

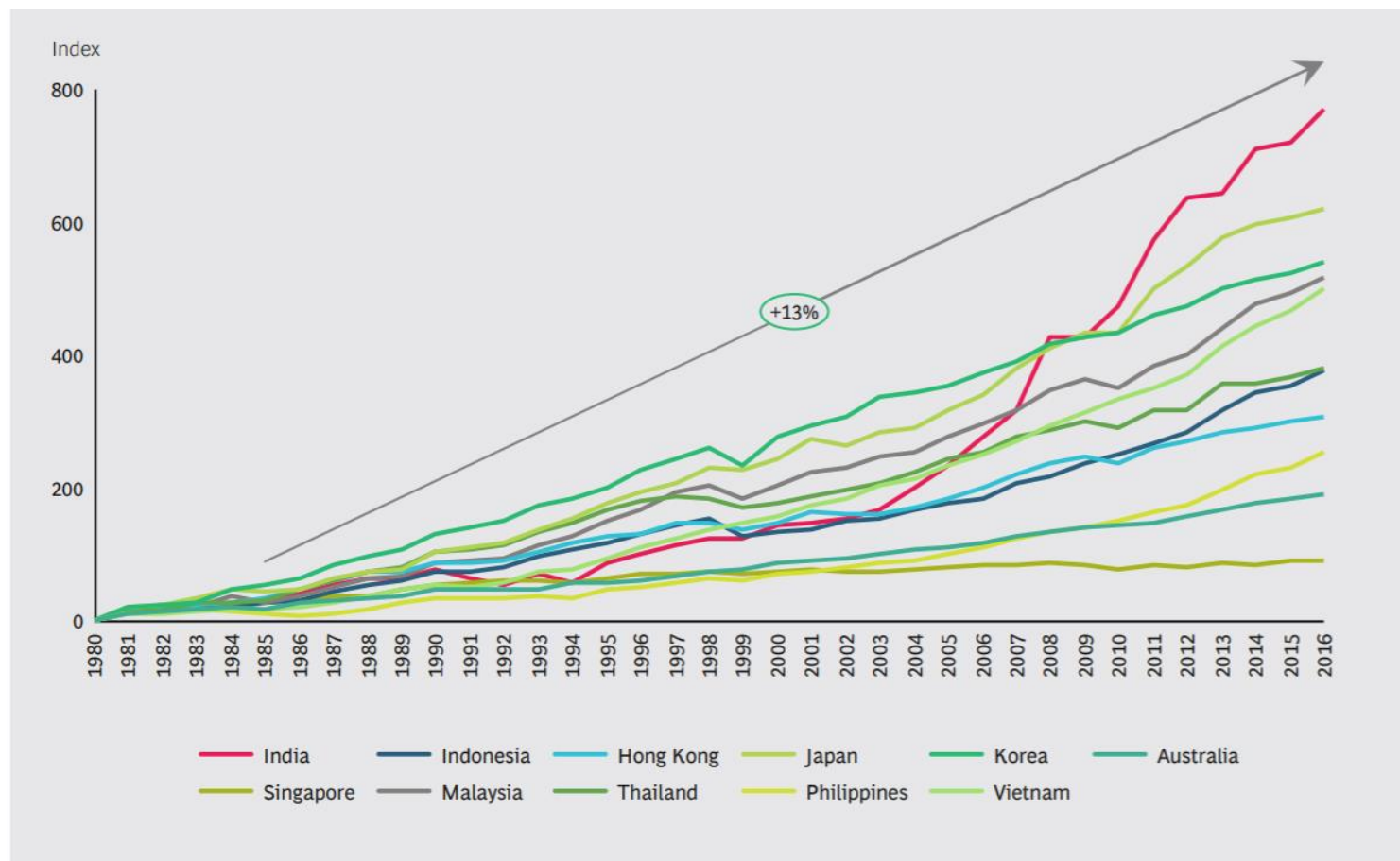




# INDIA: GROWTH STORY



Indexed estimated growth in travel demand (in Asian cities)



## Growth between 1980 to 2015

- Human population: 2 times (~90%)
- GDP: 5 times
- Transport demand: 8 times
- **Registered vehicles: 40 times!**  
(5.4 Mil in 1981, 210 Mil in 2015)

Sources: World Bank; OECD; National center for Sustainable transportation; BCG analysis





