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MOBILITY & AIR QUALITY

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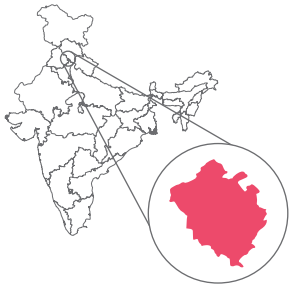
STRATEGY FOR PEDESTRIANISATION & NON-MOTORISED TRANSPORT (NMT), CHANDIGARH

Project Highlights

- Establishment of a NMT Cell for inter agency coordination on NMT action
- Information, Education and Communication (IEC) initiatives to encourage behavioural change and promote shift to active transport
- Provision of NMT infrastructure and supporting policy that ensures safety and security, connectivity and directness, comfort and attractiveness and universal accessibility

Background

Chandigarh, 'the City Beautiful' has the unique administrative character of being a Union Territory (UT) and joint capital of Punjab and Haryana. Spread over an area of 114 sq. km, it is home to 1.05 million people as per Census of India, 2011. Due to extensive urbanisation around Chandigarh and rapid increase in motorised traffic, city is facing challenges of increased pollution, road congestion and safety concerns for pedestrians and cyclists. To address these challenges, Department of International Development (DFID)-UK, under the UK-India Strategic Partnership for Smart Urban Development in Indian States (SmUDI) has initiated the preparation of a Strategy for Pedestrianisation and Non-Motorised Transport (NMT).



Chandigarh

2018

(Not to scale)

Project Objectives

I. To formulate strategies to increase NMT share
II. To recommend policy and infrastructure measures for enhanced Non-Motorised Transport (NMT) usage and shift from motorised modes
III. To recommend institutional framework for inter agency coordination on NMT action

Key Stakeholders

Municipal Corporation Chandigarh, Chandigarh Administration, Chandigarh Smart City Limited , Transport Department, Chandigarh Traffic Police, Engineering Department and Urban Planning Department among others

Approach

- A consultative and need based approach adopted covering (i) as-is assessment of traffic characteristics, supporting policy and institutional structure (ii) identification of improvement areas based on national & international good practices/standards (iii) formulation of strategies and implementation roadmap for policy, institutional structure, and provision of NMT infrastructure
- A Steering Committee was constituted with members from relevant departments/agencies to facilitate inter-departmental coordination
- Delineation of ABD Area under Smart City Plan for recommendations on infrastructure provision as it represented a good mix of land uses
- Strategy developed based on following Guiding Principles: Safety and Security, Directness and Connectivity, Comfort and Attractiveness and Universal Accessibility

Achievements

- **Establishment of a NMT Cell**
  - Formation of an independent cell to ensure institutionalisation of NMT inclusive planning and policy action
  - NMT Cell to facilitate inter-departmental coordination to enhance commitment and progress towards adopting and shift to NMT
- **NMT database creation**
  - Origin-Destination data on existing travel pattern of NMT users and Road Inventory Survey on existing NMT infrastructure. RfP floated for traffic surveys
  - Accident Recording and Reporting System (ARS) to be standardised and adopted for uniform recording of accidents, as undertaken by MoRTH
- **Revision of Road Safety Policy and Draft Parking Policy**
  - Mandate Road Safety Audits (RSA) at different stages of existing/proposed projects to enhance safety of NMT users
  - Parking Policy to prioritise NMT movement, and access to Public Transport. Projects generating significant movement to provide Traffic Impact Assessment
- **Information, Education and Awareness initiatives**
  - Awareness events at frequent intervals - Car Free Day, Cycle Rally and Raahgiri
  - Actively engage with work related commuters by preparing Travel Plans
- **Provision of infrastructure facilities**
  - Provision in compliance with IRC/national guidelines/standards including ITCN and Complete Streets and gaps identified in Inventory Survey.
  - Installation of CCTVs, street lighting, solid fill painted NMT tracks, traffic calming measures at intersections, retrofitting of road cross section giving equal right of road space to all modes of transport

Long Term Impacts

- Increase NMT share to reduced carbon emissions, improved air quality and health of the citizens
- Shift from private vehicles to NMT and PT to reduce traffic congestion and improvement safety of vulnerable road users

