

Mobility in Smart Cities of Maharashtra – Case Study on Pune

**PRESENTATION AT URBAN MOBILITY
CONFERENCE, INDIA**

**BY
RAJENDRA JAGTAP
ADDITIONAL MUNICIPAL COMMISSIONER
PUNE MUNICIPAL CORPORATION, PUNE**



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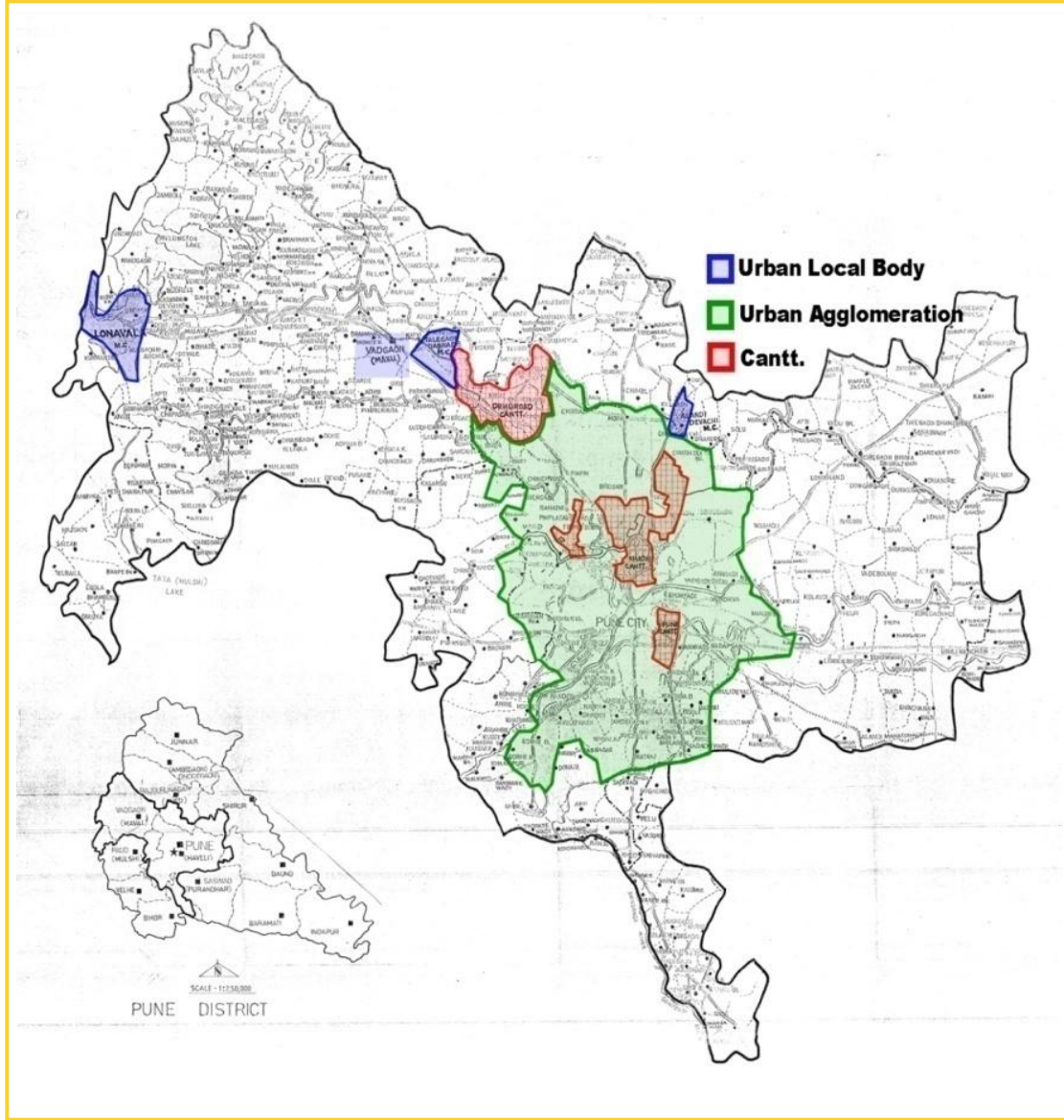
Current mobility challenges faced by Pune



Proposed integrated mobility plan for Pune



About Pune Metropolitan Region



8th – Most populous city of India

7,200 sq. km – Area under PMR¹

11 million – Population of PMR

432 sq. km – Area under PMC and PCMC

5.1 million – Population of PMC and PCMC

46,17,773 – Vehicles registered²

500–600 per day – New cars registered

5th – highest city by GDP in country

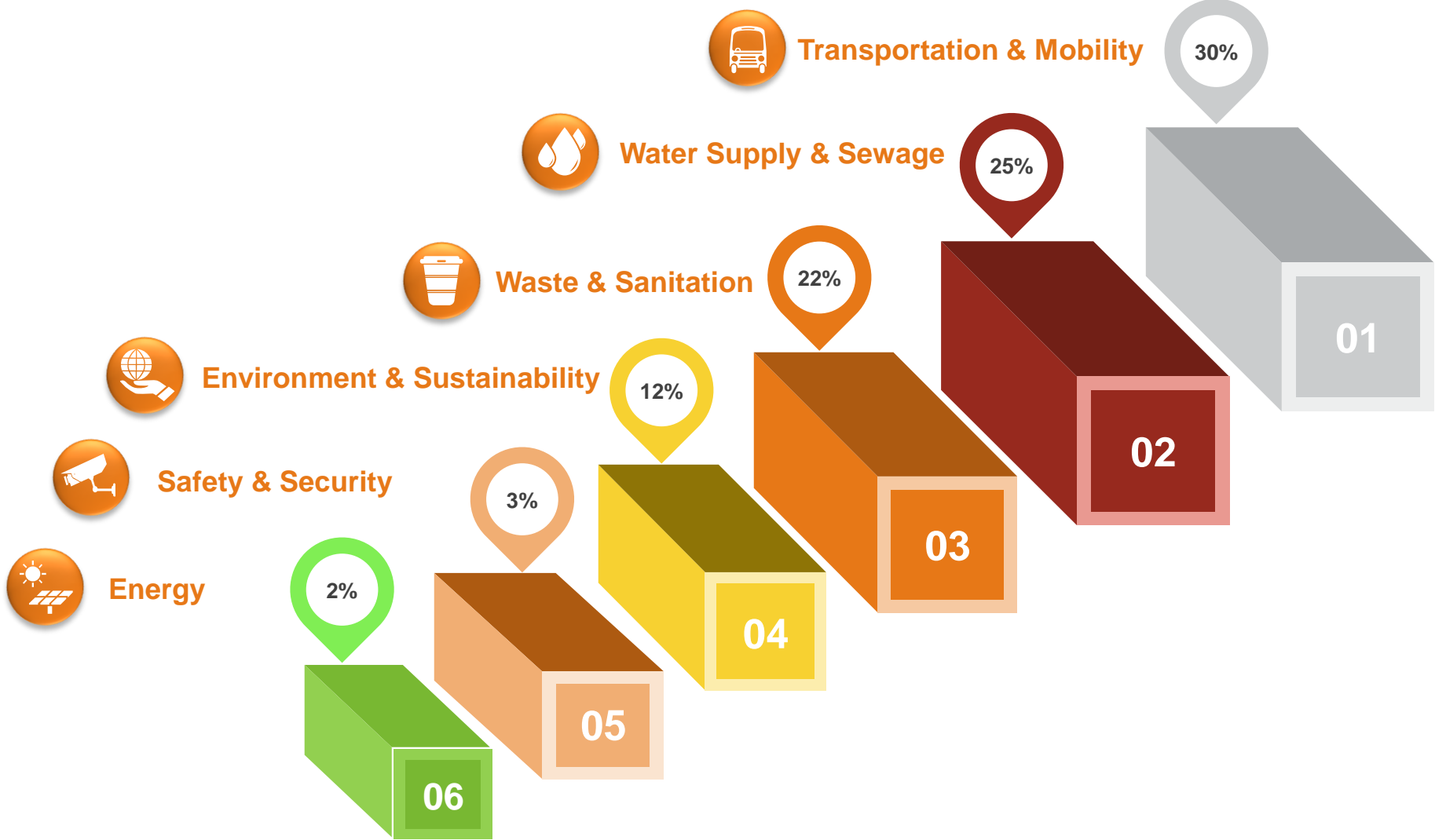
INR 1,065 billion – GDP of Pune city
(5th highest in country)

¹ Comprises Pune, Pimpri- Chinchwad, Parts of Haveli, Daund, Bhor, Shirur, Mulshi and surrounding 854 villages ; ² As of Aug 2016