# PRIVATE TRANSPORT: GROWTH STORY



## Sale of Automobiles in India

Category	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Passenger Vehicles	26,29,839	26,65,015	25,03,509	26,01,236	27,89,208	30,47,582	32,88,581	33,77,436
Commercial Vehicles	8,09,499	7,93,211	6,32,851	6,14,948	6,85,704	7,14,082	8,56,916	10,07,319
Three Wheelers	5,13,281	5,38,290	4,80,085	5,32,626	5,38,208	5,11,879	6,35,698	7,01,011
Two Wheelers	1,34,09,150	1,37,97,185	1,48,06,778	1,59,75,561	1,64,55,851	1,75,89,738	2,02,00,117	2,11,81,390
<b>Grand Total</b>	<b>1,73,61,769</b>	<b>1,77,93,701</b>	<b>1,84,23,223</b>	<b>1,97,24,371</b>	<b>2,04,68,971</b>	<b>2,18,63,281</b>	<b>2,49,81,312</b>	<b>2,62,67,156</b>
Annual growth		2.49%	3.54%	7.06%	3.78%	6.81%	14.26%	5.15%

Source: Society of Indian Automobile Manufacturers, 2019

Alarming growth in the sale of private vehicles, especially **2 Wheelers**, accounting to over **80% of total sales**



