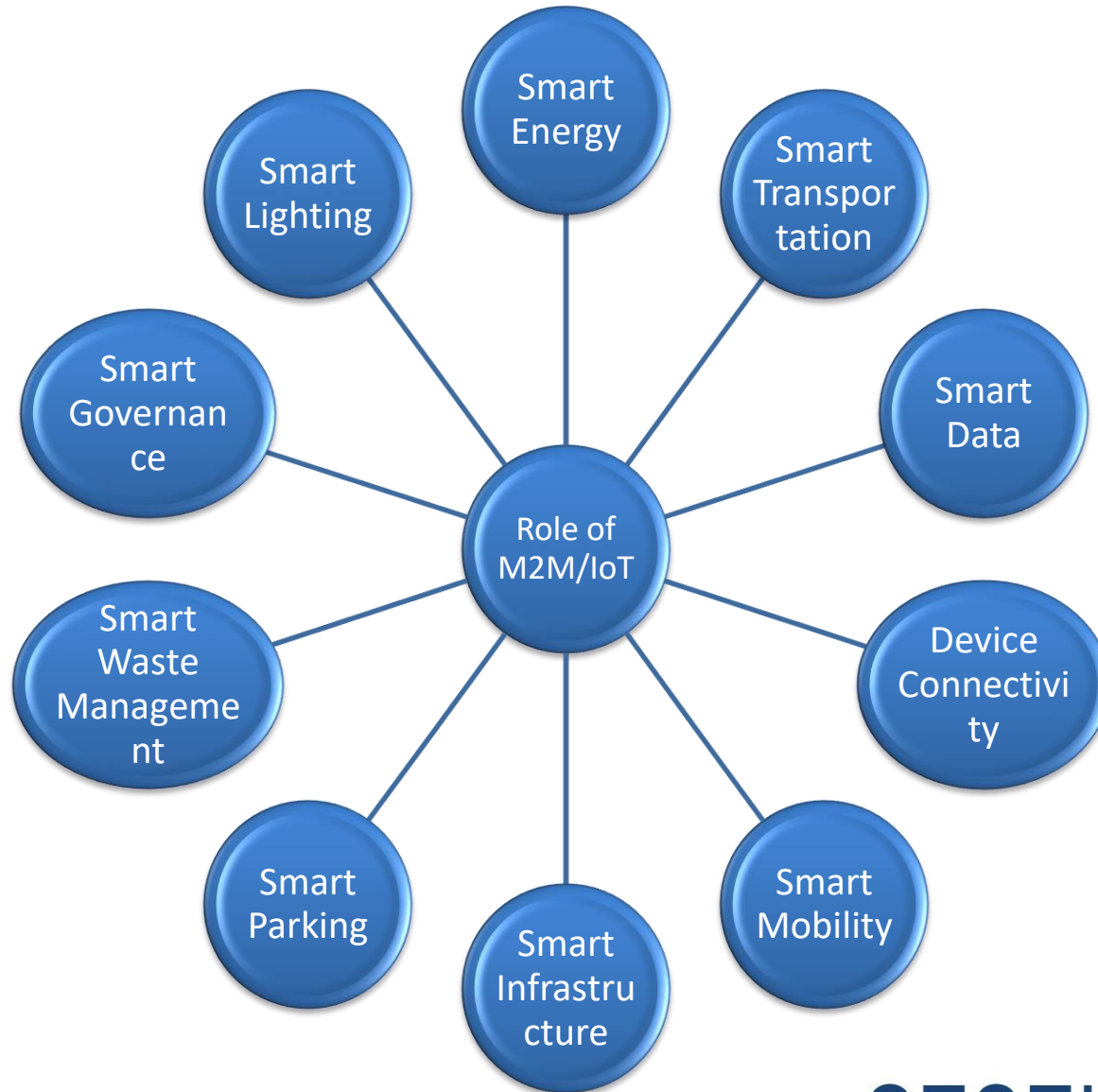
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Instruments Considered for Smart Cities Mission



Critical Role of M2M/IoT Considered



Convergence with other Government Schemes

- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**
 - ✓ Launched on 25th June 2015 & Smart City Proposals (SCPs) aligns with AMRUT by including:
 - Water supply system & rehabilitation of old water supply system
 - Augmentation of existing sewerage system & sewerage treatment plants & recycling of water
 - Footpaths/Walkway for Non Motorized Transport (NMT)

