GCNI – CEGET Framework for Governance of Smart Cities

- Healthy Infrastructure
- Urban Mobility
- Smart Grid
- Energy Efficiency
- Internet of Things
- Smart Security
- Inclusive Growth
- Water for All
- Smart Security
- Education for All
- Environment Friendly
- Smart Grid
- Internet of Things
- Water for All
- Inclusive Growth
- Energy Efficiency
- Internet of Things
- Water for All
- Inclusive Growth
Acknowledgment

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Disclaimer

This publication is intended strictly for the purposes of knowledge transformation.

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GCNI – CEGET Framework for Governance of Smart Cities
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<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>CEGET</td>
<td>Centre of Excellence for Governance, Ethics and Transparency</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>EOI</td>
<td>Expression of Interest</td>
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<td>EPC</td>
<td>Engineering Procurement and Construction</td>
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<td>GCNI</td>
<td>Global Compact Network India</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Products</td>
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<tr>
<td>GST</td>
<td>Goods &amp; Service Tax</td>
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<td>JICA</td>
<td>Japan International Corporation Agency</td>
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<tr>
<td>M &amp; E</td>
<td>Monitoring &amp; Evaluation</td>
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<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>MoUD</td>
<td>Ministry of Urban Development</td>
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<td>NDMC</td>
<td>New Delhi Municipal Corporation</td>
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<td>O &amp; M</td>
<td>Operation &amp; Management</td>
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<td>POC</td>
<td>Proof of Concept</td>
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<tr>
<td>PPP</td>
<td>Public-Private Partnership</td>
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<td>PSC</td>
<td>Pune Smart City</td>
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<td>PSCDCL</td>
<td>Pune Smart City Development Corporation Limited</td>
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<td>QCBS</td>
<td>Quality &amp; Cost Based Selection</td>
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<td>RFP</td>
<td>Request for Proposal</td>
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<td>SCM</td>
<td>Smart Cities Mission</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goal</td>
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<tr>
<td>SPV</td>
<td>Special Purpose Vehicle</td>
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<tr>
<td>SWOT</td>
<td>Strength, Weakness, Opportunity and Threat</td>
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<td>ULB</td>
<td>Urban Local Body</td>
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<td>UNGC</td>
<td>United Nations Global Compact</td>
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<tr>
<td>USTDA</td>
<td>United States Trade and Development Agency</td>
</tr>
<tr>
<td>WBS</td>
<td>Work Breakdown Structure</td>
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</table>
The 10 pillars of GCNI-CEGET Framework for Governance of Smart Cities runs through the entire chain of the project implementation and supporting structures as depicted in the Figure below.

1. Establish definition of Smart City with all Services, Solutions and Products
2. Develop Smart City Components, Master Plan and Roll out plan
3. Align with Existing Guidelines and Best Practices
4. Define and develop sustainable Business/Financial Models/Clarity on funding options and plans
5. Define and Establish Decision making structures, Responsibility matrix and Accountability with SPV framework
6. Establish Procurement policies and guidelines, Define Procurement Process and Effective compliance models
7. Establish clear monitoring and evaluation system - Framework and parameters against timelines and deliverables
8. Build Capacity of the SPV Officials and Use Project Management Consultant for support
9. Enable and Ensure extensive industry participation in smart cities with clear deliverables and milestones
10. Encourage participation and innovation by local industry/Encourage entrepreneurship
Executive Summary

In recent decades, the world has experienced unprecedented urban growth. According to the Report of the Secretary-General “Progress towards the Sustainable Development Goals”, in 2015 close to 4 billion people — 54 per cent of the world’s population — lived in cities and that number is projected to increase to about 5 billion people by 2030. Rapid urbanization has brought enormous challenges, including growing numbers of slum dwellers, increased air pollution, inadequate basic services and infrastructure, and unplanned urban sprawl, which makes cities more vulnerable to disasters. Better urban planning and management strategies are needed to make the world’s urban spaces more inclusive, safe, resilient and sustainable. As of May 2017, 149 countries around the world were developing national-level urban policies.

The Centre of Excellence for Governance, Ethics and Transparency (CEGET) at the United Nations Global Compact Network India (UN-GCNI) has been playing a leading role in promoting governance and ethics in business. Since September 2015, CEGET has been committed to establishing a robust framework of governance and transparency in the Smart City Mission of Government of India. The Governance Framework for Smart Cities, developed by CEGET, emerged as an outcome of a consultative process that was facilitated in five cities viz. Visakhapatnam, Lucknow, Pune, Bhubaneswar, and Ranchi (from October 2015 to March 2016) and the process culminated at a National Consultation on Smart Cities in New Delhi in April 2016.

In the process that was followed CEGET derived intervention strategies through linking the Sustainable Development Goal 11 (Sustainable Cities and Communities), Goal 16 (Peace, Justice and Strong Institutions) and Goal 17 (Partnerships for the Goals) for effective development of the new urban agenda in India. (Annex 2 presents the complete list of targets and indicators for SDG 11).

CEGET OBSERVATION

What emerged was that a robust system for governance and transparency would necessitate a focused plan for implementation of the various smart city initiatives, which in turn needs to be backed by a strong process flow and system of policy, guidelines and compliances along

Key Commitments of The New Urban Agenda set by the Habitat III additionally state that:

- Ensure that all citizens have access to equal opportunities and face no discrimination
- Take action to address climate change by reducing their greenhouse gas emissions
- Promote measures that support cleaner cities
- Improve connectivity and support innovative and green initiatives
- Fully respect the rights of refugees, migrants and internally displaced persons regardless of their migration status
- Promote safe, accessible and green public spaces
- Strengthen resilience in cities to reduce the risk and the impact of disasters
- Provide basic services for all citizens
with clear definition of structure, accountability and deliverables. Implementations never run as smoothly, so adopting a process framework seemed crucial to overcome challenges in organizational alignment, governance, and implementation. CEGET is piloting this framework in Pune city through a five-year Memorandum of Understanding with Pune Smart City Development Corporation Limited (PSCDCL).

Whilst the governance framework was implemented in Pune, CEGET realised that it would be optimal to share the learnings from its smart city intervention process with other cities, and hence the idea emerged to develop a Proof of Concept for the Business Case for Governance of Smart Cities. This document is evidence of that journey.

This document shares the New Urban Agenda that nations across the globe have committed to, including India, and links it to the Smart City Mission of Government of India. The GCNI – CEGET Framework for Governance of Smart Cities presented in this document enumerates 10 key pillars that are required for effective governance, with an estimated time line for each pillar so that the delivery of the mission is on track. The Framework also shares the key performance indicators of evaluation for the 10 pillars as well as targeted outputs for each of the pillars. The document additionally lists the challenges and recommendations, as well as benefits of the framework for different stakeholders.