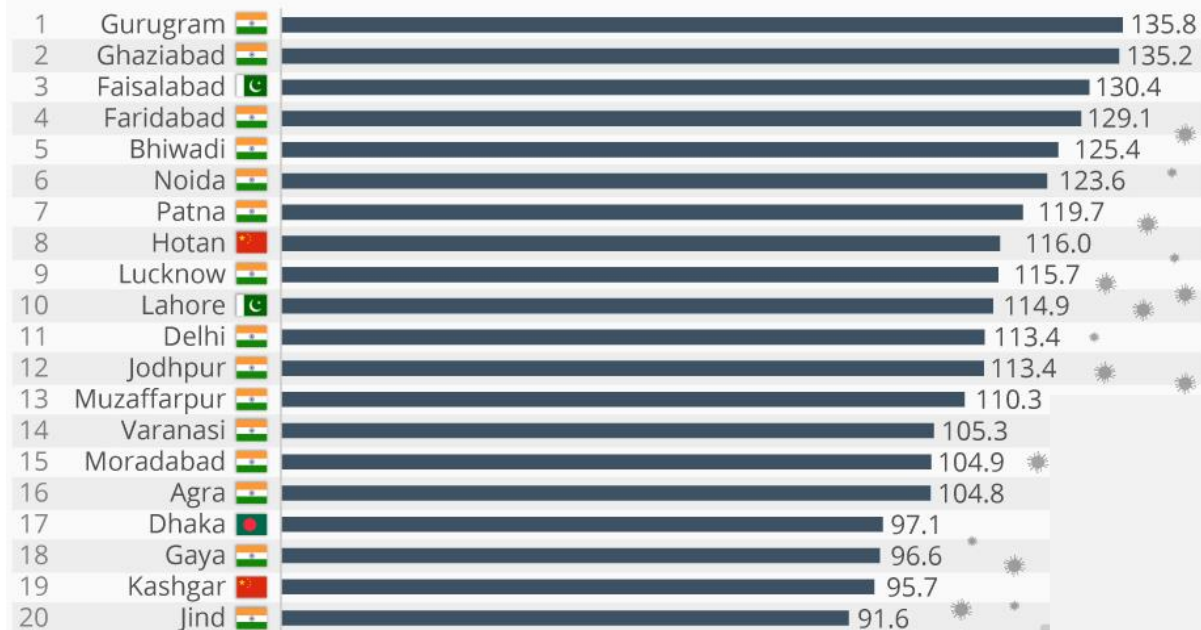


# RESULT: MOST POLLUTED & CONGESTED CITIES



## India Has The Most Polluted Cities On Earth

Average level of particulate matter (PM 2.5) pollution in 2018

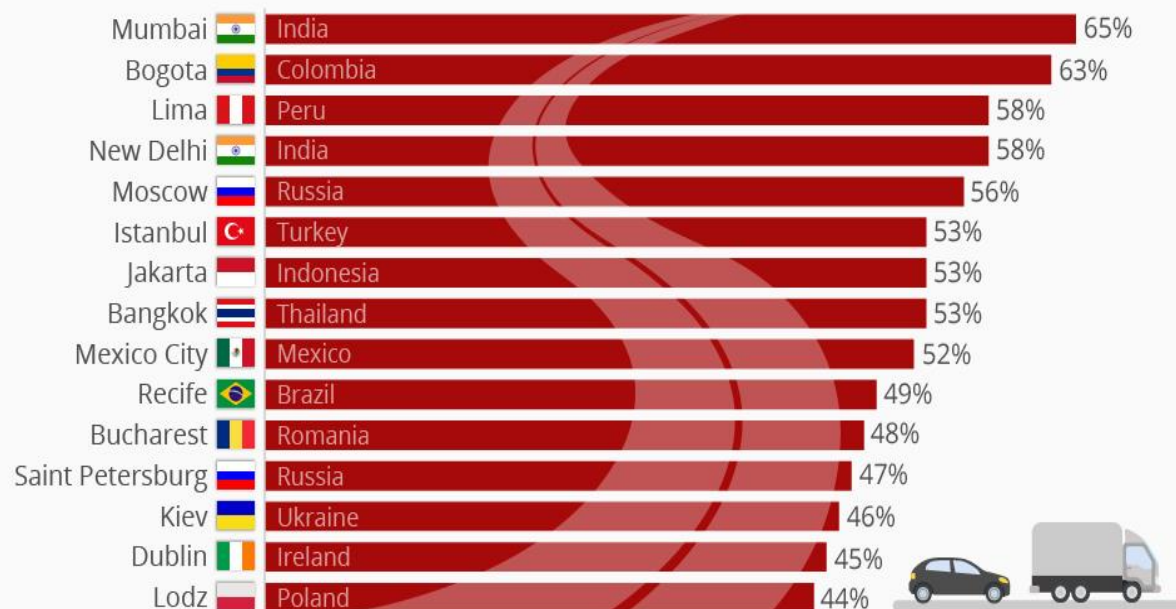


Source: IQAir AirVisual 2018 World Air Quality Report

- 15 of the top 20 - NOT PROUD!

