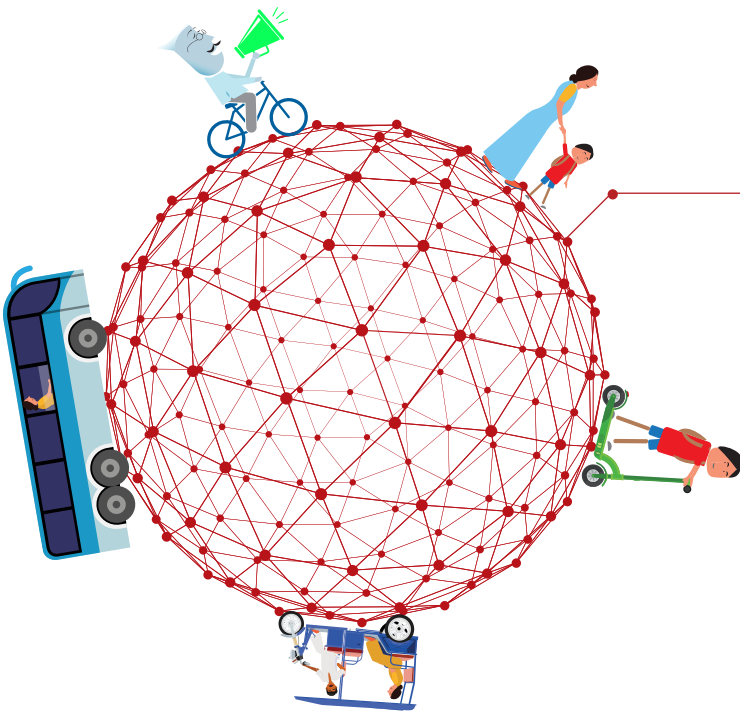


INTEGRATED SUSTAINABLE URBAN TRANSPORT SYSTEMS FOR SMART CITIES (SMART-SUT)

Ministry of Housing and Urban Affairs (MoHUA) and Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) GmbH are jointly implementing the technical cooperation project “Integrated Sustainable Urban Transport Systems for Smart Cities (Smart-SUT)”. The project works with the three Smart Cities of Bhubaneswar, Coimbatore, and Kochi and respective state governments of Odisha, Tamil Nadu, and Kerala to promote low carbon mobility planning, and to plan and implement sustainable urban transport projects in the fields of public transport, non-motorised transport and modal integration.



PROJECT OBJECTIVE AND COMPONENTS

To improve the planning processes and the implementation of sustainable and integrated urban transport systems and solutions in Indian cities. Project components:

1. Support partner institutions in city-wide planning and projects/measures
2. Development and implementation of customised capacity development measures and institutionalising them in local training institutions
3. Enhance peer-to-peer learning, knowledge exchange, and support in state-wide campaigns on sustainable urban transport
4. Support the state departments in policy-oriented research, development of replication mechanisms and data management strategies

Upscaling measures are planned/ongoing in Cuttack (Odisha), Trivandrum (Kerala), Salem and Madurai (Tamil Nadu)



NATIONAL

Training Needs Assessment of e-Buses in India

Objective of the study is to undertake training needs assessment of STUs across the E-Bus life cycle starting from need, technology selection, procurement, operation, maintenance and disposal at all levels and roles of organization

- Based on a comprehensive questionnaire, surveys were conducted for STUs as well as supply-side stakeholders (E-bus/charging infrastructure providers, energy companies, experts etc), to understand skill gaps and challenges in e-Bus deployments and potential training requirements for improved e-Buses adoption and integration
- Report on Training need and skill gap assessment will be ready by mid of may and will be discussed with MoHUA



Study on experiences and user perception on Public Bike Sharing (PBS) system in selected five cities

Study will identify the issues & challenges associated with recently implemented PBS systems in India and based on learning, it will suggest a sustainable way

- Primary survey conducted in all five cities
- Stakeholder consultation completed involving GIZ, PBS Operators, and Local Planning Authorities
- Final report under preparation and outcomes will be discussed with MoHUA

