National Institute of Urban Affairs

Smart City
MISSION TRANSFORM NATION

Ministry of Housing and Urban Affairs
Government of India

AFD

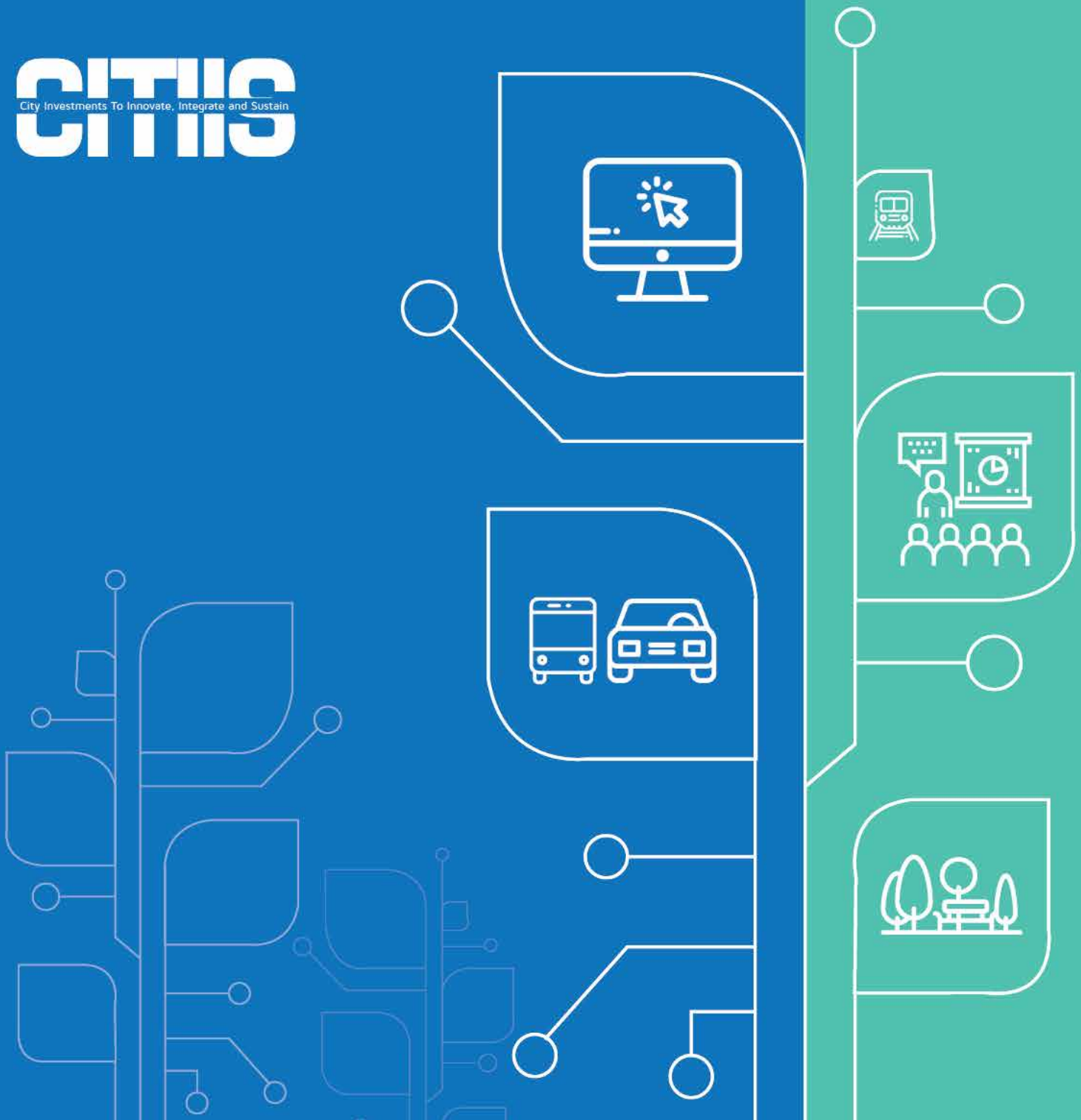
150 YEARS OF CELEBRATING THE MAHATMA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

PROJECT COMPENDIUM

Summary of the 27 shortlisted projects
February, 2019

CITIIS
City Investments To Innovate, Integrate and Sustain



Sh. Kunal Kumar,
Joint Secretary, MoHUA

PREFACE

The Smart Cities Mission is a bold and novel initiative of the Government of India. The Mission boasts of many firsts, including extensive citizen consultation during formulation of Smart City Plans and selection of 100 Smart cities through a national-level Challenge process. The principles of public participation and competitive and cooperative federalism which form the cornerstones of Smart Cities Mission have now also been adopted in selection of projects through a unique program called the CITIIS program.

City Investments to Innovate, Integrate and Sustain (CITIIS) was launched on 9th July, 2018 by the Smart Cities Mission, Ministry of Housing and Urban Affairs in partnership with AFD, EU and NIUA. The program, the total size of which was 100 Million Euros, was open to all the 100 smart cities During the Challenge process for selection of projects under CITIIS, 36 Smart cities submitted a total of 67 proposals belonging to various themes. Of these, 27 were shortlisted in the first round by a distinguished jury comprising of nine experts from India and France. Another round of evaluation was done to select the final project awardees.

The aim of the CITIIS program is to use world-class concepts for planning, design and implementation of selected urban projects. Innovation, Integration and Sustainability are the core elements of the program. Right from the stage of preparation of proposals to the final delivery of projects, international/national technical expertise is planned to be made available for the cities, along with financial assistance. Thus, CITIIS is expected to be a watershed program in the history of urban development in India, one that will not only usher the selected cities into a new era, but also be a shining light for the other cities in India.

This compendium presents a summary of the 27 high-potential projects from 20 Smart Cities shortlisted in the first round of CITIIS Challenge. I congratulate all the 20 Smart Cities that worked hard for developing these project proposals. I also congratulate the entire team of NIUA, AFD, EU and the Ministry officials who helped put all this together. I sincerely hope that this compendium shall serve as a valuable source of reference for the other cities while developing similar proposals for their own cities. Happy reading!

INTRODUCTION

City Investments To Innovate, Integrate, and Sustain (CITIIS) is the main component of the 'Program to fund Smart City projects through a Challenge Process,' launched by the Ministry of Housing and Urban Affairs (MoHUA) on 9th July 2018. The program is financed by the French Development Agency (AFD) and supported by the European Union (EU) through a €100 million loan and €6 million grant. The program is coordinated and managed by the Program Management Unit (PMU) set up at National Institute of Urban Affairs (NIUA), New Delhi.

CITIIS aims to foster sustainable, innovative, relevant and participatory approaches to build projects within the Smart Cities Mission (SCM). Smart City Special Purpose Vehicles (SPV) have been chosen through a challenge process and provided with financial assistance in the form of grant and tailor-made mentorship in the form of expertise for a period of three years. The total project cost of the projects will be financed collaboratively by the Government of India, the State Governments and the Smart City SPVs.

The CITIIS program supplements the Smart Cities Mission by supporting SPVs in design, project development (maturation), and implementation of the selected projects, under four thematic areas that emerged through public consultations during the Smart City Mission:
I. Sustainable Mobility; II. Public Open Spaces; III. Urban E-Governance and ICT; and
IV. Social and Organizational Innovation in Low-income Settlements

Prior to launching the CITIIS application process, a preparatory workshop was held in Delhi for interested SPVs on 25-26 September 2018. Representatives from 52 SPVs, including 40 CEOs and international experts participated in the workshop. Participant SPVs were invited to submit their project proposals, and the application process was made live on 1st October 2018. Deadline to submit the proposal was 30th October 2018 which was later extended to 30th November 2018; this provided the SPVs over 60 days to submit their proposals.

36 cities submitted 67 project proposals. The proposals were collated on Smartnet by the CITIIS PMU and a nine-member jury comprising of reputed experts in the field was appointed for selection process. In the first phase, the jury went through the project proposal in detail and ranked each project using an online assessment tool.

As per program guidelines and online assessment, 27 projects were shortlisted from 20 cities. SPVs were invited for a face to face interview on 21-22 January 2019 at NIUA in New Delhi. The SPV, represented by the CEO in most cases made a detailed presentation of the proposed project followed by a discussion with the Jury. Jury members interacted with the CEOs on various aspects of their proposed projects and assessed them on four key values of the CITIIS program: Excellence in Sustainable Urban Development; Innovation and Integration; Participatory approaches; Relevance and feasibility

1. GREATER VISAKHAPATNAM
Social Inclusion through Modernizing Public Schools as Smart Campus

2. PUDUCHERRY
Our Neighbourhood is Your Neighbourhood Too – A Participatory Planning Approach for Improvement of Low-Income Settlements in Puducherry

3. BHUBANESWAR
B-Active

4. DIU
Diu-Ghogla Bridge Park

5. KAKINADA
Electric Public Transportation System

6. DEHRADUN
Child Friendly and Commuter Centric Dehradun City

7. COCHIN
E-Health Solution

8. AMRITSAR
Development of Sustainable and Green Public Transportation in Amritsar City

9. CHENNAI
Model and Smart Corporation Schools in Chennai

10. UJJAIN
Mahakal Rudra Sagar Integrated Development Approach – Phase II

11. SURAT
Creating "Wild Valley Bio-Diversity" Park as City Lungs

12. HUBBALLI DHARWAD
Green Mobility Corridor

13. AMARAVATI
Basic Infrastructure Development for Low-Income Settlements

14. AGARTALA
Howrah River Front Development (Phase-II)

15. NAGPUR
Digital Governance of Nagpur

16. GREATER VISAKHAPATNAM
Ecosystem for Sustainable Mobility and Social Inclusion

17. GREATER VISAKHAPATNAM
Re-imagining Waterfronts through Rejuvenation of Mudsarlova Lake Precinct

18. PUDUCHERRY
Blockchain for Civic Identity and Public Service Delivery

19. KAKINADA
Social and Physical Infrastructure Development in Low-Income Settlements

20. AHMEDABAD
Last Mile Connectivity using Dockless Bikes for Bus Rapid Transit System (BRTS) and Ahmedabad Municipal Transport Services (AMTS)

21. THANE
Mobility Improvement in ABD Precinct of Thane City

22. SURAT
Green Mobility through Last Mile Connectivity and Augmentation of Existing Public Mass Transit System of Surat City

23. BHOPAL
Teacher JI – 'Education on Wheels'

24. DAVANAGERE
Rejuvenation of Mandakki Bhatti Area

25. BHOPAL
100 KM's of Green Corridor for NMT (Non-Motorised Transport) & Pedestrian Friendly Track

26. INDORE
Development of Green Corridor along Kahn and Saraswati River (Phase – I)

27. SURAT
Creation of Digitally Inclusive Urban Spaces

1. Greater Visakhapatnam Smart City Corporation Limited (GVSCCL)

Social Inclusion through Modernizing Public Schools as Smart Campus

Overview

The project aims at modernizing public schools as smart campuses by retrofitting GVMC schools. It would transform the schools as 'Smart Campus' and create a 21st century education infrastructure for every strata of the society. It includes,

- Upgradation of basic infrastructure facilities,
- Encouraging outdoor play and physical activities amongst students,
- Rebranding of the Greater Visakhapatnam Municipal Corporation (GVMC) schools, and,
- Investment in schools to provide technology-based learning.

Currently, GVMC runs 149 schools. The proposal mentions that though it is essential to add to the current pool of primary and secondary GVMC schools, upgrading existing schools by adopting smart ways to develop futuristic learning environment is necessary. This will efficiently fulfil basic requirements of a large existing user base that primarily belongs to low-income families. In medium to long term, the project will also improve the overall health and well-being of its citizens, especially the children.

Population
17,28,128

Area (sq. kms.)
513.61

Density (persons per sq. kms.)
3,365

Literacy Rate
81.79 %

Ease of Living Index Rank, 2018
17

Work Orders Processed under SCM
INR 1027.22 Cr.

Objectives

- To rebrand GVMC schools through uniform identity in terms of facade improvements and signage.
- To provide clean and green education campus to enhance learning and teaching environments and to provide more outdoor activity areas for students to increase opportunities for greater physical activity.
- To optimize the use of underutilized land within school premises by creation of functional spaces, and universally accessible design through creation of ramps for access to schools and classrooms.
- To equip schools with technology-based digital learning zones for students and teachers, future classrooms, other teaching/learning resources, in addition to capacity building of teachers. The project aims at leveraging IT infrastructure for the improvement of quality of education in schools and encouraging the medium of digital literacy amongst students.

Summary

Relevance and Feasibility	• To rebrand GVMC schools through uniform identity in terms of facade improvements and signage. • To provide clean and green education campus to enhance learning and teaching environments and to provide more outdoor activity areas for students to increase opportunities for greater physical activity. • To optimize the use of underutilized land within school premises by creation of functional spaces, and universally accessible design through creation of ramps for access to schools and classrooms. • To equip schools with technology-based digital learning zones for students and teachers, future classrooms, other teaching/learning resources, in addition to capacity building of teachers. The project aims at leveraging IT infrastructure for the improvement of quality of education in schools and encouraging the medium of digital literacy amongst students.
Sustainability Aspects	• The project aims to create a safe learning environment by providing adequate lighting and surveillance cameras that will provide a sense of security to students, especially the female students and staff members. • The project proposes providing amenities like adequate number of toilets for all genders at regular intervals for convenience of the citizens. • The project proposes to make schools more accessible by providing barrier free access for all abilities and age groups. • The creation of active outdoor spaces will allow for users to improve their health and wellbeing with a wide range of active and passive pursuits.
Innovation and Integration Aspects	• The project aims at comprehensive upgradation of educational infrastructure such as smart classrooms, smart labs, improvements in school physical infrastructure (water, drainage, playgrounds, play courts, toilets etc.), universal accessibility, facade improvement etc. into a single project called 'Smart Campus'.
Participatory Approach	• The project envisages to promote participation and co-creation by engaging with various urban planners, sector experts, relevant NGOs, educational institutions (Andhra University, etc.), design professionals (IIA), ecologists, environmentalists, and economists to add value to the proposed project.

Project Cost

Financial Indicators (INR in Crore)

2. Puducherry Smart City Corporation Limited (PSCCL)

Our Neighbourhood is Your Neighbourhood Too – A Participatory Planning Approach for Improvement of Low-income Settlements in Puducherry

Overview

The project aims at improvisation of shared community infrastructure as well as augmenting social and technological capacity to achieve the goal of a 'slum-free' Puducherry. It focusses on empowerment of stakeholders through an innovative and integrated financing mechanism.

The project address the following challenges:

- Absence of direct and effective communication between communities and government
- Unequal representation in neighbourhood-level development
- Inadequate access to professional expertise, especially housing, infrastructure, and finance
- Exclusion from economic opportunities
- Limited ability of slum improvement lead agencies

It does so by solutions oriented towards citizen participation, ICT-enabled provision of government services, promotion of economic activity & employment, upgradation of public spaces in low-income settlements, and a dedicated knowledge & design centre.

Population
2,44,377

Area (sq. kms.)
19.54

Density (persons per sq. km.)
12,507

Literacy Rate
89 %

Ease of Living Index Rank, 2018
60

Work Orders Processed under SCM
INR 62.43 Cr.

Objectives

- Amplifying Community Voices: To empower community stakeholders to voice their needs, and utilization of funds where they are needed the most.
- Catalysing Community Resources: To innovate an integrated financing mechanism to streamline deployment of multiple funding streams strategically towards social housing, community initiatives, and projects.
- Leveraging Community Environments: To improve shared community infrastructure and public open spaces as needed assets.
- Capacity Building – Bottom-up + Top-down: To augment the existing technological and social capacity, and inter-departmental coordination of lead delivery agencies to achieve the goal of a slum-free Puducherry.

