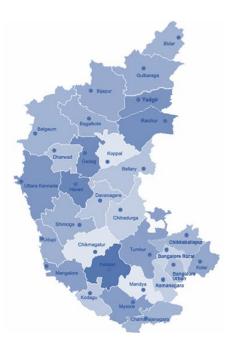


KARNATAKA AND ITS TRANSPORT SCENARIO





6th	Largest state by area (5.83% of India)
23 m / 39%	Population of Karnataka people in urban areas
26 no's	Cities with a population of 100,000
31.5 %	Urban population growth: 2001 - 2011
50%	Population to live in urban areas by 2025



Urban Sprawl

- Cities are growing in area
- Capturing suburbs and peripheral lands
- Expanding in size with sparse density



Vehicular Growth & Congestion

- In Bangalore, vehicular registration has crossed the 1 crore.
- Vehicles have doubled in the last 10 years
- · Congestion and traffic on road



Increased Land Pressure

- Increased demand for land
- Sky-rocketing land prices
- Pressure on infrastructure services



Pollution

• Transport contributes about 20% of air pollution

DIRECTORATE OF URBAN LAND TRANSPORT

Only one of its kind institution in the country with expertise in transport planning

MISSION

To facilitate implementation of **efficient**, **sustainable and integrated transportation systems** that enhance the state's economic competitiveness and prosperity while preserving the quality of our environment and neighborhoods.

MANDATES

PLAN

Improved Accessibility | Integrated Mobility

FINANCE

Leverage State Urban Transport Fund | External Funding

ASSIST

Stakeholders in Project Formulation | Appraisal | Technical Solutions | Capacity Building

ENGAGE

Similar Interest Groups | Other Technical Institutions | Community

Directorate of Urban Land Transport

Framework

Plans focused on safe and accessible infrastructure.

Proactive Engagement with community

Emphasis on research and innovation

Building partnerships

Branding and communication

1. Facilitating Policy Framework

Bengaluru Metropolitan Land Transport Authority Act (BMLTA)



ಭಾಗ - ೪ ಎ

ವೆಂಗಳೂರು, ಗುಡುವಾರ, ೧೨, ಜನವರಿ, ೨೦೨೩(ಮಷ್ಟ ೨೨, ಶಕವರ್ಷ, ೧೯೪೪) BENGALURU, THURSDAY, 12, JANUARY, 2023(PUSHYA, 22, SHAKAVARSHA, 1944) ನಂ. ೨೦ No. 20

ಸಂಸದೀಯ ವ್ಯವಹಾರಗಳು ಮತ್ತು ಶಾಸನ ರಚನೆ ಸಚಿವಾಲಯ ಅಧಿಸೂಚನೆ ಸಂಖ್ಯೆ: ಸಂವ್ಯಶಾಇ 26 ಶಾಸನ 2022, ದಿನಾಂಕ: 12.01.2023

ಬೆಂಗಳೂರು ಮಹಾನಗರ ಭೂಸಾರಿಗೆ ಪ್ರಾಧಿಕಾರ ವಿಧೇಯಕ, 2022 ಇದಕ್ಕೆ 2023ರ ಜನವರಿ ತಿಂಗಳ 11ನೇ ದಿನಾಂಕದಂದು ರಾಜ್ಯಪಾಲರ ಒಪ್ಪಿಗೆ ದೊರೆತಿದ್ದು, ಸಾಮಾನ್ಯ ತಿಳುವಳಿಕೆಗಾಗಿ ಇದನ್ನು 2023 ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೇ.06 ಎಂಬುದಾಗಿ ಕರ್ನಾಟಕ ರಾಜ್ಯಪತ್ರದ ವಿಶೇಷ ರಾಜ್ಯಪತ್ರಿಕೆಯಲ್ಲಿ (ಭಾಗ IV) ಪ್ರಕಟಿಸಬೇಕೆಂದು ಆದೇಶಿಸಲಾಗಿದೆ,-

2023ರ ಕರ್ನಾಟಕ ಅಧಿನಿಯಮ ಸಂಖ್ಯೆ: 06

(2023ರ ಜನವರಿ ತಿಂಗಳ 12ನೇ ದಿನಾಂಕದಂದು ಕರ್ನಾಟಕ ರಾಜ್ಯ ಪತ್ರದ ವಿಶೇಷ ಸಂಚಿಕೆಯಲ್ಲಿ ಮೊದಲು ಪ್ರಕಟವಾಗಿದೆ)