This framework will benefit city, state and central government as well as businesses participating in Smart Cities projects. This framework will ensure governance and transparency at every stage of smart city projects which in turn encourage more national and international businesses to invest and bid for projects. Specific benefits are enumerated on page 22 of this document.

This Proof of Concept has emerged from a grounded process of ten months and its pilot testing for another twelve months. There is a lot of learning yet to be garnered and the organic way in which different cities will adopt this framework would further enhance its implementation and contribute to the development agenda of India. A lot of innovation and creativity will be required whilst taking this document forward.

Shabnam Siddiqui
Director, GCNI-CEGET
Snapshot of Smart City Mission In India

Smart Cities Mission was launched by the Government of India in June 2015 with a vision to develop 100 cities all over the country making them citizen friendly and sustainable. The strategic components of area-based development in the Smart Cities Mission are City Improvement (Retrofitting), City Renewal (Redevelopment) and City Extension (Greenfield development) plus a pan-city initiative in which smart solutions are applied covering larger parts of the city. The Ministry of Urban Development (MoUD) is the nodal agency responsible for implementing the mission, in collaboration with the state governments of the respective cities. A total of ₹98,000 crores (US$15 billion) has been approved by the Indian Cabinet for development of these 100 smart cities. Each city is to create a Special Purpose Vehicle (SPV), registered under the Companies Act, 2013 that will operate as a corporate entity. The SPV is to be led by a full-time CEO who will be entrusted with the task of implementing the smart city mission. The execution of projects may be done through joint ventures, subsidiaries, public-private partnership (PPP), turnkey contracts, etc. suitably dovetailed with revenue streams. Center and state government will provide INR 1,000 Crore funding to the company, as equal contribution of INR 500 crore each. The company would have to raise additional fund from the financial market as a debt or equity.

The smart city mission envisions developing an area within 100 cities in the country as model areas, based on an area development plan, which is expected to have rub-off effect on other parts of the city and nearby cities and towns. Cities competed in a countrywide smart cities competition for selection in this mission. As of June 2017, 89 cities out of planned 100 cities have been selected.

The critical element of the Smart City initiative is citizens planning and interpreting smartness, and every city has its own definition of smartness. All selected cities have created the SPV as a public-sector company to which city councils have delegated many of their rights. The SPV is responsible for raising money from debt and equity market in addition to utilising the grant and aid provided by the state and central governments. However, progress on the ground is slow as there have been no foreign or private sector investments in the SPV as yet.

If a city selected for the smart city mission does not complete tasks within the set time frame or fails to meet deadlines set by the urban development ministry, it will lose future financial support and be replaced by another city.

Sixteen smart cities have prepared to list their Municipal Bonds in stock markets as civic bodies, with Pune’s Rs 200-crore municipal bonds issue being listed in Bombay Stock Exchange on June 22, 2017. 15 other smart cities have appointed transactional advisers, and will hit the market soon. These include Jaipur, Jabalpur, Ahmedabad, Visakhapatnam, Indore, NDMC, Kakinada, Udaipur, Bhopal, Warangal, Kota, Bhiwadi, Kishangarh, Greater Hyderabad Municipal Corporation (GHMC) and Panaji.

Updated information on the Smart Cities Mission is available on http://smartcities.gov.in
GCNI CEGET Framework for Governance of Smart Cities

- A Proof of Concept

The 10 pillars of GCNI-CEGET Framework for Governance of Smart Cities runs through the entire chain of the project implementation and supporting structures as depicted in the Figure below.

Since monitoring and evaluation is a key success factor for any such framework to be implemented, evaluation at each stage needs to be ensured for smooth functioning of the framework, as well as for self-learning abilities within the mechanism, which shall make the framework more robust. Thus, performance indicators for each stage of the framework have been outlined in this Proof of Concept document.

The framework additionally enumerates the measurement of target and output whilst implementing smart city initiative to facilitate course correction. Finally, an effort has been made to list down the challenges that need to be tackled right at the implementation initiation stage.
Establish definition of Smart City with all Services, Solutions and Products

It is essential to have a broad definition of a 'Smart City' with its different parameters and components, around which each city can come up with its own definition depending on the level of development, aspiration and resources, as well as willingness to change.

To provide for the aspirations and needs of the citizens, urban planners ideally aim at developing the entire urban eco-system, which is represented by the four pillars of comprehensive development - institutional, physical, social and economic infrastructure. This can be a long-term goal and cities can work towards developing such comprehensive infrastructure incrementally. This is important to create a clear understanding in the minds of the government agencies, stakeholders and citizens, who will be involved in the implementation of the smart city project.

<table>
<thead>
<tr>
<th>Key Elements</th>
<th>Performance Indicators</th>
<th>Targeted Output</th>
</tr>
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<tbody>
<tr>
<td>• Define the scope of the smart city development in the context of the status of development and availability of infrastructure in the city.</td>
<td>• Specific definition of Smart city based on city dynamics developed.</td>
<td>• The city has a comprehensive development plan, which seeks convergence of services / solutions/ systems for inclusion of institutional, physical, social and economic infrastructure.</td>
</tr>
<tr>
<td>• Specify types of products, services and solutions that fall within the scope and ambit of the procurement processes specific to the city.</td>
<td>• Smart ways to use information technology innovated.</td>
<td>• The city has a master plan for the city that integrates smart solutions.</td>
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<tr>
<td></td>
<td>• Smart solutions defined and explained clearly. Few of these can be described as below:</td>
<td>• The city has a clearly stated Vision and Mission.</td>
</tr>
<tr>
<td></td>
<td>– E-Governance and Citizen Services</td>
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<td></td>
<td>– Waste Management</td>
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<tr>
<td></td>
<td>– Water Management</td>
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<tr>
<td></td>
<td>– Energy Management</td>
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<td></td>
<td>– Urban Mobility</td>
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</tbody>
</table>

Challenges

• Any missing stakeholder in this process may lead to the development of a flawed definition, which could result in projects not being aligned with the needs of the city.
• May face challenges when operationalizing and implementing the services and smart solutions as defined in the comprehensive city development plan/ city master plan.
• May prove to be difficult to ensure provision of services, as envisioned at the time of planning.
• Integrating services and smart solutions into the master plan for the city would involve working with different governance systems, which could be challenging.
Develop Smart City Components, Master Plan and Roll out plan

Master Planning based on conventional principles has led to a static built environment, which is largely disconnected from the rapidly changing socio-economic conditions in the urban areas of India. To overcome this disconnect, State Governments resort to changing land use and building regularization schemes to legalize buildings/land use in contravention of existing Master Plans. Such frequent amendments to land use/building regulations, even if justified, have unintended detrimental consequences that include encouraging frequent violations of regulations, opening opportunities for rent seeking, making advance infrastructure planning impossible, requiring expensive retrofits and redevelopment programs leading to revenue shortfalls for cash-strapped urban local bodies and preventing innovation in building designs.