Summary

Relevance and Feasibility	• The project components include, - Makkal Mandram (People's forum), - Puducherry SMART Enterprise Resource Platform (ERP), - Pondy Urban Lab, - Housing Fix Project (HFP), - Housing Build Project (HBP), - Community Fix Set of Projects, and, - Physical infrastructure projects. All these are consistent with the project objectives identified under the CITIIS program.
Sustainability Aspects	• The project focuses on establishing equal representation of women, at the minimum 50%. The project's primary target is low-income groups residing in slums. • At a later phase of the project, once the site experiments and the first upscaling are established, many of the built-in tools developed in the projects could be expanded to address the whole population of Puducherry. • Community Fix and Housing Fix projects will be carried out using the 'urban acupuncture' methodology in order to bridge gaps of minor infrastructure, resolving problems, and upgrading living conditions at the level of individual home as well as in common public spaces. This will improve the overall living conditions, including garbage collection and water management. It would contribute to better quality of environment and climate resilience. This specific issue is a priority as many of the low-income settlements are located in particularly vulnerable sites - the seashore and next to natural sites such as mangroves or protected areas.
Innovation and Integration Aspects	• The project proposes a holistic convergence of the material and social aspects which are often addressed separately. • The project proposes partnership between public bodies and related agencies such as PSCDL, Slum Clearance Board, other government departments; private sector (YES Bank), researchers and experts skilled in participative planning and community engagement in urban areas, from both public (IFP) and private institutions (UDC). • The project also emphasises on technological solutions to be materialized by the digital platform ERP, their interlinkage with GIS, geospatial systems and mapping. It also includes techno-legal solutions, required during the realisation of the housing project, involving construction of 448 new housing units for beneficiaries from low-income communities. The socio-cultural innovation will be reflected in the ways in-situ regeneration is addressed while integrating a vision to enhance different forms of heritage.
Participatory Approach	• The entire partnership built for the purpose of CITIIS challenge is the first dimension of co-creation. It will be actively implemented throughout the duration of the project via the Pondy Urban Lab - an agency working as a platform of collaborative decision-making. It involves the competent government and will be extended to NGO and SHG at the time of site-experimentation. The key partners and members of Pondy Urban Lab are: - Puducherry Slum Clearance Board - French Institute of Pondicherry - Urban Design Collective - Yes Bank, Pondicherry • The Community Media Initiative, project Pump Up the Volume will give voice to the beneficiaries, making them actors of the overall implementation of the project. The primary language of communication of all aspects of the project will be Tamil to ensure maximum participation.

Project Cost

Financial Indicators (INR in Crore)

3. Bhubaneswar Smart City Limited (BSCL)

B-Active

Overview

The project aims at improving the quality of life of citizens by developing public open spaces. It includes development of parks and playgrounds, streets, non-motorized transit, smart PODs, youth engagement programs and heritage area development among others.

At the micro-level, the B-Active project intends to bridge gaps and overcome challenges observed during implementation of several of Bhubaneswar's Smart City Proposal components related to public open spaces, listed as under:

- Lack of an enabling framework to maximize use of public open spaces;
- Local capacity building constraints in programming and activation of formal public open spaces;
- Use of technology to better monitor these valuable city assets and improve citizen participation;
- Tools for co-creating and co-managing the public infrastructure investments; and
- Inequitable spatial distribution of parks at the city scale.

Population
8,43,402

Area (sq. kms.)
135

Density (persons per sq. km.)
6,247

Literacy Rate
91.87 %

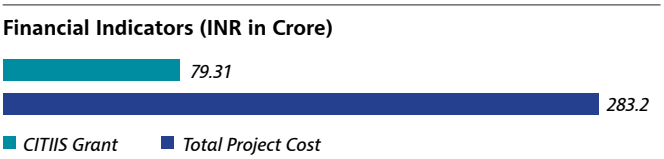
Ease of Living Index Rank, 2018
18

Work Orders Processed under SCM
INR 2807.22 Cr.

Objectives

- To empower citizens to co-create and manage their neighbourhoods and open spaces.
- To revitalize waterways, tanks, streets that would act as sponges for capturing, storing, and cleaning its water systems.
- To reuse the landscapes as productive spaces offering opportunities for interaction with nature through urban agriculture.
- To reclaim public spaces for cultural, arts, and social activities.
- To raise the profile of organized sport and active recreation in Bhubaneswar.

Project Cost

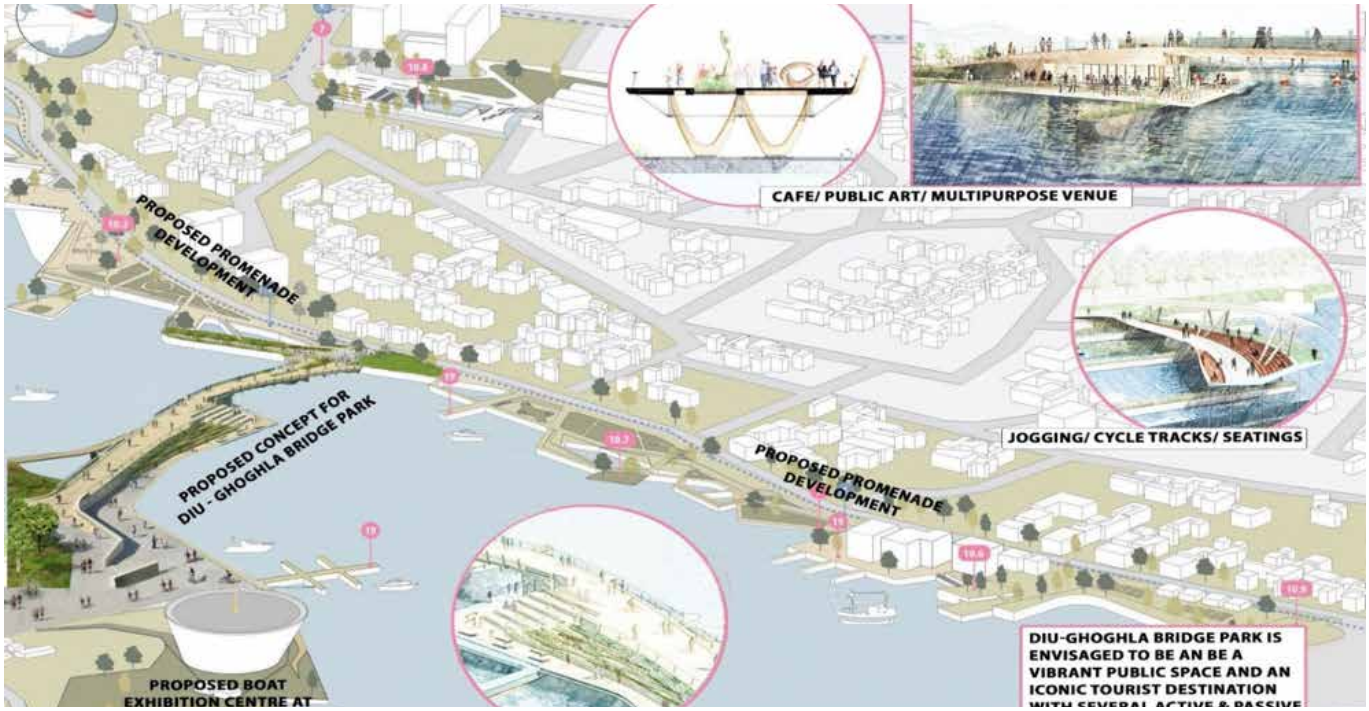


Summary

Relevance and Feasibility	• The project aims at addressing the challenges faced in prioritizing public health as an integral component of the smart city transformation.. • The B-Active project addresses the challenges created by the lack of access to sports facilities and active recreation in Bhubaneswar, including the lack of a supporting institutional framework to manage recreational, cultural, and open spaces assets and activities associated with it. • As per the existing inventory of parks and open spaces prepared by the Bhubaneswar Development Authority (BDA), there are no parks in 19 of 67 wards in the BMC area. Nearly 60% of the city area is under extreme to moderate urban flood risk. The B-Active project has been proposed to address this urgent issue. • The SPV has a strong team already in place for deploying smart solutions with a technology Programme Management Consultant (PMC), engineering PMC, and a Master System Integrator. Working together, these agencies will be able to provide the necessary skills and expertise required to implement the B-Active project.
Sustainability Aspects	• The B-Active project intends to promote universal accessibility not only through its physical infrastructure investments, but also through participatory activities and ICT initiatives for persons with disabilities, through collaboration with local, national, and international NGOs. • The project incorporates the concepts of resiliency based planning in its five city assets, viz. streets, water, parks and open spaces, playgrounds, and heritage.
Innovation and Integration Aspects	• The project shall include social innovations like living classrooms, youth leadership programmes, technical innovations parks, open space master plan etc. The projects will be bundled to ensure efficiency and effectivenes.
Participatory Approach	• The key initiatives that the B-Active project will utilize and further build upon include extensive public engagement, consultation with diverse group, residents, seniors, and children. • The implementation of the project will be dependent on the following partners who are the core contributors: - Bhubaneswar Development Authority (BDA), - Bhubaneswar Municipal Corporation (BMC), - Tourism Department, - Sports and Youth Services Department, - Public Works Department. The Smart City SPV is already under agreement with United Nations Fund for Population Activities (UNFPA) to support the city in achieving youth and gender improvement programs.

4. Diu Smart City Limited (DSCL)

Diu Ghoghla Bridge Park



Overview

The project proposes to build a 300 metres bridge for pedestrians and cyclists that connects the old city of Diu and Ghoghla Beach. The bridge will act as a mediator between urban and ecological spaces and improve pedestrian connectivity to the city's heritage (Fort) and waterfronts. The project design aims at activating the beaches with promenades, water sports, night lighting, and art installations.

The project would act as a public open space offering multiple seating options with appropriate landscape along with active and passive recreational facilities. The design and aesthetics of the project is envisaged to be a landmark structure in accordance with the culture of Diu, which would create a unique identity for Diu.

The bridge would promote walkability for tourists and locals as well as would connect the different communities in old city Diu and Ghoghla.

The Project would strongly contribute to the city's strategy for Area based Development whose objectives include- leveraging the waterfront location and the

Population
23,991

Area (sq. kms.)
11.66

Density (persons per sq. km.)
2057

Literacy Rate
92.24 %

Ease of Living Index Rank, 2018
47

Work Orders Processed under SCM
INR 42.48 Cr.

beach destinations to improve the tourism potential of Diu and supporting the economy, in addition to improving the quality of life of the local residents.

In order to achieve the city's vision effectively, the project shall help in addressing the following challenges:

- Identity and Culture: Image building and landmark creation
- Transportation and Mobility: Connectivity
- Open Spaces: Vibrant public space creation
- Place Making: Exclusive and unique experience
- Mixed Use and Compactness: Walkability and safety
- Indirect Impact: Economy and employment

Objectives

- To improve connectivity between Diu (Old City) and Ghoghla Beach.
- To leverage the waterfront location and the beach destinations in order to improve the tourism potential of Diu.
- To improve the quality of life of the local residents.

Project Cost

Financial Indicators (INR in Crore)

Summary

Relevance and Feasibility	• The project is envisaged as an economic generator that will attract more visitors to the old city area. There is a heritage fort that would become a landmark once access to it is built through this intervention. • The project will ensure that tourists have a spread of round-the-clock offerings, food courts, night markets, amphitheatres and events spaces, complete with sanitation, and convenience facilities. • The beaches will be activated with promenades, water sports, convenience, night lighting, and art installations. • The Diu-Ghoghla Bridge Park would be one of its kind project, which has not been executed in India thus the CITIIS expertise would be an important guiding factor to take the project forward.
Sustainability Aspects	• The bridge is planned for pedestrian/NMT access to a park with multipurpose areas. The design and aesthetics are planned to improve the visual character of the surrounding infrastructure. • An intensive landscaping and a planting program will help mitigate the harsh humid climate of Diu and aid in experiencing the cityscape in a comfortable environment.
Innovation and Integration Aspects	• The project innovation is in designing the bridge for pedestrians and cyclists only. The space around the bridge is planned for public space, recreation, and urban greenery. • The project is envisaged to be a unique destination. Thus, the design, construction, and execution of the project would be most important for which consultancy services of the field experts would be utilized. The innovation in relation to existing best practices for similar projects will be explored, especially the projects that are being implemented by various developed cities across the globe with the intention to expand the public space, urban greenery and to create unique experiences and destinations for the people.
Participatory Approach	• The city administration had carried out the largest exercise in the history of Diu city to arrive at the vision, goals, and project identification for Smart City projects. The total outreach of the citizen engagement process was 84 per cent of the total population. Based on this consultation, the Diu-Ghoghla Bridge Park project has evolved. The project needs, goals, and objectives have been derived from the same. The active participation of the beneficiaries/end-users has been duly taken into consideration for the design of the project.

5. Kakinada Smart City Corporation Limited (KSCCL)

Electric Public Transportation System

The project is aimed at developing the public transport system of Kakinada. The absence of public transportation system in Kakinada city has resulted in increased vehicular emissions, traffic congestion, absence of last mile connectively and expensive commute choices for the citizens.
The key components proposed in this project are,
- Electric buses for transportation,
- Charging stations, and,
- ICT enabled real time passenger information system.

With introduction of cleaner modes of intermediate mode of public transport, the project also aims to improve livelihood of cycle rickshaw peddlers by operationalizing e-rickshaws. The electric public transportation will be integrated with 200 new bi-cycles proposed as a part of the project.

The city has been demarcated into various zones and in the first phase, every zone will have 20 bicycles with 5 docking stations, which may be expanded in later phases as per the response of the citizens.

Population
3,12,538

Area (sq. kms.)
57.36

Density (persons per sq. km.)
6,698

Literacy Rate
80.62 %

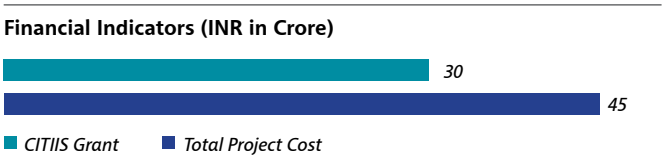
Ease of Living Index Rank, 2018
64

Work Orders Processed under SCM
INR 982.48 Cr.

Objectives

- To provide public transport mode for all socio-economic groups and genders.
- To introduce Electric Public Transportation system to reduce vehicular emissions and traffic congestion.
- To achieve last mile connectivity by integrating existing e-rickshaws and proposed public bicycle sharing system.
- To provide affordable transportation mode for longer trips.

