



22 November 2017

India Leaps Ahead: Urban Mobility Lab

Establishing India's First Mobility Solutions Lighthouse City

Objective

NITI Aayog and Rocky Mountain Institute (RMI) are opening a Grand Challenge to select a state to host India's first mobility solutions Lighthouse City. A Lighthouse City is a living lab for conceiving, financing and testing mobility solutions that align with the Government of India's vision for a shared, electric, and connected mobility future. The selected state will be the first host of India's Urban Mobility Lab, a program that helps project teams generate solutions to complex mobility problems and test their solutions as pilots in a Lighthouse City. The Urban Mobility Lab will provide:

- a multi-day workshop that rapidly advances teams' solutions with the support of expert advisors
- an ongoing platform to support financing, implementation, monitoring, and evaluation of pilots
- a methodology for integrating multiple pilots that address parts of the mobility transition into a whole system strategy in one location
- support in disseminating lessons learned to other communities in India and beyond.

The Lab will launch in early 2018 with organizational support from NITI Aayog and RMI. India's Lighthouse Cities, and the mobility solutions that they test, will demonstrate ways to upgrade mobility services to meet the needs of rapidly growing cities while bringing operational efficiency and reducing pollution, congestion, and petroleum demand.

Opportunity and Need

India has the potential to lead the world in advanced passenger mobility using new technologies, business models, and urban design. The Government of India's vision is a shared, electric, and connected mobility future. India can realize this vision by leapfrogging the traditional mobility paradigm of privately owned, underutilized, fossil-fuel-burning vehicles. This potential leapfrog could enhance access, reduce congestion, and improve urban air quality, while saving India 876 million metric tons of oil equivalent, worth INR 21 lakh crore, and one gigaton of CO₂ emissions by 2030.

Rapidly falling technology costs and business-model innovation make it possible for India to cost-effectively shift to a new mobility system that is shared, electric, and connected. However, India must develop and test mobility solutions on the ground in order to demonstrate the viability

and benefits of this new system. Testing solutions at the city and state levels will allow India to establish a blueprint for national-level adoption of these solutions. The Lighthouse Cities supported by the Urban Mobility Lab can meet this need by demonstrating whole-system approaches to mobility transformation and creating replicable models of mobility solutions.

How to Apply to Host the First Lighthouse City and Urban Mobility Lab

State government officials must submit a one-page application form explaining why their state is a strong candidate to host the first Lighthouse City within four weeks of this announcement. Applications should be submitted by relevant state government officials (for example, a state's Director of Transportation, CEO of Economic Development Board, Ministry of Industries, or Ministries of Roads and Transport). Please see the "Urban Mobility Lab Grand Challenge Form" on page 4 for details about the application.

What is the Urban Mobility Lab?

The Urban Mobility Lab brings resources and support to advance the design, integration and implementation of projects that will test new solutions to complex mobility challenges.

- *Multi-day workshop:* The workshop is an event that aims to take projects from concept to implementation. It provides access to investment, resources, connections, and an environment that together advance projects to a point where they are ready to go to market. In partnership with the state government, NITI Aayog and RMI will convene multistakeholder teams working on projects that address high-priority challenges across India's passenger-mobility system. Participation from local and central government, private-sector actors, and private and multilateral financial institutions will support the financing and implementation of the projects. By the end of the workshop, the teams will be ready to implement their solutions as an integrated portfolio in the Lighthouse City. The workshop will be held in early 2018.
- *Platform to support implementation, monitoring, and evaluation:* NITI Aayog and RMI will create a platform for supporting the implementation, monitoring, and evaluation of the teams' pilots. Interaction and transparency among project teams will support the learning and sharing necessary to scaling these solutions across India. This platform's rapid learning process will enable India to quickly progress from one Lighthouse City to a nation of Lighthouse Regions.
- *Integrating multiple pilots:* Urban Mobility Lab will provide a process for integrating multiple pilots and identifying and filling gaps to provide integrated solutions that address electric mobility for 2-, 3-, and 4-wheelers, buses, charging infrastructure, data platforms and other issues.
- *Disseminating lessons learned:* Urban Mobility Lab will communicate lessons learned from Lighthouse Cities through multiple media channels and direct outreach to relevant policymakers and private sector decisionmakers across the relevant ecosystem of stakeholders.

Senior leaders from the public and private sectors have already committed to participate in the Urban Mobility Lab.

Step-by-Step Process for Establishing the Lighthouse City and Urban Mobility Lab

1. **Host city selection:** The first step is selecting the Lighthouse City, which will host the Urban Mobility Lab in early 2018. Key selection criteria include strong local government support, demonstrated progress on shared and electric mobility, and ongoing plans for smart urban development. The selected city should have a population greater than 1 million and a population density that warrants diverse modes of transportation. An advisory board from NITI Aayog and RMI will select the host state by drawing on these criteria.
2. **Recruitment of teams:** Once the host state and the Lighthouse City have been identified, the state government, NITI Aayog, and RMI will recruit four to six mission-driven teams, working on economically viable projects that address high-priority challenges in India's passenger-mobility system, to participate in the workshop. These teams will have projects with high scaling potential, leveraging shared infrastructure and investments. Strong interest already exists from teams working on swappable batteries for electric scooters and rickshaws; fast chargers for electric vehicle fleets; high-mileage electric service vehicles for commuter routes; and data platforms for integrated planning, booking, and payment of multimodal trips.
3. **Development of a common knowledge base:** NITI Aayog and RMI will co-author a set of research papers on key mobility topics to establish a knowledge base for project teams.
4. **Workshop for pilot design and implementation:** Facilitators and technical experts will provide customized content, training, and feedback for each team's unique project before, during, and after the event. The workshop will provide participants with structured working sessions to make progress on project design, tools and training to overcome technical barriers, access to private and multilateral investment capital, and a unique environment conducive to creativity and breakthrough ideas.
5. **Implementation support and progress monitoring:** As demonstration projects deploy, NITI Aayog and RMI will track each team's progress and publish relevant insights. The teams will learn from new iterations and use this feedback to improve the solutions in order to increase their effectiveness as they scale nationally.

Contacts

For more information, please contact:

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Urban Mobility Lab “Grand Challenge” Form

Please email your application and any supporting materials to the contacts listed on page 3.

Applicant Information:

Contact person: _____

Organization: _____

Title of applicant: _____

State you represent: _____

Application Questions:

(1) Please summarize key progress that has been made by your state on shared, electric, and/or connected mobility (250 words max).

(2) Based on current and future plans, please describe why your state is a promising candidate to host the first “Mobility Lighthouse City” (250 words max).

(3) Please attach relevant materials or documents that support your response to the first question.