Developing Low Carbon IPT Action plan for Udaipur under the Capacity Building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)

Terms of Reference
Udaipur Municipal Corporation

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| Time Period                                                          | TOR published on ICLEI South Asia website – 11th October 2017  
Last date of acceptance of proposals: 17th October 2017  
Identification of winning proposal and selection of consultant: 30th October 2017  
Initial information, data collection, review of existing plans, and analysis – November 2017  
Draft Action Plan – December 2017,  
Presentation to city and state- January 2018,  
| Involvement of Experts                                               | Urban Mobility Expert-National 45: Man Days  
Urban Mobility Expert -International :12 Man Days |
Background:

Swiss Agency for Development and Cooperation (SDC) is supporting the CAPACITIES project in 4 Indian cities including Udaipur. The project aims at strengthening the capacities of Indian cities to identify, plan and implement measures for achieving lower greenhouse gas emissions growth path and enhancing resilience to climate change in an integrated manner. CAPACITIES project is offering to assist the city on the aspect of Low carbon mobility.

ICLEI Local Governments for Sustainability, South Asia (ICLEI South Asia) on behalf of Udaipur Municipal Corporation and CapaCITIES implementation team invites proposal for involvement of national as well as international mobility expert for “Developing Low Carbon IPT Action plan for Udaipur under the Capacity Building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)

Description of the Project

Intermediate Public Transport is extensively used and is a major mode of transport in Udaipur. It plays a critical role in transporting people by connecting them to employment opportunities, job locations etc. Since IPT brings to the table a convenient mode of transport at a reasonable cost, it is mostly preferred by Middle Income Group (MIG). Also because of the size and type of vehicles used (mainly auto rickshaw and e rickshaw) it is not only an efficient and affordable mode of travel, but also provides employment (directly or indirectly) to many people.

With the absence of robust public transport in Udaipur, IPT is a preferred mode of travel in the city. It caters to more than 11% of trips in the city and provides employment (directly or indirectly) to a large population of the city. IPT sector has the ability to serve a wide variety of trips and services, ranging from very cheap to expensive, reliable to unreliable, readily available to sparingly available. Since most trips in Udaipur are around 5km in length, these are not viable to be served by a formal public transport mode, and may not be entirely attractive using non-motorized modes. Hence, IPT services fulfill the requirement of a viable public mode to undertake such trips in the city. This is especially useful for the floating population, ensuring accessibility to important destinations, thereby facilitating tourism in the city. Additionally, IPT provides a viable alternative to private modes of transport, providing door to door connectivity to all – but more importantly to elderly, disabled and those with mobility impairment. An IPT which serves to offset private vehicle trips also helps in minimizing the parking requirements of the city.

At present the overall condition of the existing IPT service in Udaipur seems to be unorganized and substandard as most of the vehicles are old, cause pollution and are non-compatible with the emission standards. There are no fixed routes followed by the operators though RTO has demarcated fixed routes for operations, resulting in chaos and traffic jams caused by IPT service.

1 Low Carbon Comprehensive Mobility Plan, Udaipur
Hence, this sector faces issues which are mainly attributed to institutional and regulatory in nature. The issues faced by the sector include lack of regulations, lack of operational planning, lack of infrastructure for IPT sector such as parking bays and charging infrastructure, missing fare regulations, lack of environmental controls, etc. These lead concerns on reliability, service quality, safety and security. Though the city has designated auto routes but still the number of IPT vehicles dedicated to each route is not monitored/controlled which lead to imperfect market situations. The existing poor condition of the IPT vehicles in the city creates pollution and safety issues for the users. Though IPT service is usually a preferred mode for travel, it is seen that there are irregularities in the fares collected due to lack of standardized fares in Udaipur. An immediate check on the air pollution caused by the IPT vehicles is required. Besides the above, it is also seen that though various policies for transport have been formulated at central level, but none of them discuss much about Intermediate Public Transport. The unregulated and unorganized fleet of the existing IPT sector in the city has led to the development of a poor image for the sector. Currently there is no clarity between IPT and public transport as both these sectors are not integrated. Different forms of IPT sector compete in the market leading to a more chaotic situation. In addition to this, the city lacks the regulatory framework to regulate the sector.