Limitations

- Inter departmental coordination across key stakeholders is the most important success towards creating enabling ecosystem for NMT users
- Behavioural change among existing motorized transport users key to enable shift to and adoption of NMT

Future Prospects

- Strategy can be scaled up across the city
- Focused interventions to increase modal share of Public Transport to reduce ATL for NMT will enhance NMT usage
- Pilot Projects to be taken up to showcase best practices

Source: As received from DFID

17

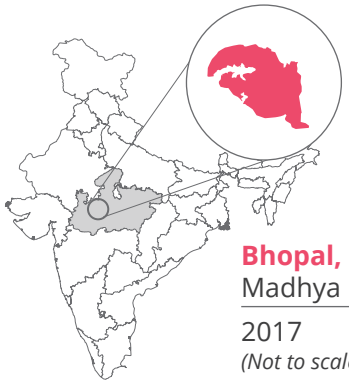
PUBLIC BICYCLE SHARING SYSTEM AND CYCLING INFRASTRUCTURE IN BHOPAL

Project Highlights

- Aimed at improving the usage of cycling and increasing the catchment area of BRTS and public transport in Bhopal through provision of first and last mile connectivity
- Public bicycle Sharing System comprising of 500 cycles spread across 50 stations, focused on important trip generating and attracting points including connectivity to bus/BRTS stops
- Cycling Infrastructure: 5 meter wide and 12 km long dedicated and segregated cycle track
- Another 55 km cycle track under construction along with expansion of PBS stations

Background

Bhopal, is the capital of Madhya Pradesh. Like any other city Bhopal was facing issues due to rapid urbanisation, For a city like Bhopal which is the youngest (65 years) and the fastest sprawling city (850 Sq Km) Public bike sharing fully integrated with the BRTS was seen as a apt solution to encourage a shift in mode share and reduce the issues of pollution.



Bhopal,
Madhya Pradesh

2017
(Not to scale)

Project Objectives

I. To improve mode share of cycling in the city and reduce dependence on motorized private vehicles
II. To reduce pollution, improve environment and well being by promoting healthy commuting options

Key Stakeholders

Bhopal Smart City Development Corporation Limited (BSCDCL), Urban Administration and Development Department (UADD), Bhopal Municipal Corporation (BMC), CharteredBike (Operator) and Citizens

Approach

The project adopted an integrated approach to improve the mode share of cycling and reduce the negative impacts of increased motorization in the city. City authorities carefully strategized activities being undertaken under the initiative as indicated below:

- Creating awareness around importance of cycling and its usage through Raahgiri Day and using the platform for citizen inputs and feedback on the project
- Planning and designing of public bicycle sharing system to improve cycling mode share as well as increase the catchment of existing public transport system
- Integration of PBS with existing public transport in terms of station placement and payment integration
- Provision of cycling infrastructure in conjunction with PBS system through dedicated and segregated cycle tracks

Financial Structure of the initiative

- Capital cost for PBS jointly funded by government and private operator
- 40% subsidy on operating cost provided to PBS operator by government based on performance against pre defined service level benchmarks
- Major sources of revenue for operator are user and membership charges, advertisement and sponsorship revenue
- The infrastructure cost is completely borne by city government

Achievements

Benefits

- The stations are unmanned and linked to the Central control system and this data is used to make decisions on redistribution of cycles around stations during the hours of operations
- The PBS acts as a feeder service to the BRTS and this has improved the catchment area of the public transport in the city
- The system now has 2.35 rides per cycle per day
- The Infrastructure for Bhopal PBS now has 500 cycles and 50 stations
- More than 5000 kgs of CO_2 emissions saved from being released, equivalent to planting almost 1200 trees

Co-Benefits

- Improved public transport usage through provision of first and last mile connectivity
- Improved awareness around benefits of NMT usage

Success Factors

- More than 50 thousand registered members and around 2.35 rides per bicycle per day
- Achieved 12 km of 5m wide Cycle tracks integrating BRTS to Public Bike sharing

Limitations

Funding to sustain and expand the PBS as well as infrastructure

Future Prospects

The city is planning to extend the cycle network to spread across the city connecting through green links, simultaneously expanding the coverage of PBS stations and number of cycles