ಬೆಂಗಳೂರು ಮಹಾನಗರ ಭೂಸಾರಿಗೆ ಪ್ರಾಧಿಕಾರ ಅಧಿನಿಯಮ, 2022 (2023ರ ಜನವರಿ ತಿಂಗಳ 11ನೇ ದಿನಾಂಕದಂದು ರಾಜ್ಯಪಾಲರಿಂದ ಅನುಮೋದನೆಯನ್ನು ಪಡೆಯಲಾಗಿದೆ)

ಬೆಂಗಳೂರು ನಗರದಲ್ಲಿ ನಗರ ಸಂಚಾರ ಪ್ರದೇಶಕ್ಕಾಗಿ ಮತ್ತು ನಗರ ಸಂಚಾರ ಪ್ರದೇಶದೊಳಗೆ ನಗರ ಸಂಚಾರದ ಅಭಿವೃದ್ಧಿ, ಕಾರ್ಯಾಚರಣೆ, ನಿರ್ವಹಣೆ, ಮೇಲುಸ್ತುವಾರಿ, ಮೇಲ್ವಿಚಾರಣೆಯ ವಿನಿಯಮನಕ್ಕಾಗಿ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಭೂಸಾರಿಗೆ ಪ್ರಾಧಿಕಾರ ರಚನೆಗಾಗಿ ಉಪಬಂದ ಕಲ್ಪಿಸುವ ಒಂದು ಅಧಿನಿಯಮ.

ಇದರಲ್ಲಿ ಇನ್ನುಮುಂದೆ ಕಂಡುಬರುವ ಉದ್ಯೇಶಗಳಿಗಾಗಿ ಬೆಂಗಳೂರು ನಗರದಲ್ಲಿ ನಗರ ಸಂಚಾರ ಪ್ರದೇಶಕ್ಕಾಗಿ ಮತ್ತು ನಗರ ಸಂಚಾರ ಪ್ರದೇಶಕ್ಕಾಗಿ ಮತ್ತು ನಗರ ಸಂಚಾರ ಪ್ರದೇಶದೊಳಗೆ ನಗರ ಸಂಚಾರದ ಅಭಿವೃದ್ಧಿ, ಕಾರ್ಯಾಚರಣೆ, ನಿರ್ವಹಣೆ, ಮೇಲುಸ್ತುವಾರಿ, ಮೇಲ್ಕಿಚಾರಣೆಯ ವಿನಿಯಮನಕ್ಕಾಗಿ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಭೂಸಾರಿಗೆ ಪ್ರಾಧಿಕಾರ ರಚನೆಗೆ ಮತ್ತು ಅದಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಅಥವಾ ಅದಕ್ಕೆ ಪ್ರಾಸಂಗಿಕವಾದ ವಿಷಯಗಳಿಗಾಗಿ ಉಪಬಂಧ ಕಲ್ಪಿಸುವುದು ಯುಕ್ತವಾಗಿರುವುದರಿಂದ;

ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ, ಬೆಂಗಳೂರು ಮಹಾನಗರ ವಲಯ ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ, ಬೆಂಗಳೂರು ಸಂಚಾರ ಪೂಲೀಸ್, ಬೆಂಗಳೂರು ಮಹಾನಗರ ಸಾರಿಗೆ ನಿಗಮ, ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ, ಬೆಂಗಳೂರು ಮೆಟ್ರೋ ರೈಲ್ವೆ ನಿಗಮ ನಿಯಮಿತ, ಮತ್ತು ಸಾರಿಗೆ ಇಲಾಖೆಯಂಥ ಬಹುವಿಧ ಸಂಸ್ಥೆಗಳು ಅಥವಾ ಏಜಿನ್ಸಿಗಳು ಬೆಂಗಳೂರು ನಗರ ಮತ್ತು ಅದರ ಸುತ್ತಮುತ್ತಲಿನ ಪ್ರದೇಶದಲ್ಲಿ ನಗರ ಸಂಚಾರಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಯೋಜನೆಗಳನ್ನು ರೂಪಿಸುವುದಕ್ಕೆ, ಅಭಿವೃದ್ಧಿಪಡಿಸುವುದಕ್ಕೆ, ಅನುಷ್ಠಾನಗೊಳಿಸುವುದಕ್ಕೆ ಮತ್ತು ಅವುಗಳ ನಿರ್ವಹಣಾ ಚಟುವಟಿಕೆಗಳಿಗೆ ಜವಾಬ್ದಾರಿಯಾಗಿರುವುದರಿಂದ ಮತ್ತು ಮೇಲ್ಯಂಡ ಪ್ರತಿಯೊಂದು ಸಂಸ್ಥೆಗಳು ಮತ್ತು ಇಲಾಖೆಗಳು ಬೇರೆಬೇರೆ ಶಾಸನಗಳ ಅಡಿಯಲ್ಲಿ ಒಂದು ನಿರ್ದಿಷ್ಟ ಕಾರ್ಯಚೌಕಟ್ಟಿನೊಳಗೆ ನಗರ ಸಂಚಾರಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ವಿಷಯಗಳ ಬಗ್ಗೆ ವ್ಯವಹರಿಸಲು ಅಧಿಕಾರ ಹೊಂದಿರುವುದರಿಂದ;

- To ensure holistic integrated planning and management of urban transport, as an independent legal entity with technical expertise and financial autonomy.
- DULT is the Secretariat to BMLTA.
- BMLTA fund will be set up for the purpose of implementation of this Act.

Current Status: The BMLTA Act was was approved by the Government on 12.01.2023

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Active Mobility Bill

To protect the **rights of pedestrians and cyclists** of all ages, abilities and gender to safe, accessible, and connected pedestrian and cycling networks in urban areas of the State, to promote sustainable urban mobility and build healthy communities.



16-12-2022

The Karnataka Active Mobility Bill, 2022

Preamble/Statement of Objects and Reasons

A Bill to provide for the rights of pedestrians and cyclists of all ages, abilities and genders to safe, accessible, and connected pedestrian and cycling networks in urban areas of the State, with a view to promote sustainable urban mobility and build healthy communities;

Whereas walking and cycling not only contribute to better health of an individual but also help in improving societal well-being, and improvements to pedestrian and cycling infrastructure ensure equity and inclusive development, it is expedient to provide for the design and development of streets and public places keeping in view the needs and requirements of all road users and transition to sustainable urban areas where every road user is conscious and respectful of the rights of other road users, and for the matters connected therewith or incidental thereto for the purposes hereinafter appearing:

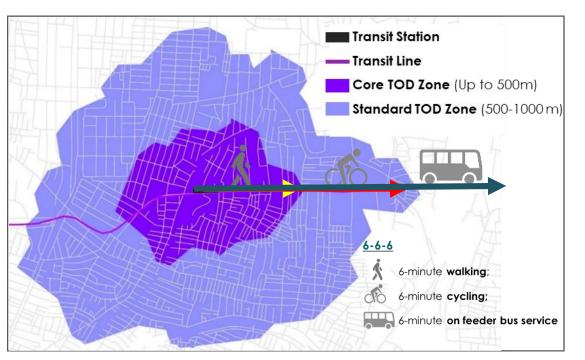
Be it enacted by the Karnataka State Legislature in the seventy third year of the Republic of India, as follows: -

Current Status: Awaiting approval of the Government.

TOD Policy-Transit Oriented Development for Bengaluru

Transit-oriented development (TOD) promotes:

- High mode share of public transport
- Priority to walking and cycling infrastructure
- Mixed land-use
- Densification of population, employment and activities near transit stations
- Station areas that are inclusive and accessible
- High quality of life through place-making



higher FAR with emphasis on mix of uses/activities/jobs etc. to promote active and lively station areas.

Current Status: The TOD Policy for Bengaluru was approved by the Government on 17.11.2022

Travel Demand Management through Parking Policy 2.0

Streamlining Commercial On-street Parking

- Promoting NMT
- Prioritizing pick-up/drop-off, loading/un-loading
- Prevent long term on-street parking
- Restricted close to junctions, pedestrian crossings & high traffic roads
- Prohibition around transit nodes and MLCP's.