Source: Press search, Census, Pune Municipal Corporaton

Traffic has consistently emerged as the #1 concern of Pune-kars time and again

Citizen engagement output – top concerns for citizens of Pune

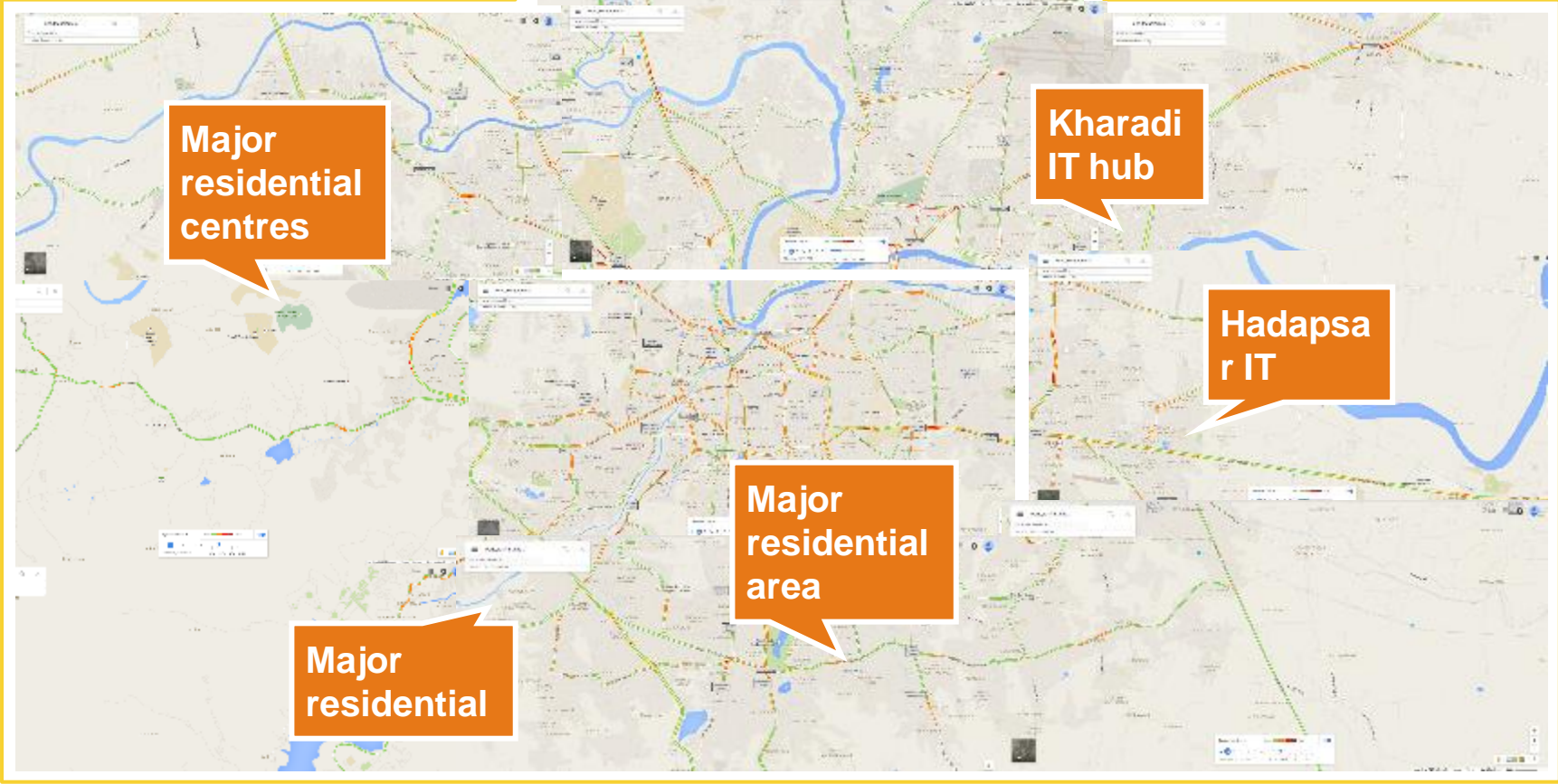


Pune traffic heat map at 7 pm on Monday morning (based on Google map)

Pune traffic at 7 pm on Monday evening is a nightmare!