Source: As received from WRI

For more Information

https://www.citylab.com/transportation/2017/07/can-bike-sharing-survive-in-india/533610/
https://smartbhopal.city/public-bike-sharing-system
https://smartnet.niua.org/sites/default/files/webform/PBS%20Bhopal%20DPR_23%20JUNE%20(2%20files%20merged).pdf

18

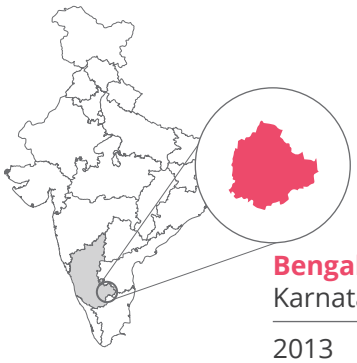
BIG BUS NETWORK, BANGALORE (ROUTE & SERVICE OPTIMIZATION FOR CITY BUS SERVICE)

Project Highlights

- Route and service rationalization refers to a large-scale periodic review of the entire bus network to meet the changing public transport needs in a changing city.
- Route and service rationalization at the network level ensure that services are of high quality and meet the changing needs of a growing city.
- Route and service rationalization was implemented in Bengaluru by Bangalore Metropolitan Transport Corporation on 4 major corridors (arterial roads) in the city – Hosur Road, Kanakpura Road, Old Madras Road and Ola Airport Road.

Background

Bangalore Metropolitan Transport Corporation (BMTC) was operating buses on 2400 routes with an average of 2.7 buses per route. The buses were operated using a complex destination-based bus network resulting in low bus frequencies on individual routes. Hence, BMTC decided to adopt a direction-oriented bus network as it would help service the city better. Accordingly, it conceptualized Bangalore's 'BIG Bus Network'- a city wide connective grid of high frequency services on 12 major roads in the city.



Bengaluru, Karnataka

2013

(Not to scale)

Project Objectives

I. To transition to a direction-oriented model for bus services to provide a higher quality public transport for Bengaluru residents with a simplified route structure and reduced waiting times

Key Stakeholders

Bangalore Metropolitan Transport Corporation (BMTC), Bruhat Bengaluru Mahanagara Palike (BBMP)

Approach

The Project Approach involved 4 stages:

- Qualitative Assessment of Existing Services: Service providers conduct a qualitative and comprehensive evaluation of the existing services
- Network Model Evaluation and Alternative Development: In this step, agencies explore the underlying network model of the service
- Data Collection and Modelling: In this step, relevant data was collected to develop an in-depth analysis of existing services

- Finally Route and Service Planning: The magnitude of planning in this stage will be based on the decision from Step 2 and 3. If the decision entails a system overhaul and change in network model, this step will require the development of an entirely new slate of routes and services. If the data supports the existing model, a marginal yet meaningful effort will be required

Financial Structure of the initiative

- The Project primarily required redistribution of existing bus fleet
- Project was funded by BMTC

Achievements

Benefits

- Big Trunk routes, providing high-frequency services on Bangalore's 4 major arterial roads;
- Big Circle routes, providing high-frequency services along Bangalore's circular Outer Ring Road (ORR);
- Big City routes, providing high-frequency services along high-density and high-demand corridors in the city center; and
- Big Connect routes, providing high-frequency services between arterial roads beyond the ORR

Co-Benefits

- Improved public transport usage through provision of improved Services
- Improved Bus network Efficiency.

Success Factors

A combined 42 buses, namely the BigTrunk buses and the Samparka Sarige feeders, were launched on Kanakpura Road and a combined 51 buses on Old Madras Road. This brings the total BIG Bus Network to three corridors, of the 12 planned, and a total of 185 buses as part of this network.

Limitations

- Fare structure and transfer penalties deterred acceptance of the system
- Lack of interagency co-ordination to create comfortable waiting infrastructure at bus interchange points

Future Prospects

Feeder routes will also be introduced to link villages and suburban destinations to their nearest arterial roads.