Parking regulations for TOD influence zone

- Reduced building parking norms in TOD Zones
- Multi Sectoral Industrial parks
 - a. Provision of bus-stops within the premises
 - b. Facilitate common parking facilities

Parking Revenue Utilization



Adoption of Technology for Parking Management

- Setting up an integrated Central Parking Portal.
- Market driven approach to encourage innovative technology solution for parking





Parking Meters for Management

Smart Parking using Apps – Find a spot

Parking Pricing Strategy

- Base parking fee > public transport fare
- Higher pricing for on-street with differential pricing based on land-use while cycle parking would be free.

1.5x - 3x



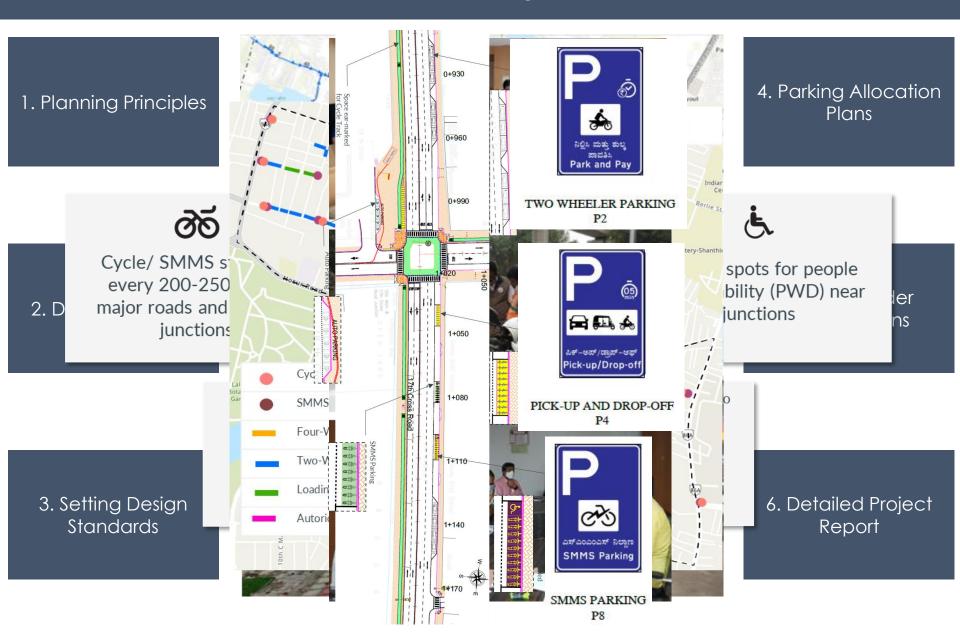
Parking on Street



Parking in MLCP

2.	Plans focused on safe and accessible infrastructure.

PLANS FOCUSED ON SAFE AND ACCESSIBLE INFRASTRUCTURE Area Parking Plans

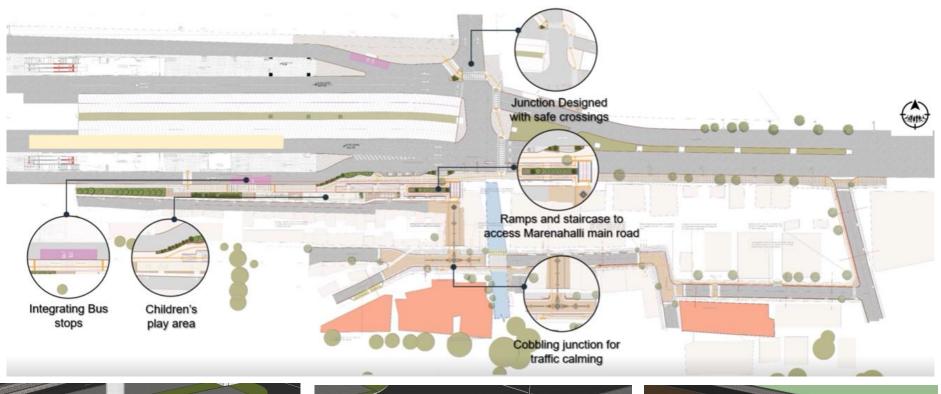


Redevelopment of Gandhi Bazaar

CIRCULATION PEDESTRIANISED ZONE PARKING



Designing an Inclusive Street in JP Nagar









Integration of IPT Modes

Proposed Ramp and Staircase

Improving accessibility

Mass transit and NMT projects

SUBURBAN RAIL

• 148 km of suburban network across 4 corridors, 57 stations. Completion period: 6 years (2026).