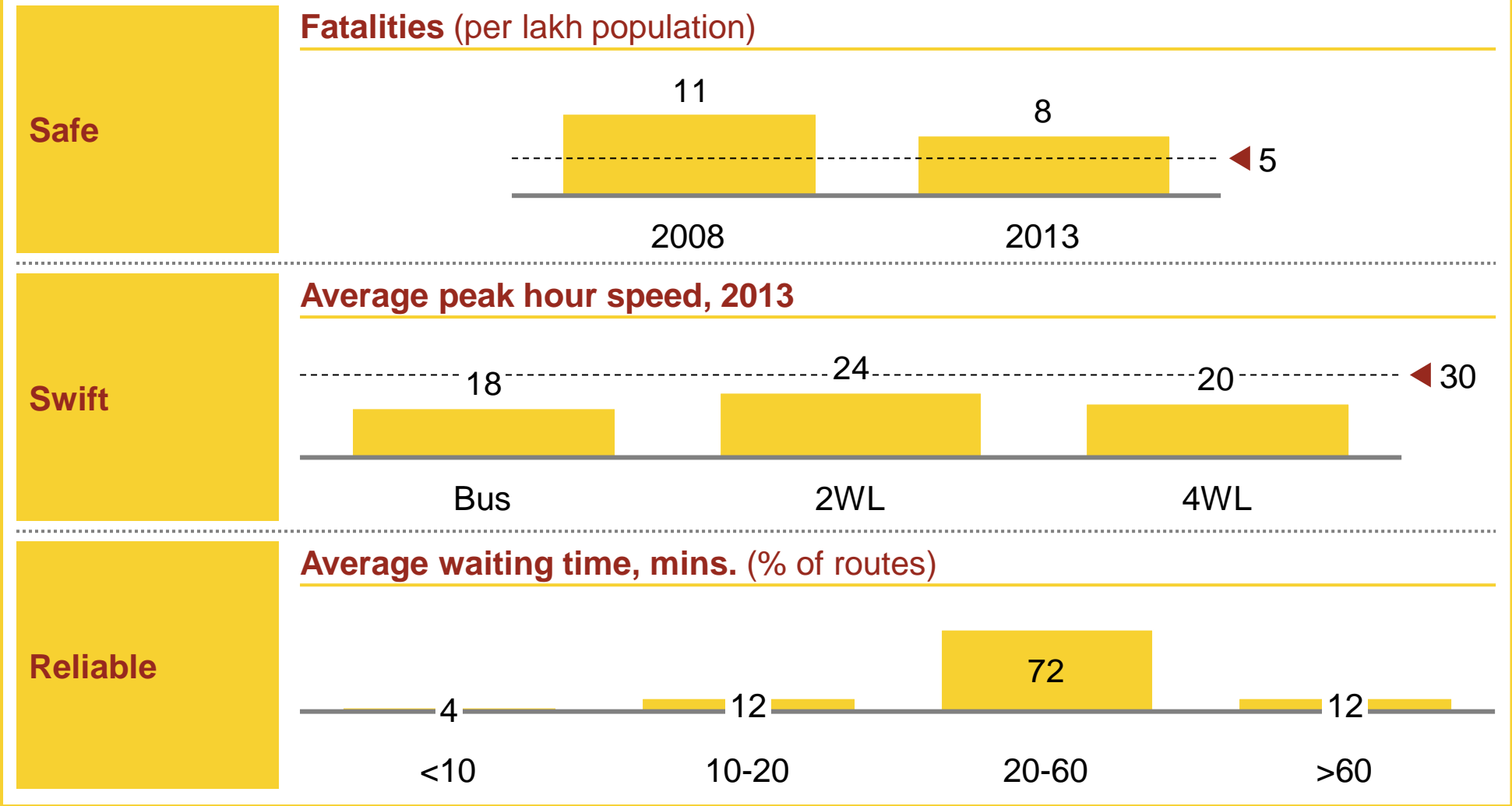


Google mapping

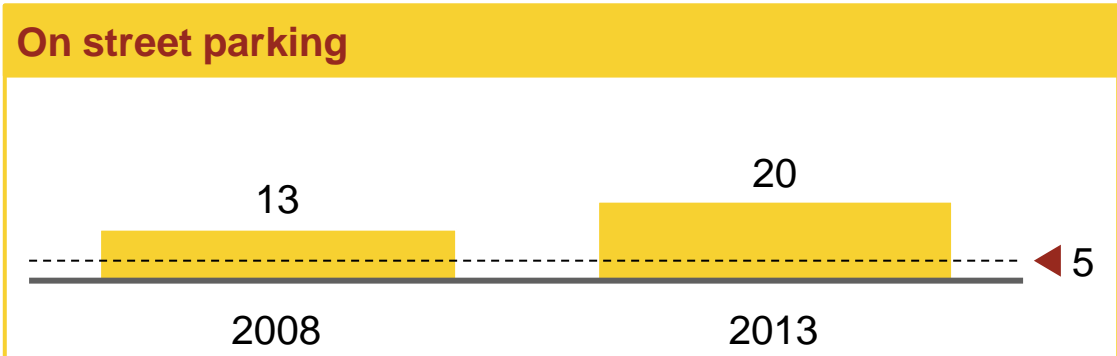
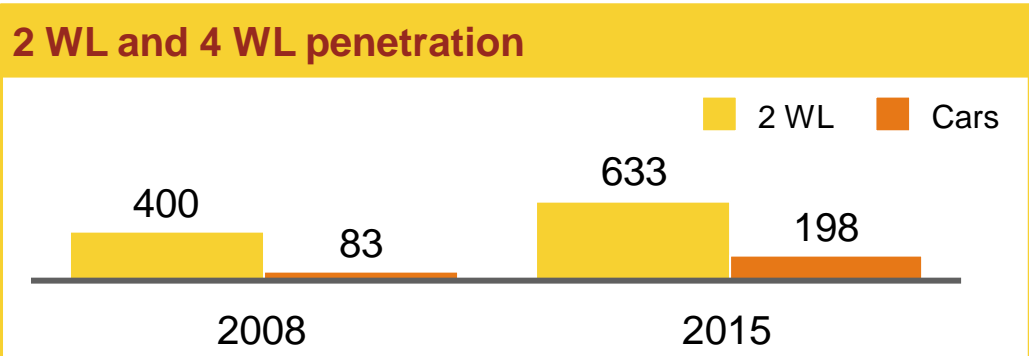
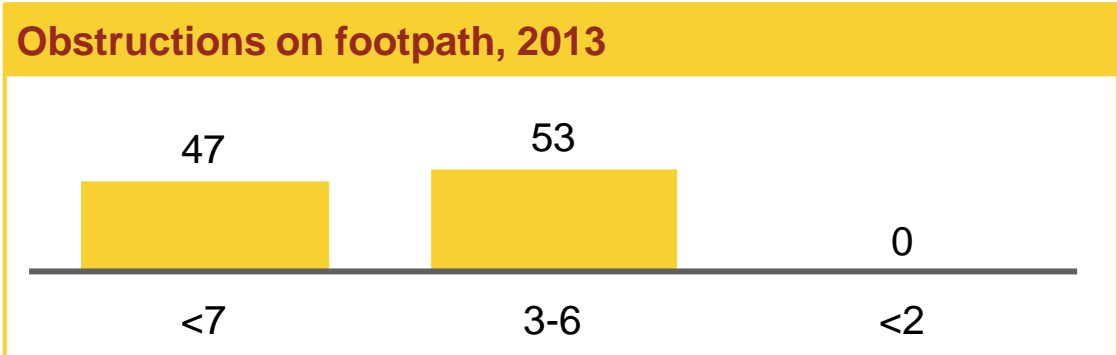
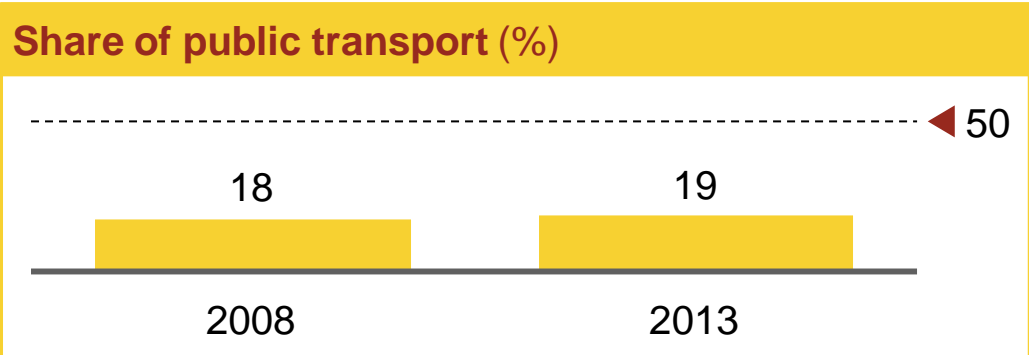
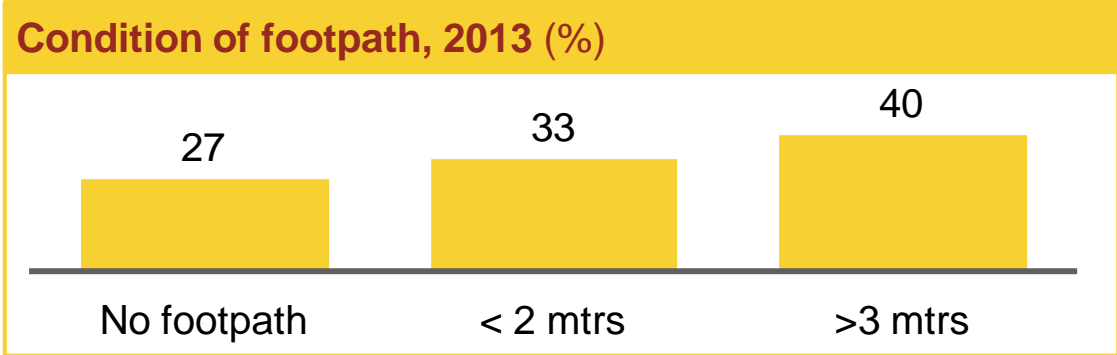
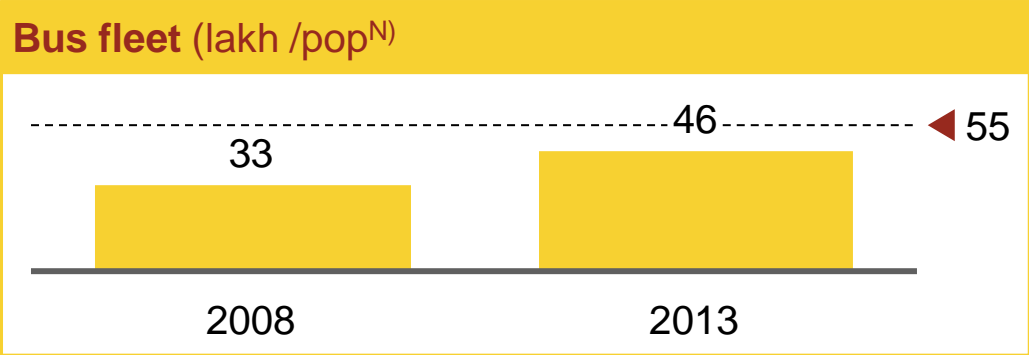


Pune faces significant challenges in urban mobility and transport (1/2)

Core Tenets of urban mobility



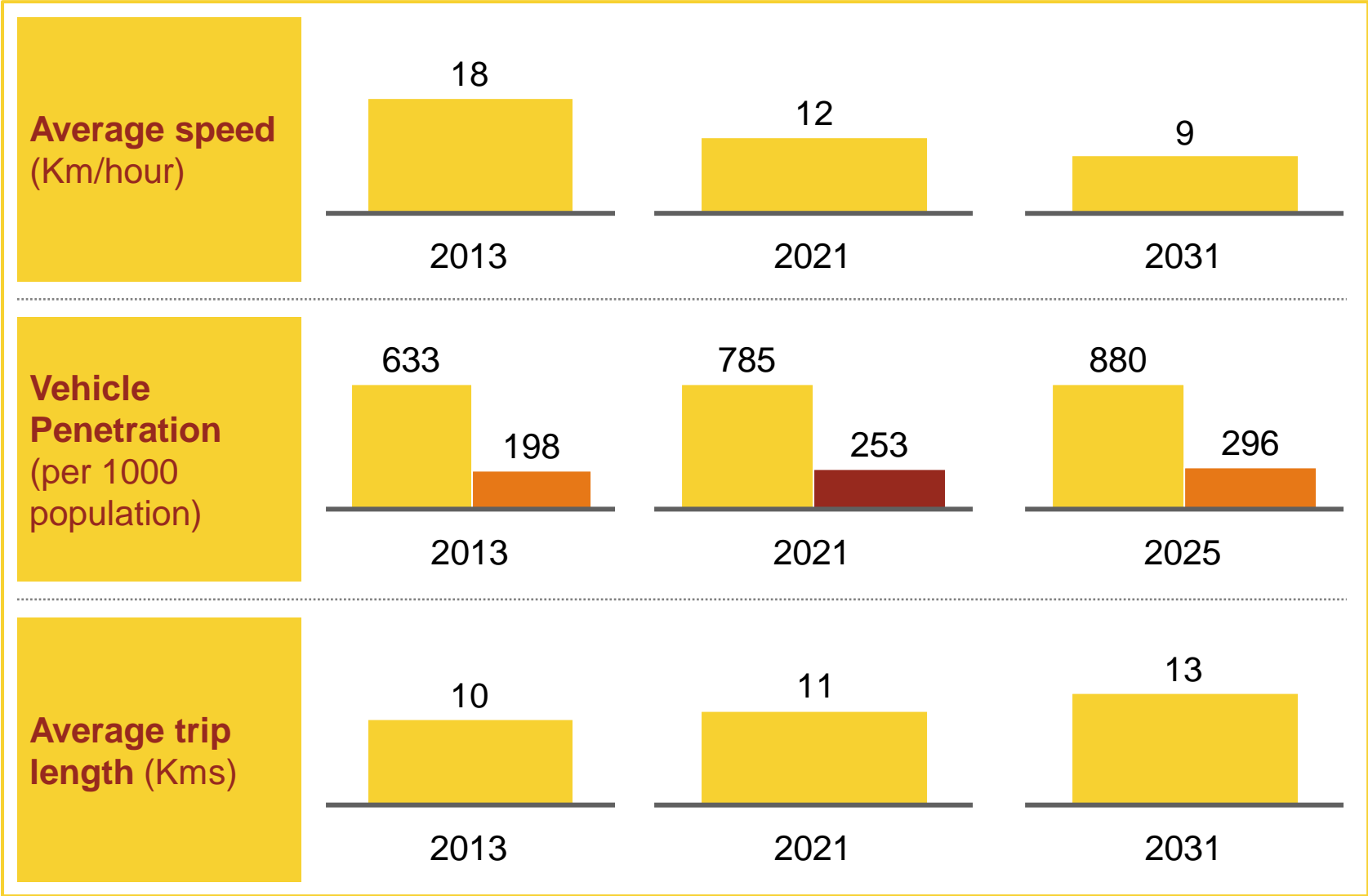
Pune faces significant challenges in urban mobility and transport (2/2)