Project Cost

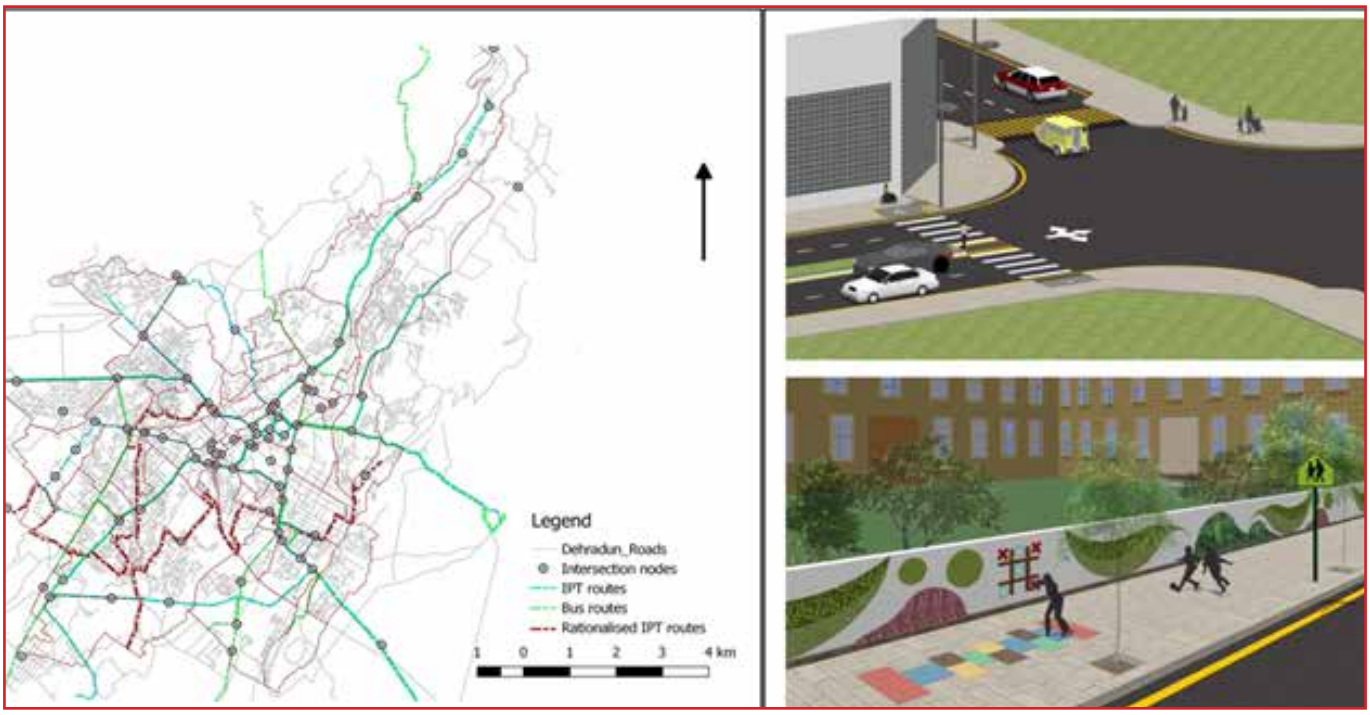


Summary

Relevance and Feasibility	• In the absence of a city public transportation system, this project is relevant as it aims at providing a cleaner means of transport. • The buses proposed in the project will be procured under the Faster Adoption and Manufacturing of (Hybrid) Electric Vehicles (FAME-India) scheme that provides subsidy on E-buses. The initial route planning has been done for the operation of the buses.
Sustainability Aspects	• The project would be operationalized based on an outright purchase or supply operate contract which has a lease at per month model with the operator providing a driver and the Andhra Pradesh State Road Transport Corporation (APSRTC), paying monthly lease for the bus. The ULB will act as a facilitator for the provision of bus depot and charging station. • The Electrical Public Transportation Project at KSCCL will develop gender friendly mobility plan for women commuters. • The project envisages increased women participation in operational functions of transport systems like drivers, station attendees, and supervisors. • The electric public transport will be charged using electricity generated by renewable energy.
Innovation and Integration Aspects	• The integrated land use and transportation planning for project will be done through convergence of e-rickshaws and bicycle sharing with e-public transportation. The Kakinada Smart City App will be used for tracking live status of public transport modes. • The project proposes integration of a smart card with electric public transport for transport services. • Command and communication centre would conduct traffic and transport data analytics.
Participatory Approach	• KSCCL will collaborate with APSRTC, traffic police, Aarthi (NGO) and utilise the existing Public Announcement System, hoardings, and government offices participation mechanisms. • APSRTC will participate in the project on the operational level. KSCCL and Kakinada Municipal Corporation will be the implementing agencies for the project.

6. Dehradun Smart City Ltd (DSCL)

Child Friendly and Commuter Centric Dehradun Smart City Sustainable Mobility Plan



Overview

The project encourages a modal shift to public transportation systems with feeder services and Non-Motorised Transport (NMT) across the city to reduce air pollution, road accidents, congestion and wastage of time and money for residents, students and tourists.

Dehradun is one of the premier tourist destinations of the country. Around 33 per cent of the total trips to the city are for tourism purposes. Work trips and education trips constitute 34 per cent and 10 per cent respectively. Buses function as the main public transport system with mini buses and Vikrams/tempos plying as feeder routes to the public transport. Around 250 buses ply on the existing routes of the city, with an average frequency of 15 minutes against the fixed operational average of 7 minutes as prescribed by the RTO. However, there are many issues associated with operation of buses in the city. This includes,

- Unorganized bus routing and patterns;
- Lack of basic facilities like bus queue shelter and designated stop along the routes;
- Due to disorganised bus services, people rely more on pollution causing Vikrams for commute;

Population
569578

Area (sq. kms.)
68.18

Density (persons per sq. km.)
8354

Literacy Rate
88.36 %

Ease of Living Index Rank, 2018
80

Work Orders Processed under SCM
INR 281 cr

- Lack of quality of public transport system in the city, overloading during peak hours, inconsistent fares, too less boarding and alighting time, poor frequency during non-peak hours are some more issues associated with bus services in the city;
- Non-inclusion of child-friendly design and socio-economic aspect in city-wide interventions in ease of access and mobility consideration;
- Lack of passenger information system to make public transit seamless; and
- Lack of pedestrian infrastructure that disrupts first and last mile connectivity in the city.

Through the project, 'Child Friendly and Commuter Centric Dehradun Smart City Sustainable Mobility Plan,' the SPV aims to integrate child friendliness in mobility related improvements city wide.

Objectives

- To revamp the existing public transport and para transit system through strategic utilization of existing network routes, ply of buses and IPTs. This would improve traffic congestion and increase the access for everyday commuters, school going children and incoming tourists.

- To develop public transport boarding and alighting infrastructure to ensure safety and ease of access for users and particularly for the school children.

- To encourage modal shift to public transport and para transit by easing journey planning via. Information on real time vehicle arrival, boarding, alighting nodes, fares, frequency, journey time etc. The e-app will include different profile features to aid tourist, children, and other commuters alike.

- To improve the regulatory system of public and para transport by formulating a unified authority that can regulate and monitor the operation of private buses and IPTs with a fixed fare, route, and frequency.

Summary

Relevance and Feasibility	• At present the ICT infrastructure for the proposed project is not well structured. However, the proposed Intelligent Traffic Management System linked to the Integrated Command and Control Centre proposed to be established at the Information Technology Development Agency (ITDA) will serve as the base for all ICT mobility proposals.
Sustainability Aspects	• Universal design principles will be applied for designing the streets and affiliated infrastructure. • The ICT-Passenger Information App will have a separate feature for children enabled with privacy of user data and SOS system for safety. • Security of passengers will be ensured through well-lit bus stops and footpaths. • The kiosks at bus shelter will be solar powered and they will also generate revenue through advertising space. The passenger information application shall also include advertisements for revenue generation.
Innovation and Integration Aspects	• Pre-fabricated bus shelters and kiosks will be assembled using recycled material. The design includes retrofitting of rear-end of the shelter with greenery and the rooftop with solar panels to convert the kiosk as a self-sufficient structure for energy and lighting • Web/mobile app public information system maybe be adopted to understand everyday traffic behaviour and the traffic management system.
Participatory Approach	• In-depth stakeholder analysis will be conducted for the development of applications and in assessing the data through a stated preference model.

Project Cost

Financial Indicators (INR in Crore)

7. Cochin Smart Mission Ltd. (CSML)

E-Health Solution

Overview

E-Health solution is being developed and implemented by Kerala State Health Department (KSHD) which integrates all departments and government hospitals into an efficient Hospital Information and Management System. The cloud based e-health solution will rely on high speed Multi-Protocol Label Switching (MPLS) connectivity as every transaction is stored in cloud based State Data Centre. The success of this project will contribute enormously in improving the lives of common people who depend on the public healthcare institutions for availing health related services.

Objectives

To provide affordable and quality healthcare services to the citizens through installation of a state of the art IT infrastructure for implementing the e-health solution.

Population
6,02,046

Area (sq. kms.)
107.13

Density (persons per sq. km.)
5620

Literacy Rate
97.36 %

Ease of Living Index Rank, 2018
45

Work Orders Processed under SCM
INR 136.67 cr

Summary

Relevance and Feasibility	• Cochin already has a large number of advanced healthcare facilities. But most of them are in private sector. • The existing network and the computer hardware infrastructure is very old and inadequate to implement an e-Health solution. • The project aims at building a digital database of individual medical records that is easily accessible to the medical practitioners. • It includes unique patient identification in different settings and exchange of data between different health care delivery units at primary, secondary, and tertiary level across state.
Sustainability Aspects	• The key objective of this project is to facilitate availability, accessibility, and affordability of health services for all categories of people through the use of ICT. • Scientific Supply Chain Management will be made possible through the framework. It will optimize inventory management and ensure timely availability of medicines, equipment etc. • Handholding and training to the doctors and other healthcare professional will be provided as part of this project. PMU for e-Health at State level will be responsible for the operation of this project. • ICT based Health solution will lower the cost in operation of the project over time as Doctors will be able to issue medical prescriptions digitally
Innovation and Integration Aspects	• Demographic data will be dynamically updated. This will provide accurate and complete information of the population. • Since the software solution is already developed by the State, implementation of E-health Kochi will be cost effective.
Participatory Approach	• The State Government has already developed a E-Health website https://ehealth.kerala.gov.in • Consultations with hospital and the state e-health team have been conducted to understand the requirement of the project. • The SPV plans to conduct a hand holding by SeMT to the doctors and healthcare professionals for the seamless operation of the e-health solution.

Project Cost

Financial Indicators (INR in Crore)

8. Amritsar Smart City Limited (ASCL)

Development of Sustainable and Green Public Transportation in Amritsar City

Overview

The city of Amritsar has an existing bus network (BRTS and City Bus Network), but the current system is not sufficient to cater to the public transportation requirements of all citizens. The proposed project is for development of last mile connectivity for all citizens through feeder service. The present modal share for public transport is 1.5%. The proposal aims at increasing it to 20% through simultaneous reduction of private vehicles. Project also aims at an overall improvement of air quality and reduction in carbon footprint.

Objectives

- To provide an e-mobility experience to all residents and visitors in the holy city of Amritsar.
- To improve modal share of public transport in Amritsar and increase it to 20%.
- To reduce air pollution caused by diesel powered Public Transport (PT) and Intermediate Public Transport (IPT) services.
- To provide a comprehensive system of charging infrastructure for electric vehicles.

Population
11,32,383

Area (sq. kms.)
136

Density (persons per sq. km.)
8,326

Literacy Rate
84.19 %

Ease of Living Index Rank, 2018
76

Work Orders Processed under SCM
INR 101.33 Cr.

- To provide an effective feeder network to the BRTS corridors.
- To ensure eco-friendly and convenient mode of last mile connectivity.
- To reduce operational expenditure of city bus service fleet by introduction of e-mini buses.

Project Cost

Financial Indicators (INR in Crore)

Relevance and Feasibility	• There is lack of adequate public transport infrastructure and poor last mile connectivity in Amritsar. The project proposals integration of e-rickshaws and e mini buses for increasing the modal share of public transport. • Current BRTS in Amritsar City has a fleet of 93 buses along-with an integrated command control centre. Building on this, ASCL intends to extend it to sustainable modes of transport in the city. • Amritsar Smart City Limited (ASCL) and Amritsar City Transport Services Ltd (ACTSL) shall be responsible for planning and implementation of the project. • The upcoming Integrated Command and Control Centre facility is state of the art ICT enabled platform from where various smart components shall be operated and monitored such as City Surveillance, Emergency Call Box, Environment Monitoring Systems, Information dissemination systems etc. • The SPV envisage to capture funds through monetizing land banks, improvisation of property taxes, betterment costs for improved service delivery, betterment cess for improved service delivery.
Sustainability Aspects	• A key element of this project is equitable access of the public transport system to all the city residents. The envisioned e-bus services will enable cost-effective and differently abled friendly. • Convergence of the project with other IT related initiatives (e.g. ICCC project) launched under Smart City Project, will help in creating a safe & secured environment specially for women. • ACTSL shall select a suitable private operator who shall be responsible for running the buses on the defined routes based upon the predefined rules, regulations and associated covenants.
Innovation and Integration Aspects	• The proposed central command and ITS based intervention will help in real time tracking of e-Buses and adherence to the schedules. Interactive mobile application developed during the project would help the citizens in planning the journey in advance and minimise wait time. • Public information system will be provided on all the bus station as well as IPT stops to alert the passenger and facilitate seamless transfers. • Common smart card for all the PT modes will be developed that avoid the inconvenience of buying ticket every time of travel. • The cost of the operation and maintenance shall be borne by the private operator selected through transparent bidding process. The private operator would recover the O&M cost through pre-decided fare system.
Participatory Approach	• ASCL has a dedicated team of communication experts that has the larger role of sensitizing the city residents about various projects currently being envisaged under Smart City project. • ASCL shall collaborate with NGOs to sensitize citizens about the potential benefits of e-vehicles and conduct regular consultation with auto owners to switch from diesel run autos to e-vehicles.

9. Chennai Smart City Limited (CSCL)

Model & SMART Corporation Schools in Chennai

Overview

The project aims to pro-actively enhance the learning experiences of children in schools, especially public schools. It is to be noted that majority of the children belonging to the low-income households attend public schools, as the private counterpart is expensive. Hence, the project aims to revamp 10-15 corporation schools in the low-income settlements of the city under the CITIIS program.

Objectives

- To enhance the overall learning experience of students in corporation schools into a holistic, interesting, enriching, and rewarding experience.
- To arrest the falling learning levels in public schools in the short run and increase learning levels across corporation schools in the long run.
- To provide experiential learning zones such as science innovation labs, experience labs, and other such practical training zones in the selected project schools so as to boost the interest factor in learning for kids.
- To promote self and digital learning among

Population
46,46,732

Area (sq. kms.)
175

Density (persons per sq. km.)
26,553

Literacy Rate
90.18 %

Ease of Living Index Rank, 2018
14

Work Orders Processed under SCM
INR 118.3 cr

students, by equipping them with modern learning infrastructure such as tablets, and Wi-Fi enabled classrooms etc.
- To create analytics based student monitoring tool, and track and gauge student performance real time.
- To create a robust stakeholder (teachers, students, community) capacity building framework keeping in mind all their interests.
- To create an avenue for every student to follow their talents, natural abilities along with keeping them abreast of what the world offers.

Summary

Relevance and Feasibility	• The HRD Ministry's assessment of learning levels among India's tenth standard students in 2015 placed Tamil Nadu's students close to the bottom in every subject. In Chennai, government run schools have shown poor performance and dismal results. • The project will focus on revamping of physical and digital infrastructure along with adequate capacity building for teachers, parents, and students. • Chennai Smart City Ltd. (CSCL) has implemented a SMART Classroom project under the Smart Cities Mission in 28 schools around the city in association with Samsung on a CSR initiative. • Selection for the project will be done based on their location and preference will be given to those in low income settlements to provide an enhancement in their learning experience in schools. • Additional methods such as tapping the CSR funds, asking corporates to adopt maintenance of schools, allocation of additional funds from the GCC budget, other PPP modes of maintenance are planned
Sustainability Aspects	• Schools will be selected based on some criteria such as whether the school has carried out water harvesting measures, whether the school has taken sufficient efforts to increase the greenery in the school etc. • Experience labs will be built in schools to teach children about climate change. The schools selected for this project will take green and climate friendly efforts such as installation of solar panels, planting a minimum number of trees in their playgrounds etc. • This project also proposes to initiate urban horticulture projects in the terraces of selected schools. Usable crops like vegetables and fruits are to be cultivated with the active involvement of teachers and students in the school.
Innovation and Integration Aspects	• The project is intrinsically inclusive and benefits are aimed to reach the poor. • Co-ed schools from low income settlements will be chosen for the project to ensure that benefits reach equally. Gender balance will be maintained in School Management Committee compositions, staff, teachers etc. • Innovative models and concepts such as 'School Champions,' 'Girl Champions' will be explored in schools where girls of extra ordinary talents and achievements in particular areas will be selected and their talents nurtured under expert guidance. Also, sports as habit is to be implemented in this scheme in all selected schools, wherein special emphasis will be given to girls.
Participatory Approach	• Large scale capacity building workshops, awareness creation seminars will be conducted in the selected schools. • Group discussion will be held before implementing the project to ensure the real voices from ground are heard and further the same is incorporated in the plan. • Both Greater Chennai Corporation and Chennai Smart City are setting up a social media strategy and this project is expected to be publicized among the citizens using the same. • Intensive capacity building for teachers and partnership with a private organisation for guidance as a potential programme partner for implementation of this project has been proposed.