PUBLIC BICYCLE SHARING (PBS) MYSORE

Is the 1st PBS in India

Existing PBS	Revamped PBS
Regular Pedal Cycles	Pedal assisted cycles
450 Cycles	1000 cycles
48 docking stations	100 docking stations





Where there is a bus, there is a way

HUBBALI-DHARWAD BRTS (branded as "CHIGARI")

- Is the 1st BRTS in Karnataka.
 - Operation since 2018 and has won many accolades from general public.
- The project was jointly funded by GoK, World Bank and GoI.
- The Directorate is responsible for overall monitoring and supervision of HD-BRTS.



SUTF- State Urban Transport Fund

The Government of Karnataka has set up the State Urban Transport Fund in 2010 to support financial assistance to projects under PT, NMT, Capacity Development, Innovation, etc.

The source:

- Budget allocation
- 1% of Cess on motor vehicle tax
- 2% of Cess on property tax



46 Terminals

27 City Bus Services

13 NMT Projects

6 Innovative Projects

12 Depot & Tyre retreading plants

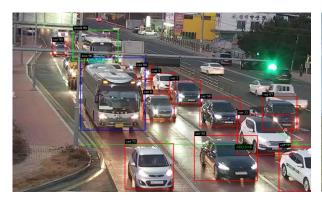
PLANS FOCUSED ON SAFE AND ACCESSIBLE INFRASTRUCTURE Advance Traffic Information and Management system (ATIMS)

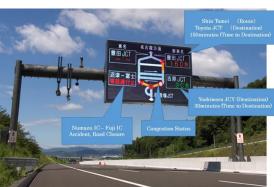
DULT is implementing the Intelligent Transport Systems (ITS) in Bengaluru to aid in better traffic management using grantin-aid from the Government of Japan

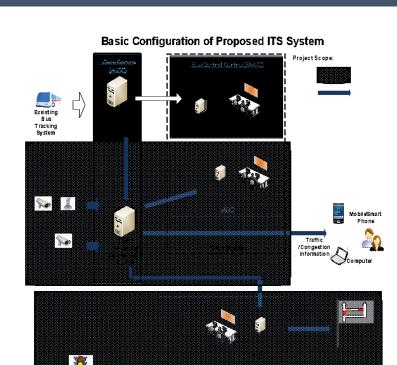
1. Bengaluru Traffic Information Centre (B-TIC)

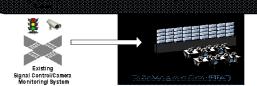
- City buses (operated by BMTC) to act as probe realtime location details sent to B-TIC
- Automatic Traffic Counter and Classifier (ATCC)
- Queue-Length Measurement System (QLMS)
- Variable Message Signs (VMS) 3 locations

2. Area Traffic Control System (ATCS)









3. Proactive Engagement with community

PROACTIVE ENGAGEMENT WITH COMMUNITY Cycle Day

Initiated Cycle Day in Bengaluru in the year 2013

SPREAD

- 41 Community Partners
- 40 Neighbourhoods covered
- 500+ Cycle Day across 60+ community partners

IMPACT

- Increase in PT Share
- **20,000** Trips were made on the day on the bus (otherwise account for **5000 cars** on the road)
- Drop in pollution levels:
 Karnataka State Pollution Control Board recorded
 30.6% decrease in particulate matter and 11.5% dip in ambient noise quality from the previous day









No honking, only tinkling Bangaloreans Cutting Across Age Groups Throng Agara Lake For A Jovride

HOW DID YOU COME FOR THE OPEN STREETS EVENT?