- **Heritage City Development and Augmentation Yojana (HRIDAY)**
 - ✓ Launched on 21st Jan'2015 & SCPs aligns with HRIDAY by including:
 - the focus on holistic development of heritage cities

- **Swachh Bharat Mission (SBM) – Clean India**
 - ✓ Launched on 2nd October 2014 & following goals and finances of the Smart City Mission are incorporated within SCPs
 - SBM component IV : Solid waste management
 - SBM component V : Information, Education and Communication (IEC) & Public awareness

- **Digital India, Skill India and Housing for All etc.**



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Liveability Index Programme

- ✓ Ministry launched a set of 'liveability standards' relevant to Indian cities in June 2017
- ✓ Subsequently, Ministry also launched Liveability index to rate 116 Indian cities on January 2018
 - ✓ List includes identified 99 smart cities and few more cities with 1 million-plus population.
 - ✓ Framework includes 24 smart city features and 79 indicators (57 Core Indicators and 22 Supporting Indicators).
- ✓ Programme would be funded by World Bank and ranking is expected by June-July, 2018
- ✓ Economist Intelligence Unit (EIU) will perform assessment of Liveability Index in alliance with IPSOS Research Private Ltd. and Athena Infonomics India Pvt. Ltd.
- ✓ Rating will help cities attain a liveable city status, and get them more investments and improve tourism.



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Smart City Standardisation

❑ Bureau of Indian Standards

✓ Civil Engineering Division Council (CEDC)

- [CED 59 \(10000\)WC](#) ('SMART CITIES - INDICATORS')

✓ Electronics and Information Technology Division Council (LITDC)

- LITDC 28 : Smart Infrastructure Technical Committee and Panel

❑ Ministry of Electronics and Information Technology (Meity)

- Working with Union Ministry (MoHUA) and Industry to support Smart City initiatives

❑ Ministry of Communication (MoC)

✓ Telecommunication Engineering Centre (TEC)

- TEC Under Department of Telecom (DoT) in this Ministry through its M2M Working groups have been working to review telecom aspects and released reports addressing various vertical and horizontal aspects of technology relevant to Smart City.

✓ Centre for Development of Telematics (C-DOT)

- Common service platform (CCSP) to make smart cities more efficient, economical and future proof

❑ Telecommunications Standards Development Society, India (TSDSI)

- Produced various technical report and continue working on Big Data, Deep Learning, Context Information Modelling etc.



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Status of Current Standards developed

- ✓ LITD 28 released a [Pre-Standardization Study Report](#) on Technical Requirements Analysis of Unified, Secure & Resilient ICT Framework for Smart Infrastructure

Work in Progress @LITD28:

- Reference Architecture for Unified Secure & Resilient ICT Infrastructure for Smart Cities
- Unified Last Mile Communication Architecture & Protocols for Smart Infrastructure
- Common Service Layer for Unified Smart Cities/Infrastructure ICT Architecture
- Unified Data Semantics, Data Models & Ontology in Smart Cities & Smart Infrastructure Paradigm
- Security & Resilience Framework
- Use Cases in Smart Infrastructure Paradigm
- Standards Inventory & Mapping for Smart Infrastructure Paradigm



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Role of SESEI in Smart City Standards

- SESEI actively engaged with standardisation process of Smart City in India
- Working closely with BIS
 - LITD 28 - Smart infrastructure Sectional Committee
 - ITS (Smart Transport)
- TEC M2M Working Group
 - Contributed effectively towards the report prepared by the TEC on M2M
- Working closely with CDOT for the promotion of Common Service Layer based on oneM2M for the Smart Cities in India
- Member of IET – IoT Panel in India and Chairs the WG on Standards, Legal & Regulatory
- Technical Synergy and collaboration with “India-EU Cooperation on ICT-Related Standardisation, Policy and Legislation: M2M/IoT - ITS, 5G and NFV/SDN
- Uses all possible Forums/ Conferences/ Meetings to share best practices and work carried out by the ESOs, 3GPP, oneM2M on Smart Cities initiatives



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Conclusion

- ✓ Concept of Smart Cities is great but lack of infrastructure & basic amenities are biggest challenges
- ✓ Government is driving the Smart Cities mission but progress is quite slow
- ✓ Smart cities need greater cooperation within national and International experts
- ✓ Strong need for Common ICT Architecture, Common Service Layer, Global Standards for the Smart Cities applications

Thank You !!!