Project Cost

Financial Indicators (INR in Crore)

10. Ujjain Smart City Limited (USCL)

Mahakal Rudra Sagar Integrated Development Approach (Phase – II)

Overview

The proposed project envisages the integration of Maharajwada Complex for better crowd management by developing more holding area for visitors. Open landscaped areas have been proposed in temple vicinity to provide recreation to the pilgrims and create an ecological balance. The open landscapes will also serve as breathing spaces in the heart of the otherwise congested city.

The proposed project envisages to address the following challenges,

- Space constraint for accommodating a crowd of 70,000 - 80,000 persons per day;
- Non-availability of green spaces within the core city areas;
- Lack of stakeholder as well as inter-departmental coordination; and
- Relocation of existing schools for redevelopment and adaptive reuse of buildings and their premise near the temple resulting in preserving the heritage and identity of the Mahakaal temple and Ujjain city.

Population
5,15,215

Area (sq. kms.)
92.68

Density (persons per sq. km.)
5559

Literacy Rate
84.43 %

Ease of Living Index Rank, 2018
24

Work Orders Processed under SCM
INR 1533.68 cr

The components of the project include,
- Mahakal Temple extension,
- Maharajwada Complex development,
- Chota Rudrasagar lake redevelopment,
- Strengthening of roads,
- Ann Kshetra & Dharamshala,
- Ramghat Street Development, and,
- Widening of bridge.

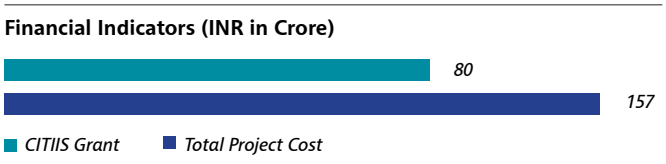
Objectives

- To develop interactive open public space for the citizens and tourists by creating plazas, small food joints & restaurants, crowd holding areas, soft & hard paved landscaping, and visitor facility centre.
- To create walkable space by developing pedestrianized pathways for pilgrims and re-organising movement pattern in and around the premise of temple. Shaded pathways and resting areas for people and restricting vehicular access around the temple are proposed.
- To generate revenue by making adaptive reuse of existing buildings and provide spaces that attract tourists. The revenue can be used for maintenance and upkeep of these spaces.
- Rejuvenation of Chhota Rudrasagar and development of facilities along the existing lakefront to enhance tourism and increasing the catchment area of the lake. Interlinking of the temple extension areas via foot over bridges, resulting in better and safe pedestrian movements.
- Organising and controlling vehicular movement and parking space to manage traffic on roads through widening of existing roads and bridges. This will reduce the traffic near the temple premise and result in proper management of vehicles. Restricting vehicles in certain areas will help in maintenance of pedestrianised streets, encourage people to walk to the temple and provide a sense of security.
- To preserve the identity and culture of the city, urban design elements such as facade uniformity, common fabric along the roads, retaining the structural strength of old buildings, paving pathways, and roads will be considered.

Summary

Relevance and Feasibility	• There is a space constraint for accommodating a crowd of 70,000 - 80,000 persons per day and hence the project proposes several components including improving access to the Mahakaal temple, lake rejuvenation and development, street development, and widening of the bridge.
Sustainability Aspects	• The public spaces proposed in the project will serve as green lungs for the city.
Innovation and Integration Aspects	• Innovative project components include, interlinking of adjacent areas of the temple with shaded pedestrian paths, rejuvenation of the lake and existing water bodies, storm water drains, sewer lines, and underground electrification to mitigate environmental impacts.
Participatory Approach	• A group of members or a committee with representation from partner institutions will be formed and empowered to take decisions on related issues. The solutions can be easily replicated in any part of the city.

Project Cost



11. Surat Smart City Development Limited (SSCDL)

Creating 'Wild Valley Bio-Diversity Park' as City Lungs by Rejuvenation of Existing Wasteland along the Creek

Overview

The city of Surat has a few natural drains/ Khaadis running across from east to west. Most of the areas along the Khaadi were mis-used for dumping waste and illegal activities like animal slaughtering. Crime, nuisance and illegal activities started developing as a result of lack of accessibility and creation of unsafe zones. Some stretches along the Khaadi also became the hubs of unwanted mosquito breeding.

The project aims to rejuvenate the existing wasteland along the creek by proposing varied range of activities through the following components,

- Public Park with a special focus on children and the elderly;
- Plantation of natural species of flora to maintain good air quality;
- Walking trails, and cycle tracks;
- Maintaining the natural storm water course;
- Interconnection of water retention ponds; and
- Compound walls, fencing, gates, and railings etc.

In addition to developing a bio-diversity park for

Population
44,67,797

Area (sq. kms.)
335.82

Density (persons per sq. km.)
13,304

Literacy Rate
87.89 %

Ease of Living Index Rank, 2018
19

Work Orders Processed under SCM
INR 2971.05 cr

preserving flora and fauna, the project envisages to make the wasteland accessible for public use by developing it into a usable public space. Through the CITIIS grant, the project intends to mobilise the city ecosystem to facilitate partnerships between stakeholders to define common goals and road maps.

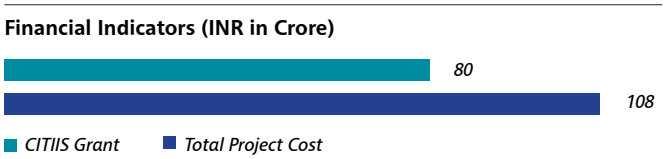
Objectives

- Rejuvenation of existing wasteland along the creek into wild valley Bio-Diversity Park and creating large chunks of city greens.
- Reducing foul smell from the creek, prevention of water pollution by phytoremediation, and improving air quality through plantation of natural species.
- To increase overall green cover by providing non-conventional recreational spaces like children's play area, senior citizens corner, parks with facilities for disabled people, etc.
- To reduce impact of heavy rainfall by creating water retention ponds and creating spaces with favourable areas for birds and other species

Summary

Relevance and Feasibility	• The Surat Municipal Corporation (SMC) has a dedicated Garden Department for civil infrastructure and horticulture.
Sustainability Aspects	• The bio diversity park will be developed with minimum intervention to the natural terrain. The project proposes extensive plantation of natural species that will help to control urban temperature and mitigate the extreme effects of heat and cold. • Financial sustainability of the project will be ensured through user charges, advertisements, parking charges, shared bicycles and solar vehicle sharing system
Innovation and Integration Aspects	• Digital Elevation Modelling is proposed for the planning of the project. • The innovative and already experimented (elsewhere) technique named Miyawakiu will be implemented. In this technique, different species are planted together and nearby like an actual forest that enhances and accelerates plant growth. • Funding from Corporate Social Responsibility and environment improvement charge is mentioned as an innovative funding source.
Participatory Approach	• A participatory approach will be adopted that involves local citizens, people's representatives, and experts from varied fields. Environmental activists, nature clubs, and NGOs would be associated with the project during conception, designing, and implementation. • Local leaders have already been informed in detail and their suggestions are incorporated as per the needs of the area.

Project Cost



12. Hubbali–Dharwad Smart City Limited (HDSCL)

Hubbali–Dharwad Smart City Limited (HDSCL)

Overview

The green mobility corridor proposed by HDSCL aims to connect the major roads with cycle tracks for encouraging cycle and pedestrian movement across the city. The mobility corridor is proposed along the Unkal Nala, the 8.5-kilometre-long drainage channel in the city.

The proposed project is envisaged to address the following challenges of the city,

- Increasing vehicles are creating traffic problems in the CBD;
- Absence of a dedicated cycling infrastructure;
- Lack of centralized recreation zone with multiple activities for various user groups in the city;
- Unkal Nala is a storm water drain with inflow of sewage water at many places. There is a need to restrict the sewage inflow to maintain its water quality and improve edge conditions of the Nala.

The major components of the project include,

- Bicycle and walking tracks,
- Drain lining and sewerage diversion,
- Controlled flow of water in channel,

Population
9,43,788

Area (sq. kms.)
213.42

Density (persons per sq. km.)
4422

Literacy Rate
86.79 %

Ease of Living Index Rank, 2018
57

Work Orders Processed under SCM
INR 345.85 cr

- CCTV surveilance,
- Landscape design and place making,
- Link with Integrated Command and Control Centre,
- Transportation and open spaces,
- Revenue generation opportunities,
- Citizen engagement,
- Horticulture knowledge and, safe and common platform for exercise.

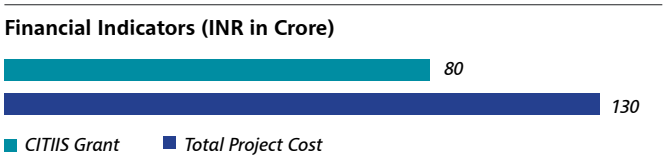
Objectives

- To develop a non-motorized corridor along the existing drainage channel.
- To develop the drainage channel to its optimum capacity for better flow management.
- To capture popular imagination in terms of showcasing the Smart Cities Mission's transformation and Swachchata drives by means of converting the existing un-clean, inaccessible Nala into a vibrant public utility and recreation space.

Summary

Relevance and Feasibility	• The proposed project aligns with the existing Smart Cities Mission (SCM) projects. There is a SCM project to de-pollute the water of Unkal Lake, which is the main source of water for the channel in the green mobility corridor project. • HDSCL has competent human resources in fields of transportation, landscape architecture, structural design, and storm water management to manage the project.
Sustainability Aspects	• The project is being designed for seamless accessibility for pedestrians and cyclists, thus providing an eco-friendly mode of commute for all social groups. • The channel passes through both well-developed and under-developed areas, the citizens in different neighbourhoods will have direct access to the facilities without having to go through any sort of gates or uninviting buffer zones. • The project envisages to redesign the drainage section to address public health issues and control vector-borne disease. The revised design will also ensure better capacity, flexibility of accommodation in case of flooding, rainwater harvesting, and water percolation.
Innovation and Integration Aspects	• Some innovative design elements incorporated in the project include, RCC edging at sharp turns to avoid water friction and deterioration of edges, cross bridges to create loops for bicycle tracks which provides provision to hold cycling events, and diversion of sewerage inlets through underground pipes below bicycle tracks. • Some other elements proposed along the corridor include traditional games in parks and Herbal & ayurvedic elements for enhancement in health and knowledge
Participatory Approach	• PMC for SPV shall be the advisory partner for project design and citizen consultation workshops for further sensitization and feedback gathering will be conducted.

Project Cost



13. Amaravati Smart and Sustainable Cooperation Limited (ASSCL)

Basic Infrastructure Development at Low-Income Settlements in Amaravati City

Overview

Ninety per cent of the households in the four identified habitations of Amaravati are Below Poverty Line. The project comprises of the following components,

- Basic physical and social infrastructure facilities;
- Access to safe drinking water;
- Separating sewerage and storm water systems;
- Increasing power requirement;
- Proper waste collection and disposal system;
- Access to primary healthcare;
- Planned and well-designed road connectivity;
- Proper infrastructure facility for Anganwadi centre.

Objectives

- To provide regular access to safe drinking water in each household through installation of a water treatment plant.
- To ensure efficient collection and management of solid waste;
- To create separate networks of sewage and storm water drains;
- To provide electricity to every household through a smart metering system;

Population
35,52,950

Area (sq. kms.)
217.5

Density (persons per sq. km.)
16335

Ease of Living Index Rank, 2018
16

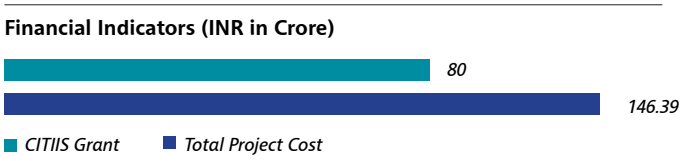
Work Orders Processed under SCM
INR 1591.4 cr

- To ensure a safe and secure learning environment for students through construction of school building, approach roads and compound walls;
- To provide access to basic healthcare through construction of smart healthcare centres and anganwadi centres; and
- To adopt a pro-people approach through all stages of the project.

Summary

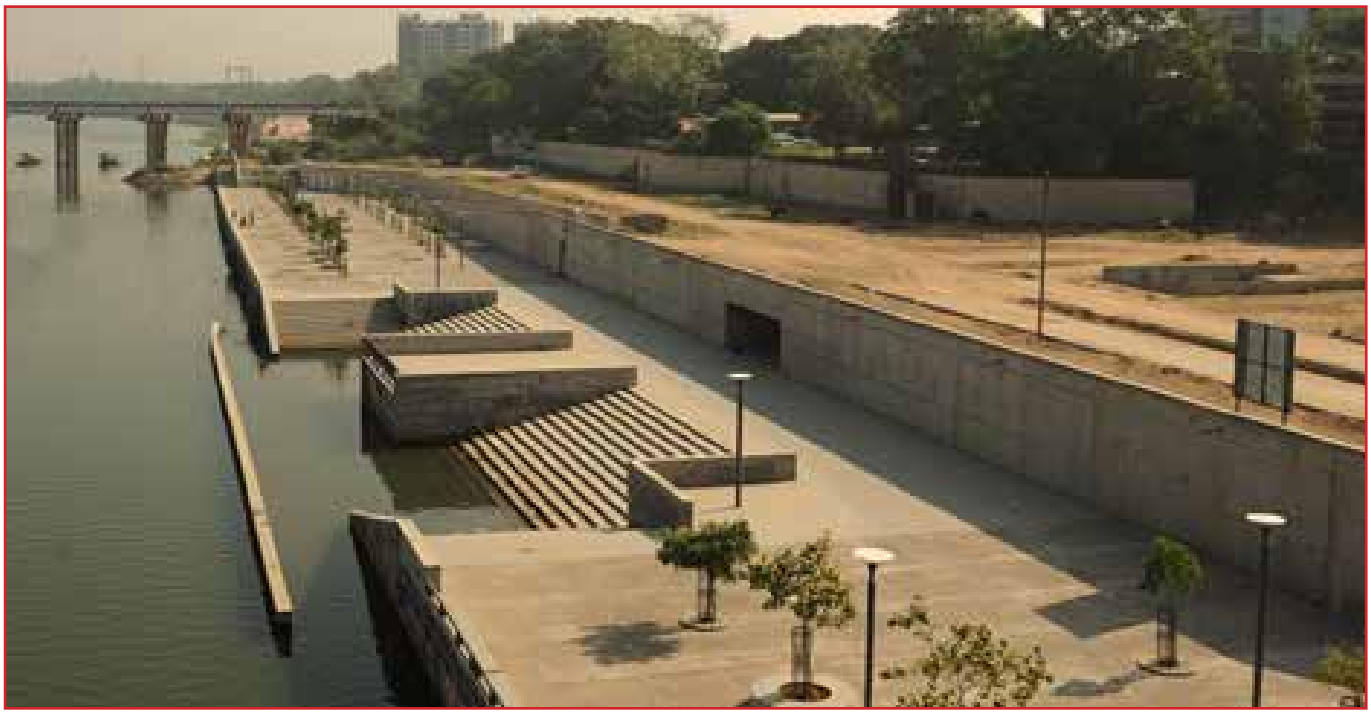
Relevance and Feasibility	• Andhra Pradesh Capital Region Development Authority (APCRDA) has tendered out projects under phase I of village infrastructural development. However, these lack an integrated approach and many habitations with below poverty line population do not have basic infrastructure amenities.
Sustainability Aspects	• The proposed projects address problems which are not concerning any particular social group alone, but the entire community of residents in the villages. Therefore, the coverage of the project will extend to all members of the villages. • As part of the project, channels will be designed to facilitate rainwater harvesting. • Collection and disposal of solid waste will be done using e-rickshaws. • User charges will be levied on the services to achieve financial sustainability for the project.
Innovation and Integration Aspects	• Women will be appointed and trained as 'Green Ambassadors,' to generate awareness on solid waste management among the communities and facilitate segregation of waste at source. • Fully equipped and technology enabled public health centres will be developed. ASHA workers will be provided cycles to reach patients who cannot reach the primary health centres.
Participatory Approach	• The SPV has completed consultation with village panchayats and women SHG. The project intends to reach out to the communities through an active network of SHGs. • APCRDA will provide financial and technical support; and upon completion the project will be handed over to the beneficiaries for operations and maintenance. An NGO will be appointed by CRDA for on-ground monitoring of project related works

Project Cost



14. Agartala Smart City Limited (ASCL)

Howrah River Front Development (Phase- II)



Overview

The project aims at developing sustainable waterfront environment along the banks of the Howrah River which can help redefine the identity of Agartala. It has multiple components, including,

- Strengthening of embankment,
- Provision for adequate sanitation and solid waste management facilities,
- Development of event area, market area, amusement park, riverfront walkway and parking facilities,
- Provision of water recreation facilities,
- Promotion of organic fruits and vegetable gardening and urban forestry

Objectives

- To develop Agartala as a tourist destination through creation of open spaces of touristic and recreational value.
- To target sustainable livelihood generation through organic gardening.
- To control soil erosion and flooding by strengthening of earthen embankment.