National Capacity Building Framework for Urban Transport in Cities

Focuses on training need assessment in urban transport followed by capacity building of city officials using various methods (webinars, face to face interactions, e-learning etc)

- Training Need Gap assessment for Urban Transport is in progress with various stakeholders and results will be out by May 2020 and will be further discussed with MoHUA for structuring the training programs

SMART-SUT
e-MOBILOGUES

SHIFTING THE GEARS
Towards Electric Buses

Started e-Mobilogues, a webinar series on e-Bus Ecosystem of India. The webinar series will have industry experts sharing their experiences and insights on national and state-level electric vehicle policies, current practices, national and international case studies, and lessons learned during e-bus adoption.

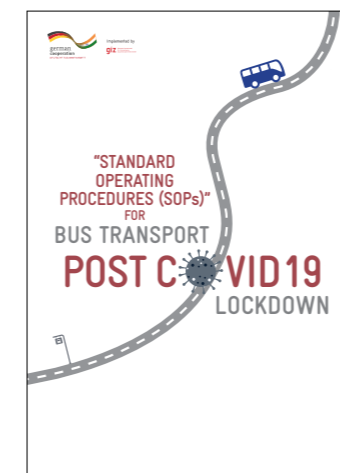
- **First Webinar (12 March 2020):** Basics on e-Buses – The Relevance and Possibilities
– Speaker: Mr. Amarjeet Singh Lakra – Senior Transport Expert
Link to the recording: <https://bit.ly/3axzaaN>
- **Second Webinar (16 April 2020):** e-Bus Adoption & Integration – Lessons from Europe and the Middle East
– Speakers: Mr. Jaime Ruiz Huescar and Mr. Shailendra Kaushik – Co-founders, Cities Forum Limited, Mr. Rafael Orihuela Navarro – Deputy Director Transport Services, EMT Madrid
Link to the recording: <https://bit.ly/3eFDtUi>

Developing framework for implementing Mobility as a Service (MaaS) for sustainable urban transport in Indian cities

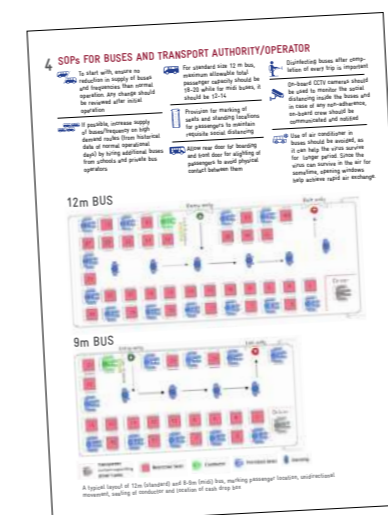
As agreed with MoHUA, objective of the assignment is to develop a mobility data specification (MDS) framework and a mobility data harvesting guideline for the effective implementation of MaaS in Indian cities

- Bids evaluation in process

Standard Operating Procedures (SOPs) for Bus Transport post COVID19 Lockdown



The project has compiled and disseminated a technical document on SOPs for bus transport operations post COVID-19 lockdown to ensure safety of passengers as well as crew for Indian cities.



BHUBANESHWAR & ODISHA

Low Carbon Mobility Plan (LCMP), a strategic vision document and mobility blueprint for the city to develop and monitor its transport sector.

- Draft mobility proposals (including land use and transport integration, public transport and shared mobility, climate resilient network, walking and cycling, parking & demand management, freight, E-mobility etc.) up to horizon year 2040 were presented and accepted at a high level non statutory committee (Mobility Plan Coordination Committee – MPCC) meeting conducted on 28th February 2020
- Final report is under preparation



Individual & organisational level capacity development for Capital Region Urban Transport (CRUT)-SPV responsible for managing the buses and Public Bike Sharing (PBS) operation

Support extended through a combination of on-the-job technical support, regular training sessions, study tours, printed guidance material and remote support

Training cum workshop on 'Sustainable public transport for Odisha' (4th – 6th February 2020, Bhubaneswar) : Training of over 100 officials from various bus operating agencies in Odisha, to strengthen and develop their capacities in planning and provision of public transport services in the state.