## The Cities With The Worst Traffic Congestion

Percentage of extra travel time due to congestion in 2018\*



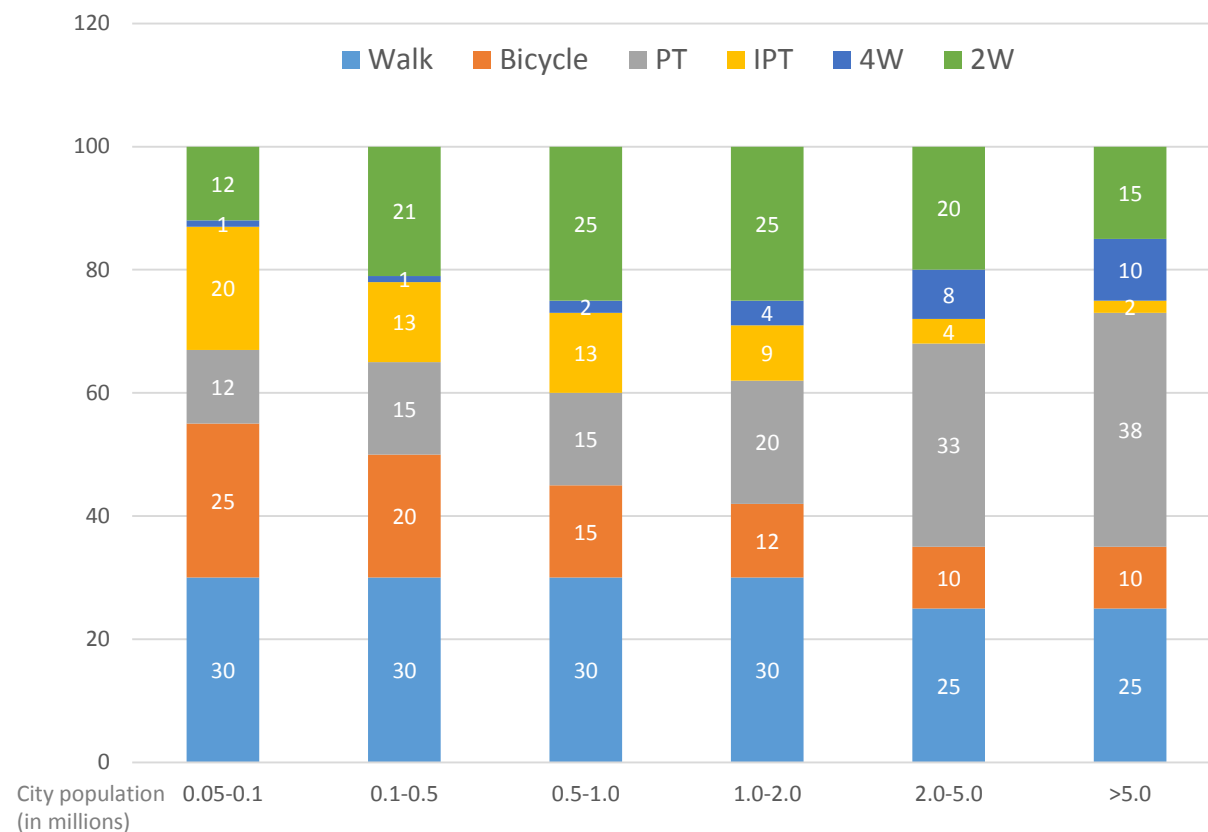
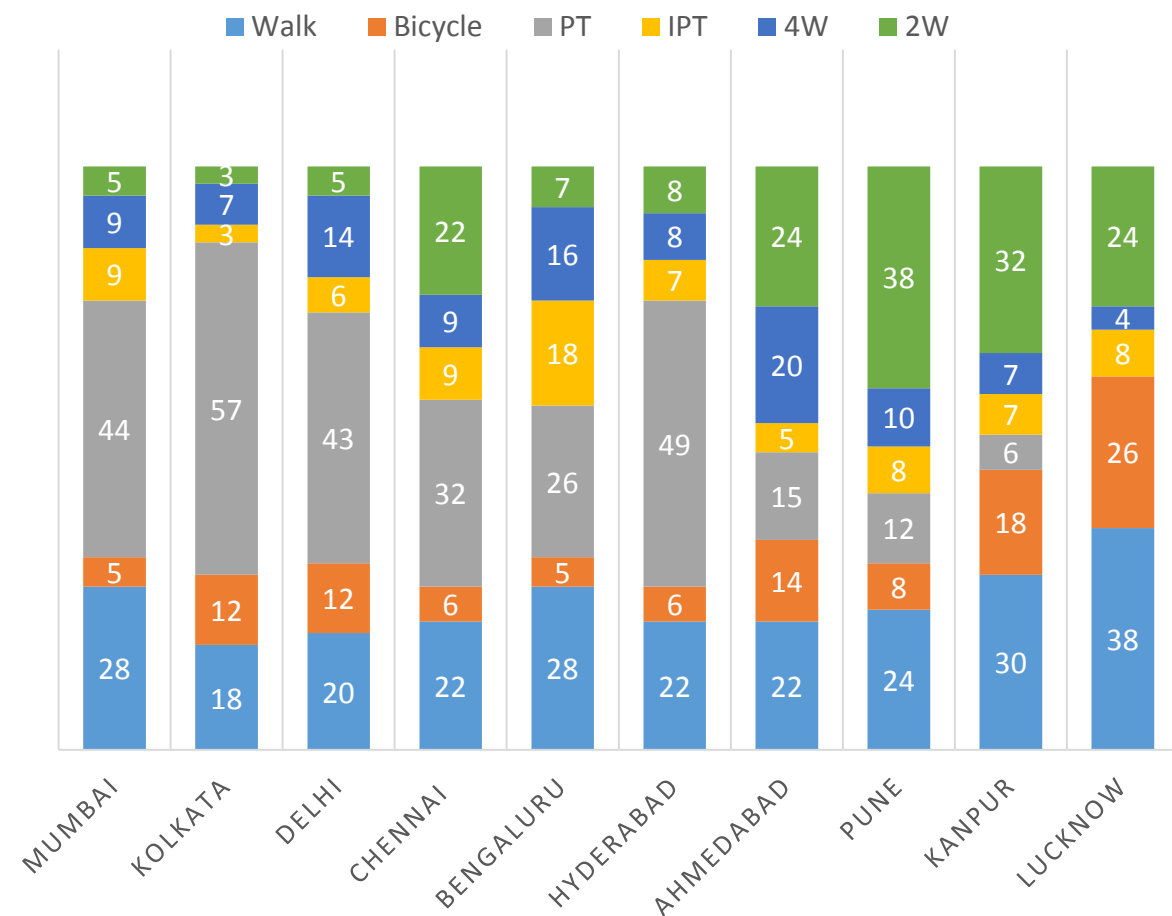
Source: TomTom Traffic Index

- Mumbai tops, and Delhi at 4<sup>th</sup> place out of 403 cities
- Estimated loss of two cities – USD 15 billion annually
- Adequate PT available, last mile connectivity missing!