SOURCE: MoUD study, 2008; CMP, 2008; TSR, 2013

Key mobility parameters will become even worse unless an integrated mobility plan is created for Pune

2 WL Car



SOURCE: MoUD report, 2008; TSR, 2013; India's urban awakening, MGI, 2010

Contents



Current mobility challenges faced by Pune



Proposed integrated mobility plan for Pune



How do we solve the issue of mobility

*“A developed country is **not a place where the poor have cars. It’s where the rich use public transport**”*

- Enrique Penalosa, former Mayor of Bogotá, Colombia

*“Bring about equitable use of road space with **people and not vehicles as the focus**”*

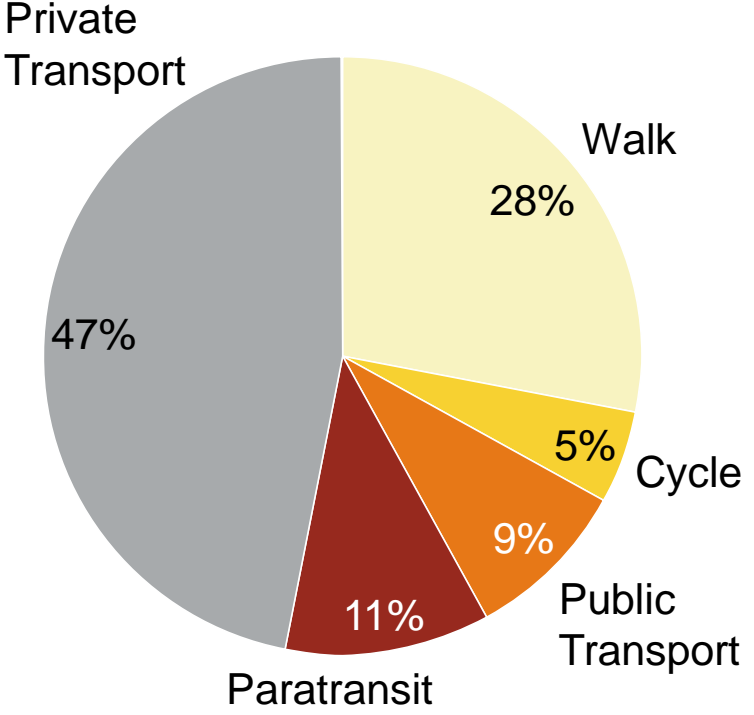
- National Urban Transport Policy

In order to resolve these mobility issues, a Comprehensive Mobility Plan (CMP) has been designed by Pune City

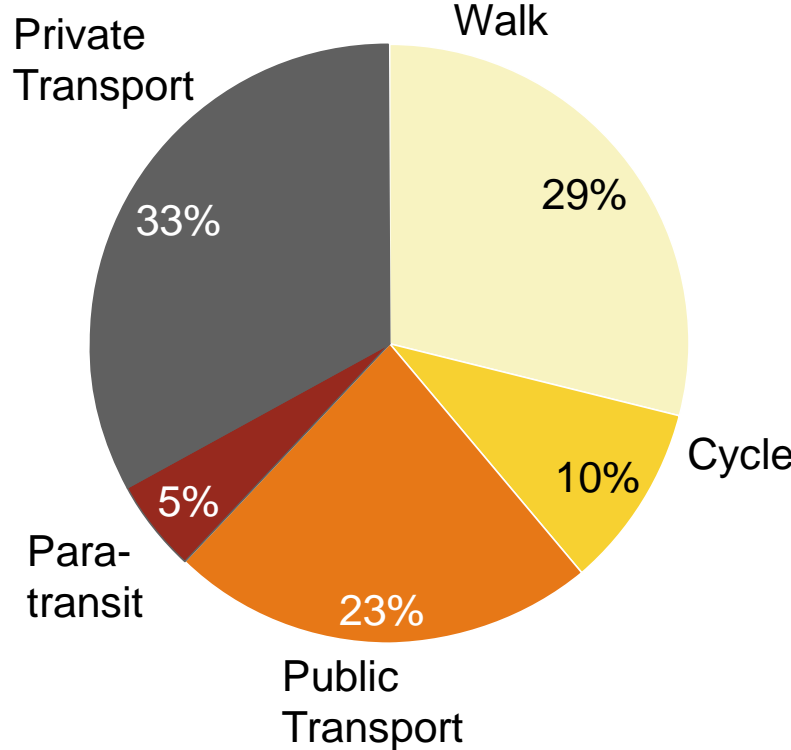


SOURCE: Pune CMP

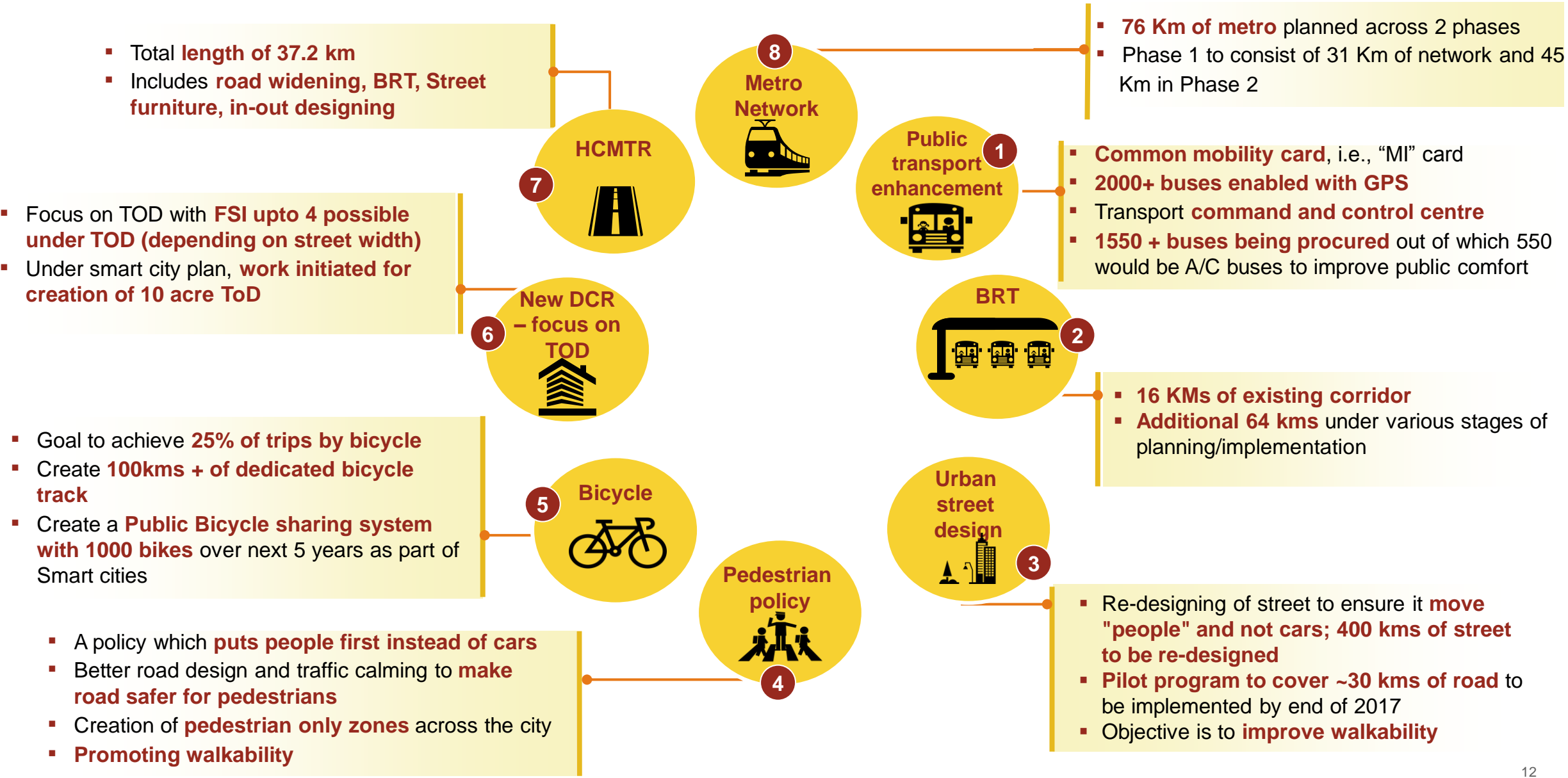
Break-up of travel (2016)



