Transforming Urban Mobility in India using Micro-Mobility Platform

DRIVING SUSTAINABLE MOBILITY

SOLVING FOR TRAFFIC CONGESTION

Average speed of our big cities during office hours has reduced below 6 kmph. This is due to inefficient use of personal vehicles or cabs. 65% of the trips are below 5 km which can be made efficient by using shared micro-mobility as a service. Yulu wants to make short distance commute more efficient and greener.

MAKING OUR CITIES BREATHABLE

14 out of 20 most polluted cities in the world belong to India. It has been affecting the well-being of every individual. One-third of this pollution is caused by vehicles, we can solve it by using clean modes of commute.

Growing 2-W preference & lowering battery cost- a window of Opportunity

Exhibit 4: Changes in vehicle ownership with age (Age Group vs Vehicle Ownership)

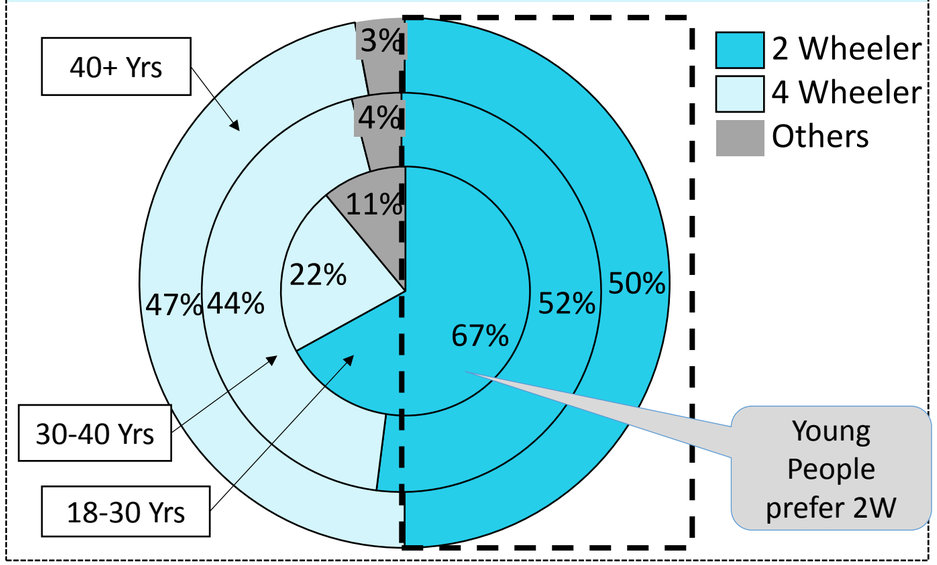


Exhibit 5: Ownership Vs Preferred Transport Mode (Comparison between vehicle ownership and preferred mode of transport)