Population
4,00,004

Area (sq. kms.)
58.84

Density (persons per sq. km.)
6798

Literacy Rate
94.45 %

Ease of Living Index Rank, 2018
93

Work Orders Processed under SCM
INR 143.74 cr

- To maintain flora and fauna, natural habitats, biological, ecological, and geological attributes of river.
- To arrest solid and liquid waste disposal by developing sewage and solid waste management system.

Summary

Relevance and Feasibility	• The project targets green field development and proposes organic gardening along the project trail. • The project aims to uplift livelihood of surrounding communities through tourism. • The project is relevant to the needs of the city, in terms of disaster management and public open spaces for recreation.
Sustainability Aspects	• The proposed riverfront walkways and parks will be universally accessible. • The measures such as embankment strengthening will ensure adequate flood control management. • The proposed activities like organic gardens are targeted towards gender integration by providing livelihood to women. • The financial sustainability of the project will be ensured by the following mechanisms: - Entry Fees for the amusement park, - Event booking charges, - Advertisements - Revenue from sales of flower, fruits & vegetables • The design of the river front will ensure that all existing flora and fauna, natural habitats, biological, ecological, and geological attributes of river are maintained
Innovation and Integration Aspects	• The proposed riverfront walkways and parks will be universally accessible. • The measures such as embankment strengthening will ensure adequate flood control management. • The proposed activities like organic gardens are targeted towards gender integration by providing livelihood to women. • The financial sustainability of the project will be ensured by the following mechanisms: - Entry Fees for the amusement park, - Event booking charges, - Advertisements - Revenue from sales of flower, fruits & vegetables • The design of the river front will ensure that all existing flora and fauna, natural habitats, biological, ecological, and geological attributes of river are maintained
Participatory Approach	• The project aims to bring together city's self-help groups, communities and local developers.

Project Cost

Financial Indicators (INR in Crore)

15. Nagpur Smart and Sustainable City Development Corporation Ltd (NSSCDCL)

Digital Governance of Nagpur

Overview

The project envisages to implement an integrated system to effectively deliver the applicable municipal services to anyone, anywhere, anytime irrespective of their education, caste, gender, age, and income. The scope of the software and applications includes all associated processes, functions and activities including but not limited to:

- Citizen centric operations such as property tax transactions, trade licenses, marriage certificate, water billing.
- Backend operations such as accounting, solid waste management, DAK management system (DARPG/ similar guidelines of Government of Maharashtra Compliant), HRMS including pension & payroll.
- Workflow management consisting of all workflows of ULB departments with integrated Document Management System.
- Enterprise level SMS and e-mail solution
- Payment gateway
- Service Level Agreement monitoring
- Designing and developing necessary interfaces as required for seamless integration with other systems to get required information

Population
2405665

Area (sq. kms.)
217.56

Density (persons per sq. km.)
11057

Literacy Rate
91.92 %

Ease of Living Index Rank, 2018
31

Work Orders Processed under SCM
INR 1655.94 cr

Objectives

- To develop an Enterprise Resource Planning (ERP) solution for web-based integration of all municipal services.
- To enable a 360-degree view of all the property, assets, offices, and utilities in different layers using 3D GIS Map.
- To improve decision making in planning processes- traffic management, asset management, and services provision.

Summary

Relevance and Feasibility	• The portal would be a single point of entry for entire range of G to C, G to G, G to B, and B to C services (G-Government, B-Business, C-Consumer). • The project already has in place a project management unit for design, implementation and monitoring of the project. • The City Operation Centre (COC) comprising of a 1,045 kilometres network provides the backbone for integration of services.
Sustainability Aspects	• The portal will be integrated with environmental ICT devices at different locations in the city to provide, - Climate information like temperature, humidity, wind, air quality/pollution level to the citizens. - Historical pattern analysis via 3D environment dashboards to the local administration. • The portal will facilitate analysis of Dengue and other diseases and facilitate further decision making to prevent the spread of these diseases.
Innovation and Integration Aspects	• The project provides a common platform for integrating various data streams and analyse the impact across urban socio-technology system comprising of, - Urban infrastructure layer (Infrastructure / Jurisdiction components), - Urban Data/Digital layer, - Services layer (services by government agencies, business companies, etc.,). • The portal will facilitate development of digital assets (illustrations and animations) based on the municipal services. • The project has tremendous replication potential within the city as well as across Urban Local Bodies, including replicability of digital assets.
Participatory Approach	• The Nagpur Municipal Corporation (NMC) and Nagpur Smart and Sustainable City Development Corporation Ltd (NSSCDCL) will conduct workshops to socialize and create awareness among the staff and the citizens. • The solution implementation partners will be involved for minimum 3 to 4 years to ensure maximum utilization of the proposed portal in the respective departments. • The NSSCDCL shall seek citizen feedback via an online platform. • The project involves collaboration across the ULB, universities, private entities etc. for modelling and simulation.

Project Cost

Financial Indicators (INR in Crore)

16. Greater Visakhapatnam Smart City Corporation Limited (GVSCCL)

Ecosystem for Sustainable Mobility and Social Inclusion

Overview

The project aims at encouraging the use of public transport system and non-motorised vehicles across the city. It includes components such as,

- Smart Streets
- Smart Bus Stop Clusters
- SH(E)-rickshaws
- Public Bicycle Sharing (PBS)

Objectives

- To provide a comfortable and safe mobility environment for women.
- To provide livelihood opportunity for women through the non-conventional medium of driving SH(E)-rickshaws.
- To provide multiple mobility options to citizens of all age groups and abilities.
- To reduce vehicular congestion and hence, pollution.
- To provide healthier and active lifestyle through creation of walkable streets.
- To reduce urban heat island effect through reduction in paved surfaces and increase in landscapes islands along the streets.

Population
17,28,128

Area (sq. kms.)
513.61

Density (persons per sq. km.)
3,365

Literacy Rate
81.79 %

Ease of Living Index Rank, 2018
17

Work Orders Processed under SCM
INR 1027.22 cr

Summary

Relevance and Feasibility	• The project addresses outstanding needs of the city such as, - Discontinuous construction of footpaths and encroachments - Inadequate street lighting - Inadequate infrastructure at bus stops • The Greater Visakhapatnam Municipal Corporation (GVMC) and the Greater Visakhapatnam Smart City Corporation Limited (GVSCCL) have experience in similar nature of projects such as smart streets, Public Bike Sharing and smart bus stop solution under Smart Cities Mission (SCM). • The associated project management consultancy has expertise in water management, urban design, landscape design, renewable energy, construction management and site execution. • The SH(E)-rickshaws will be integrated with the City Operations Centre, which has been already established, via GPS to ensure safety of the passengers as well as the drivers.
Sustainability Aspects	• The project includes adequate lighting and surveillance cameras encouraging women to use the streets with confidence. • The provision of amenities like adequate number of toilets for all genders at regular intervals adds to the convenience for citizens. • The increase in green cover around the sidewalks will facilitate temperature reduction. • The operations and maintenance of the project would be ensured by following revenue sources: - Advertisements at bus stops, PBS stops and SH(E)-rickshaws - Renting of kiosks and vending spaces - Renting of bikes and digital advertisements space on mobile application
Innovation and Integration Aspects	• The project envisions an ecosystem of sustainable mobility and social inclusion by bundling together various components such as, smart streets, smart bus stop clusters, SH(E)-rickshaws, Public Bicycle Sharing (PBS). • The project covers additional areas in and around the ABD to fill the mobility gaps.
Participatory Approach	• The citizens' and stakeholders' feedback and requirements have been considered in the conceptualization and design phase. • The city would undertake a pilot project to gather citizens' feedback and incorporate it into the design of all components of the project. • The project will engage local NGOs with expertise in the area of environment and ecology to generate awareness among citizens.

Project Cost

Financial Indicators (INR in Crore)

17. Greater Visakhapatnam Smart City Corporation Limited (GVSCCL)

Re-imagining Waterfronts through Rejuvenation of Mudsarlova Lake Precinct

Overview

The project aims at improving the ecology of the Mudsarlova Lake to convert it into a functional and accessible public open space in the city and convert it into a city-level attraction. It includes,

- Place-making
- Universally accessible parks and open green spaces
- Introduction of Public Bicycle Sharing (PBS)
- Safety and security measures using technological innovations
- Improvement of citizen's knowledge about clean energy techniques and nature
- Organic gardens and nature trails with native species
- Adequate wayfinding and signage.

Objectives

- To increase interaction with nature.
- To increase health benefits by increasing opportunity for physical activity and target for reduction in lifestyle diseases.

Population
17,28,128

Area (sq. kms.)
513.61

Density (persons per sq. km.)
3,365

Literacy Rate
81.79 %

Ease of Living Index Rank, 2018
17

Work Orders Processed under SCM
INR 1027.22 cr

Summary

Relevance and Feasibility	• The project aims to address outstanding issues of, - Underutilization of open space around the lake - Lack of functional and accessible open spaces in the vicinity. • The project is an opportunity to protect and preserve flora and fauna as it is strategically located in the Eastern Ghats. • The project focuses on health and well-being of the citizens, especially children and elderly. • The city has previous experience in implementation of similar park development projects.
Sustainability Aspects	• The project aims to ensure safety by including adequate lighting and surveillance cameras. • The proposed on-site vending spaces will encourage self-help groups to display and sell their work at the weekly programs conducted on site. • In order to realize city's sustainable energy goals, the city has already installed the largest floating solar plant (2MW) on the Mudsarlova lake. • The long-term project operations will be ensured by inter-departmental training and capacity building. • The project will lead to increase in the green cover around the lake through components such as eco-park, nature trails etc. • The peripheries of the lake will be treated in a resilient manner by creating bunds to reduce the possibility of inundation on the site. • The paved areas in parks would be substituted by pervious surfaces and playgrounds/sport courts etc. which would lead to reduction in urban heat island effect.
Innovation and Integration Aspects	• The design process has taken into account national and international benchmarks and best practices while providing a localized solution. • The project aims at optimum utilisation of public space. • The project has bundled together components such as learning environment, play area, water front, and outdoor recreation activities. • The elements of this project can be incorporated in projects in other urbanised areas as well.
Participatory Approach	• The design process has taken into account national and international benchmarks and best practices while providing a localized solution. • The project aims at optimum utilisation of public space. • The project has bundled together components such as learning environment, play area, water front, and outdoor recreation activities. • The elements of this project can be incorporated in projects in other urbanised areas as well.

Project Cost

Financial Indicators (INR in Crore)

18. Puducherry Smart City Corporation Limited (PSCCL)

Blockchain for Civic Identity and Public Service Delivery

Overview

The project aims to develop a robust identity management system using Blockchain and Aadhaar as a backbone for a secure platform and improve public service delivery in Puducherry. The project will be undertaken in two phases as follows:

- In Phase-I, the project will focus on building the identity management system.
- In Phase-II, the project will focus on improving service delivery and reducing Government to Consumer (G2C) transaction costs by leveraging the blockchain-based identity management system.

Objectives

- To provide tamperproof, immutable, and auditable integrated civic identity management.
- To on-board consensus mechanism on a secure platform for agreements, approvals, and transaction worklets.
- To improve service delivery and effectiveness of targeted benefits.
- To obviate single point of failure by not having data stored in one single place in neither digital nor physical format.

Population
2,44,377

Area (sq. kms.)
19.54

Density (persons per sq. km.)
12,507

Literacy Rate
89 %

Ease of Living Index Rank, 2018
60

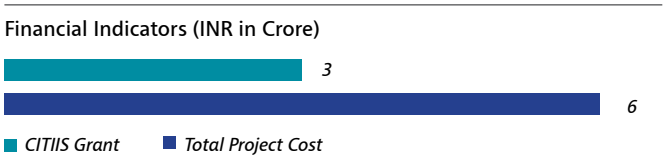
Work Orders Processed under SCM
INR 62.43 cr

- To bring about quick arbitration by introducing provenance and traceability.
- To ease the complexities involved for citizen as well as the organization that consumes information for providing certain benefits to the citizen.
- To introduce gazetted officers on the system to attest and confirm the authenticity of certificates.
- To allow citizens to redact data as per their convenience before presenting to the 3rd party.
- To allow real-time generation of certificates.
- To cut the cost incurred in the issuance of certificates.
- To digitise the process of registration of births, deaths, and marriages.
- To minimise transaction costs is property tax, building permits etc.
- To give conclusive land titles and minimise transaction costs in property transfers.

Summary

Relevance and Feasibility	• The project addresses following outstanding issues related to high volume of certificates issued by the Government of Puducherry: - Lack of robust identity management system for effective management of service delivery. - Repetitive tasks of the renewal of annually issued certificates by some consuming agencies/institutions. - High transaction costs and poor human resource utilisation due to administrative inefficiencies in identity management - Slow process due to disconnected sources of multiple documents. - Large cash flows and expenses associated with the certification process. - Potential misuse, tampering and loss of identity documents stored in papers or files.
Sustainability Aspects	• The project will ensure data security and avoid unauthorized data sharing by Blockchain cryptography and smart contract mechanism. • The solution will map all in-scope personal attributes to a unique Aadhaar number in a secure and trusted way. • The automatized, faceless and paperless system would reduce overall carbon footprint of the identity management process. • The digital product would be accessible anytime from anywhere by any citizen of Puducherry to request an identity certificate.
Innovation and Integration Aspects	• The project uses smart algorithm to combat fraudulent activity and incorporate complexities in identity management. • The project is scalable both horizontally and vertically and to the other states and cities. • The project will integrate various services such as death and birth registration system, ration management system, electricity connection system, etc.
Participatory Approach	• The project will be promoted via various media channels such as paper, audio and video. • The community participation and adoption will be promoted by creation of a World Economic Forum's Global Shapers Community Chapter in Puducherry. • The branding, outreach, and communication would be undertaken by organizing public talks on Blockchain.

Project Cost



19. Kakinada Smart City Corporation Limited (KSCCL)

Social and Physical Infrastructural Development in Low-income Settlements

Overview

The project targets development of social and physical infrastructure in the notified slums of Kakinada city to uplift the quality of life of their residents. It includes,

- Physical infrastructure components such as: 24x7 water supply, decentralised sanitation, storm water drainage,
- Social infrastructure components such as: education and skill development; community spaces/open areas; commercial and vending areas, and ICT integration.

The physical and social infrastructure development in low-income settlements will address social exclusion issues and ensure better livelihood for the residents.