How we want Pune to travel in 2026



This resolve, to change the way Pune travels, would be anchored on 8 pillars



1 Public transportation enhancement with objective of improving ridership through increased availability, convenience and increasing reliability

1550 buses under procurement including 550 A/C buses



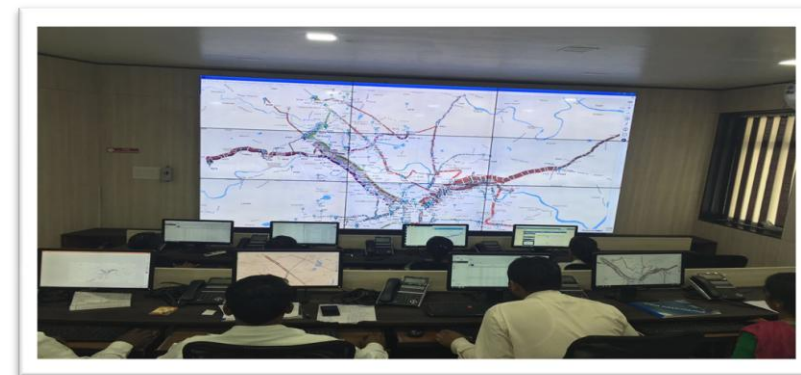
Common Mobility Card defined



2000+ buses fitted with GPS¹

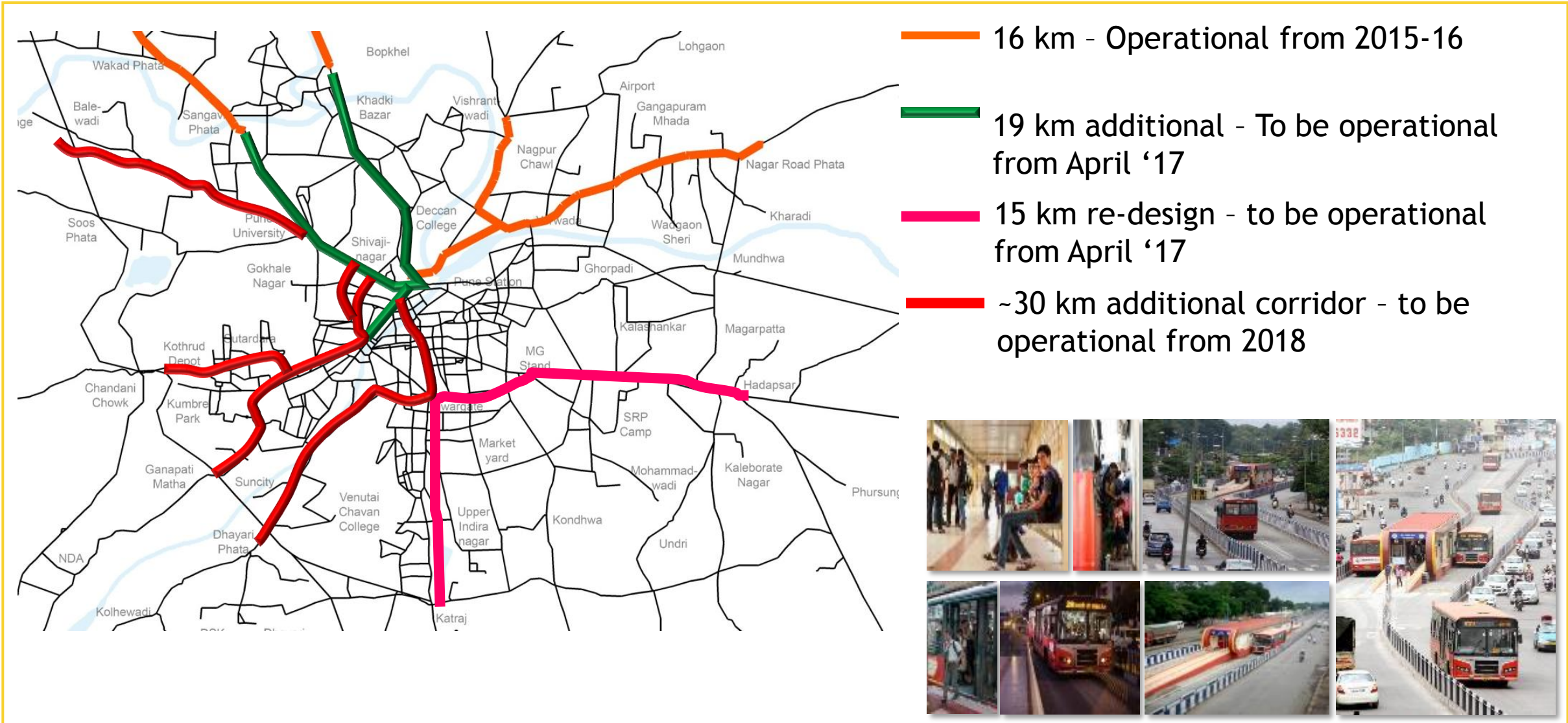


Central Command and control centre

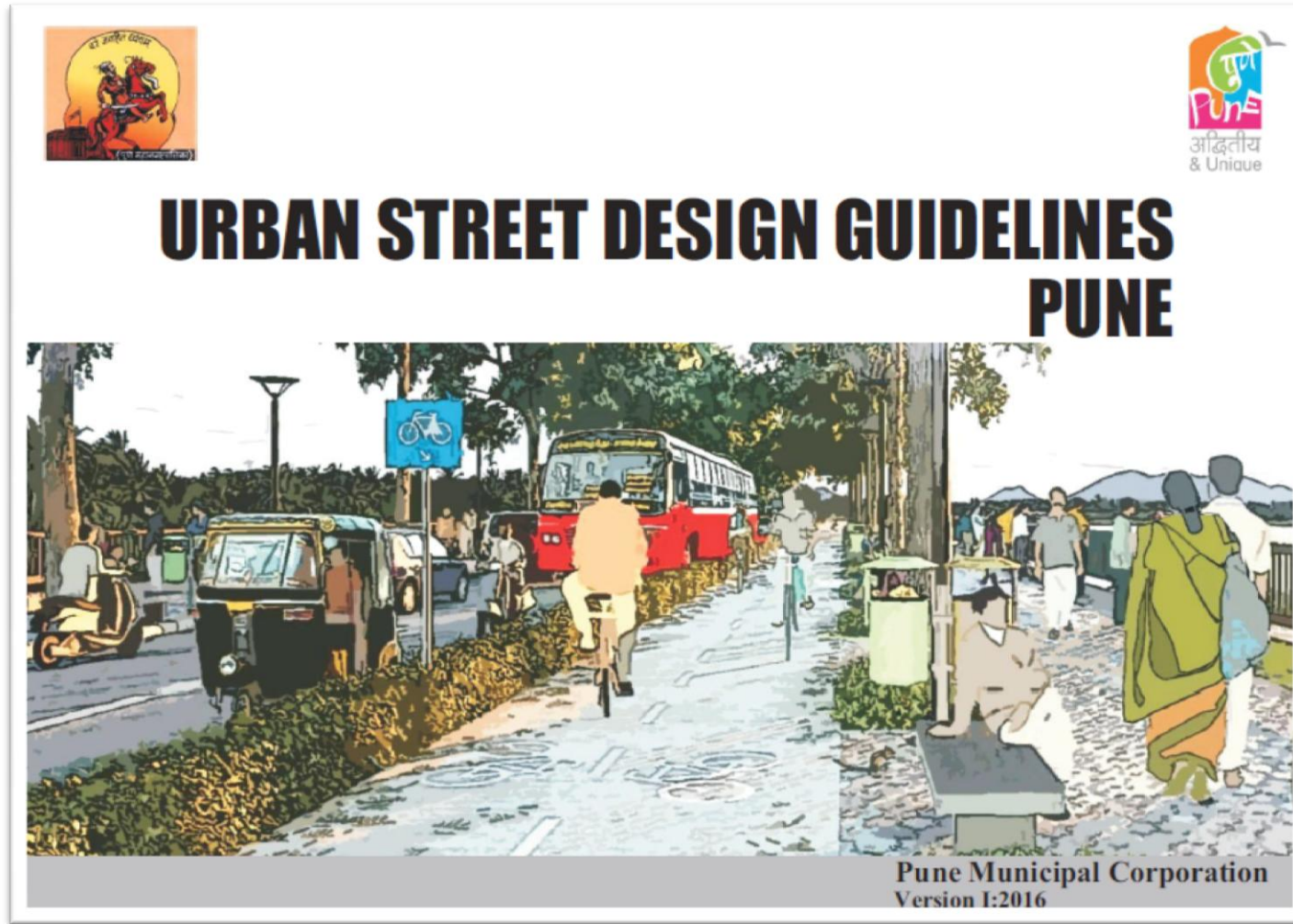


¹ 1 old buses fitted with GPS

2 Pune's proposed BRT network



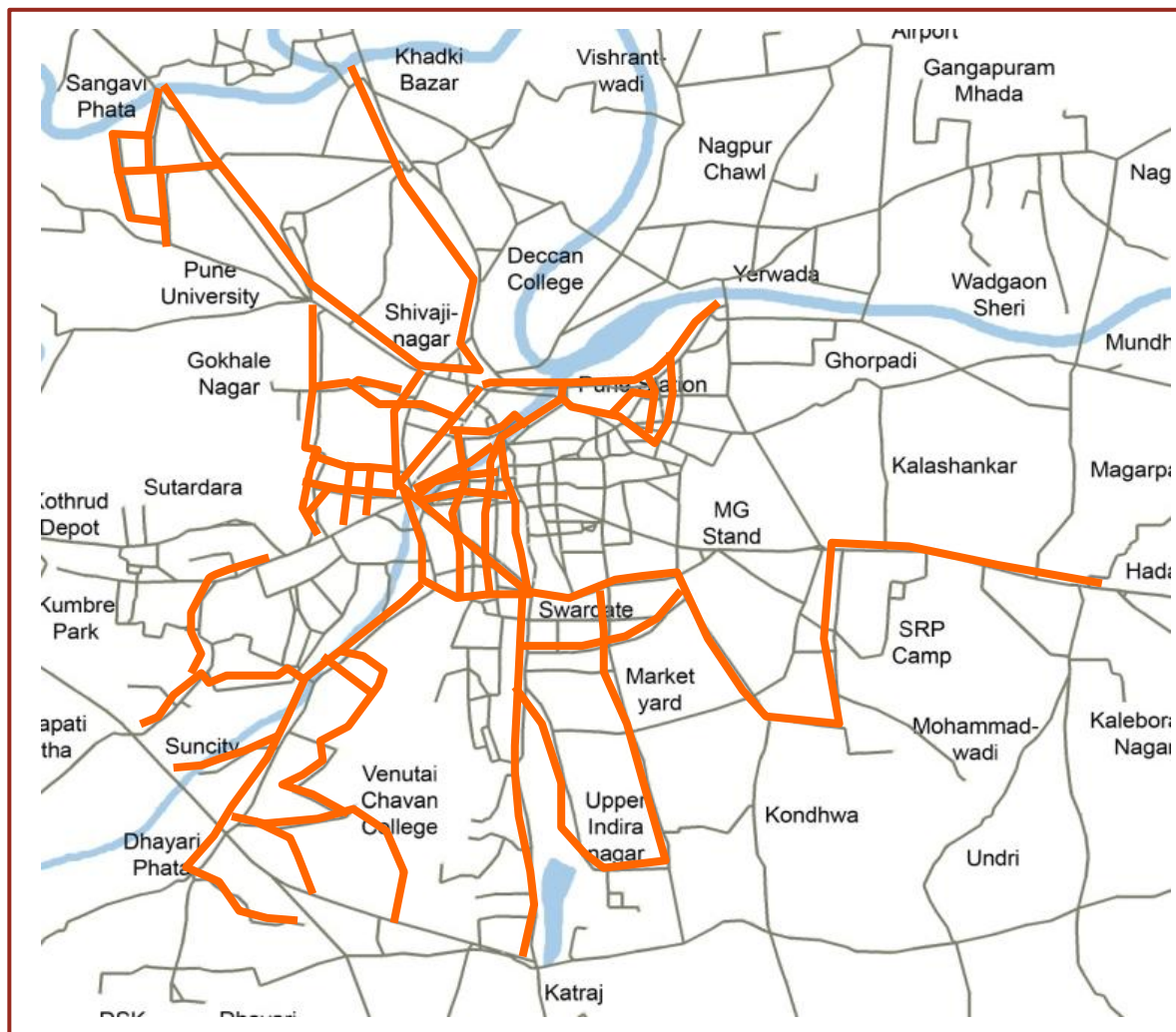
3 Urban street design guidelines developed for Pune



Features of the policy

- Based on **principals of universal access**
- Increased focus on **Pedestrianisation** and increase **walkability**
- **Cycle friendly**
- **Organised hawkers space**
- Strong focus on **organised parking and parking policy**

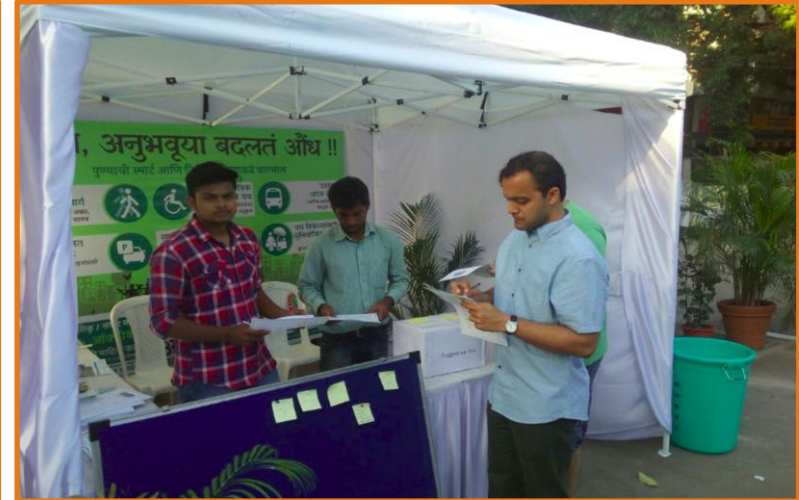
3 400 kms of the streets to be re-designed by 2020; 100 already under design phase



— Proposed corridor of 100 kms under street redesign by 2017



3 On-going mock through “reversible changes” to ensure people experience pedestrianization before long term changes are made



COME EXPERIENCE THE CHANGE
PUNE MOVES TOWARDS A SMART & HEALTHY TOMORROW

<p>DEDICATED WIDE WALKWAYS WALKER FRIENDLY continuous level, obstruction free Footpaths</p>			<p>UNIVERSAL ACCESS DESIGNED FOR PEOPLE WITH SPECIAL NEEDS Wheelchair & other Devices</p>		<p>UDAAN SHUTTLE SERVICE IMPROVED CONNECTIVITY with local shuttle service for citizens</p>
<p>ORGANISED PARKING SPACES DEDICATED Spaces for Public Parking of 4 Wheelers & 2 Wheelers</p>		<p>DEDICATED CYCLING ROUTES CYCLIST FRIENDLY Developed in conjunction with PMC's Pune Cycle Plan</p>			<p>ORGANISED SPACE FOR HAWKERS ACCESSIBLE HAWKER ZONES at demarcated locations</p>