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<tr>
<th>Key Elements</th>
<th>Performance Indicators</th>
<th>Targeted Output</th>
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<tbody>
<tr>
<td>• Make a comprehensive plan, based on city needs, detailing out all smart city components with roll out plan along with timelines and investments, with details on operations and maintenance.</td>
<td>• Current status of the infrastructure available as well as future needs of the city documented in the form of a report. • A practical and responsive Master plan focused on core infrastructure elements and Smart solutions for various sectors developed and implemented. • SWOT analysis of the city conducted. • Project mentioned in the master plan to be sustainable and viable for minimum 10 to 15 years.</td>
<td>• The city master plan provides details on the city profile, Area based proposals, Pan city proposals, Implementation plans, as well as the Financing plans. • The City profile includes information for enhancing the efficiency of the city, the vision and mission for smart city as well as strategies for involving citizens and industry experts. This forms the base for designing of other components of master plan and is formulated with inputs from all stakeholders. It focuses on developing practical and realistic solutions for each city. • The SWOT analysis provides a holistic view on the development of city and creates strategies to mitigate weakness and to convert opportunities into reality.</td>
</tr>
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</table>

Smart city Master Plan will have following areas:

• City Profile
  Quality of life, Administrative efficiency, SWOT, Strategic focus and blueprint, city vision and goals, citizen engagement.

• Area Based Proposal
  Key components, Smart urban form/solutions, Convergence agenda and its implementation, Risks, Success factors, Measurable impact.
### Key Elements vs. Performance Indicators vs. Targeted Output

<table>
<thead>
<tr>
<th>Key Elements</th>
<th>Performance Indicators</th>
<th>Targeted Output</th>
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</table>
| **Pan city Proposal**  
Demand assessment, inclusion, frugal innovation, risk mitigation, convergence area, convergence implementation, Success factors, Benefits delivered, Measurable impact. | **Implementation Plan**  
Plan, Scenarios, SPV details, Stakeholder roles, convergence, Public Private Partnership framework. | **The area and pan city based proposal defines approaches and methodology for development of all core components of the smart city including infrastructure, smart solutions, their integration and implementation as well as delivery of services and impact of these.**  
**The definitive financing plan for each smart city includes sources of funds revenue generation strategies, costing and provision for Operation and Management to ensure effective implementation of the master plan.** |
| **Implementation Plan**  
Plan, Scenarios, SPV details, Stakeholder roles, convergence, Public Private Partnership framework. | **Financing Plan**  
Itemized cost, Resources plan, costs, Revenue and Pay back, Recovery of Operation and Management, Financial timeline, fall back plan. | |
| **Financing Plan**  
Itemized cost, Resources plan, costs, Revenue and Pay back, Recovery of Operation and Management, Financial timeline, fall back plan. | | |

### Challenges

- Creating the Master plan in such a manner as to ensure sustainability of all projects considering the fluctuating/growing population, and evolving technologies will be challenging. The growth of a city too can be unexpected, and this may cause roadblocks.
- Sustainability should be an integral part of the design, implementation, O & M stages of projects. However, ensuring sustainability at every stage can be a challenge due to financial and operational viability.
- City dynamics change at a rapid pace over a short period as do the needs of city. The journey from master plan to implementation could be phased out so that the changing needs can be incorporated.
- Area-based and pan-city proposal will be a large aspect of master plan. There may be times when citizens groups raise objections to certain aspects of a project which may then need to be reworked. The delays caused need to be factored into the city plan.
- Defining Stakeholders role at start of the project could be difficult as these roles may change with time and across different scenarios.
- Investment plans and all corresponding costs for projects are projected in master plan these costs can change due to various factors like inflation, demand for product, etc.
- Revenue generated from operation of different services is forecasted as per various factors at that time, these factors will change over a period of operation of services, which will change revenue generated from operation of services.
Align with Existing Guidelines and Best Practices

Every smart city, for its operation and sustenance, needs a set of guidelines and best practices as per the dynamics of the city. State and central government, as well as municipal corporations can have different guidelines, hence it is essential to define/align it for the city.

In addition to existing guidelines, international best practices can also be incorporated in this framework. For every smart city, details of various processes under this framework need to be customized.

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<tr>
<th>Key Elements</th>
<th>Performance Indicators</th>
<th>Targeted Output</th>
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</thead>
<tbody>
<tr>
<td>Guidelines</td>
<td>• Guidelines developed for statutory compliance for SPV under Companies Act, 2013 including SPV formation and roll out.</td>
<td>• Inclusion and alignment of guidelines ensures compliance and adherence to smart city directives.</td>
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<td></td>
<td>• Guidelines for PPP framework developed. These to cover all aspects of PPP projects including identification of projects, Feasibility study, Procurement, final approval and award, contract management as well as monitoring and exit strategy.</td>
<td>• PPP framework and its corresponding accounting framework for grantor and concessionaire boosts confidence of private entities.</td>
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<tr>
<td></td>
<td>• Corresponding accounting framework for grantor and concessionaire charted.</td>
<td>• Factoring in effect of GST and other taxation on various projects leads to a reduction in the cost of implementation and service to be offered (change of cost due to input tax credit in GST).</td>
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<td></td>
<td>• Guidelines developed and aligned for procurement of goods and services.</td>
<td>• Best practices are used to align the framework to make framework reliable and transparent. Best national and international practices are adopted resulting in the smooth implementation of smart city project.</td>
</tr>
<tr>
<td></td>
<td>• Guidelines for GST and other taxation policies aligned with the PPP/ accounting framework.</td>
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<td></td>
<td>• Best practices included in framework.</td>
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<tr>
<td>Global Best Practices</td>
<td>• Feasibility study, Existing and planned services capability</td>
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<tr>
<td></td>
<td>• Risk analysis, mitigation and allocation</td>
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<td></td>
<td>• Monetization of projects</td>
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<tr>
<td></td>
<td>• Decision making Structure, Responsibility matrices</td>
<td></td>
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<tr>
<td></td>
<td>• Stakeholder management</td>
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</table>

Challenges

• Alignment with all statutory compliances, GST and other taxes, Companies Act, 2013, will require experts in particular fields.
• Alignment or preparation of sector wise PPP framework will require PPP experts.
• The implementation of the PPP framework may be challenging.
Define and develop sustainable Business/Financial Models/Clarity on funding options and plans

The Smart City project is a technology, infrastructure and capital-intensive one. At the outset, the project should be viewed as an economically viable project with a long term, sustainable socio-economic impact. Traditional funding mechanisms are not likely to meet the extensive funding requirement of the development plan. There is need for extensive private sector involvement in the implementation and therefore, a strong business and financial model should be established to attract investments.