Trainers & topics:

1. Mr. Alok Jain, Managing Director of Trans-consult Asia – Route planning, Timetabling & scheduling, Fare products, Contract Management and Real-time operations management.
2. Mr. Rama Krishna, Senior Vice President, Urban Mass Transit Company Limited – Issues in implementation of city bus operations
3. Dr. Sandeep Gandhi, Principal, SG Architects – Fleet estimation tool for STU's
4. A.S. Lakra, Senior Expert on Public Transport Systems – Fare fixation
5. Ms. Sonal Shah, Co-Founder, the Urban Catalysts, – Creating gender responsive public transport
6. Mr. Prashant Bachu, Urban transport expert – Route planning principles and a hands-on exercise on route planning

A comprehensive set of recommendations on route planning including steps to be adopted while route planning for future fleet has been submitted to the partner

Leadership development of 20 CRUT employees to strengthen in-house technical expertise is in process



Parking policy and management plan

Development of a parking policy to guide the development of planned parking facilities and to prepare a parking area management plan

- A multi-stakeholder workshop was conducted on 6th February 2020, to sensitise various concerned departments on viewing parking as a demand management tool and to solicit feedback on the currently under development parking policy and management plan for Bhubaneswar

Other ongoing/proposed projects

Technical assistance for Comprehensive Development Plan (CDP) for Bhubaneswar – 2040

- Support extended through detailed review and development of Terms of References (ToR)
- As part of strengthening institutional capacity for preparation of master plan, workshop was organized to disseminate knowledge on best practices and to develop consensus on the ToR
- Detailed review and recommendations submitted to BDA

Review of street design guidelines and pilot implementation

Comprehensive review of the guidelines to ensure it provides a step-by-step approach for developing "Complete Streets"

- Recommendations submitted to partner and will be incorporated into the revised street design guideline
- Traffic management plan for arterial road named 'Nandankanan Road': Corridor improvement to integrate mobility needs of all road users and to improve traffic circulation and road safety
- Corridor designs under preparation

Data analytics for efficiency improvement of bus systems

Objective of the project is to develop a tool for monitoring the Key Performance Indicators (KPIs) identified at each level of the organisation (CRUT) including bus operators using various data sets (GPS, ticketing etc). Same tool will provide the data analytics framework for improving planning, scheduling and efficiency of bus system through informed decision making.

- A detailed stakeholder consultation was done during first week of February regarding the KPIs needed at each levels
- Interim report is ready comprising KPIs framework, key analytical questions and will be discussed with CRUT
- Work on proof of concept (POC) for dashboard is in progress



Integrated planning document for transportation projects in Fort Kochi - Mattancherry (FKM)

- A strategic planning document for FKM area that looks at integration of various modes, way finding measures, an NMT network and promotion of public transport.
- Planning document is under development in consultation with stakeholders
- 5 measures (roadway design templates, shared mobility, NMT network, PBS, Local connectivity & transit map and tactical urbanism) identified for immediate implementation and are being detailed out and discussed with city corporation of Kochi

KOCHI & KERALA

A positive sign of commitment

The Kochi Municipal Corporation (KMC) Budget '20-21 speech listed the SMART-SUT projects including: Launching shared e-autos in Kochi, Redesign of Sahodaran Ayyappan road, Integrated planning document for transportation projects in Fort Kochi - Mattancherry and Institutional strengthening of KMC to plan, execute and manage urban mobility projects

Redesign of the arterial road named 'Sahodaran Ayyappan' (3.5 kms) and its extension 'Church Landing Road' (0.5 km)

The objective is to redevelop SA road as model road, with high quality safe foot-paths with utility provisions, landscaping and creating public spaces, improved access to metro and buses, junction improvement and traffic calming elements for encouraging pedestrian movements