Source: As received from WRI

For more Information

https://wricitieshub.org/infographics/big-bus-network-bmtc-bangalore
https://wrirosscities.org/media/photo-essay/big-bus-network-bangalore-india
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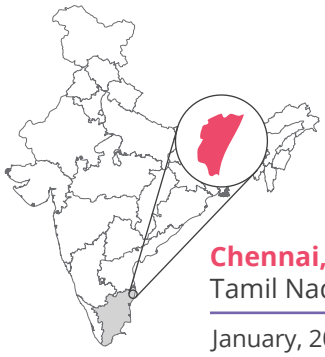
SWITCHING TO SUSTAINABLE AUTO-RICKSHAW SYSTEM-CASE STUDY OF ELECTRIC AUTO FEEDER FOR CHENNAI METRO RAIL LIMITED

Project Highlights

- First of its kind electric auto-based feeder system for City Metro Rail Limited
- First set of Electric Autos to be registered in the city of Chennai
- Research on estimating carbon emissions from existing auto-rickshaw fleet completed
- Roundtables organized to carve possible sustainable IPT solutions including detailed research identifying behavioral patterns of metro-users related to last-mile connectivity
- Collaborative Initiative- Auto-drivers, Metro Rail, Local Transport Departments

Background



Chennai,
Tamil Nadu

January, 2019-
February, 2020

(Not to scale)

Auto rickshaws play an indispensable role in the mobility needs of most Indian cities. They act as an intermediate public transport mode and provide first and last-mile connectivity. However, they are still an inefficient sector that neither answers appropriately to the changing dynamics of urban mobility in India nor embeds a sustainable pattern of transportation. A multitude of challenges plagues the auto-rickshaw ecosystem some of which includes lack of technological up-gradation contributing to poor air quality, inefficiencies in operations as auto-drivers are less organized and competition from other modes of transport such as Cab Aggregators. On the other hand, cities, despite having good public transport, are falling short of reliable last-mile connectivity. It is therefore pertinent that the Auto-rickshaw sector needs to move towards Sustainable Businesses, where less polluting technologies are promoted among service providers, auto-rickshaws act as reliable and viable options for last-mile connectivity to public transport, at the same time, customers are educated and aware of the need to shift to sustainable modes of transport. Chennai is a standard example of a growing city that is attempting to meet the mobility needs of its citizens. With over 75,000 registered autos, a considerable portion of its mobility needs is catered by auto-rickshaws. In view of this, the city undertook this project of transforming the existing fleet of auto-rickshaws in the city.

Project Objectives

I. Scaling up of a replicable and integrated model of sustainable auto-rickshaw transport, based on clean technologies
II. To create a synthesis document based on the pilot, that can inform the up-scale /replication potential of the pilot project
III. Increase demand for electric autos as a feeder system (first and last-mile connectivity) to metros
IV. Support the use of sustainable autos as a feeder system to metro stations in Chennai, to effectively integrate auto-rickshaws in the multi-modal urban transport system

Key Stakeholders

Consortium consisting of Fondazione ACRA (Italy), Stichting ENVIU (Netherland), Women Health and Development (India) and The Energy and Resources Institute (India).

Approach

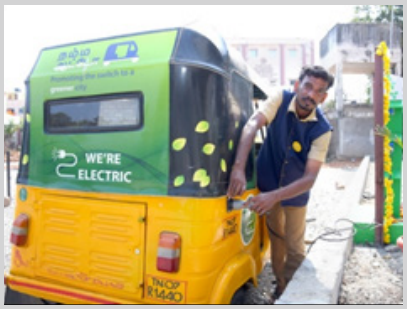
The following steps were undertaken under the project:

- Setting up of the pilot operations of electric auto-rickshaw as a feeder network to Chennai Metro Rail Limited in two heavy footfall stations
- Awareness generation and behavioral change intervention for promoting the use of this service among metro rail users
- Analysis of the regulatory framework for promoting electric mobility in the auto-rickshaw sector through stakeholder discussion and develop a paper on the same
- Contribution towards developing an ecosystem for promoting electric auto-rickshaw system (Loans, information about technology, training for drivers etc.)