Objectives

- To reduce gentrification by bridging the social gap.
- To provide physical and social infrastructure in low-income settlements

Population
3,12,538

Area (sq. kms.)
57.36

Density (persons per sq. km.)
6,698

Literacy Rate
80.62 %

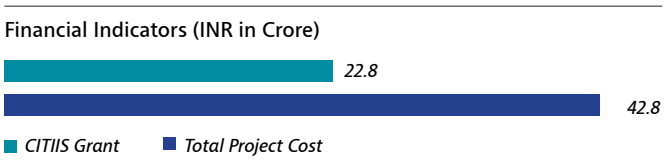
Ease of Living Index Rank, 2018
64

Work Orders Processed under SCM
INR 982.48 cr

Summary

Relevance and Feasibility	• The project addresses the following outstanding issues in the low-income settlements of the city: - Unavailability of community spaces; - Inadequate physical infrastructure, such as 24X7 water supply, solid waste management and sanitation; - Social exclusion of low-income communities; - Lack of adequate social infrastructure, such as community halls, open gyms, skill development, and knowledge hubs. • The Urban Local Body has experience in similar projects involving water supply networks and construction of service reservoirs in collaboration with the World Bank, and the State Government.
Sustainability Aspects	• The project is designed keeping in mind accessibility of all community members, irrespective of age and gender. • It is proposed to have special hawking zones for women in weekly markets. • The provision of physical infrastructure like piped water supply to houses will ease the household chores, especially for women. • The operations and maintenance will be transitioned to the community level committees, with an equal representation from women, post-completion.
Innovation and Integration Aspects	• The project targets infrastructural development, economic sustainability, and well-being of residents of low-income settlements. • The project bundles together various social inclusion and infrastructural development components, which would collectively ensure an overall improved lifestyle, economic sustainability and well-being of the residents. • The project targets public-participation and a bottom-up approach.
Participatory Approach	• The public announcement through hoardings and government offices has already commenced. • The project would collaborate with Board of Secondary Education of Andhra Pradesh and skill development organisations to promote projects related to establishment of skill development and knowledge hubs. • The needs assessments has been undertaken using community surveys. • The project has collaborated with an NGO to generate awareness about the projects, potential use of community spaces etc.

Project Cost



20. Smart City Ahmedabad Development Limited (SCADL)

Last Mile Connectivity Using Dockless Bikes for Bus Rapid Transit System (BRTS) and Ahmedabad Municipal Transport Services (AMTS)

Overview

The project aims to ease last mile connectivity through dockless bikes for Bus Rapid Transit System (BRTS) and Ahmedabad Municipal Transport Services (AMTS). It includes,

- Dockless and smart bikes
- Functional and Unisex bikes
- Installation of multiple bicycle stations at several different key locations,
- Development of application to reserve/book a ride,
- Sustainable and low-cost transport infrastructure,
- IT integration of bicycles, users, stations and terminals

Objectives

- To target conversion of 250,000 potential passengers into public transportation users.
- To integrate with 1000 buses (250 BRTS + 850 AMTS buses) to provide connected travel experience.

Population
55,77,940

Area (sq. kms.)
468.92

Density (persons per sq. km.)
11,895

Literacy Rate
88.29 %

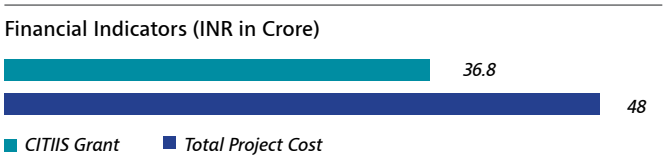
Ease of Living Index Rank, 2018
23

Work Orders Processed under SCM
INR 2281.39 cr

Summary

Relevance and Feasibility	• The project focuses on, - Reducing air & noise pollution, - Reducing greenhouse-gases emission, - Ensuring economical and convenient last-mile connectivity, - Reducing congestion on streets, - Promoting healthier lifestyle. • The station sizing would be according to the demand of the vicinity and station placement in visible areas like BRTS/AMTS stops, near upcoming metro stations, riverfront, parks and gardens, heritage locations. • The ULB has previous experience with Smart Bike initiative called, MYBYK at riverfront and experienced human resources include specialised urban planners, civil engineers and mobility experts. • The project would leverage existing IT solutions such automatic fare collection systems, open loop common city payment system, city surveillance and Integrated Command and Control Centre (ICCC).
Sustainability Aspects	• The dockless bike system will delimit the BRTS and AMTS geographical reach in the city. • The project is environmental friendly as the gradual reduction in number of motor vehicles would reduce fuel consumption and greenhouse gas emission. • The financial sustainability will be ensured through user charges paid by the commuters. • The dockless bike will be a highly cost-effective and time-saving mobility option for local and tourists alike.
Innovation and Integration Aspects	• The dockless bikes are pro-convenience as these are geo-enabled. • The project will provide dual rider bikes at public locations like parks, gardens, lake-front, river-front, heritage locations to attract more people to use them. • The innovative user workflow would be as follows: - Spot a bike; - Download the Mobile Application; - Use any digital mode of payment (credit card, debit card, janmitra card, e-wallet); - Remotely unlock the bike
Participatory Approach	• The project requirement has incorporated feedback from focused group discussion with private players. • The concept would be promoted in schools, universities and private offices, in addition to other offline and online promotion platforms • The citizen outreach and marketing would be undertaken by organizing cycle drives and cyclathons. • The project proposes to consider lower BRTS-AMTS fares for bicycle riders.

Project Cost



21. Thane Smart City Limited (TSCL)

Mobility Improvement in ABD Precinct of Thane City

Overview

The project proposes station area improvement to benefit the daily commuter footfall of 6.5 lakh passengers at Thane station through,

- Promotion of Non-Motorized Transport (NMT),
- Organization of station related activities, and,
- Use of technology to organize vehicular movement.

The project involves infrastructural development along twenty-three streets around the station area. These streets have been categorized into following four themes and would be developed thematically:

- Gateway
- Retail
- Culture
- Waterfront

The project responds to the mobility and safety needs of pedestrians by the following proposed components:

- Construction of roads and wider footpaths with urban design components such as: ramps, tactile pavement road markings, bollards, interlocking pavers; landscaping, and street furniture;
- Variable message signage and interactive message

Population
18,41,488

Area (sq. kms.)
128.23

Density (persons per sq. km.)
14,361

Literacy Rate
84.53 %

Ease of Living Index Rank, 2018
6

Work Orders Processed under SCM
INR 634.33 cr

boards;
- Adoption of smart traffic management technologies such as sensor based traffic lights along with the Integrated Command and Control Centre (ICCC)

Objectives

• To promote NMT and other environmentally sustainable practices.
• To integrate physical and digital space.
• To enhance streetscape and place-making.
• To improve distinct urban experience.

Summary

Relevance and Feasibility	• The project is proposed around Thane station which is one of the most heavily used stations in region and hence, will have huge impact for the daily commuter footfall of 6.5 lakh passengers. • The project addresses outstanding issues of the station area such as, - Heavy vehicular and pedestrian traffic, - Narrow footpath force pedestrians to walk on the road, - Haphazard parking spaces, - Encroachment by hawkers and vendors, - Conflict of multi-modal traffic at intersections. • The city has experience in implementing projects for streetscape design, Non-Motorized Transport and multi-modal integration and is seeking expertise for aesthetics and traffic calming.
Sustainability Aspects	• The project acknowledges the need to include physically challenged, seniors and children in designing infrastructure around the train station. • The street signage with Braille and place route maps for easy understanding have been proposed • The security will be ensured in station precinct by installing CCTV cameras and the vendor stalls will be functional the entire day. • The project also proposes arrangement for ground water recharge at permeable areas, sufficient planting, installation of solar-powered lights and use of locally sourced building materials.
Innovation and Integration Aspects	• The project borrows from the principles of train station design in Japan, where train stations have historically been public places. • The project is focused on the pedestrians and passengers using the train station and nearby area. • The project is replicable at all railway stations in Mumbai and largely India since principles of station area design and development are universally applicable.
Participatory Approach	• T• The need for the project has evolved from the citizens' consultations and opinion surveys conducted during Thane Smart City Proposal formulation. • Out of all the respondents, 37% asked for improvement in station area experience and 47% pointed out mobility as a key problem in the city. • The needs assessment during project maturation and implementation will be done through surveys of passengers, shop keepers, hawkers, and vendors. • The project would invite suggestions and criticism on the existing plan for the area by setting up kiosks at the railway station.

Project Cost

Financial Indicators (INR in Crore)

22. Surat Smart City Development Limited (SSCDL)

Green Mobility through Last Mile Connectivity and Augmentation of Existing Public Mass Transit System of Surat City

Overview

The project proposes station area improvement to benefit the daily commuter footfall of 6.5 lakh passengers at Thane station through,

- Promotion of Non-Motorized Transport (NMT),
- Organization of station related activities, and,
- Use of technology to organize vehicular movement.

The project involves infrastructural development along twenty-three streets around the station area. These streets have been categorized into following four themes and would be developed thematically:

- Gateway
- Retail
- Culture
- Waterfront

The project responds to the mobility and safety needs of pedestrians by the following proposed components:

- Construction of roads and wider footpaths with urban design components such as: ramps, tactile pavement road markings, bollards, interlocking pavers; landscaping, and street furniture;

Population
44,67,797

Area (sq. kms.)
335.82

Density (persons per sq. km.)
14,361

Literacy Rate
187.89 %

Ease of Living Index Rank, 2018
19

Work Orders Processed under SCM
INR 634.33 cr

- Variable message signage and interactive message boards;
- Adoption of smart traffic management technologies such as sensor based traffic lights along with the Integrated Command and Control Centre (ICCC)

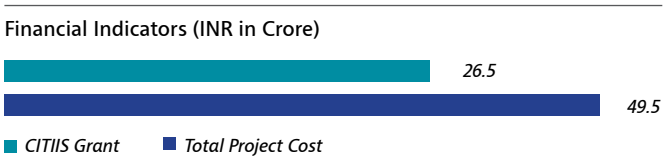
Objectives

- To promote NMT and other environmentally sustainable practices.
- To integrate physical and digital space.
- To enhance streetscape and place-making.
- To improve distinct urban experience.

Summary

Relevance and Feasibility	• The project is proposed around Thane station which is one of the most heavily used stations in region and hence, will have huge impact for the daily commuter footfall of 6.5 lakh passengers. • The project addresses outstanding issues of the station area such as, - Heavy vehicular and pedestrian traffic, - Narrow footpath force pedestrians to walk on the road, - Haphazard parking spaces, - Encroachment by hawkers and vendors, - Conflict of multi-modal traffic at intersections. • The city has experience in implementing projects for streetscape design, Non-Motorized Transport and multi-modal integration and is seeking expertise for aesthetics and traffic calming.
Sustainability Aspects	• The project acknowledges the need to include physically challenged, seniors and children in designing infrastructure around the train station. • The street signage with Braille and place route maps for easy understanding have been proposed • The security will be ensured in station precinct by installing CCTV cameras and the vendor stalls will be functional the entire day. • The project also proposes arrangement for ground water recharge at permeable areas, sufficient planting, installation of solar-powered lights and use of locally sourced building materials.
Innovation and Integration Aspects	• The project borrows from the principles of train station design in Japan, where train stations have historically been public places. • The project is focused on the pedestrians and passengers using the train station and nearby area. • The project is replicable at all railway stations in Mumbai and largely India since principles of station area design and development are universally applicable.
Participatory Approach	• The need for the project has evolved from the citizens' consultations and opinion surveys conducted during Thane Smart City Proposal formulation. • Out of all the respondents, 37% asked for improvement in station area experience and 47% pointed out mobility as a key problem in the city. • The needs assessment during project maturation and implementation will be done through surveys of passengers, shop keepers, hawkers, and vendors. • The project would invite suggestions and criticism on the existing plan for the area by setting up kiosks at the railway station.

Project Cost



23. Bhopal Smart City Development Cooperation Limited (BSCDCL)

Teacher JI – 'Education on Wheels

Overview

The project aims at refurbishing old Bhopal City Link Limited (BCLL) buses as modern classrooms to provide classrooms at doorstep. It envisages,

- The refurbished, child-friendly and universally accessible buses will act as a support to education for the slum habitants.
- The mobile computer-enabled buses would be utilized to cater to the education needs of slum areas, during the day hours (8 am to 5 pm).
- The buses will provide,

• Basic primary and secondary education,
• IT skills,
• Access to latest skill development courses, and,
• Certification to the students.

Objectives

• To refurbish the old public transport buses of BCLL as modern classrooms.
• To impact as many school students as possible with education support.
• To improve student retention rate in schools by strengthening education systems.
• To generate awareness.
• To provide user-friendly mobile community development centre as a learning space.

Population
17,98,218

Area (sq. kms.)
285.88

Density (persons per sq. km.)
6,290

Literacy Rate
80.37 %

Ease of Living Index Rank, 2018
10

Work Orders Processed under SCM
INR 3026.84 Cr.

Summary

Relevance and Feasibility	• The target population lacks access to basic primary and secondary education, information technology skills, and other advanced skill development courses. • The project proposes to bring education to the slum communities using the Enabler (bus), Services (classroom infrastructure) and System/Processes (slum communities) approach. • In the designed pilot phase, 15 buses, each with capacity of 35 students, are proposed to cater to more than 500 students in slums of Bhopal.
Sustainability Aspects	• The project has incorporated awareness courses related to health issues, gender biases, education, sanitation, environment etc. • The classroom infrastructure such as computers, projectors and other accessories will be solar powered inverters. • The project will incorporate all the design principles to ensure that the bus infrastructure is universally accessible. • The project will emphasize on co-education, with no gender disparities. • The project will be operated by Bhopal Smart City Development Cooperation Limited (BSCDCL) and supported by, - Municipal Corporation, - Bhopal City Link Limited (BCLL), - Directorate of Technical Education, and - Madhya Pradesh Council of Vocational Education and Training.
Innovation and Integration Aspects	• The project conceptualization has incorporated many innovative components such as, - Converting existing old buses to classrooms - Using renewable energy for powering the mobile classrooms and labs - Space utilization for community development and awareness generation activities - Mobile library • The project has proposed diverse learning and training programs to be undertaken, such as - Computers, graphics, and animation - Language skills - Teacher training
Participatory Approach	• The project envisions to partner with various skill-development bodies in public, private and non-government sector. • The project envisions to partner with CSR programs for employment opportunities • The project has identified following primary stakeholders: - Primary and Higher Education Departments, - Madhya Pradesh Council of Vocational Education and Training, - Self Help groups, - NGOs, - Schools/Colleges/Open Institutes, and, - Radio Partners.

Project Cost

Financial Indicators (INR in Crore)

24. Davanagere Smart City Limited (DSCL)

Rejuvenation of Mandakki Bhatti Area

Overview

The project aims at rejuvenation of Mandakki Bhatti area targeting socio-economic development of the precinct and improvement of overall quality of life. It includes,

- Slum redevelopment
- Provision of infrastructure facilities
- Capacity building for skill improvement

Mandakki Bhatti area is the socio-economic precinct of the city of Davanagere, known for its production of puffed rice. Around 8,000 people are engaged in the making, loading, storing, and transportation of this variety of puffed rice.

Objectives

- To improve basic services such as water supply, sewerage system, public toilet, roads, storm water drains, solid waste management, electricity, and street lighting.
- To undertake technological intervention to improve efficiency, maintain clean and hygienic working environment, reduce resultant pollution, and standardize products.

Population
4,34,971

Area (sq. kms.)
77.12

Density (persons per sq. km.)
5,640

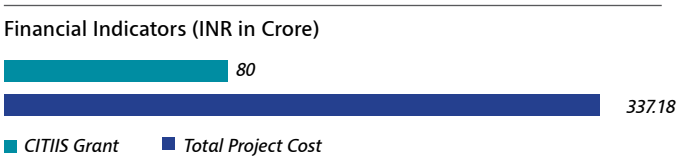
Literacy Rate
84.90 %

Ease of Living Index Rank, 2018
83

Work Orders Processed under SCM
INR 1134.75 Cr.

- To improve the health conditions of the workers.
- To redevelop housing and physical infrastructure in the slums adjacent to the Mandakki Bhatti area.
- To improve socio-economic conditions of the workers.
- To ensure provision of better education and skill development facilities.