PROACTIVE ENGAGEMENT WITH COMMUNITY Cycle Day Impacts



Cycle Stands and Cycle Track



Walk and Cycle to School Program



ORR - Pop Up Cycle lane (17 Kms)



Bangalore Bicycling School

PROACTIVE ENGAGEMENT WITH COMMUNITY SUMA

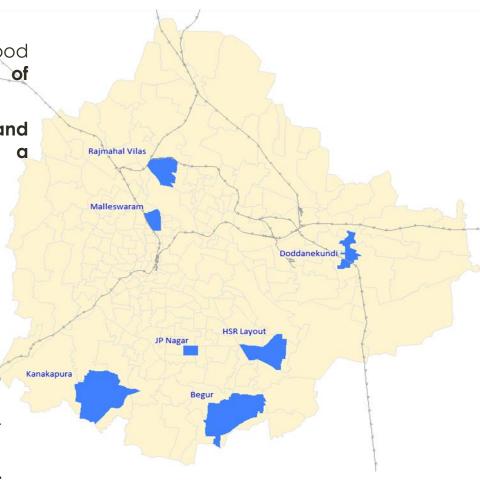
Objectives of SuMA

 To engage communities at the neighbourhood level to spread awareness on benefits of sustainable modes of transport.

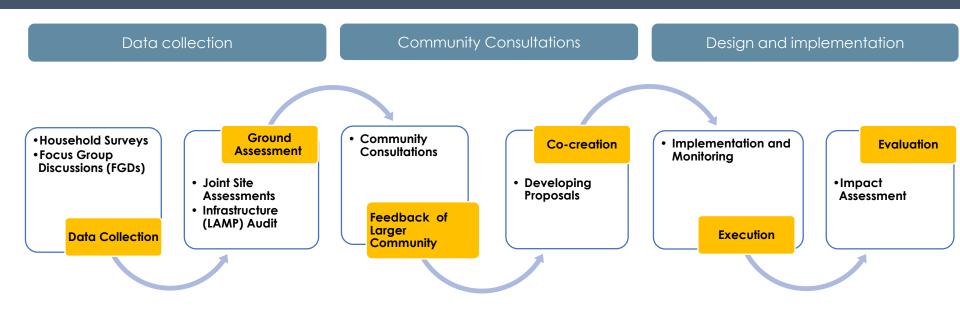
To support the community in formulating and implementing proposals to transform into a sustainable neighbourhood.

Expected Outcomes

- Capacity building of neighbourhoods to advocate for sustainable mobility practices.
- More neighbourhoods with better NMT and PT infrastructure.
- Better sense of ownership for NMT and PT assets.



PROACTIVE ENGAGEMENT WITH COMMUNITY Major Activities of SuMA



Key Documentations / Outputs

Household Data Analysis Report

FGD Report

LAMP Audit Report

Detailed proposals with designs

Ongoing documentation during implementation



FGD with Lower Income Group



FGD with Children



Tag Along Survey



Community Consultation



Community Engagement (Sutta Mutta)

PROACTIVE ENGAGEMENT WITH COMMUNITY SuMA- Impacts









Installation of safe cycling infrastructure - segregated cycling lane



Installation of Bicycle Counter



Installing Bollards at Junction for smooth turning of Buses



PROACTIVE ENGAGEMENT WITH COMMUNITY Tactical Interventions



STEP 1Study the site conditions, issues and challenges.

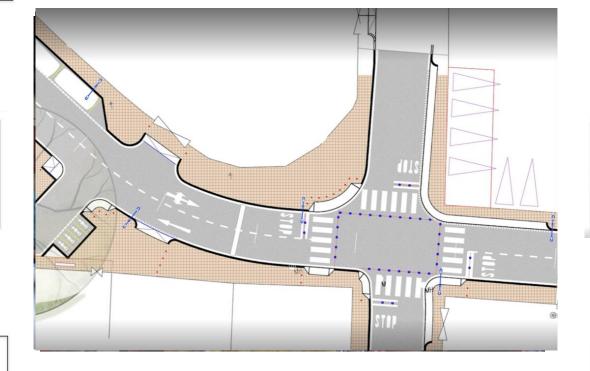
"TEST, LEARN, MODIFY & IMPLEMENT."





STEP 2

Develop Conceptual plans.





STEP 5

Gather data through observation, measurements, surveys etc.



STEP 3

Stakeholder consultations to get buy-in of all.



STEP 6

Gauge impact, issues etc. and based on insights modify.

PROACTIVE ENGAGEMENT WITH COMMUNITY Tactical Interventions

SLOW STREET - ALEXANDRIA STREET























PEDESTRIAN PRIORITY STREET - SIDDHAIAH ROAD









5. Emphasis on Research and Innovation

EMPHASIS ON RESEARCH & INNOVATION Research & Innovation

CART

"Call for Research Topics" (CART) is an annual program for soliciting research ideas and suggestions from **government stakeholders** on urban mobility research topics including, but not limited to Active mobility, Public Transport, Micro-mobility, Urban Freight and Travel demand management.