Achievements

Benefits and Co-Benefits

- First set of Electric Auto-rickshaws to be registered in the city of Chennai
- For the first time, electric autos were used as a feeder to the city metro rail with nominal service rates to the passengers
- Drivers who are trained under the project and adhering to the code of conduct were chosen to be the face of the service
- Extensive support by the City Metro Rail for implementation of the feeder service on the ground by providing charging and parking facility
- Appreciated by European Union ambassador, during his latest visit to Chennai
- Total of 8910 riders used the service till date from Aulander Station
- Reduction in carbon footprint of the city, and thus environmental benefits



Long Term Impacts

- The project has a long-term impact at the given levels:
- This project will reduce passenger carbon footprint and thereby the air quality in the city. As per TERI's analysis, the average annual carbon dioxide emission from an LPG auto is 3.72 tonne
- Switching to electric autos, in the long run, helps the driver who will benefit from low operational cost (reduced by approximately 40%) leading to an increase in income
- The learnings from the pilot can be used to build sustainable models of last-mile connectivity in cities where Metro Rail Networks are active

Limitations

One of the major barriers in the implementation of this pilot in the initial months was the absence of Electric Vehicle Policy in Chennai which posed the following challenges:

- No permit available specifically for electric auto
- New Electric autos were not allowed to register in the city

Future Prospects

- The pilot is currently limited to one metro station with three electric autos on a pre-fixed route plan. It is ready to start operations in the second station soon
- Tamil Nadu derives a significant source of its electricity requirement from renewable sources. By going electric, the carbon footprint from transport can be drastically reduced by up scaling such pilots appropriately
- Pilots give significant visibility, awareness and information to different stakeholders about this new category of the electric auto. This will contribute to the adoption of this technology in the city

Source: As received from The Energy and Resources Institute (TERI), Fondazione ACRA (ACRA), Stichting ENVIU Nederlands, Women Health and Development (WHAD)

For more Information

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THE URBAN MOBILITY LAB: ENABLING A SHIFT TO SHARED, CLEAN, & PEOPLE-CENTRIC MOBILITY IN DELHI & PUNE

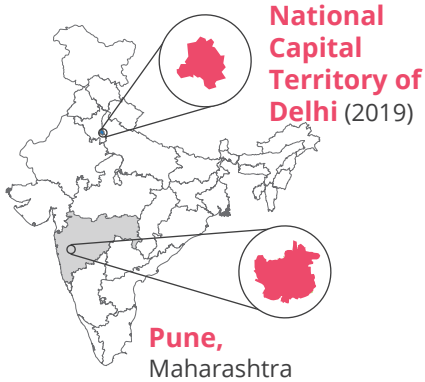
Project Highlights

- Partnered with the cities of Delhi and Pune to support their transition to a shared, clean, and people-centric mobility paradigm
- Facilitated the successful implementation of 25 electric buses, 35 shared electric vehicles (EVs), 250 shared cycles, and more in Pune
- Created commitment for 35,000 electric and accessible vehicles, at least 1,000 EVs for last-mile deliveries, and several hundred public charging and swapping stations by 2020 in Delhi

Background

The Urban Mobility Lab is a platform that partners with Indian cities to identify, integrate, and implement mobility solutions that transform how people and goods move. Rocky Mountain Institute (RMI) and NITI Aayog jointly developed the concept of Lighthouse Cities—early leading geographies for testing new mobility solutions—in India Leaps Ahead. The Urban Mobility Lab was created in November 2017 to support the development of Lighthouse Cities. It offers support for policymaking and pilot projects related to transformative mobility solutions. RMI leads the Urban Mobility Lab and works with central, state, and city government partners to implement the program.

Delhi and Pune are the first two host cities for the Urban Mobility Lab. The Dialogue and Development Commission of Delhi (DDC-D) and the Pune Municipal Corporation (PMC) are RMI's partners in each city.



Project Objectives

To accelerate India's shift to shared, clean, and people-centric mobility by helping cities to:

- Identify, integrate, and implement mobility solutions
- Adapt projects to local needs and conditions
- Increase collaboration across public and private sectors
- Problem-solve on key regulatory and system-level barriers

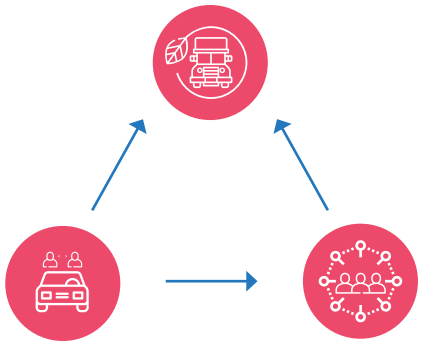


Figure: Shared, clean, and people-centric are foundational elements of India's new mobility paradigm