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<th>Key Elements</th>
<th>Performance Indicators</th>
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<tr>
<td>• Need for developing economically viable and sustainable financial models for various types of implementation strategies clearly defining the mode, such as Public Private Partnerships (PPP) / Engineering Procurement and Construction (EPC) along with source of funding i.e., Government/multi-lateral funding etc. and execution model.</td>
<td>• Business model/s evaluated against all essential components.</td>
<td>• Assessment of gaps between existing and planned capability helps in planning strategies for project implementation.</td>
</tr>
<tr>
<td>• Such Business models to emphasize on best procurement practices along with focus on capabilities expected as well as life cycle of projects over longer term.</td>
<td>• Guidelines for Risk mitigation and allocation developed and rolled out for projects.</td>
<td>• Feasibility study includes technical feasibility and positively impacts project execution, identification, mitigation and allocation of risks.</td>
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<td></td>
<td>• All financial statements included in every financial model.</td>
<td>• Detailed financial model brings about clarity in funding pattern, estimation about end usage of services, for some projects monetization details, O &amp; M costs as well as provisioning and depreciation of assets.</td>
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<td></td>
<td>• All projects made sustainable.</td>
<td></td>
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<tr>
<td></td>
<td>• Conceptualization of projects includes strategies for integration of smart solutions, monetization plan, implementation and design strategy making the planning and implementation processes more effective.</td>
<td></td>
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</tbody>
</table>
Key Elements  | Performance Indicators  | Targeted Output
--- | --- | ---
- This model must be supported with clear guidelines on access to central / state level funding, timing of funding, uses of funding and process by which these funding can be accessed for smart city projects. Also, guidelines for understanding funding for different purposes from global institutions like World Bank, USTDA, JICA, ADB etc., must be developed. | - All components of financial model flow through financial plan i.e. P&L, Balance sheet and Cash flow. This provides clear indication as to the financial viability of the project. - Financially unviable, but socially important projects defined for planning of appropriate implementation. - Economic viability of projects and Value for Money analysis carried out. |

**Business or Financial Model to cover the following major areas:**
- Strategic Planning for Project
- Assessment of Existing and Planned service capability
- Pre-feasibility Study
- Feasibility Study of the Project
  - Market Analysis and Project Scope
  - Need Analysis
  - Option Analysis
  - Technical feasibility
  - Risk Studies
  - Financial Viability
    - Economic feasibility
    - Value for Money analysis
- Risk Identification, mitigation and allocation
- Timelines for various stages of project
- Various funding options for Project with repayment strategy
- Revenue generated from operation of project
- Allocation of cost towards Operation and maintenance of project

All the project calculations must be done, taking in account, sustainability for multiple decades.

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<th>Challenges</th>
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<tr>
<td>- Business model / financial models are generally developed on current scenarios and information; however, these projects are generally operated for long periods, during which many variables may change. - Introduction of new technology in every sector could be challenging, as costs for the project may increase significantly. Moreover, implementation itself could also be challenging. - Risk factors can change over a period requiring the development of new strategies for identification and mitigation of risks. - Timelines for various projects may be affected due to different financial situations in country as well as in different natural conditions.</td>
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5
Define and Establish Decision making Structures, Responsibility matrix and Accountability with SPV framework

The fulcrum of power and decision making for the smart cities scheme is at city-level, while the state and central government play ‘support’ roles. This calls for laying a roadmap to empower local governments and incentivising state governments to support cities with increased capacity, faster decision-making, accountability and increased autonomy.

The Smart City project is to be implemented by special purpose vehicles (SPVs), registered under the Companies Act. One of the reasons for setting up SPVs in smart cities is to ensure objective and efficient decision making, independent of municipal councils, which are subject to local politics. In practice, it has been observed that there is often lack of clarity about the SPVs responsibilities and powers, and lower than adequate allocation of manpower and funds to SPVs. This often leads to a situation in which the state government and ULBs run the show from behind the curtains. This further strengthens the case for having responsibilities defined based on pre-emptive forecasts.
### Key Elements

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<tbody>
<tr>
<td>- Clearly specified/delineated decision-making structure/s established and responsibility matrices created that cover everyone in organizational chart (for all stakeholder groups).</td>
<td>- Newly formed SPVs perform various functions of Smart city including stakeholder management and those related to execution of projects.</td>
</tr>
<tr>
<td>- Decision making process in case of emergency situations developed and rolled out.</td>
<td>- The roll out of new decision-making structure facilitate the chain of decision making based on criticality of work, and amount of funds involved. Proper delegation of authority at different levels of decision making speeds up the processes.</td>
</tr>
<tr>
<td>- Periodic assessments conducted of - time taken for decision making process - responsibility assigned vs. executed by individual stakeholders</td>
<td>- Pre-defining of responsibility for every position assists in the day today functioning of SPV as well as in the implementation of projects at all stages.</td>
</tr>
<tr>
<td>- Systems set up to ensure sustainability with respect to all projects.</td>
<td>- The clear and specific definition of roles and responsibilities results in all assigned work being completed within the given time frame, and holds people accountable for defined work.</td>
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</table>

### Challenges

- Developing the decision-making structure will be complex as SPVs have many stakeholders. Defining the day to day activities for each group of stakeholders will be a difficult task.
- Similarly, developing responsibility matrices and ensuring accountability for every stakeholder of a SPV will be challenging due to the large number of stakeholders involved.
Establish Procurement policies and guidelines, define procurement process and Effective compliance models

Smart City SPVs work to develop innovative Procurement Policy as well as Compliance Models that encourage participation of Start-ups in the Smart City Projects and promote enterprises in the field of hospitality, training and capacity building, entrepreneurship development centres etc. The Smart Cities Program focuses on the delivery of services and outcomes. Hence, procurement may take the form of service and performance-based contracts rather than the form of goods based procurement. Furthermore, it is imperative to design and implement rules, institutions and practices that prevent and penalize corrupt behaviour, thereby enhancing transparency in decision-making and in enforcing compliance.