EXPERIENCE / LEARN / INTERACT
8TH - 15TH OCTOBER
 PUBLIC INFORMATION BOOTHS
 9:00 AM TO 9:00 PM EVERYDAY
EXCITING STREET EVENTS

HEALTHY औंध

[/smartpune](https://smartpune.in) • www.punecity.in



4 A Pedestrian policy has been defined for Pune



Walk Smart


Policy for Pedestrian Safety and Comfort
Pune City



Features of the policy

- **Status, dignity and top priority to walking** by changing the existing attitude and mindset of all concerned
- Better **road design and traffic calming** to make road safer for pedestrians
- Creation of **pedestrian only zones** across the city
- **Promoting walkability** as convenient and zero cost mode of transport
- Detailed policy is available on
 - https://go.itdp.org/download/attachments/47653152/PMC%20Pedestrian%20policy_%20ENG_Rev_FINAL_dt.%2024-02-16.pdf?version=1&modificationDate=1461651378497&api=v2

5 Detailed plan for cycling under preparation; Objective to improve mode share of cycle from 5% to 10% by 2026



The banner features logos of the Ministry of Urban Development, Government of India, and the Pune Municipal Corporation. It depicts a city skyline with silhouettes of cyclists in various colors (green, blue, yellow) riding along a path. A signpost with a bicycle icon is visible. The text 'पुणे सायकल प्लान Pune Cycle Plan' is written in Marathi and English.


"Pune can be a city where people find cycling, using public transport and walking convenient, comfortable, safe and attractive.

Pune Cycle Plan is part of the efforts by the Pune Municipal Corporation to transform transportation in the city. PMC is also committed to improvements in footpaths, design of streets, public transport, and traffic management".