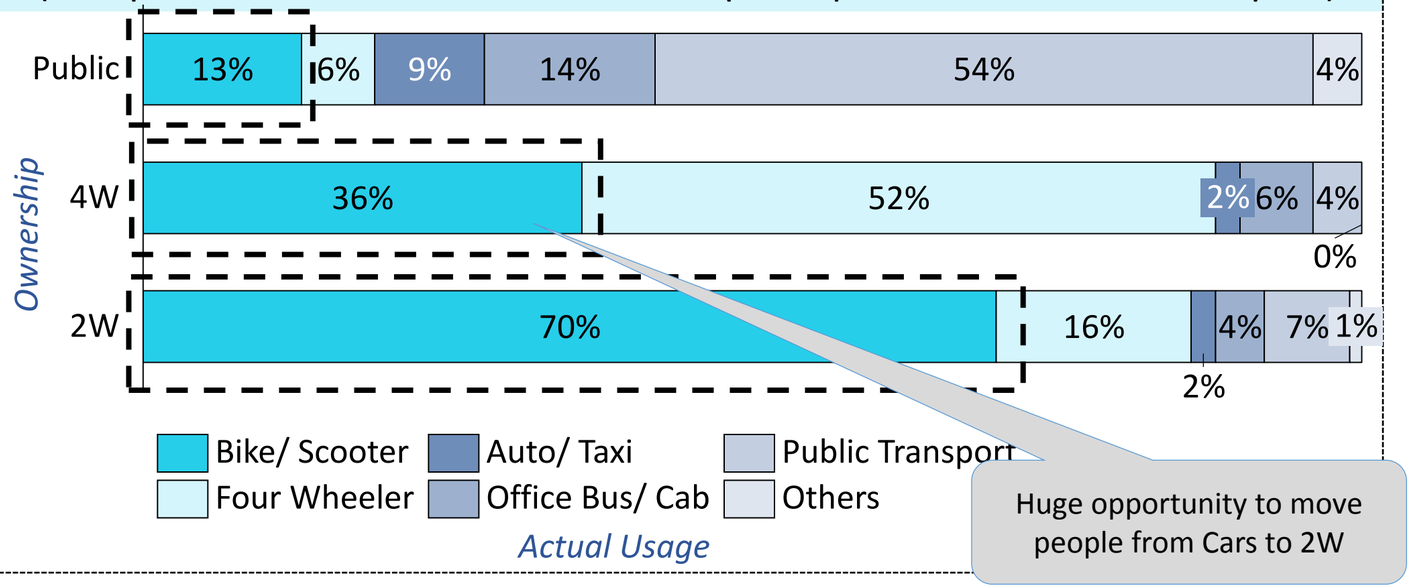


Exhibit 6: Used cases

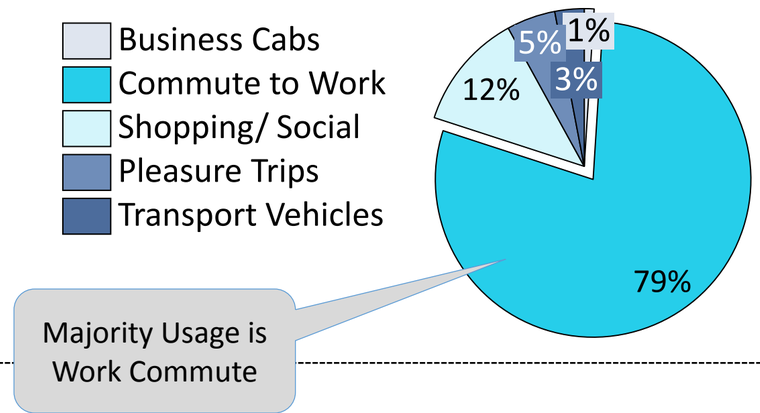
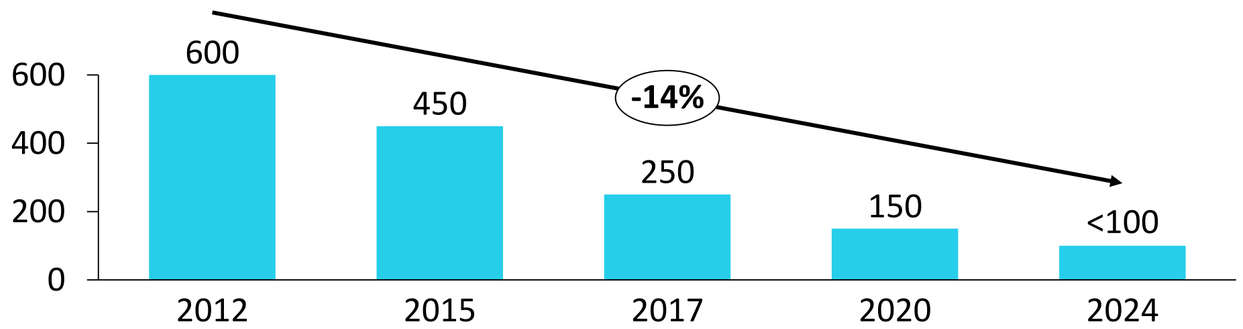


Exhibit 7: Li battery costs per kWh (USD)



Sources: Study on Electric Mobility in India- UNEP DTU Partnership, Yulu Analysis

Urban Commute

72% of Ahmedabad vehicles are two-wheelers

This is how people in big cities can move efficiently

0 – 5 Km

60% Trips

Micro Mobility

Low speed, small sized vehicles designed for single passenger and sharing usage model. These vehicles are human or electric powered.