# MODE SHARE: CURRENT AND DESIRED



Source: National Transport Development Policy Committee, 2013

While PT and NMT mode share is decent for large cities, extra intervention is needed to shift users from private modes to Public Transport in Tier II and Tier III cities

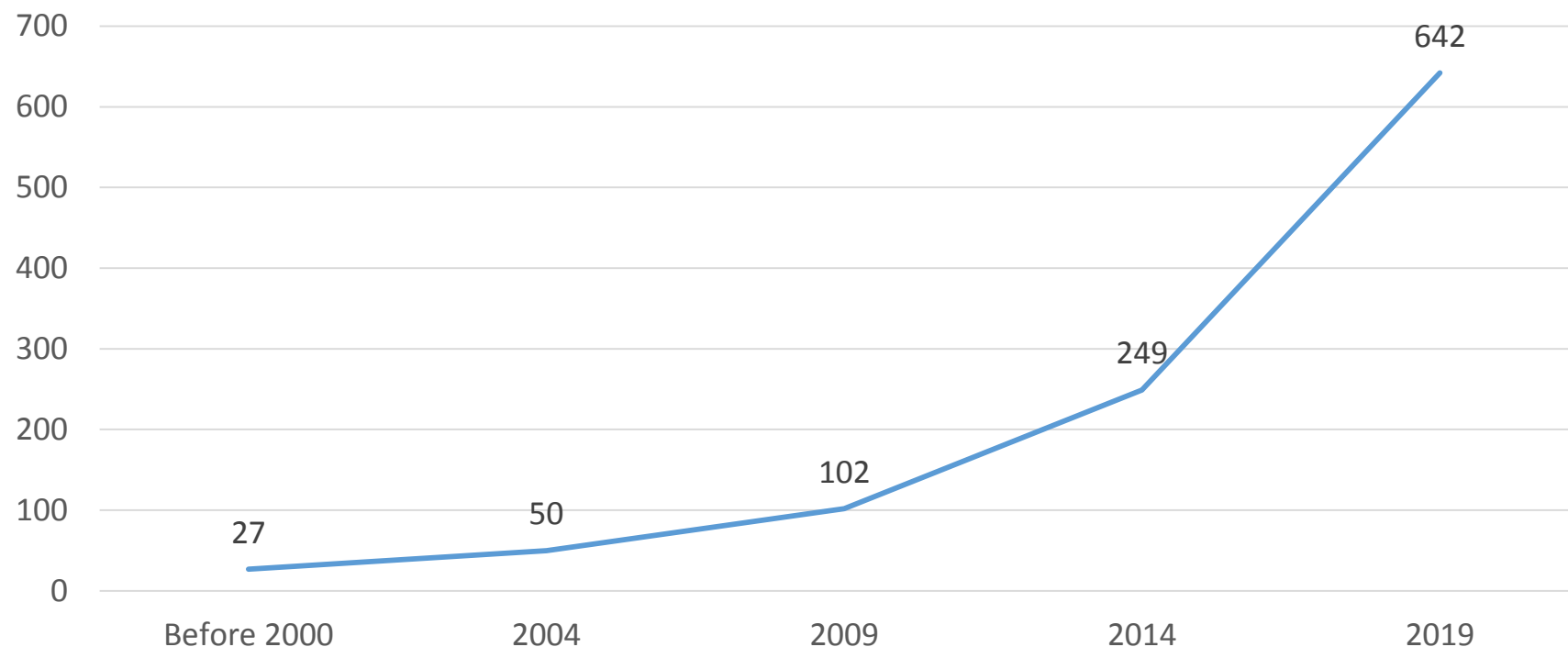




# METRO RAIL: COMMISSIONED AND PLANNED



Operational Metro length



Source: Ministry of Housing and Urban Affairs, 2019

- 642 kms of operational metro lines
- 691 kms under construction
- Almost equal no. of metro stations
- **First / Last mile connectivity to play a crucial role in bringing users on to the system**