Project Cost



Summary

Relevance and Feasibility	• The project addresses following issues prevalent on site: - Inadequate basic infrastructure/amenities including, roads, potable water supply, sewerage system, storm water drainage system, solid waste management, and public sanitation system etc. - Unhygienic and insufficient workspace leading to extension of processing to road/roadsides - Inadequate processing technology - Industrial air pollution and ash handling - Health hazards such as respiratory disease due to air pollution - Socio-economic issues such as bonded labour and child labour - Lack of clean, safe, and efficient use of energy
Sustainability Aspects	• The precinct development aims to improve the conditions for all residents as well as users of that area. • The project aims to considerably reduce air pollution in the area through introduction of pollution free equipments like gasifier, puffing units, and heat recovery units. • The project targets long-term community engagement. • The project envisages skill-development for sustained livelihood opportunities. • The project would also lead to an improvement in health conditions of people.
Innovation and Integration Aspects	• The existing manufacturing system will be replaced with technological and mechanized equipment, like, - Gasifier, - Three-in-one machinery (roasting, drying, and puffing), and, - Energy recovering unit. • The project will harbinger efficiency in implementation, monitoring, as well as financial viability. • The project is replicable to similar kind of communities that deal with home-based industries.
Participatory Approach	• The project targets community consultation in the form of day-to-day interactions with the residents to gain their support for the project. • The formation of a Community Development Committee will facilitate effective public and government interaction.

25. Bhopal Smart City Development Corporation Limited (BSCDL)

100 Kms of Green Corridor for Non-Motorised Transport and Pedestrian Friendly Track

Overview

The project aims at promotion of non-motorized transport in the city of Bhopal. It includes,

- Development of 100 kms of green corridor for Non-Motorized Transport (NMT)
- Development of pedestrian friendly track
- Installation of lights and surveillance cameras, integrated with Command and Control Centre along the NMT corridor

The proposed corridors are classified under four typologies:

- Cycle Track (complete segregation of lanes): The routes with high traffic are recommended to have segregated cycle tracks.
- Green Ways (complete separation of NMT from motorized vehicle): The routes are dedicated for cycle lanes/tracks and closed for motorized traffic.
- Light Segregated Lane: The routes demarcate an area of the carriage way for the use by cyclists.
- Advisory Cycle Lane: These routes are advisory cycle lanes are intended for low traffic volume streets, with two-way vehicular lane in the centre and advisory cycle lanes on either side.

Population
17,98,218

Area (sq. kms.)
285.88

Density (persons per sq. km.)
6,290

Literacy Rate
80.37 %

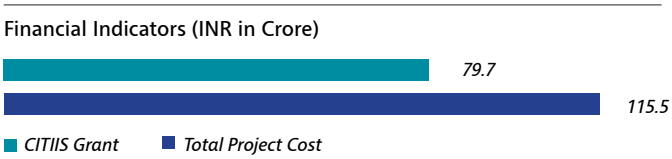
Ease of Living Index Rank, 2018
10

Work Orders Processed under SCM
INR 3026.84 Cr.

Objectives

- To provide infrastructure which supports the right to walk and provides equal weightage to non-motorized traffic.
- To enhance public transport infrastructure to build a low vehicle society.
- To promote better air quality and improved health of the citizens.
- To introduce dedicated safety and surveillance infrastructure for pedestrians and cyclists.

Project Cost

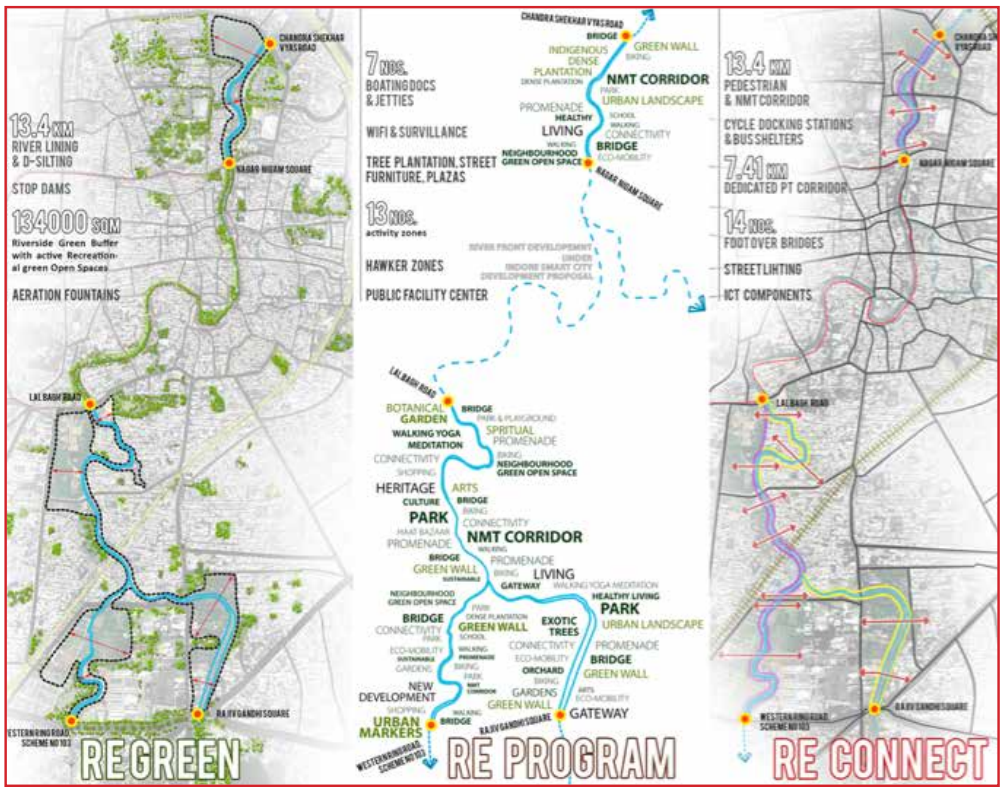


Summary

Relevance and Feasibility	• The project is an extension to the existing Public Bicycle Sharing (PBS) system of the city. • The proposed NMT corridor would facilitate the adoption of PBS and use of bicycles at large. • The project is directly addressing the decline in air quality of the city due to increased number of motorised vehicles. • The average distance of commute for majority of the citizens within the city is between 5-15 kilometres. Hence, cycling and walking are envisaged as better alternatives for the citizens to commute within the city who are primarily dependent on motorised transport. • The city already has developed and operationalized a 14-kilometre-long cycling corridor as part of the PBS project.
Sustainability Aspects	• The promotion of NMT will lead to reduction in carbon dioxide emissions. • The construction and development will be done on existing roads of city and does not aim to capture any share of any private property. • The security and surveillance will be ensured through cameras to provide security to women, children and others who will use the proposed NMT corridor. • The proposed NMT corridor has been designed in such a way that the corridor would cover the entire city (All major, minor roads and important areas). Hence, the proposed corridor will help to reduce heavy congestion on roads due to reduction in the dependency on motorised vehicles. • The environmental benefits include improved air quality through a reduction in per capita energy consumption. • It will reduce stress on fossil fuels and align with development of low-carbon sustainable communities.
Innovation and Integration Aspects	• The project has been developed in integration with existing Public Bike System (PBS). • The design and development of proposed corridor will include components such as sidewalks, crosswalks, street furniture, traffic calming, traffic speed reductions, bicycle parking, vehicle restrictions to increase modal share of NMT. • The project can be replicated by other cities with similar roads, ROW, and feasibility to roll-out a dedicated NMT corridor.
Participatory Approach	• The city has installed smart electric polls with attached digital signage boards which are proposed to be used for advertisements, awareness campaigns, news and regulations, etc. • The project would leverage the collaboration platform on Bhopal Plus, city's smart city mobile application, for promotion and awareness. • The project envisages collaboration with Bhopal Municipal Corporation and Global Shapers community (World Economic Forum initiative) to spread awareness in schools, colleges, coaching institutes, etc. • The project proposes focused campaigns for environmental and health awareness.

26. Indore Smart City Development Limited (ISCDL)

Development of Green Corridor along Kahn and Saraswati River – Phase I



Overview

The project encompasses development of about 30 hectares of recreational spaces and 13.4 Kms of Non-Motorized Transport (NMT) corridors. The proposed project is an extension of the same component in the smart city project on river front development. The project includes,

- Development of 6.7 kms of the riverfront (5.48 kms upstream and 1.22 kms downstream) of the 11 kms of Kahn and Saraswati rivers flowing through Indore.
- Treating the rivers through drainage management
- Design the banks and turn them into open spaces for citizens

Currently, the rivers have turned into channels carrying grey water and sites for dumping of solid waste.

Objectives

- To build resilient ecosystem in the form of green corridor along the rivers to act as lungs of Indore.
- To ensure unpolluted and uninterrupted flow of water.

Population
19,64,086

Area (sq. kms.)
170

Density (persons per sq. km.)
11,569

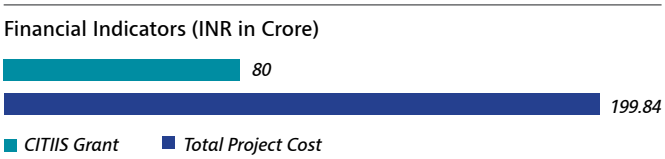
Literacy Rate
85.87 %

Ease of Living Index Rank, 2018
8

Work Orders Processed under SCM
INR 3234.82 Cr.

- To enhance connectivity and seamless sustainable mobility through the dense urban core.
- To transform urban wasteland to vibrant community places.
- To reduce net carbon footprint by adopting green technologies.

Project Cost



Summary

Relevance and Feasibility	• The project is aligned to Indore's Smart City Proposal. • The project proposes a multi-sectoral approach to riverfront rejuvenation and deals with multiple problems including, - Lack of drainage and septage system resulting in river pollution, - Lack of public spaces resulting in illegal activities surrounding the river banks, - Lack of a pedestrian and NMT corridor resulting in absence of north-south connectivity, and, - Lack of solid waste management resulting in dumping and thereby local flooding. • The project feasibility is based on city's demonstrated experience in similar projects.
Sustainability Aspects	• The project design incorporates elements like tactile flooring for visually impaired, CCTV cameras and ambient lighting planned for women security. • The river banks will be lined with natural flow design techniques and retaining wall after sewer and drainage networks are tapped. • The green corridor for NMT will be built along the river to increase mobility options and improve air quality. • The project has planned NMT and public transport corridors such that there is easy accessibility to the traditional core market areas. • The development of green corridor with recreational spaces and public parks piercing through the core CBD areas in North-south directions will help in reducing city's carbon footprints. • The proposed footpaths, cycle tracks, bus stops and recreational spaces will ensure barrier free access with special focus on differently-abled and senior citizens. • The rejuvenation of Kahn river will improve the water quality in the river. • The human resources from Indore Municipal Corporation (IMC) and Atal Indore City Transport Service Limited (public transport provider) will be used for operation, maintenance and management of the project.
Innovation and Integration Aspects	• The project has bundled together components of multiple sectors to leverage gains in a combined approach. • In this project, the riverfront has been seen beyond its narrow use of water carrying channel and has become an enabler of interventions such as, - Public spaces, - Urban form transformation, and - Provision of connectivity. • It has been proposed to bundle interventions and financial resources from other initiatives such as AMRUT. • The project is replicable in all Indian cities with presence of river or water channels.
Participatory Approach	• The project has detailed stakeholder participation and communication strategy. • The project proposes to communicate extensively during project implementation using online and offline consultations. • The offline consultations will be undertaken with: - Non-Government Organizations (NGOs), - Resident Welfare Associations (RWAs), - Proposed citizen's advisory forum (to ensure co-creation) - Proposed political advisory forum (to manage political economy of the project) • The online communication will be undertaken via social media, project website and messaging platforms • The project has identified following key partners: - Indore Municipal Corporation, - Atal Indore City Transport Service Limited (public transport provider), and, - NGOs for communication and outreach.

27. Surat Smart City Development Limited (SSCDL)

Creation of Digitally Inclusive Urban Space

Overview

The project targets space creation in public open spaces, creation of additional service delivery points, for various civic and administrative services, and creation of a participatory environment, in addition to address safety concerns. It includes,

- Creation of seating space for waiting, rest or evening recreation for senior citizens, children, adults, females etc. at major locations like gardens/ parks, street footpath, major bus stations etc.
- Encouraging self-service through smart kiosks, like banking, along with space creation rather than personal visit at civic centres.
- Providing citizens with information related to weather, air pollution, bus timing, important announcements etc. at any time during morning walk or while in transit.
- Enabling real time feedback from citizens to civic administration on various services and needs through this project.
- Provisioning with CCTV surveillance to ensure security of the infrastructure as well as citizens within the vicinity of the urban space created.
- Introduction of Surat Money card, with an additional channel whereby citizens can pay their fees and payments for civic services.

Population
44,67,797

Area (sq. kms.)
335.82

Density (persons per sq. km.)
13,304

Literacy Rate
87.89 %

Ease of Living Index Rank, 2018
19

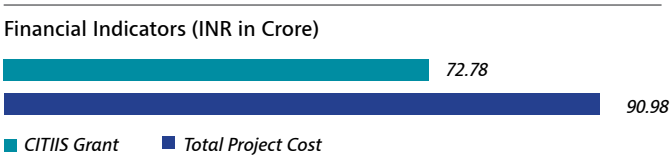
Work Orders Processed under SCM
INR 2971.05 Cr.

The major physical infrastructural components of the project will include,
- Smart Connect,
- Smart Kiosk,
- Environmental Sensors,
- Smart Eye,
- Smart Billboards and Public Announcement Systems,
- Smart Space Creation with USB charging sockets,
- Integration with City Command Control Centre,
- Solar Panels, and,
- Smart LED Lights.

Objective

- To create a digitally inclusive urban space through interactive service delivery points

Project Cost



Relevance and Feasibility	• The project aims at improving the quality and user experience of public service delivery by, - Providing one stop smart solution - Providing information access on the fly, - Ensuring additional service delivery points for the convenience of citizens, and, - Providing integrated view of all services to ULBs and hence, facilitating the decision- making. • The project is proposed to meet the expectations of citizens and provide digitally inclusive services across the city. • Through the creation of digitally inclusive urban space, Surat Smart City will enhance the quality of life for citizens by means of real time information about important announcements, weather conditions, air pollution level etc. • The project will utilize the state of art technology comprising of solar panels, sensors, interactive screens etc. which will be integrated with the state of art Integrated City Command Control Centre for monitoring and real time update. • The city has undertaken multiple projects in the field of space creation and ICT including Internet of Things (IOT) devices.
Sustainability Aspects	• The proposed project is a digitally inclusive plan. • The project will promote digital inclusion by providing public Wi-Fi services at each digitally inclusive space and hence, bridging digital gap between different strata of society. • The project will help to achieve the cashless culture within Surat city by simplifying their payment of fees, property tax, water bill etc. • The project is eco-friendly as it uses solar panels to power all IOT devices. • The air quality and weather sensors at each digitally inclusive space will facilitate real time information on air quality. • The integration of these sensors with Integrated Command Control Centre would enable civic administration to take innovative corrective actions.
Innovation and Integration Aspects	• The project uniquely bundles together space creation and digital services. • The IT components will be integrated with the Smart Poles as well as the transactional kiosks proposed. • The project bundles together various citizen centric services in terms of scalability, reliability, and usability with real time information. • The project envisages various innovative revenue generation avenues such as, - Smart billboards, - Kiosks, - Paid premium Wi-Fi etc.
Participatory Approach	• The outreach activities for the project have been planned on social media. • The project will engage local youth to act as change agents and encourage their peers and relatives to utilize the space. • The project will seek feedback from local communities for requirement of any additional features.