- General arrangement drawings(GAD) and Bill of quantities (BOQ) is being submitted to the city authorities
- Co-financing mechanism with Kochi Metro Rail Ltd. (KMRL) is being explored for improved resource utilisation and phase-wise implementation of project

Institutional assessment and strengthening of KMC

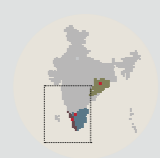
- Objective of this activity is to understand the strengths and weakness of KMC and further capacitate and strengthen them to plan, execute and manage urban mobility projects
- Questionnaire development for assessing individual capacities and processes impacting urban mobility projects is under way

Launching of shared e-autos in Kochi



This project has been envisaged to increase first and last mile solution for Kochi city

- Detailed scoping study prepared for pilot of 100 e-autos with lithium-ion batteries including options for a viable business model, demand analysis, technology selection, cost estimates and supporting infrastructure. Pilot areas are Fort Kochi, Kadavanthara and Elamkulam and is intended to lead to upscaling to other parts of the city - approved by KMC.
- Institutional strengthening of Auto society (EJADCS, final beneficiary) has been initiated to develop both organizational and individual (both society officials and auto drivers) level capacity. Due to COVID -19 virtual trainings for board members of the Society on select topics like e-vehicle technology - vehicle models & charging infrastructure, success stories of cooperative models and e-auto operations, managerial skillsets is planned for May-2020.



Other ongoing/proposed projects

- User & Non-user perception studies for women's safety in public transport: On advice of state partners, this study has been planned in Kochi, Trivandrum and Calicut. This is to understand the problems being faced by women while travelling into public transport systems, this will further strengthen the recommendations from on-going gender sensitization study.
- Institutionalization of UMTA – On state Transport department request, this activity has been planned, under this GIZ shall undertake institutional strengthening and structuring of UMTA for Kochi city.

Route Rationalization and city Bus improvement for Trivandrum city

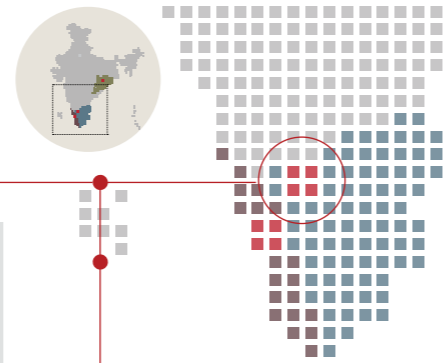
- A detailed study has been initiated with Kerala State Road Transport Corporation on route rationalization and strengthening of city buses in Trivandrum.
- An open source tool shall be developed at end of the study to avoid massive physical surveys for rationalization process and will be used for replication for other cities of Kerala as well. Presently secondary data collection initiated but activity affected due to COVID-19 pandemic.

Gender Sensitization studies and state-wide campaign for Kerala

- A state-wide campaign is planned to build awareness among local citizens of Kerala state. For outreach three cities of Kerala has been identified after consultation with Transport Department, Government of Kerala (GoK). Cities selected are Kochi, Trivandrum, and Calicut. A draft campaign strategy is in place and will be finalized and implemented post COVID -19 jointly with the partners.
- Gender studies, user perception studies and focus group discussions are also on-going in Kerala. User perception surveys have been put on hold due to COVID situation. The intent of these studies are to understand the existing issues faced by women, assessment of existing policies, institutional framework of the authorities, guidelines, standard operating procedures and proposing recommendations at state level to enable safe and secure travel for women in state.
- Transport Commissionerate has been appointed as nodal department by Transport Department for this activity

Policy oriented research

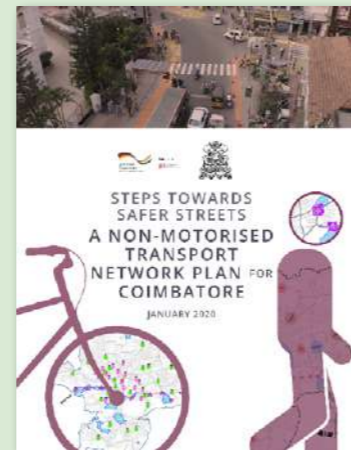
- The objective of this activity is to develop guidelines, framework and give policy recommendations to state on topics of e-mobility-GHG emissions and multi modal integration
- Due to outbreak of COVID -19, desktop research work related to policy-oriented research on mentioned topics has been initiated and initial baseline assessment shall be ready soon