Key Partners and Stakeholders

Advisors and partners

- Central government: NITI Aayog, Ministry of Housing and Urban Affairs
- Local government: Government of

Key stakeholders

- Government: Central, state, and urban local bodies
- Industry: mobility solution providers

Maharashtra, Pune Municipal Corporation; Government of NCT of Delhi, Dialogue and Development Commission of Delhi

- Academia: universities
- Civil society: local non-governmental organizations and citizens

Approach

For each city, RMI and its partner conduct a process to support the identification, integration, and implementation of mobility solutions. This process includes four phases:

- Phase 1: Conduct a needs assessment: Assess the city's mobility needs and opportunities through literature review and stakeholder interviews
- Phase 2: Solution identification: Identify and shortlist solution providers to offer mobility solutions that align with the needs that were identified during the needs assessment
- Phase 3: Solutions Workshop: Convene a workshop to provide an open forum for the government, private sector, and civil society to codevelop solutions and implementation plans for mobility pilot projects
- Phase 4: Implementation Support: Support the public and private sectors in implementing solutions from the workshop and track and share progress and lessons learned

The Solutions Workshop is a core part of the Urban Mobility Lab process. It supports the aforementioned objectives through four key components:

- Solution development: Solution providers advance their solutions from ideas to implementable projects through a facilitated process
- Coaching and feedback: City- and state-level public agencies and industry experts provide coaching and feedback to the solution providers on how to customize their solutions to meet the city's needs and address implementation barriers
- Integration and networking: Solution providers engage with each other to identify system-level barriers that can benefit from collaborative action
- Vision setting: Policymakers provide a vision and call for action for transformative mobility solutions

Financial Structure

- RMI is an independent, nonprofit that currently offers the Urban Mobility Lab platform at no cost to partner cities thanks to philanthropic support.
- The Urban Mobility Lab seeks to connect cities and solution providers with public and private funding sources, such as fiscal incentives from the Central government (e.g., FAME II).

Achievements

Benefits

- Advanced progress on Delhi and Pune's mobility planning, policymaking, and goals.
- Identified opportunities to address system-level barriers and developed potential solutions.
- Shared lessons learned across levels of government to inform policymaking.
- Supported the implementation of several innovative mobility projects and created commitment for future project deployment.

Examples of implemented mobility projects in Delhi and Pune

Public transport

Pune's public transit agency, PMPML, closed a tender for 25 electric buses and charging infrastructure. RMI offered technical guidance on the charging infrastructure planning.

Electric vehicles

Lithium Urban Technologies launched 35 EVs at a Pune IT park.

Accessible transport

Ezy Mov Solutions developed several partnerships at the Delhi Urban Mobility Lab to bring its wheelchair accessible transport services to Delhi.

Charging infrastructure

Magenta Power Solutions installed 9 AC community chargers across Pune.

Non-motorized transit

YULU deployed 250 shared bikes at a Pune IT park.

Final-mile parcel delivery

DELIVER ELECTRIC DELHI

RMI is supporting a multi-stakeholder pilot project to launch 1,000 electric goods carrier vehicles in Delhi. 270 vehicles are currently operating under the pilot.

Co-Benefits

- Building relationships and creating a collaborative environment for the public and private sector.
- Generating awareness of innovative mobility solutions and establishing proof points for new business models and operational practices.
- Conducting planning with a whole-systems approach.
- Contributing to improved local air quality and greater access. If Delhi achieves its 25 percent battery electric vehicle registration target by 2024, approximately 2,085 tonnes of PM2.5 tailpipe emissions can be avoided over the lifetime of the EVs deployed by 2024 (relative to an equal-sized internal combustion engine fleet; RMI internal analysis).

Success Factors

- Strong government leadership
- Shared commitment to a shared, clean, and people-centric mobility future
- Openness to collaboration from the public and private sectors
- Participation and coaching by urban local bodies

Long Term Impacts

- In urban road-based passenger mobility, shifting to a shared, clean, and people-centric mobility paradigm could save India 1 gigatonne of carbon dioxide emissions and US $330 billion in fuel imports by 2030, according to NITI Aayog and RMI's May 2017 report, India Leaps Ahead. This shift can also lead to improved local air quality (e.g., through avoided PM2.5 emissions) in cities and greater access to mobility options.
- Collaboration and coordination across levels of government can lead to more informed decision making and consistent application of policy.
- The Urban Mobility Lab is a replicable process that can be adapted to and performed by any city to support its specific mobility goals.