PART II- PROBLEM STATEMENTS		
Broad Problem Area	Suggested Research Topic	
Intelligent Transport systems (ITS)	Implementation of ITS in-transport system considering present practical aspects for smooth and user-friendly implementation and development of effective vehicle maintenance module for existing maintenance practices.	
Public transport	New techniques and latest techniques (Practices) in maintenance and upgradation of vehicles. E-vehicle maintenance, cost of operation and Depot setup for E-buses in city for bus operators	
Behavioural change	Training and upgradation of knowledge and skills of people working in the transport sector.	
Parking management	City bus parking and stops management, cost analysis for providing shelters for public and buses effectively by using available spaces.	
Travel demand management	Online survey methods and applications for analysis of public demand and feedback in the city	

ASPIRE (DULT's Annual Research Program)

ASPIRE is DULT's annual research programme that invites proposals specific to research topics from **individual** researchers, academic and research institutions.



5. Building partnerships

BUILDING PARTNERSHIPS



STARTUP

Jhatkaa.org

moving

CHANGE MAKERS®

6. Branding and communication

BRANDING AND COMMUNICATION

URBAN DESIGN GUIDELINES : TOD HUBLI DHARWAD

- Guidelines for the Preparation of ToD
- Built-form Guidelines
- Street Design Guidelines
- Public Realm Guidelines

SIGNAGE MANUAL

PARKING SIGNAGE MANUAL



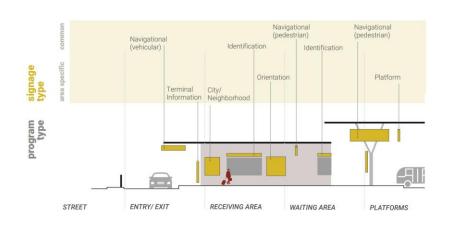
KARNATAKA'S CYCLING BRAND

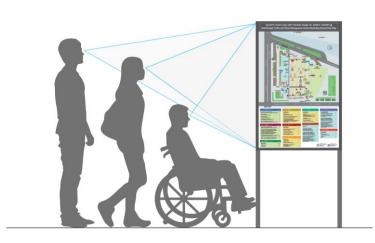


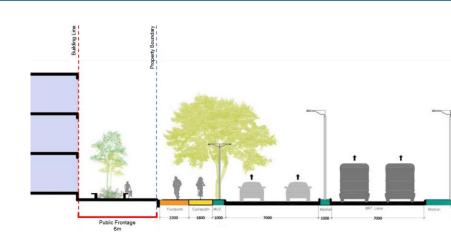
BUS PRIORITY LANE MANUAL



BUS TERMINAL SIGNAGE GUIDELINES



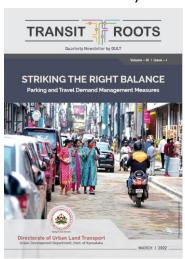




BRANDING AND COMMUNICATION

TRANSIT ROOTS

Quarterly newsletter of the DULT.





INFORM

An initiative by DULT focused on effective information dissemination on topics related to urban mobility.





AWARDS AND RECOGNITIONS



Commendation Award in Urban Transport-"Implementation of the Best Urban Transport Project" at the 14th Urban Mobility India Conference 2021.



Special recognition for enabling and demonstrating collaborative mobility solutions towards improving the quality of life for the citizens in Bengaluru by Volvo Group India, 2021.



"Most Admired City Planning Body for Urban Development" by Urban Infra Business Summit and Awards 2022.



Directorate of Urban Land Transport, Urban Development Department, Govt. of Karnataka



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Website: www.urbantransport.kar.gov.in

DULT Facebook Page: www.facebook.com/directorateofurbanlandtransport **DULT Twitter handle:** @DULTBangalore
(https://twitter.com/DULTBangalore)

DULT Linkedin handle: https://in.linkedin.com/company/directorate-of-urban-land-transport

DULT Instagram handle: https://www.instagram.com/dultbangalore
Cycle Day Facebook Page: www.facebook.com/blrcycleday

Open Streets-Bengaluru Blog: www.openstreetsbengaluru.wordpress.com

Skype: dultbangalore