COIMBATORE & TAMIL NADU

A positive sign of commitment

SMART SUT projects (NMT network plan and Big Bazaar street redesign projects) featured in Coimbatore City Municipal Corporation (CCMC) budget 2020-21



Redesign and pilot implementation of Big Bazaar street

The objective is to redesign Big Bazaar street to include complete street elements while streamlining the unused street space into various uses like enhanced public space, street furniture, bus stop improvement, junction improvement, and pedestrian plaza. This project is intended to set a precedent to improve streets with less disruption.

- The overall project is

estimated at INR 4.5 Cr, divided into 4 packages for ease and preparedness of implementation

- A convergence funding mechanism is applied to implement the project where finances will be arranged from mainly 4 sources (CCMC general budget, Smart City, GIZ Seed fund, and CSR)
- Project is approved and budgeted in 2020-21 city budget.



Safe school precincts

School children being one of the most vulnerable group of road users, require safe access to the schools which they attend daily. The project is intended to provide recommendations through design and capacity building of CCMC to improve the accessibility of school zones in the city

- 84 CCMC run schools will be studied for travel patterns and accessibility gaps
- Up to 5 pilot schools will be selected for detailed problem-solution identification
- Solutions to be converted as design guidelines to be applied for other schools/children accessing public spaces





Complete streets through safe intersections

The objective to support CCMC in identifying quick win solutions to improve safety of pedestrians

- Intersection being major interchange points for pedestrians, prioritise to improving them will benefit large user group
- Support in providing capacity building sessions for officials on intersection re-design

TNSTC User and Non-user survey

To support Tamil Nadu State Transport Corporation (TNSTC) in identifying right measures to improve the level of service and to enable people shift towards public transport

- User and non-user survey to identify the gaps in service levels
- Recommendations to include the survey protocol as perpetual feedback mechanism
- Recommendations to improve service levels while correlating

Institutional change management for NMT in Coimbatore

Within the purview of overall capacity development strategy under SMART SUT, the capacity building activity intends to address the gaps in planning and engineering processes and strengthen the capacities to implement NMT related projects

- Detailed assessment of human competencies to plan, design, and implement NMT projects
- Detailed assessment of organisational and inter-departmental coordination mechanism to implement NMT projects
- On-the job trainings through a demonstration project for CCMC officials
- Recommendations at various levels to in-built the process pertaining to NMT projects

Policy oriented research

The objective of this activity is to develop guidelines, framework and give policy recommendations to state on topics of e-mobility-GHG emissions and road safety

- Due to outbreak of COVID -19, desktop research work related to policy-oriented research on mentioned topics has been initiated and initial baseline assessment shall be ready soon

State of urban transport study for Tamil Nadu

To provide policy inputs and comprehensive measures to strengthen urban transport in Tamil Nadu

- First level introductory consultations have been carried out and one level of data and inputs have been gathered from the agencies
- Some of the data/reports that were obtained include reports on CMP, CTTS, TOMP; details from STUs etc.
- Draft state assessment report under preparation

Route rationalisation and city bus service improvement study for Coimbatore

A detailed study has been initiated with Tamil Nadu State Transport Corporation (Coimbatore) on route rationalisation and strengthening of city buses in the city. An open source tool shall be developed for replication for other cities in Tamil Nadu.

- Network development (node-edge) is complete. 200bus route data incorporated out of 280 bus routes
- Planned e-bus routes are analysed based on few key parameters and different scenarios are developed to optimise the operation of E-bus routes. The E-bus routes will be identified based on the assessment of the indicators
- Primary survey activities affected due to COVID-19 pandemic



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