Bikes & Scooters

5 – 15 Km

25% Trips

Medium Distance

Ride Hailing running on dedicated road cooridors in Shared Mode. Augmented by micro-mobility for first or last 1 Km.

Ride Hailing Cabs

> 15 Km

15% Trips

Long Distance

Public or Chartered Buses, Metro trains, Sub-Urban Railways. Augmented by micro-mobility for first and last mile.

Public Transportation

YULU MIRACLE

Yulu Miracle is one of the most advanced shared micro-mobility vehicles

Battery – Li Ion (swappable, 5 Kg weight) Range per charge – 65 – 70 km

Max Speed – 25 kmph
Overall Weight – 43 Kg
Legal Status – Treated as bicycle, doesn't require helmet, license, registration plate

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Assembling

Our Partner is a leading 2 W Manufacturer in India

Long Term Plan
Co-Designed by Yulu
Manufactured in India

Challenges and Issues for Micro-Mobility..

Ecosystem Development: Grounds Up

ASSET HEAVY/OPERATION BURN

Self financing

Weak Unit economics

No VGF, Subsidy, Financing schemes

UNREASONABLE SPACE RENTALS

Compete for space with other subsidized mode

No preferential access for NMT

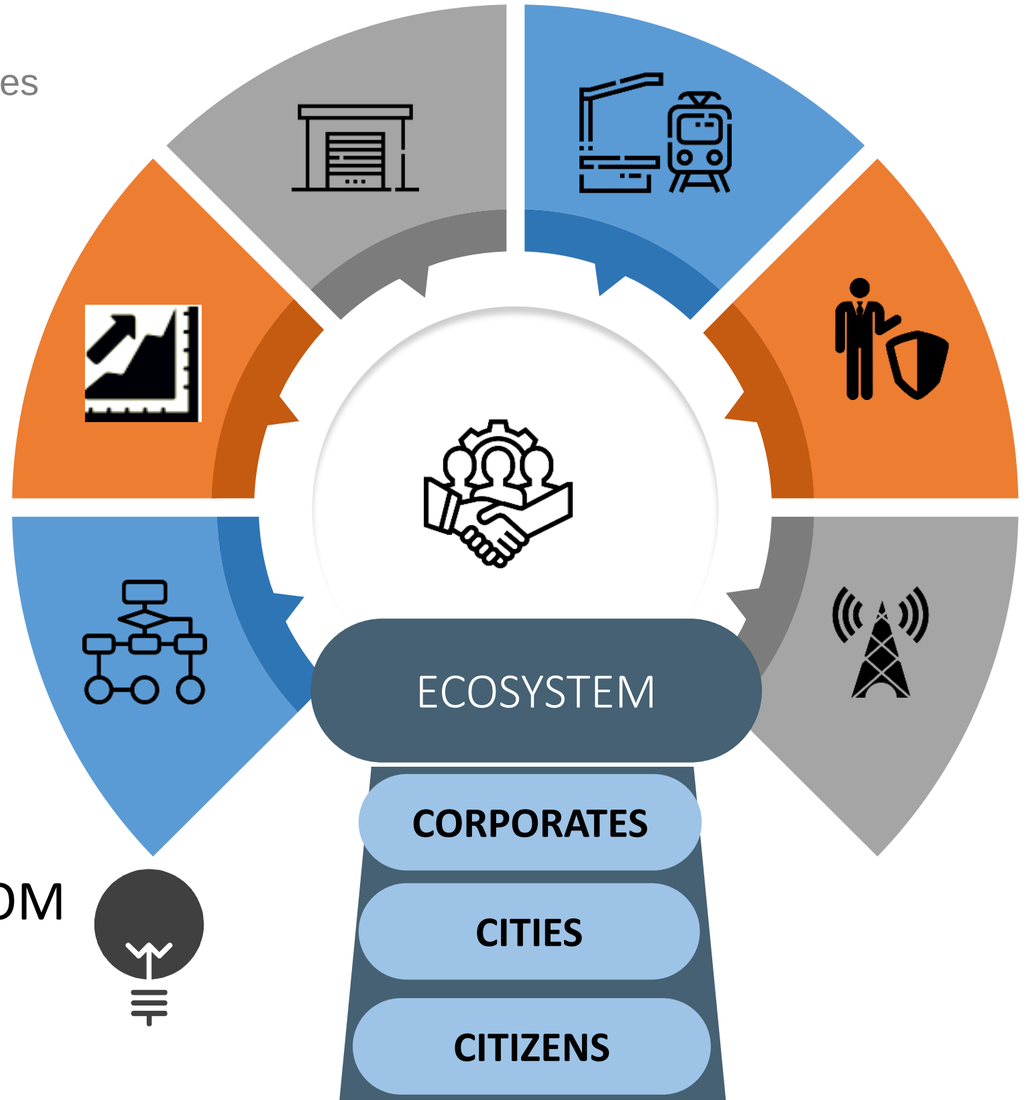
MISSING NODAL AGENCY

Onboarding multiple stakeholders

Missing guidelines

Solving all problems on our own

FIGHTING EVERY BATTLE FROM *DESIGN TO DISPOSAL*



DENSE NETWORK OF STATIONS

Available-Affordable-Accessible

Lack of infrastucture

BEHAVIOR CHANGE

From Ownership to Sharing

Awareness: Keyless, QR Code, Digital, Aadhar, Range, Geo Fence

FUTURE TECHNOLOGY ANXIETY

Fast paced development

Minimum time to test and stabilise

Future technology promising only when we utilize the current one

Operational Challenges: Ever evolving puzzle

Technology driven yet human intensive

1

BATTERY SWAPPING

Decentralised charging infrastructure
Optimum distances for Swapping

2

SKILLING & CAPACITY BUILDING

From Eager to learn individual to well trained resource in 4 weeks

3

RELOCATION & REBALANCING

AL/ML for demand supply match

4

REPAIR & MAINTENANCE

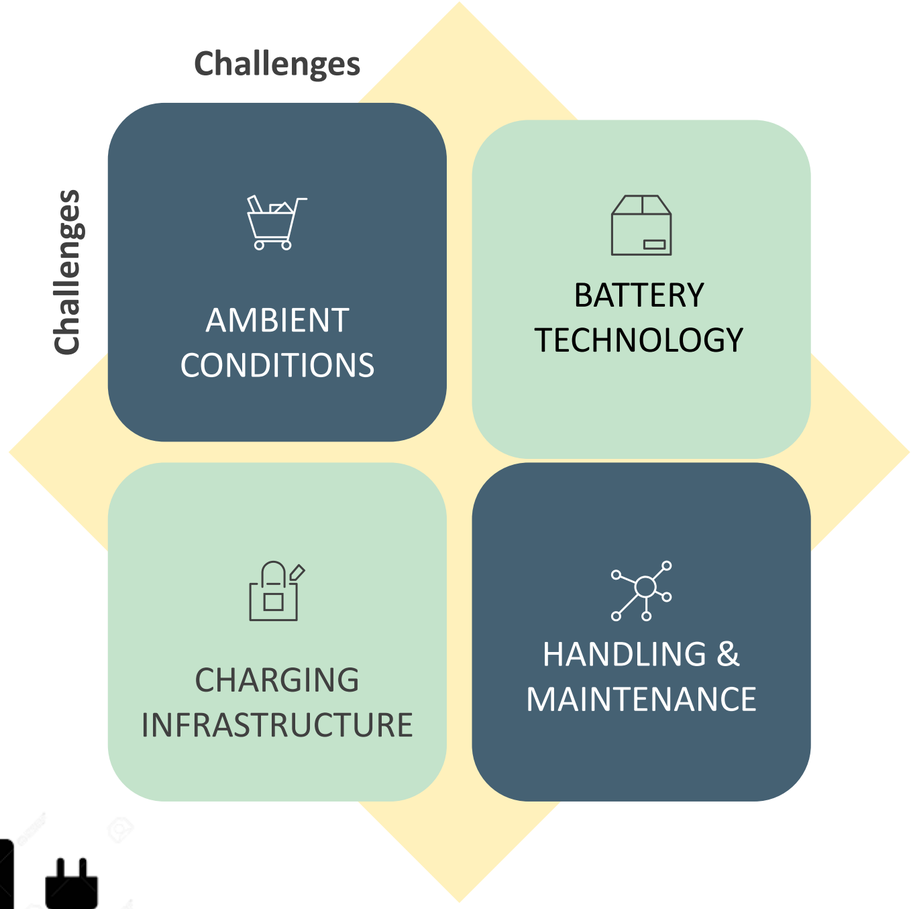
On ground repair
Minimum TAT & cost
Heavy wear and tear