CapaCITIES implementing team is supporting the city in developing and implementing certain selected projects identified in consultation with the project core group in the city the steering committee headed by the SDC. The Low carbon IPT action plan has been identified by the city as a possible bankable project where the CapaCITIES team has implemented a pilot project by delivering to UMC 18 E-Rickshaws and developed a documentation of e-rickshaw operations at Udaipur together with comparative documentation of similar experiences from 2 other Indian cities. Based on an analysis of the current IPT situation in the city, learning’s of operating electric rickshaws recently, the implementing team will propose a 5 to 10-year action plan for the city that will assist transform its IPT fleet to low carbon based on national and regional context. The Action plan will also include societal and environmental benefits of this transition and recommend possible funding options to support it.

**Objectives of the project**

The primary objective is to develop an action plan for IPT sector to identify options for improving IPT allowing for integration with PT. The target is to increase ridership in PT (as a total) in a sustainable manner whilst reducing emissions per km.

The plan would describe the significance of IPT sector in Udaipur and highlight its complementary role with the public transport in the city. The action plan would outline the need for infrastructural requirements such as parking areas, maintenance facilities, along with institutional structures to check vehicle specifications, performance monitoring schedules, fare structures/ revisions etc.
Outputs of the project

1. Low Carbon Action Plan for IPT specific to Udaipur city
2. Awareness and acceptance of the action plan amongst key stakeholders at city and state level
3. Financial plan to fund the implementation of the proposed action plan

Study area

Entire Udaipur City (UMC limits as well as Improvement trust limits)

Roles

National urban mobility expert:

- Assess current levels of IPT efficiency, its environment impact and establish deficiencies of the system.
- Assess technical and organisational means to increase IPT efficiency including improved multi-modal integration.
- Assess means to integrate IPT to PT and improve institutional structure including the potential of electronic and integrated ticketing.
- Identify stakeholders, their roles, concerns and agendas.
- Propose short and medium term low carbon actions and policies with a clear action plan.
- The required steps to implement the actions need to be detailed. The action plan should outline the required technical and financial resources along with barriers and means to overcome these are identified.

International expert

- Review and revise short and medium term actions and policies with a clear action plan (in consultation with national expert).
- Identify and detail out the required steps to implement the actions.
- Identify, propose and outline, required technical and financial resources along with barriers and means to overcome these are identified.

Scope of Work

- Delineate influence area over which system enhancement measures need to be considered.
- Establish the existing baseline for IPT system in terms of modal share, infrastructure status, its environmental impact, system efficiency and level of service.
- Identify various suitable modes such as electric rickshaws, minibus or auto rickshaws in the form of Low carbon IPT.
- Identify implementation pattern for the finalized modes including the financial aspects such as implementation cost, revenue generated etc.
• Prepare a Low carbon IPT Plan for facilitating seamless connectivity including last mile connectivity.

Task 1: Defining Scope of the Comprehensive Low Carbon Action Plan for IPT in Udaipur

The first step in preparing the Low Carbon Action plan for IPT in Udaipur is to define the scope of the project which shall include defining the planning area, planning horizon, work plan and vision. It includes following activities:

• Compile the approved urban transport development strategy and action plans from past/ongoing studies relevant to the project.
• Review of the Existing transport systems and compile the details on IPT system, the extent and routing of their operations, types of vehicles operational and categories of services and associated fare structure extended by each.
• Study of existing travel behavior, demand assessment, evaluation of the origin-destination pattern with ridership assessment of IPT for the base year as well as for the horizon years of 2022 and 2027.