Kunal Kumar, IAS
Municipal Commissioner, PMC

The Pune Cycle Plan being prepared in 2016 is your chance to help make Pune a cycle-friendly city.

The project is supported by the Ministry of Urban Development, Govt of India. The PMC Traffic Dept is overseeing the preparation of the plan.



Vision

- Safe, convenient, comfortable cycling conditions for existing and future cyclists
- Current cyclists don't shift to motorized modes
- Long distance private trips are converted to cycle + public transport
- Short trips are by walk and cycle instead of motorized modes
- Supportive, safe behaviour by motorists towards cyclists and pedestrians

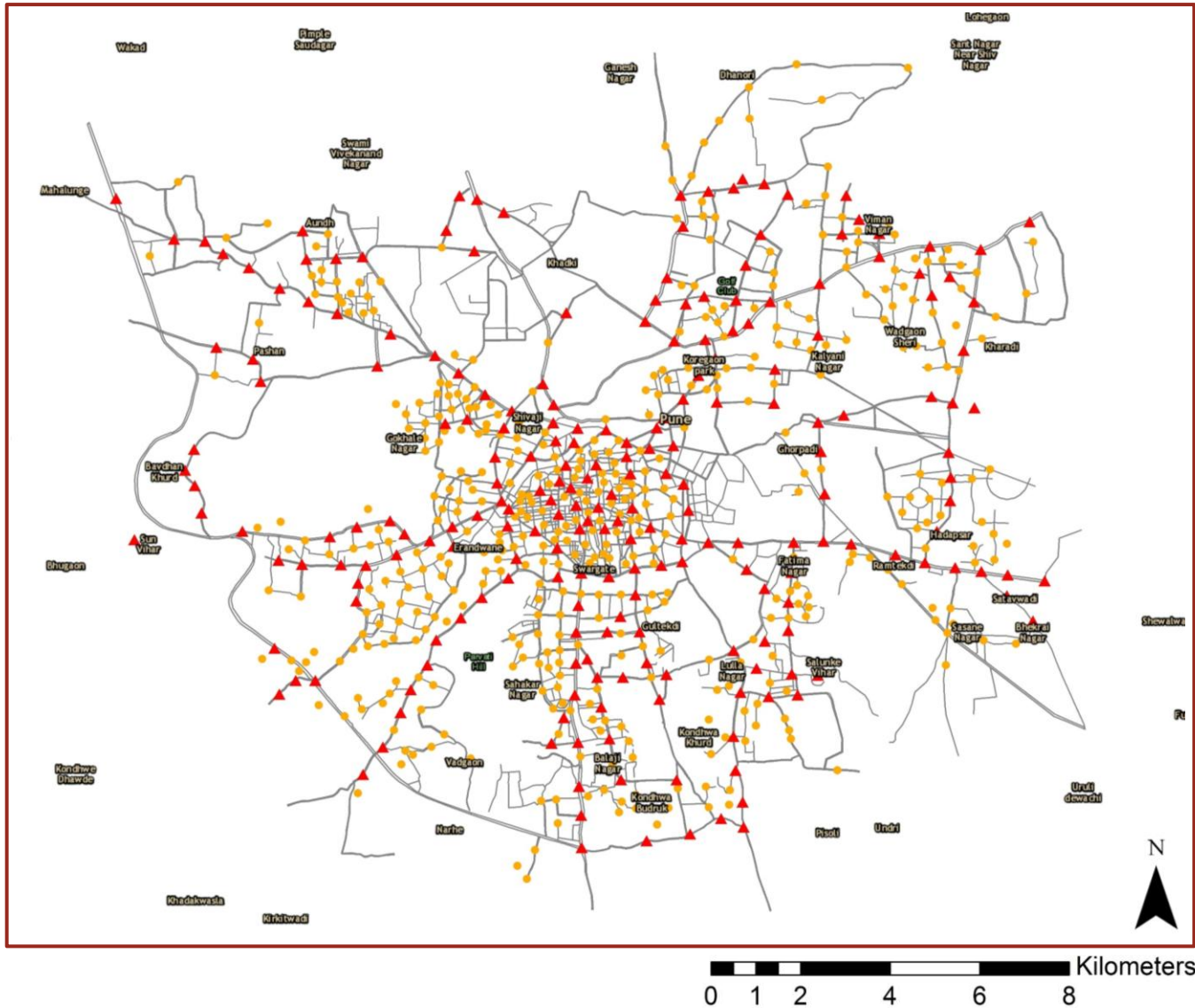


The bottom of the page features a silhouette of a city skyline with several cyclists riding along a path in the foreground.

Features of the plan

- Creating **safe, convenient, comfortable cycling conditions** for the current and future cyclists
- Aspiration to **convert long private trips** from 4 wheelers to cycles and public transport
- Aspiration to **convert short private trips** from private modes to cycles
- Support **safe behaviour by motorists** towards non-motorised mode
- Implement state of the art **public bicycle sharing** system with 1000+ bikes in the next 3 years

5 Preliminary Identification of Locations for Public Bicycle System in Pune completed (Pending ground truthing, October 2016)



- ▲ Primary cycle stations (220)
- Secondary cycle stations (440)

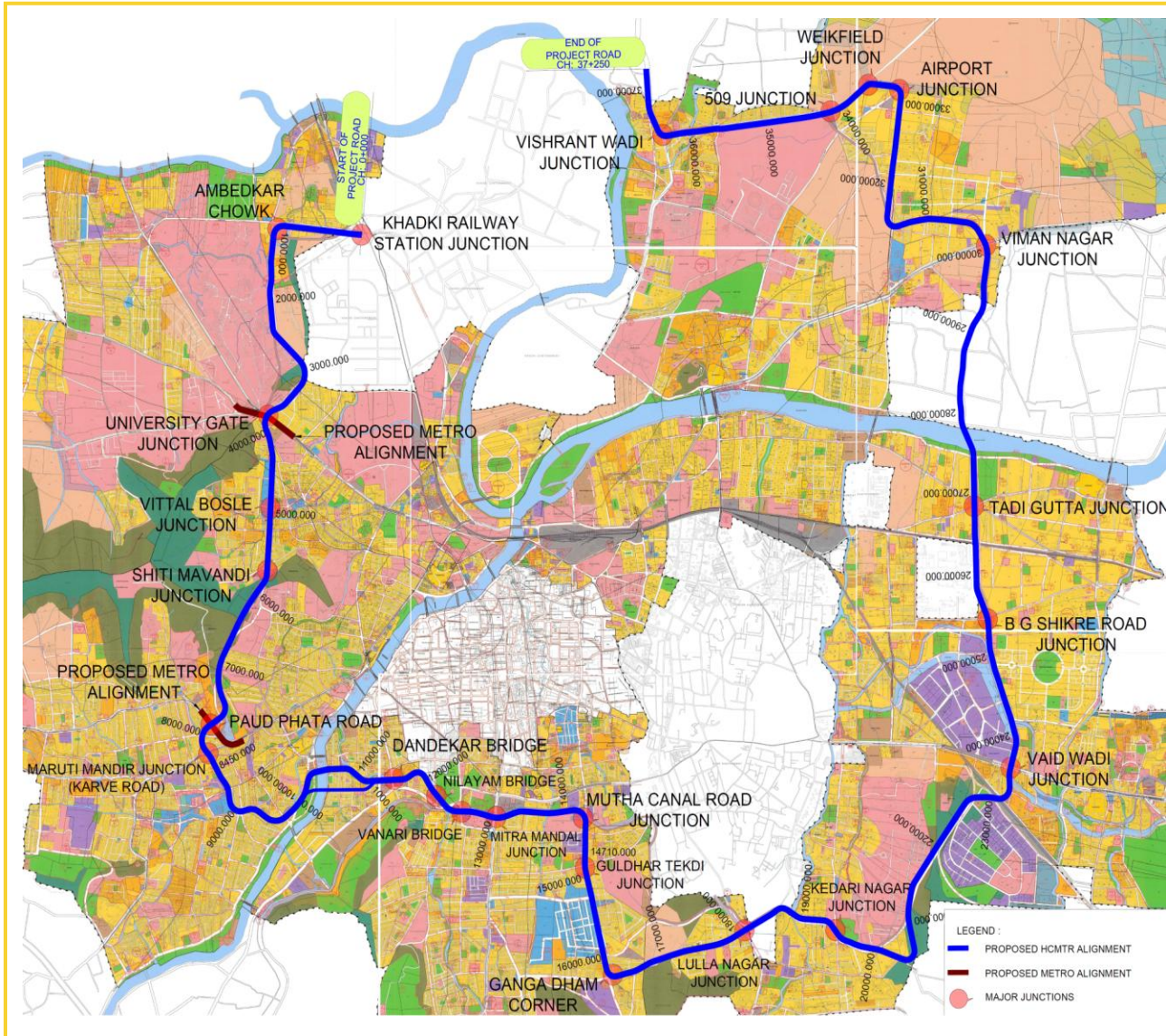
- This number is expected to fulfil 25% of the estimated potential for shift to PBS, that is approximately 6.59 lakh trips (based on surveys)
- Station locations are based on land use, density, average distance between 2 stations of 300m (walkable distance from any place)
- A 3 km buffer (cyclable distance) from the bus routes has been made