<table>
<thead>
<tr>
<th>Key Elements</th>
<th>Performance Indicators</th>
<th>Targeted Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement policy of various material and products for completion of projects should ensure following:</td>
<td>• Procurement policies and guidelines followed from inception till the completion of the process / activity / project.</td>
<td>• The roll out of procurement mechanisms as per the guidelines results in timely delivery of projects (processes followed or time taken for procurement process).</td>
</tr>
<tr>
<td>• It should adhere to legalities like anti-corruption, taxation etc.</td>
<td>• Website for E-procurement evaluated.</td>
<td>• Well defined procurement policies and processes lead to reduction of corrupt / ambiguous practices.</td>
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<tr>
<td>• Ethically and socially accountable and environmentally auditable.</td>
<td>• Economical effectiveness of procurement policy assessed.</td>
<td>• Procurement policies define processes to be followed for each category of goods and services ensure transparency, which in turn increases participation of larger numbers of national and international companies.</td>
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<tr>
<td>• Economically effective.</td>
<td>• Risk Mitigation due to Procurement Policy and Compliance Modules documented based on evidence.</td>
<td>• The adoption of E-procurement in all projects leads to a reduction of costs and a more equitable system for all parties involved.</td>
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<tr>
<td>• Conducive to maintaining SPVs ability to exploit appropriate technology,</td>
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<td>commercial and organizational development as they arise.</td>
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<tr>
<td>• Capable of identifying, minimising and managing risks that can impact</td>
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<tr>
<td>procurement process and supply chain.</td>
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<tr>
<td>• It should continuously be improved in terms of processes, approach etc.</td>
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</table>
### Key Elements

**State Government and Smart Cities may choose to do the following:**
- The State Government should put in place clear procurement policy for all smart city related activities.
- The procurement processes must be defined for different models of implementation, highlighting the differences between the models.
- An active website should be created to document master plan of city, procurement processes along with approved procurement policy.
- The tendering system and PPP / EPC processes should be package specific based on components of the package and value. It must be developed with the assistance of expert consultant well versed with procurement practices of various models so that the documents are clear and transparent with no ambiguities.
- A well-defined system of existing laws and compliances with well-defined procurement practices and compliances would act as an effective system of monitoring and managing compliances.

### Performance Indicators

- Integration of procurement policies from Municipal Corporation, State Government and Central Government is a time consuming and challenging task.
- To ensure that all procurement process is online and that E- procurement should be done for all projects, it is essential to set up a working website. Trouble shooting systems also need to be set up to deal with technical issues that may occur during in E-procurement process. Qualified and trained staff needs to be available for this.

### Targeted Output

- The new procurement policies and processes lead to visibility of spending, increase in productivity, control over all procedures. The maintenance of records and data related to procurement makes these readily available for future references.
- A transparent and clear bidding document attracts larger participation from interested companies / consortia in the tendering process.

### Challenges

- Integration of procurement policies from Municipal Corporation, State Government and Central Government is a time consuming and challenging task.
- To ensure that all procurement process is online and that E- procurement should be done for all projects, it is essential to set up a working website. Trouble shooting systems also need to be set up to deal with technical issues that may occur during in E-procurement process. Qualified and trained staff needs to be available for this.
7 Establish clear monitoring and evaluation system – Framework and parameters against timelines and deliverables

The goal of Smart Cities Mission is to create cities that provide core infrastructure and provide quality life to their citizens with a clean and sustainable environment through the application of ‘smart’ solutions. However, the guidelines, structure, and implementation of the Smart Cities project raises concerns regarding the inclusivity and transparency of these projects, as well as the ability of citizens to hold those responsible for the projects to account. This pillar aims at providing methods for monitoring, accountability and transparency. It explores ways of monitoring and creating authentic public participation. Additionally, it provides a guide to evaluate currently proposed projects specifically focused on their efforts to engage with and reflect citizen needs and concerns.

**Key Elements**

- Based on the scope, roll out plan, responsibility allocation and business models defined previously, a Monitoring and Evaluation system (M&E) should be developed. The system to cover the following aspects:
  - Break down each of the planned projects into time-based targets, with appropriate responsibility and quality evaluation metrics, with different weights being given to different parameters. This will emanate from a more detailed breakdown of the Master Plan and Roll-out plan.
  - Create a dashboard in which all these details are documented, and can be readily updated by the stakeholders during the evaluation cycles.
  - Conduct periodic evaluations by collecting data through the dashboard as well as face-to-face meetings and inspections to:
    (a) Assign a score or a rating based on project progress,
    (b) Understand the reasons behind delays/lack of quality and address those issues, and
    (c) Understand updated details on the plans for the next period.
  - Develop an internal system for redressal of issues related to critical delays, which parties can flag as the project progresses, without waiting for the next evaluation cycle.

**Performance Indicators**

- Monitoring and Evaluation system developed and rolled out for all projects and processes.
- Mid-term evaluation conducted at regular intervals.

**Targeted Output**

- Monitoring and evaluation (M & E) system ensure assessment of project on actual vs. targeted timeline, quality of services, communication and responsiveness as well as project and contract management.
- The M & E data is used to improve performances and activate (in future) internal and external accountability of resources used and result obtained for making informed decisions related to the future of the initiatives.
- M & E system increases the efficiency of work across projects resulting in an increase in percentage of work completion within the given timeline.

**Challenges**

- M & E system formulation and implementation will be a huge challenge as M & E for every project will require detailed process layouts.
- M & E should measure impact; not only process and outcomes, different kinds of interventions will require different evaluation tools and methods. It is often difficult to determine specific contributions of individual institutions or strategies to an observed outcome or impact.
- Interpreting data from M & E require significant expertise, and this may not be available in-house.
Build Capacity of the SPV Officials and Use Project Management Consultant for support

Capacity building and handholding of SPVs, State and ULBs is an important parameter for the Smart Cities. This includes developing and retaining a best practice repository (Model RFP documents, Draft DPRs, Financial models, land monetization ideas, best practices in SPV formation, use of financial instruments and risk mitigation techniques) and mechanism for knowledge sharing across States and ULBs (through publications, workshops, seminars). Furthermore, the appointment of a Project Management Consultant for the smooth process flow is a vital element for this mammoth exercise.