Task 2: Development of Business as Usual (BAU) Scenario

• Review and analysis of land use adjacent to the IPT routes to establish origins, destinations and nodes for travel patterns with respect to IPT modes.
• Establish a baseline for current IPT system in the Udaipur.
• Assess the current modal split at the level of the city for year 2017, in terms of trips and trips x km.
• Present various successful international case studies on low carbon IPT system.
• Suggest and discuss some targets for a new modal split for years 2022 and 2027, at the level of the city.
• Present carbon footprint evaluation, for the whole mobility system, for year 2022 and 2027.

Task 3: Assessment of Existing infrastructure related to IPT

• Assessment of existing routes, mode wise passenger demand, mapping of routes on any transportation tool with performance parameters as link attributes.
• Identify the extent of missing links as well as overlapping between the routes, extension of routes based on the operational performance of the routes.
• Estimating the requirement of Automated Vehicle Location (AVL) systems, Passenger Information Systems and Automated Fare Collection System.
• Potential for using ITS to providing above services and to generate valuable traffic information.
• Identify the potential of electrification of IPT system. This should include an assessment of the option of replacement of auto-rickshaws by e-rickshaws in a phased manner, as well as evaluation of strategies such as entrepreneur-driven model for this phasing out.

• Assess the impact of EV usage on electricity grid load and comment on electric grid, possible electricity tariff policies (ex: higher rates at peak time) that can be used to optimize the additional load from EVs.

• Identify potential issues and appropriate solutions with respect to the availability of infrastructure.

• Evaluate bankable financial models with participation from private sector to implement the strategies (includes infrastructure).

• Environmental and social impact assessment of real-world performance of Low carbon IPT strategies compared to fossil fuel fleets.

• Review and document the current policy framework and enabling environment for adoption of EVs (for IPT) in India including Government of India schemes such as Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME).

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**Task 4: Institutional Integration**

• Identification of best possible institutional mechanism facilitating integration of proposed systems.

• The Institutional Integration Framework shall also involve suitable coordination mechanism between the agencies and stakeholders. The organizational structure and the roles and responsibilities also need to be identified for the implementation of last mile connectivity modes.

• Provide technical assistance to organise a workshop to engage all key stakeholders including the city officials, state Government officials, relevant citizen groups, regulating ministries and prospective vendors, to present the findings of the study and brainstorm on critical issues.

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**Task 5: Preparation of Business and Implementation Plan**

• Detailed Implementation and Phasing Plan for fossil fuel fleet (bus as well as feeder vehicles) and identification of agencies responsible for implementation of the project.

• Identify typical incentives that can promote adoption electric vehicles in IPT system

• Evaluate applicable business models to procure EV’s

• Financial feasibility in the short and long term as well based on the different models mentioned above

• Identify risks involved in the procurement, operations, maintenance and disposal of EV’s.

• Analyze the various scenarios of transitioning from current fossil fuel powered vehicles to electric vehicles including retro-fitment
• Identify licensing or registration requirements for EVs and recommend appropriate measures that may be required for regulation and ensuring their safe operations.
• Assessment of the possible use of “aggregators” models (such as Uber and Ola) to roll out EVs.
• Development of business plan covering the following: Block cost estimates, means of financing, fare structure, demand projections, operations & maintenance cost estimates etc.

Proposal submission:
• Both independent consultants and firms are welcome to apply for National as well as International expert.
• There need to be separate applications for national and international expert.
• The Expert/firm can either apply for the role of national expert or international expert.

Documents to be submitted by applicants
• Technical Proposal: The Technical Proposal should provide the following information/ documents
  o Consultant/ firm profile and detailed CV.
  o Consultants experience on assignments of similar nature, the outline should indicate, inter alia, the profiles and names of the staff provided (if in case of a firm), duration of the assignment, contract amount, and firm's involvement.
  o Detailed Approach and Methodology for undertaking the current assignment , project Schedule with activity and duration to accomplish the task within the scheduled project duration along with detailed work plan.
  o List of proposed staff, details of tasks assigned to each staff as per his / her experience shall influence the evaluation.
  o All relevant CVs shall be provided in full detail. If the CV of a proposed staff is found incorrect, the award of the consultancy to the applicant may also be liable to cancellation in such an event.