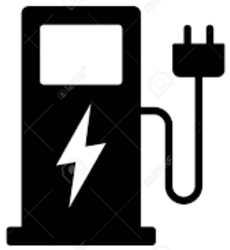
5

OPERATION HEAVY

Round the clock operations
False alarms, Noise

BATTERY CHARGING





CHALLENGES

AMBIENT CONDITIONS– Tough weather condtions mainly hot and humid,

BATTERY TECHNOLOGY– Cyclindrical/Prismatic/Pouch, Swap Vs Fast

HANDLING & MAINTENANCE– Replicating Safe charging infra, Training, Logistics,

CHARGING INFRASTUCTURE– uneven power supply, non existent infra, Renewable integration

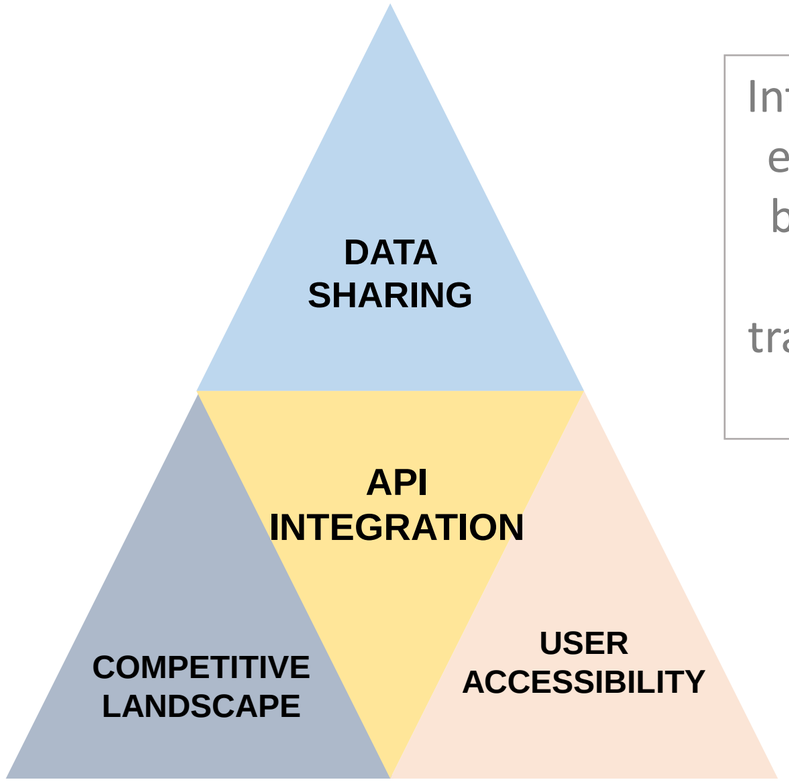
INNOVATIONS

DECENTRALISED CHARGING–Distributed and Optimally placed

SECOND LIFE APPLICATIONS–Telecom towers, Community housing etc

SMART BMS–Interoperability, Indigenous, Smart charging

MULTI MODAL INTEGRATION: CHALLENGES



Integration can happen effectively only when both sides trust each other and be transparent with usage sharing

NO PREFERRED PARKING
PBS has been an afterthought for all existing metro

EXPECTATIONS FOR SUBSIDISED TARIFFS
Not Sustainable without VGF/Subsidy

USAGE DATA SHARING: WITHOUT PURPOSE
No clear roadmap for data utilisation, leakage to competition

API INTEGRATION
More theory than practice, Opaque

PHYSICAL ABUSE

THEFT

- Unmanned stations
- Euphoria/Curiosity
- Minors are the troublemakers
- Secondary markets for spares

VANDALISM

- No support framework from Authorities
- Auto Unions/Rage
- Damage similar to public property

MISUSE

- Irresponsible usage
- Exploiting lack of direct laws for NMT
- Parents risking the kids safety
- Parking space hijack

Contact Us

Would love to hear back

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