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<tr>
<td>Smart city involves not only multi-level project execution of a large number of categories but also development of backend systems on monitoring and evaluation, and legal and procurement related compliances. Knowledge and experience in roll-out strategy, anticipation of likely challenges and formulation of potential solutions are an absolute necessity at the SPV/State government level, rather than a complete outsource to an external consultant. This can be accomplished through:</td>
<td>• Training modules for end to end planning and strategies developed and rolled out. • Training module for business model, PPP project, technical aspect of the project, software system developed and rolled out. • Training modules to cover all aspects of subject developed and rolled out. • Capacity of stakeholders strengthened through the training programs.</td>
<td>• Stakeholders receive the necessary information to improve their knowledge and capacity on planning, strategizing, conceptualization and implementation of projects. This training enables them to overcome challenges and operate the project more effectively. • Capacity building of the stakeholders provides clarity on the differing dynamics of PPP projects from EPC projects in areas like procurement, revenue generating models, exit strategy, feasibility study, post contract management activities, concession agreement etc. • This information facilitates the SPV/government in the execution and implementation of projects. • Capacity building minimizes over-reliance on outside experts as source of knowledge, resources and solutions to community issues. • The appointment of a project management consultant enables smooth functioning and management of all projects including conceptualization, RFPs, evaluation of bids, procurement, implementation, operation (revenue generation in some cases) and maintenance, post contract management activities etc.</td>
</tr>
<tr>
<td>• Smart City workshops on end-to-end planning and execution including roll-out strategies and challenges. • Training on Business Models and implementation like PPP, EPC etc. with active industry participation. • Setting up advisory and technical committees to develop technical specification and standards and development of process to incorporate them in tendering process. • Training on the software systems and packages on procurement monitoring, statutory and legal compliances, and procurement compliances so that internal capability and resources are created at the SPV level. Project management consultants, other consultants and other stakeholders will support the capable and trained team of SPV officers and plan to develop the key capabilities during the process of implementation.</td>
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Challenges

- It is necessary to balance the capacity in technical skills as well as soft skills in the capacity building trainings.
- Assessing the impact of capacity building is also essential.
Enable and Ensure extensive industry participation in Smart cities with clear deliverables and milestones

Industry participation is the key to success of smart city projects. Greater involvement of the private sector in the delivery of services is another instrument, as it enables higher levels of efficiency (this should be the prime motive for using the private sector rather than just tapping financial resources) and the Government can tap on to the private sector’s capacity to innovate. Extensive industry participation with clear deliverables and milestones in place will be the real clincher in the success of the Smart Cities Mission.

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<td>Success of smart city initiative depends on the extent of participation and commitment of the industry. This should be done by:</td>
<td>• Representatives from industries included in different projects as experts and their contributions to the project given due value.</td>
<td>• The involvement of industry experts in various projects from conceptualization of project, provides city specific insights and solutions increasing the economic and technological benefit of the projects to the city.</td>
</tr>
<tr>
<td>• Inclusion of key industry representative members in the Smart City Task forces to enable knowledge sharing and receiving specific inputs in their area of expertise.</td>
<td>• Participation of industry experts in various projects determined based on deliverables mentioned to achieve in specific period.</td>
<td>• Industry experts provide timely information on applicability and utility of new technologies.</td>
</tr>
<tr>
<td>• Engaging industry experts in conceptualization of the projects with innovative ideas for project.</td>
<td>• The private sector adheres to milestones and timelines.</td>
<td>• Industry experts provide inputs on procurement, technical specifications for project making it technically viable and executable.</td>
</tr>
<tr>
<td>• For every project, a team of industry experts should be appointed, which will help in deciding the scope of project, new approaches and will also suggest how innovative ideas should be implemented.</td>
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<td>• Industry experts resolve/provide technical solutions for the unique challenges that may arise.</td>
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<td>• Inclusion of key responsibilities, quality parameters, timelines and delivery of the implementing industry agencies in the roll-out plan, to enable smooth execution and monitoring.</td>
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Challenges

- Identification of industry experts may prove to be a challenge; it is equally critical to avoid conflict of interest in execution of such projects.
- Industry experts may be reluctant to get involved in the projects due to the levels of bureaucracy involved in projects.
- Time constraints and availability of experts for attending meetings will always be a practical challenge, and the city may look at innovative methods of opinion/information collection.
Encourage participation and innovation by local industry, Encourage entrepreneurship

Encouragement of local innovation is an important pillar on which smart cities will rest. In a technology-intensive future, job creation and GDP growth will depend on the steady incubation of new, innovative companies that can scale and go global. Cities should encourage start-ups that focus on solving urban challenges like traffic, crime, energy conservation, etc. by leveraging technology.

To enable an innovation economy focused on urban service apps, a city may choose to establish open data standards for various urban departments, ensuring entrepreneurs having access to data on public transportation, energy use, traffic, crime, etc., in order to create valuable data-driven apps for citizens.

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<td>Smart city development will create several related opportunities that can be used as triggers for local entrepreneurial development. To allow for this, a robust ecosystem that encourages innovation and entrepreneurship must be created at the city level. Some aspects to consider are:</td>
<td>• New innovative solutions developed by local industry and entrepreneurs.</td>
<td>• Local industries provide a unique perspective while conceptualizing, implementing and operating the project, and overcome different challenges resulting in economic benefits to the city.</td>
</tr>
<tr>
<td>• The ecosystem must create a strong link among incubators, entrepreneurs, PE firms and venture capitalists.</td>
<td>• Participation by local industry players and entrepreneurs encouraged.</td>
<td>• In Smart solution industries, various entrepreneurs develop new solutions to integrate with various projects.</td>
</tr>
<tr>
<td>• Local industry has more knowledge about which new concepts will work in the city and which will not work, participation of these entities in form of consortium with major entities in the project.</td>
<td>• Opportunities provided to local industry and entrepreneurs.</td>
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<tr>
<td>• Industry can support establishment of a National Centre of Excellence for Smart Cities, which would provide incubation opportunities, encourage R&amp;D and establish a system of smart city best practices. Participation of Industry, academia, expert agencies, funding institutions etc. would make the smart city mission, a very vibrant and successful initiative of the government.</td>
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Challenges

• Ease of doing business is a challenge; it is difficult to encourage more entrepreneurs and local industry to participate in projects.
• Entrepreneurs might find it difficult to start business with innovative ideas within the stipulated period.
Benefits of Framework for Governance of Smart Cities

This framework will benefit city, state and central government as well as businesses participating in Smart Cities projects. This framework will ensure governance and transparency at every stage of smart city projects which in turn encourage more national and international businesses to invest and bid for projects.

For Citizens

- Feeling of inclusiveness amongst citizens as citizens from every locality will be asked to raise issues faced by them, and these will be taken into consideration while preparing a master plan for the city.
- Master plan will provide citizens an idea as to the various projects and the smart solutions to be implemented across the city.
- Alignment with guidelines and best practices will benefit all stakeholder involved as citizens will know that all guidelines and best practices are followed by the SPV (Special Purpose Vehicle). SPV will be able to implement project within their timelines.
- Decision making structure and responsibility matrices will enable projects to run smoothly and decision making will be faster than usual, which will ensure sustained interest of citizenry in the initiative.
- Citizen can look forward to non-corrupt procurement process, as procurement policies and process will be defined and implemented as per this framework.
- Procurement process will be economically effective, which in turn will save money of tax payers, which can be invested in different projects.
- Local industry participation will ensure a better focus on solving citizens’ issues as local industry can understand them better.