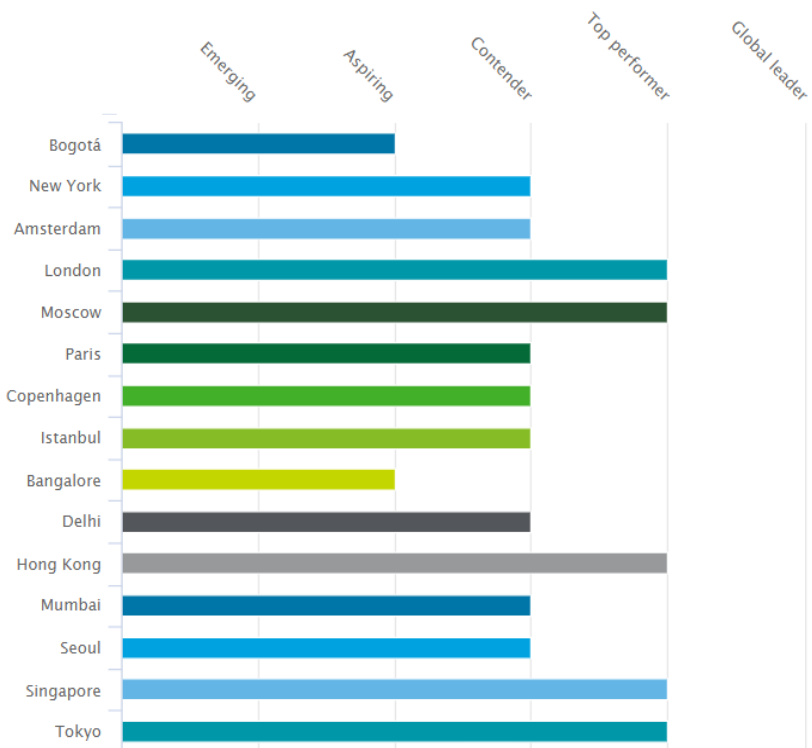




# INDIAN CITIES: GLOBAL COMPARISON



## Public Transit supply



## Accessibility



## Integrated and shared mobility



Source: The 2019 Deloitte City Mobility Index

A comparison proves that public transit **supply** in major Indian cities is **at par** with global cities. However, **accessibility** to the system and availability of integrated **and shared mobility** is **not up-to the mark**.





# YULU MIRACLE



Yulu Miracle is one of the most advanced shared NMT Electric Vehicle in the world

Battery – Li-Ion (swappable)

Range per Charge – 55 to 60 Km

Max Speed – 25 Kmph

NMT EV – No license, Permit or Registration

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Assembling



Our Partner is a leading 2 W Manufacturer in India

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# YULU: FRUGAL INNOVATIONS – Designed For India



## MOVE – First PBS Cycle

### Made For India

India centric PBS Bicycle

State of the Art IoT/Lock



## MIRACLE–The NMT EV

### No License or Registration

Uniquely built for durability,  
ease of use with swappable  
batteries



## ATOM – The Mover

### Vehicle for Relocations

Design Innovation for  
capacity and efficiency



## MAX – The Charger

### Battery Charging Station

First of it's kind in the  
world, it can charge all  
form factors





# YULU: METRICS



BENGALURU II PUNE II NAVI MUMBAI II BHUBANESHWAR II NCR

VEHICLES ON ROAD



8000 Move + 3800 Miracle

TOTAL RIDES COMPLETED



50 lacs+

TOTAL DISTANCE TRAVELLED



2 crore+ kms

CARBON EMISSIONS PREVENTED



1600+ tonnes

AVG. DISTANCE / TRAVEL TIME



4.1 kms / 22 mins

AVG. VEHICLE UTILIZATION



85%



## GOVERNMENT: Interventions Required



- Provide **Footpaths & NMT Lanes** within 5 Km of all current/future metro stations (Metro Rail Policy, 2017)
- Provide dedicated and accessible **Parking Space** for shared mobility vehicles at all metro stations (to enable MMI and First/Last Mile connectivity), including retrofitting at the existing metro stations
- Opt for a **Permit based PBS System** (and not tendering), to allow multiple players to offer their services
- **De-link Advertisement Rights from PBS** services to ensure PBS is the priority, and not the Ad Revenue
- **Provide VGF Support in Tier 2 Cities** (wherever needed), to make shared-mobility available and viable





For Tier II and Tier III cities, where cost/ridership of Metro cannot be justified, an EBL / BRTS should be planned with proper First & Last Mile connectivity, and integrating well with the system. Not only will it offer user convenience; but also bring a great shift from private transport to PT, and reduce the pollution and congestion in the cities.





Let's join hands to provide an accessible and affordable micro-mobility solution to all Indians..



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