Limitations

- Although the Urban Mobility Lab aims to create an environment that supports implementation, the implementation responsibility resides with the public and private sector actors.

Future Prospects

- The Urban Mobility Lab will continue to work with Delhi and Pune to support the implementation of shared, clean, and people-centric mobility projects and policies.
- RMI is looking forward to partner with more cities in 2019 and beyond to cohost the Urban Mobility Lab.
- To scale the Urban Mobility Lab to more cities, RMI is developing thematic cohorts to create customized learning opportunities for multiple cities to advance their understanding of a specific topic and work towards developing and deploying sustainable mobility solutions in their respective cities.

Source: As received from RMI

For more Information

https://rmi.org/insight/urban-mobility-lab-pune/
https://economictimes.indiatimes.com/industry/transportation/shipping-/-transport/pune-selected-as-indias-first-lighthouse-city-for-urban-mobility-lab/articleshow/66226268.cms?from=mdr
https://www.financialexpress.com/industry/urban-mobility-lab-think-do-tank-plans-major-makeover-for-punes-transportation/1378884/

PEDESTRIAN PRIORITY PROGRAM (PPP) : BUENOS AIRES

Buenos Aires, Argentina

Year of Initiation: 2003

Project Highlights

- **Urban renewal project to prioritize non-motorized modes of transportation**
- **Development of a Pedestrian-Scale Downtown promoting democracy on the roads**
- **Integrated and Sustainable Transportation system**

Background

The increased reliance on private modes of transportation and deterioration of the existing transport system of Buenos Aires led to the adoption of the Pedestrian Priority Program (PPP). The PPP was launched as a part of the "Healthy Mobility initiative" under the purview of its government in order to improve transform the modal share of the city and prioritize pedestrian and sustainable modes of transportation. The program presented tremendous scope of transforming face of the urban centers of the city and improve the aesthetic value of the landscape.

Project Objectives

The primary objective of the initiative was to improve access to daily needs, prioritize NMT and public transport, bring order to general traffic, decrease congestion, and reduce traffic accidents and casualties

Key Stakeholders

Ministry of Urban Development, Buenos Aires Government, Urban Residents, Architects, City Planners, Environmentalists

Approach of Pedestrian Priority Program

The PPP was implemented to prioritize the needs of the pedestrians and transform the existing built environment of the city to suit their requirements. The key measures taken in this regard included redesigning of narrow streets and public spaces and restrictions on the movement of car traffic flows in designated areas. The components undertaken to implement these measures included:

- Renewal of streets: 20-lane 9 de Julio avenue was restructured into public transit corridor having a 300 km bicycle network, public bike system
- Waste Collection System was replaced by centralized waste receptacles in order to provide clean and hygienic environment to pedestrians
- Increase in the green/tree cover
- Improvements in the signage, traffic signals, street furniture, lighting system to facilitate smooth pedestrian circulation

Financial Structure of Pedestrian Priority Program

- The PPP program was sponsored by the City of Bueno Aires Ministry of Urban Development
- The PPP project was expected to cost ~195 million Argentina pesos ($25 million U.S.)

Achievements

Benefits

Reduction in noise and air pollution levels in the restricted areas

- 97% reduction in the levels of air pollutants was observed leading to improved air quality
- The noise pollution levels and impact were reduced by 50%

- Promotion of social of cohesiveness and social sustainability due to increased avenues for social activities and meeting points

Co-benefits

- Climate Change mitigation
- Increase in awareness levels towards environmental sustainability
- Economic benefits due to improvements in land values and rents
- Behavioral shift from car travel to non-motorized modes of transport

Success Factors

- Strong Institutional and legislative Support and capacity
- Urban renewal innovations to encourage pedestrian movements and car-free environments
- Regular and timely monitoring and evaluation of the program

Limitations

- Opposition from various stakeholders like city planners and architects
- Unprecedented costs of the proposed interventions

Source: https://pearl.niua.org/sites/default/files/books/GP-GL4_MOBILITY.pdf

For more Information
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