For Government Entities

- Citizens’ aspirations, needs and suggestions from urban planner will be beneficial for smart city definition. Citizens’ suggestions will be included in smart city plan, which will benefit planning of various services for city.
- Current status of city development and needs of city are identified for smart city plan.
- Master plan will have detailed information about city profile. The inclusion of area based proposal, city based proposal, pan city proposal, Implementation plan and Financing plan make macro-level planning easier for the city government.
- Area & Pan city based proposals include demand assessment, risk strategies, new
innovative technologies, implementation strategies, impact and benefits delivered.

- The financial plan will cover Itemised cost, resource plan, revenue generation, O & M costs and its recovery plan.
- Strategy planning for every project, conceptualization of projects will be done at the start of the projects.
- Time frame for every project will be set with monitoring & evaluation, which will help projects to be executed on time.
- Decision making structure & responsibility matrices will facilitate decision making process with respect to day to day functions.
- Procurement policies & process will remove any chance of corruption in process, which is a major issue in any large project.
- E-procurement will be done for all projects as per policies defined; these policies will be conveyed to bidders via EOI & RFP documents. These guidelines will provide space for more logical procurement methods such as QCBS (Quality & Cost Based Selection). This shall ensure selection of most suitable organization for executing project.
- Industry participation will allow projects to be conceptually, technically strong & financially viable. Industry expert can introduce new technology to execute project.
- Local industry will contribute the most, as they are aware regarding the various issues of the city, to which they may advise regarding which solutions can be good for city and which will be not.
- Local industry can provide skilled people to various international projects to execute projects, and local industry can also learn about various new technology used in international arena.
- Monitoring & Evaluation system will help government to monitor projects and take necessary actions where projects are not being performed as per standards.
- Different types of data will be gathered via M & E system, which can be used to improve the execution of different projects and avoid same mistakes done in past.
- Capacity building program will train government employees in planning & strategies for projects, business model preparation, how to execute PPP projects which will be integral part of smart city projects, various software systems like ERP.
- Capacity building will reduce the dependence on external consulting firms for projects at various stages.

**For Business Stakeholders**

- Transparency will ensure more and more business participation in the smart city projects.
- Private business can plan in terms of how to provide different solutions defined in master plan of smart city.
- Alignment of framework with guidelines like statutory compliance, Companies Act, 2013, GST & other taxes will ensure compliance in every project & smooth functioning in day to day working of SPV, which shall increase business confidence.
- PPP framework & accounting framework for same will encourage more private entities to participate in bidding process. Framework will define a set of processes to be followed, which will bring more transparency in process, resulting in enhanced business confidence. It will also give investors more confidence to invest in smart city projects.
- Alignment with best practices will benefit overall execution of project, as all best practices around the world will be included in framework.
- Potential Investors (institutional or individual) will get to know projects, basic concept, implementation plans, and financial model. This will help such investors to decide upon specific projects to fund and also quantum of investment.
- Risk identification, assessment, mitigation & allocation will give basic idea to businesses about risk sharing between government & private entity.
- Due to decision making structure in SPV, private entity can look forward to on time decision making process.
- More private entities will bid for projects as procurement policy & guidelines will make procurement process more transparent.
- Local industries can become part of development of city, participating in different projects by forming consortium with multinational corporations.
- Definitive exit strategy from PPP project will encourage many private entities to bid for large PPP projects.
Timeline for Implementation of POC

Implementation of POC in Smart cities will require a definitive timeline to ensure speedy implementation of the POC. Implementation of POC will be monitored and evaluated every quarter & appropriate decision will be taken for course correction and to overcome various challenges faced in the quarter. Timelines for POC will be developed based on Work Breakdown Structure (WBS) in which tasks and deliverables are broken down into sub-tasks & estimates time needed for each. This section represents timelines for every stage of POC for implementation.

1. Establish definition of Smart City with all Services, Solutions & Products (3 months)
2. Align with Existing Guidelines & Best Practices (6 months)
3. Define and Develop Decision making Structures, Responsibility matrix and Accountability with SPV framework (3 months)
4. Develop Smart City Components, Master Plan & Roll out Plan (6 months)
5. Define and develop sustainable Business/Financial Models/Clarity on funding options and plans (6 to 8 months)
6. Establish clear monitoring & evaluation system – Framework & Parameters against timelines & deliverables (3 months)
7. Establish Procurement policies & guidelines, Define procurement process & Effective compliance models (Continuous Process)
8. Build Capacity of the SPV Officials and Use Project Management Consultant for support (Continuous Process)
9. Enable & ensure extensive industry participation in Smart cities with clear deliverables & milestones (Continuous Process)
10. Encourage participation & innovation by local industry/ Encourage entrepreneurship (Continuous Process)
The GCNI-CEGET Framework for Governance of Smart Cities includes processes that will be implemented by various stakeholders. During implementation, the ten pillars described in this framework would need to be segregated between functions of above-mentioned stakeholders. In doing so, transparency and accountability will be ensured within and between the stakeholders.

Recommendations

- **Smart city projects involve large investment and procurement is a major part of it.** Government should create policy for procurement of goods and services. Procurement policies for goods and services should be developed, which will be similar for all smart cities. E-procurement portal and policy will bring transparency in process.

- **Development for policy framework for private investment in urban sector** Policy framework for PPP projects will be crucial for smart city implementation as private investment will be essential for developing the city. These policies will give clear idea to private players in project implementation and exit strategies.

- **Data sharing between smart cities so best practices and concepts can be adopted** Every city will face some unique challenge while developing a smart city. Cities around the country should share data on regular basis so lessons can be learnt by other cities, which in turn will enable best utilization of time and funds.

- **Institutions for capacity building and attracting new talent** Capacity building will be essential to reduce dependence on private consultants. Capacity building should cover all aspect of developing smart cities from planning to implementation of strategies and projects.

- **Cities should develop or look for best practices and frameworks for smart city development** Cities should adopt best practices from around the world and develop frameworks for execution of projects based on these. Frameworks for PPP projects, monitoring and evaluation, post award contract management of project should be developed.

- **Citizens participation should increase incrementally in every stage of the project** Citizen should be encouraged to show ownership towards their city by participating in city consultations and development.

- **Ease of doing business in country to encourage international companies to bid for projects and invest in smart cities** Ease of doing business attracts international businesses and investors to invest in various smart city projects. International companies will also bring new technology and practices into the country.