IMAGE SOURCE

Sr No	Name of the project	City	Source of the Image
1	Social Inclusion through modernizing Public Schools as Smart Campus	Visakhapatnam	Presentation by GVSCCL for CITIIS Challenge
2	Our Neighbourhood is Your Neighbourhood Too - A Participatory Planning Approach for Improvement of Low-Income Settlements in Pondicherry	Puducherry	Source: Wikipedia; Available at: https://en.wikipedia.org/wiki/Pondicherry#/media/File:Pondicherry_Panorama_1.jpg
3	B-Active	Bhubaneswar	Presentation by Bhubaneswar Smart City Limited for CITIIS Challenge
4	Diu-Ghoghla Bridge Park	Diu	Presentation by Diu Smart City Limited for CITIIS Challenge
5	Electric Public Transportation System	Kakinada	http://manapalakolinfo.blogspot.com/2012/06/palakol-bus-timings.html
6	Child Friendly and commuter centric Dehradun Smart City Sustainable Mobility Plan	Dehradun	Presentation by Dehradun Smart City Ltd for CITIIS Challenge
7	E- Health Solution	Cochin	Wikipedia, Available at: https://en.wikipedia.org/wiki/Kochi#/media/File:Cityscape_view_from_Kakkanad.jpg
8	Development of Sustainable and Green Public Transportation in Amritsar City	Amritsar	Envis Centre Webpage, Ministry of Environment & Forest, Govt. of India; Available at: http://cpreecenvis.nic.in/Database/Amritsar_4088.aspx?format=Print
9	Model & SMART Corporation Schools in Chennai	Chennai	Presentation by Chennai Smart City Limited for CITIIS Challenge
10	Mahakal Rudra Sagar Integrated Development Approach - Phase - II	Ujjain	Presentation by Ujjain Smart City Ltd (USCL) for CITIIS Challenge
11	Creating "Wild Valley Bio-Diversity Park" as City Lungs by Rejuvenation of existing wasteland along the Creek	Surat	Presentation by Surat Smart City Development Limited for CITIIS Challenge
12	Green Mobility Corridor	Hubbali-Dharwad	Presentation by Hubbali-Dharwad Smart City Limited for CITIIS Challenge
13	Basic Infrastructure Development at Low-Income Settlements	Amaravati	Presentation by Amaravati Smart and Sustainable Cooperation Limited for CITIIS Challenge
14	Howrah River Front Development (Phase-II)	Agartala	Presentation by Agartala Smart City Limited for CITIIS Challenge

Sr No	Name of the project	City	Source of the Image
15	Digital Governance of Nagpur	Nagpur	Nagpur Municipal Corporation Website; Available at: https://www.nmcnagpur.gov.in
16	Ecosystem for Sustainable Mobility and Social Inclusion	Visakhapatnam	https://www.visakhapatnamsmartcity.com/smartcity.html
17	Re-imagining waterfronts through Rejuvenation of Mudsarlova Lake Precinct	Visakhapatnam	Presentation by GVSCCL for the CITIIS Challenge
18	Blockchain for Civic Identity and Public service delivery	Puducherry	Presentation submitted by Puducherry SPV for CITIIS
19	Social and Physical Infrastructure Development in Low-Income Settlements	Kakinada	Presentation by Kakinada Smart City Corporation Ltd. for CITIIS Challenge
20	Last Mile Connectivity Using Dockless Bikes For Bus Rapid Transit System (BRTS) and Ahmedabad Municipal Transport Services (AMTS)	Ahmedabad	https://mybyk.in
21	Mobility Improvement in ABD precinct of Thane city	Thane	Presentation by Thane Smart City Limited for CITIIS Challenge
22	Green Mobility through Last Mile Connectivity and Augmentation of Existing Public Mass Transit System of Surat City	Surat	Presentation by Surat Smart City Development Limited for CITIIS Challenge
23	Teacher JI – 'Education on Wheels'	Bhopal	https://smartbhopal.city/en
24	Rejuvenation of Mandakki Bhatti Area	Davanagere	Presentation submitted by Davanagere Smart City Limited for CITIIS Challenge
25	100 Kms of Green Corridor for NMT (Non-Motorised Transport) and Pedestrian Friendly Track	Bhopal	Smart City, Bhopal; Available at: https://smartbhopal.city/en
26	Development of Green Corridor along Kahn and Saraswati River- Phase I	Indore	Presentation by Indore Smart City Development Limited for CITIIS Challenge
27	Creation of Digitally Inclusive Urban Space	Surat	Surat Municipal Corporation Website; Available at: https://www.suratmunicipal.gov.in

DATA SOURCE

Sr No	Name of the project	City	Source of Demography Details
1	Social Inclusion through modernizing Public Schools as Smart Campus	Visakhapatnam	Census of India 2011. District Census Handbook - Town Amenities, Andhra Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/402-visakhapatnam.html
2	Our Neighbourhood is Your Neighbourhood Too - A Participatory Planning Approach for Improvement of Low-Income Settlements in Pondicherry	Puducherry	Census of India 2011. District Census Handbook - Town Amenities, Puducherry UT. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/495-puducherry.html
3	B-Active	Bhubaneswar	Census of India 2011. District Census Handbook- Town Amenities, Odisha. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/270-bhubaneswar.html
4	Diu-Ghoghla Bridge Park	Diu	Census of India 2011. District Census Handbook- Town Amenities, Daman & Diu UT. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/data/town/802637-diu-daman-and-diu.html
5	Electric Public Transportation System	Kakinada	Census of India 2011. District Census Handbook- Town Amenities, Andhra Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/404-kakinada.html
6	Child Friendly and commuter centric Dehradun Smart City Sustainable Mobility Plan	Dehradun	Census of India 2011. District Census Handbook- Town Amenities, Uttarakhand. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/23-dehradun.html
7	E- Health Solution	Kochi	Census of India 2011. District Census Handbook- Town Amenities, Kerala. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/459-kochi.html
8	Development of Sustainable and Green Public Transportation in Amritsar City	Amritsar	Census of India 2011. District Census Handbook- Town Amenities, Punjab. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/18-amritsar.html
9	Model & SMART Corporation Schools in Chennai	Chennai	Census of India 2011. District Census Handbook- Town Amenities, Tamil Nadu. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/district/21-chennai.html

Sr No	Name of the project	City	Source of Demography Details
10	Mahakal Rudra Sagar Integrated Development Approach - Phase - II	Ujjain	Census of India 2011. District Census Handbook- Town Amenities, Madhya Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/296-ujjain.html
11	Creating "Wild Valley Bio-Diversity Park" as City Lungs by Rejuvenation of existing wasteland along the Creek	Surat	Census of India 2011. District Census Handbook- Town Amenities, Gujarat. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.suratmunicipal.gov.in/TheCity/Demographics
12	Green Mobility Corridor	Hubbali-Dharwad	Census of India 2011. District Census Handbook- Town Amenities, Karnataka. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/437-hubli-and-dharwad-.html
13	Basic Infrastructure Development at Low-Income Settlements	Amaravati	Integrated Infrastructure Master Plan, Smart City Amaravati
14	Howrah River Front Development (Phase-II)	Agartala	Census of India 2011. District Census Handbook, Town Amenities, Tripura. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/186-agartala.html
15	Digital Governance of Nagpur	Nagpur	Census of India 2011. District Census Handbook- Town Amenities, Maharashtra. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/353-nagpur.html
16	Ecosystem for Sustainable Mobility and Social Inclusion	Visakhapatnam	Census of India 2011. District Census Handbook - Town Amenities, Andhra Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/402-visakhapatnam.html
17	Re-imagining waterfronts through Rejuvenation of Mudsarlova Lake Precinct	Visakhapatnam	Census of India 2011. District Census Handbook - Town Amenities, Andhra Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/402-visakhapatnam.html

Sr No	Name of the project	City	Source of Demography Details
18	Blockchain for Civic Identity and Public service delivery	Puducherry	Census of India 2011. District Census Handbook - Town Amenities, Puducherry UT. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/495-puducherry.html
19	Social and Physical Infrastructure Development in Low-Income Settlements	Kakinada	Census of India 2011. District Census Handbook- Town Amenities, Andhra Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/404-kakinada.html
20	Last Mile Connectivity Using Dockless Bikes for Bus Rapid Transit System (BRTS) and Ahmedabad Municipal Transport Services (AMTS)	Ahmedabad	Census of India 2011. District Census Handbook- Town Amenities, Gujarat. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/314-ahmedabad.html
21	Mobility Improvement in ABD precinct of Thane city	Thane	Census of India 2011. District Census Handbook- Town Amenities, Maharashtra. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/district/355-thane.html
22	Green Mobility through Last Mile Connectivity and Augmentation of Existing Public Mass Transit System of Surat City	Surat	Census of India 2011. District Census Handbook- Town Amenities, Gujarat. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.suratmunicipal.gov.in/TheCity/Demographics
23	Teacher JI – 'Education on Wheels'	Bhopal	Census of India 2011. District Census Handbook- Town Amenities, Madhya Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/district/311-bhopal.html
24	Rejuvenation of Mandakki Bhatti Area	Davanagere	Census of India 2011. District Census Handbook- Town Amenities, Karnataka. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/city/442-davanagere.html
25	100 Kms of Green Corridor for NMT (Non-Motorised Transport) and Pedestrian Friendly Track	Bhopal	Census of India 2011. District Census Handbook- Town Amenities, Madhya Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.census2011.co.in/census/district/311-bhopal.html
26	Development of Green Corridor along Kahn and Saraswati River- Phase I	Indore	Census of India 2011. District Census Handbook- Town Amenities, Madhya Pradesh. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html and https://www.census2011.co.in/census/city/299-indore.html

Sr No	Name of the project	City	Source of Demography Details
27	Creation of Digitally Inclusive Urban Space	Surat	Census of India 2011. District Census Handbook- Town Amenities, Gujarat. Link: http://censusindia.gov.in/2011census/dchb/DCHB.html Link: https://www.suratmunicipal.gov.in/TheCity/Demographics

Source for Ranking of Ease of Living Index

The Indian Express. Tuesday, 12.02.2019
https://indianexpress.com/article/india/full-list-of-indias-ease-of-living-index-see-where-your-city-is-ranked-5306185/

SPV'S CONTACT

CONTACT LIST

Sr No	Name of the project	City	SPV Email Id	Contact Number	Source
1	Social Inclusion through modernizing Public Schools as Smart Campus	Visakhapatnam	visakhapatnamsmartcity@gmail.com, commissioner_gvmc@yahoo.co.in	+91 9717716600, +91 7729995934	Link: https://www.visakhapatnamsmartcity.com/contact.html
2	Our Neighbourhood is Your Neighbourhood Too - A Participatory Planning Approach for Improvement of Low-Income Settlements in Pondicherry	Puducherry	pondysmartcity@gmail.com	+91 413-2224433, 2224434	Link: https://pondicherrysmartcity.in/contact.php
3	B-Active	Bhubaneswar	bbsr.bscl@gmail.com	+91 674-2548508	Link: https://www.smartcitybhubaneswar.gov.in/
4	Diu-Ghoghla Bridge Park	Diu	smartcitydmc-diu-dd@gov.in, diudscl@gmail.com	+91 2875-252444, 252111	Link: http://diu.gov.in/dmc-smart-city.php
5	Electric Public Transportation System	Kakinada	smartcityofficekkd@gmail.com	+91 9121002173	http://www.ksccl.in/p/
6	Child Friendly and commuter centric Dehradun Smart City Sustainable Mobility Plan	Dehradun	smartcityddn@gmail.com	+91 135-2750894	Dehradun Smart City Limited
7	E- Health Solution	Cochin	info@csml.co.in	+91 484 308 0000	http://csml.co.in/
8	Development of Sustainable and Green Public Transportation in Amritsar City	Amritsar	info@smartamritsar.com	+91 183 501 5048	http://www.smartcityamritsar.com/pages/contact-us

Sr No	Name of the project	City	SPV Email Id	Contact Number	Source
9	Model & SMART Corporation Schools in Chennai	Chennai	ideas@cscl.co.in	+91 44-25383781	http://cscl.co.in/contact
10	Mahakal Rudra Sagar Integrated Development Approach - Phase - II	Ujjain	info@ujjainsmartcity.com	+91 7342525856	https://ujjainsmartcity.com/en/contact-us/
11	Creating "Wild Valley Bio-Diversity Park" as City Lungs by Rejuvenation of existing wasteland along the Creek	Surat	ceo@suratsmartcity.com	+91 261 -2423751-56	https://www.suratsmartcity.com/ContactUs/Contact
12	Green Mobility Corridor	Hubbali-Dharwad	sohdsmartcity@gmail.com, smartcityhubballidharwad@gmail.com	+91 836 - 2355322	http://www.hubballidharwadsmartcity.com/contact.html
13	Basic Infrastructure Development at Low-Income Settlements	Amaravati	apcrda@gmail.com, amravaticorporation@yahoo.in	+91 866 - 2577475	Amaravati Smart and Sustainable Cooperation Limited (ASSCL)
14	Howrah River Front Development (Phase-II)	Agartala	agartalasmartcityltd@gmail.com	+91 381-232 5646	https://agartalasmartcity.tripura.gov.in/contact-us
15	Digital Governance of Nagpur	Nagpur	ceonsc.nmcngr@gov.in	+91 712-2567037	http://www.smartcitynagpur.com/
16	Ecosystem for Sustainable Mobility and Social Inclusion	Visakhapatnam	visakhapatnamsmartcity@gmail.com, commissioner_gvmc@yahoo.co.in	+91 9717716600, +91 7729995934	Link: https://www.visakhapatnamsmartcity.com/contact.html
17	Re-imagining waterfronts through Rejuvenation of Mudsarlova Lake Precinct	Visakhapatnam	visakhapatnamsmartcity@gmail.com, commissioner_gvmc@yahoo.co.in	+91 9717716600, +91 7729995934	Link: https://www.visakhapatnamsmartcity.com/contact.html
18	Blockchain for Civic Identity and Public service delivery	Puducherry	pondysmartcity@gmail.com	+91 0413-2224433, 2224434	Link: https://pondicherrysmartcity.in/contact.php

Sr No	Name of the project	City	SPV Email Id	Contact Number	Source
19	Social and Physical Infrastructure Development in Low-Income Settlements	Kakinada	smartcityofficekkd@gmail.com	+91 9121002173	http://www.ksccl.in/p/
20	Last Mile Connectivity Using Dockless Bikes for Bus Rapid Transit System (BRTS) and Ahmedabad Municipal Transport Services (AMTS)	Ahmedabad	info@ahmedabadcity.gov.in	+91 079-25391811 - 25391830	https://ahmedabadcity.gov.in/portal/jsp/Static_pages/contact_us.jsp
21	Mobility Improvement in ABD precinct of Thane city	Thane	smartcity@thanecity.gov.in, admc2@thanecity.gov.in	+91 22-25410571	https://thanecity.gov.in/department_details.php?id=44 and https://thanecity.gov.in/page.php?id=77
22	Green Mobility through Last Mile Connectivity and Augmentation of Existing Public Mass Transit System of Surat City	Surat	ceo@suratsmartcity.com	+91 261 -2423751-56	https://www.suratsmartcity.com/ContactUs/Contact
23	Teacher JI – 'Education on Wheels'	Bhopal	bscdcl@smartbhopal.city	+91 755 2477770	https://smartbhopal.city/en/contact-page
24	Rejuvenation of Mandakki Bhatti Area	Davanagere	smartcitydavanagere@gmail.com	+91 819 2222383	Davanagere Smart City Limited
25	100 Kms of Green Corridor for NMT (Non-Motorised Transport) and Pedestrian Friendly Track	Bhopal	bscdcl@smartbhopal.city	+91 755 2477770	https://smartbhopal.city/en/contact-page
26	Development of Green Corridor along Kahn and Saraswati River-Phase I	Indore	smartcityindore16@gmail.com	+91 731-2535572	https://www.smartcityindore.org/contact/
27	Creation of Digitally Inclusive Urban Space	Surat	ceo@suratsmartcity.com	+91 261 -2423751-56	https://www.suratsmartcity.com/ContactUs/Contact

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