• Financial Proposal:
  o A financial proposal including all manpower, travel, equipment, survey and costs as may be required.
  o The Financial Proposal shall be inclusive of all the costs including taxes associated with the assignment.
  o It is clarified that, for the purposes of evaluation, the financial Proposal should be prepared in INR.
  o The total amount indicated in the financial Proposal shall be without any condition attached or subject to any assumption, and shall be final and binding. In case any assumption or condition is indicated in the financial Proposal, it shall be considered non-responsive and liable to be rejected.
  o The final amount should be quoted in both figure and word.
A copy of valid Pan Number, of registration with GST, last 3 financial year’s balance sheet (or as applicable), audited by certified Chartered Accountant need to be submitted.

**Qualification and Experience**

- **Urban Mobility expert –National**
  a. Minimum of 10 years of experience in Urban Transport planning and research and preferably should have a good understanding of Low Carbon Mobility.
  b. Experience in planning, transportation studies inclusive of network analysis, demand analysis, public transport and NMT studies, operations and management of transport systems is essential;
  c. The candidate shall be conversant with low carbon mobility along with NMT developments across the world and should have good communication and writing skills;
  d. Should be a good coordinator and would be responsible for quality of the outputs;
  e. The candidate Should have knowledge and experience in providing proposals for attractive, coherent, safe and comfortable infrastructure for IPT systems.
  f. Should have experience in designing IPT as well as NMT infrastructure.
  g. Should have experience in conducting traffic surveys, analysis and preparing circulation plans

- **Part B –Urban Mobility Expert –International**
  a. At least 12 years of professional experience relevant to Urban Mobility
  b. Relevant experience of working on urban transport sector in at least 5 different countries of which at least 2 South Asian Countries
  c. Experience of working in Indian cities will be desirable
  d. Relevant experience on sustainable mobility solutions including Electric vehicles.
  e. Specifications experience that would enable the expert to recommend international best practices applicable to EV sector.
  f. In depth knowledge of EV sector value chain including charging components, battery technologies.
  g. Expert should have strong communication skills and global expertise including prior experience of working on similar issues globally.

**Proposal Submission**

- The Terms of Reference (ToR) can be downloaded from the ICLEI South Asia website(southasia.iclei.org).
- The financial & technical proposals should be submitted as separate documents.
- The bids should be submitted with title “Developing Low Carbon IPT Action plan for Udaipur under the Capacity Building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)
The Proposal can be submitted by applicant through email to ashish.rao-ghorpade@iclei.org on or before 17/10/2017.

The proposal shall be submitted in two parts, viz.
- Part I: Technical Proposal;
- Part II: Financial Proposal

Terms and conditions:
- In case of any doubt/query regarding any portions of ToR, the applicant should send it by mail to contact person mentioned in ToR.
- ICLEI South Asia reserves the right to reject any Proposal, and to annul the selection process and reject all proposals at any time, without thereby incurring any liability to the affected applicant or any obligation to inform the affected applicants of the grounds for such decision.
- It should be noted that the project is being implemented in above mentioned area and hence instructions to applicants will be given by ICLEI South Asia in consultation with city officials. ICLEI South Asia will be overall in-charge for all the works that would be executed under the present scope of work
- The applicant shall also obtain necessary permission from concerned government departments related to the work/data collection if deemed necessary and in coordination with city officials and ICLEI South Asia.
- The decision of ICLEI South Asia will be final.
- The proposals received will be scrutinized & evaluated by ICLEI South Asia in consultation with senior officials of city officials involved in the execution of CapaCITIES project. The decision shall be informed to the winning applicant.
- Detailed Work Order will be issued to winning applicant within 14 days of announcing the results.
- The selected applicant is to forward the signed and sealed work order to ICLEI at the earliest or not more than 7 (seven) days of issue of work order.