- **Cities should partner with universities, non-profit groups and private sector** Cities can partner with a wide range of organizations when developing smart city initiatives. The benefits of partnerships include opening cities up to funding and expertise that they might not have otherwise received. Universities are an excellent option for partnerships, as are non-profit groups and private companies. Cities can also partner with other cities.
Annex 1
GCNI Engagement With Pune Smart City Initiative

GCNI is actively engaged in the development of a pilot intervention for promoting business case for transparency and anti-corruption as an integral part of the Smart Cities Project through an MoU with Pune Smart City Development Corporation Limited (PSCDCL), the Special Purpose Vehicle (SPV) responsible for overseeing the implementation of the Pune Smart City Project.

In the first year of the five-year commitment with PSCDCL, GCNI entered into an MoU with two Knowledge Partners viz. Legasis Services Private Limited for the development of IT enabled compliance solutions, and with Vision360 Management Consulting Private Limited for the development of a detailed Public Private Partnership framework. Accordingly, Legasis has developed “SMART LEGATRIX” for ensuring statutory compliance and “SMART CARRAR” for ensuring transparency in procurement process in Smart Cities, while Vision360 has developed PPP Framework for Infra and IT Sector as well as an Accounting Framework for Concessionaire & Grantor.

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<thead>
<tr>
<th>General Advisory</th>
<th>Compliance Advisory</th>
<th>PPP Advisory</th>
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<tbody>
<tr>
<td>GCNI agrees to provide advisory service on governance, and compliance to the PSCDCL. The advisory services with respect to governance and compliance shall be based as per the statutory provisions under Indian law and as per industry best practices.</td>
<td>Development of an integrated customized IT solution.</td>
<td>PPP for Smart Cities through in-depth understanding of the complexities involved in transactions, financing and policy at the public-private interface.</td>
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<tr>
<td>Governance, compliance and performance of statutory functions of the SPV.</td>
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<td>Developing frameworks and helping in implementation of PPP mechanisms (industry and state specific).</td>
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<td>All procurement related compliances during the development to commissioning phase of the Project.</td>
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<td>Assistance in designing transaction procedures, formulating evaluation parameters, building financial models and defining an acceptable exit strategy for the PPP Projects.</td>
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<tr>
<td>Incorporating the Citizens Charter in the framework of governance of the SPV by concretizing the abstract rights and responsibilities of citizens and ensuring the rights and accountability of citizens to public services.</td>
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<td>Facilitating a competitive bidding process through efficient bidding strategy, and recommending improvements to timelines in processing PPP programs and project proposals.</td>
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Annex 2

Sustainable Development Goal (SDG) 11: ‘Make cities and human settlements inclusive, safe, resilient and sustainable’

Cities, countries and organisations across the world are promoting the 2030 Sustainable Development Agenda which was adopted on September 25th 2015 by 193 countries of the United Nations to end poverty, protect the planet and ensure prosperity for all. The Sustainable Development Goal (SDG) that directly relates to cities is Goal 11 that states ‘Make cities and human settlements inclusive, safe, resilient and sustainable’.

<table>
<thead>
<tr>
<th>Targets</th>
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<tbody>
<tr>
<td>11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.</td>
<td>11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing.</td>
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<tr>
<td>11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.</td>
<td>11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities.</td>
</tr>
<tr>
<td>11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.</td>
<td>11.3.1 Ratio of land consumption rate to population growth rate. 11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically.</td>
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<td>11.4 Strengthen efforts to protect and safeguard the world’s cultural and natural heritage.</td>
<td>11.4.1 Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage, by type of heritage (cultural, natural, mixed and World Heritage Centre designation), level of government (national, regional and local/municipal), type of expenditure (operating expenditure/investment) and type of private funding (donations in kind, private non-profit sector and sponsorship).</td>
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<tr>
<td>Targets</td>
<td>Indicators</td>
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<td>11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.</td>
<td>11.5.1 Number of deaths, missing persons and persons affected by disaster per 100,000 people.</td>
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<td>11.5.2 Direct disaster economic loss in relation to global GDP, including disaster damage to critical infrastructure and disruption of basic services.</td>
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<td>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.</td>
<td>11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities.</td>
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<td>11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted).</td>
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<td>11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.</td>
<td>11.7.1 Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities.</td>
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<tr>
<td>11.7.2 Proportion of persons victim of physical or sexual harassment, by sex, age, disability status and place of occurrence, in the previous 12 months.</td>
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<td>11.A Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning.</td>
<td>11.A.1 Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city.</td>
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<td>11.B By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels.</td>
<td>11.B.1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030.</td>
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<td>11.B.2 Number of countries with national and local disaster risk reduction strategies.</td>
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<tr>
<td>11.C Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.</td>
<td>11.C.1 Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials.</td>
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About Us

The United Nations Global Compact

United Nations Global Compact (UNGC) is the largest voluntary corporate citizenship initiative in the world offering a unique platform to engage companies in responsible business behaviour through the Ten Principles focusing on human rights, labor standards, the environment and anti-corruption. These principles are derived from the Universal Declaration of Human Rights, the International Labor Organization’s Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption. By incorporating these Global Compact principles into strategies, policies and procedures, and establishing a culture of integrity, companies will be able to not only uphold their basic responsibilities to people and planet, but also set the stage for long-term success.

Global Compact Network India

The Global Compact Network (GCN) India, was formed in 2000 and registered as non-profit society in November 2003 to function as the Indian Local Network of the UNGC. The Global Compact Network India works towards mainstreaming the ten universally acceptable principles in business activities around the world, catalysing action in support of broader UN goals. At present, the India network ranks among the top 3, out of the 102 local networks in the world, and has emerged as the largest corporate citizenship and social responsibility organization in the country with a pan Indian membership. With 400 renowned organizations as GCNI pivotal members/signatories, the local India network in the last 14 years of its functioning has created a strong niche for itself.

Centre of Excellence for Governance, Ethics and Transparency (CEGET)

GCNI established the Centre of Excellence for Governance, Ethics and Transparency (CEGET) in 2015, with the overall objective of developing a premier knowledge repository that conducts innovative action research and training, provides a platform for dialogue and communication and facilitates systematic policy initiatives for strengthening transparency and ethics in business.

The goal of CEGET is to bring in diverse stakeholders on a common platform to exchange best practices, deliberate upon challenges and make policy recommendations to promote responsible business standards and transparency and ethics in general.

The activities of the GCNI CEGET are centered along following three objectives:

- Develop pragmatic approaches around the 10th UNGC principle to challenging business decisions through creation of a Knowledge Hub.
- Provide enabling platforms to businesses, policymakers, civil society, industry associations, UN agencies and academia.
- Improve organisational decision making through a stakeholder management framework that integrates transparency and integrity.