6 Proposed New Development Guideline provides additional incentives for Transit Oriented Developments (TODs)

New Development Control Guidelines promotes TOD through higher FSI provisioning

<u>Front road width</u>	<u>Basic FSI</u>	<u>FDR</u>	<u>Premium FSI</u>	<u>Fungible FSI</u>	<u>Max permissible FSI</u>
(1)	(2)	(3)	(4)	(5)	(6)
Less than 18 m.	1.00	1.00	60% of (2&3)	(6) – (2+5+4)	3.70
18 m. to less than 24 m.	1.10	1.00	As above	As above	3.80
24 m. to less than 30 m.	1.20	1.00	As above	As above	3.90
30 m. and above	1.20	1.00	As above	As above	4.00

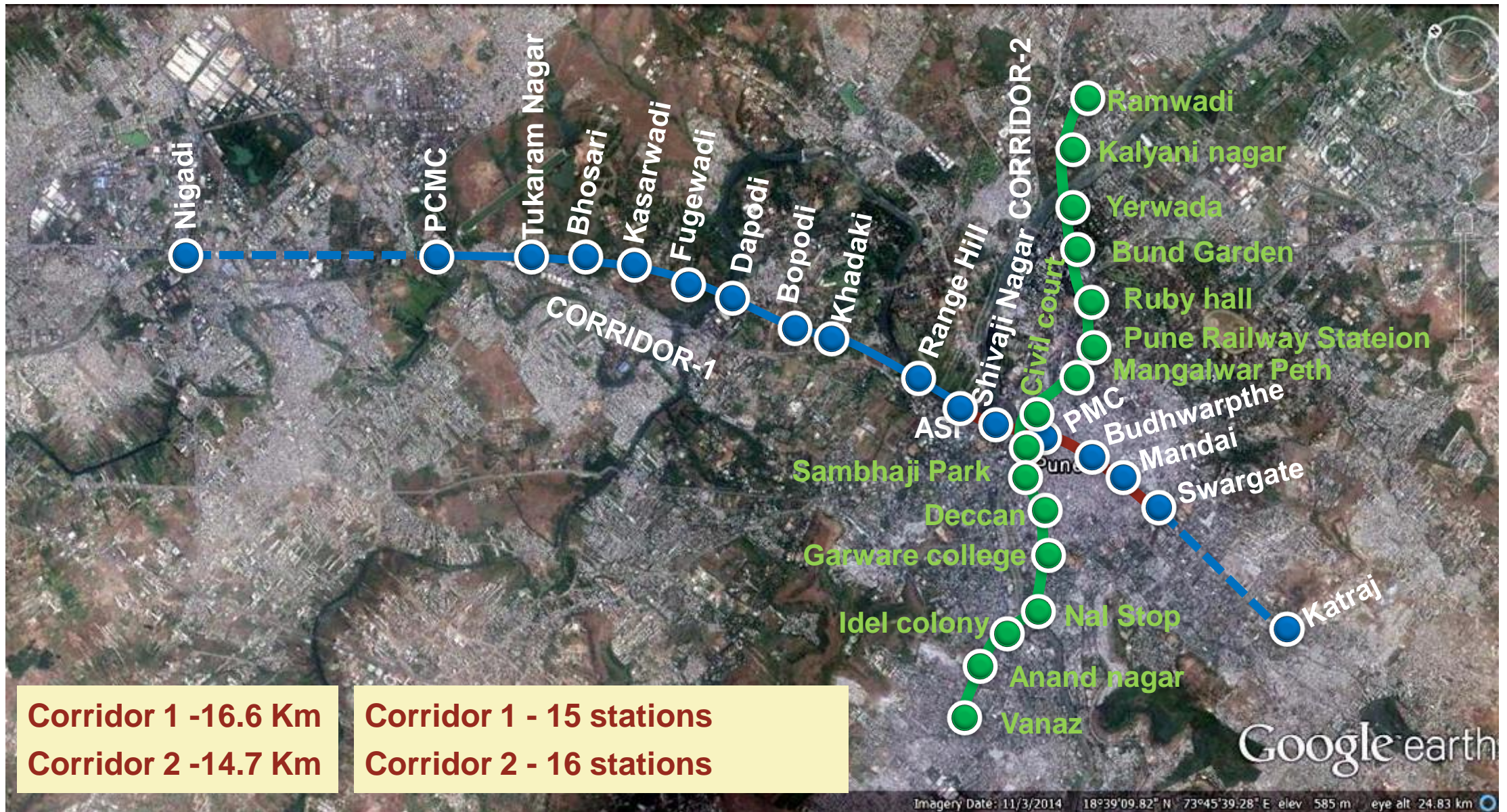
7 Pune HCMTR (as per 1987 Development Plan)



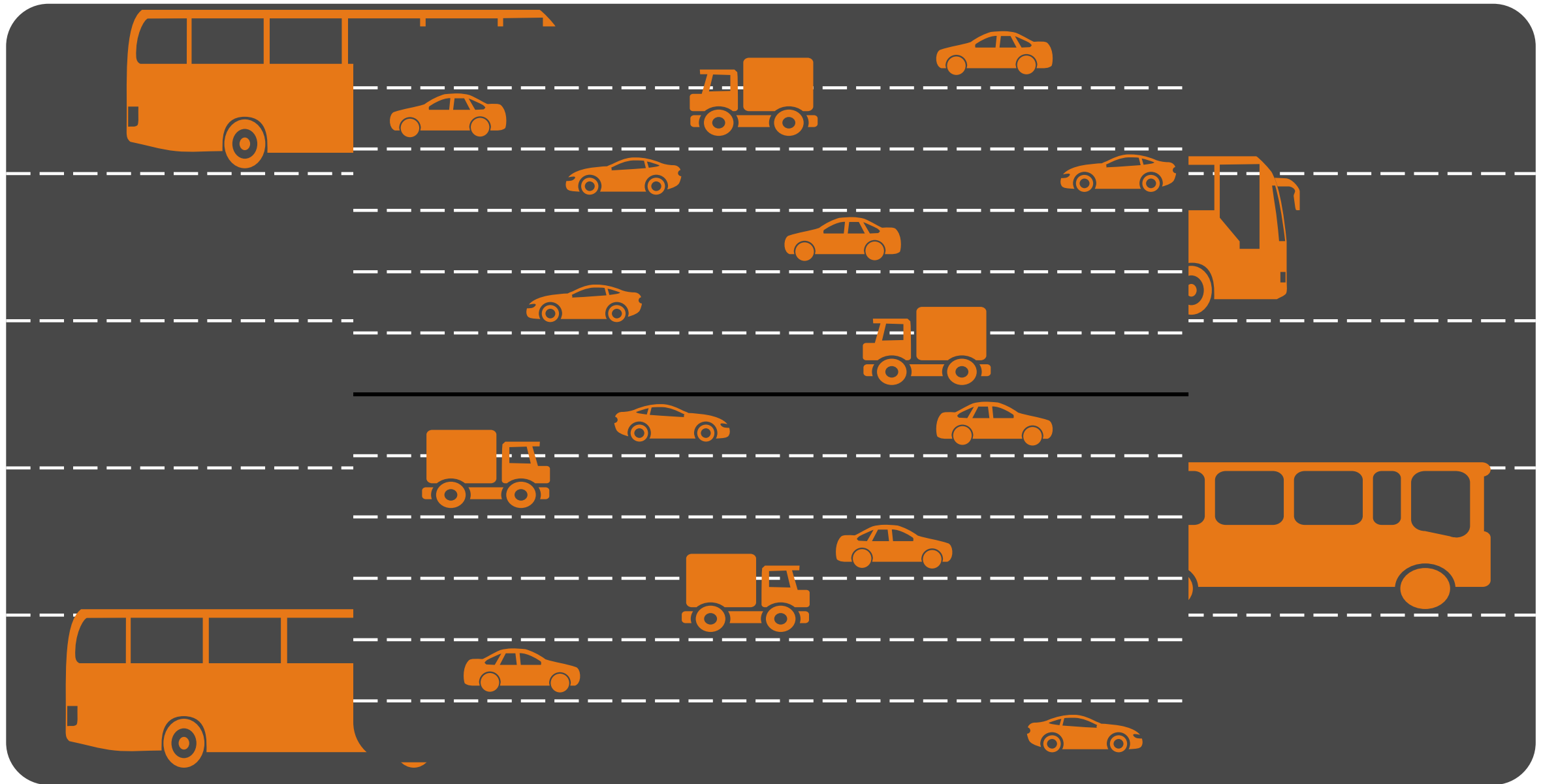
Total Length	37.2 km
Total estimated Cost	~ INR 8500 Crore
Proposed Component	Road Widening, BRT, Street furniture, in-out designing
Current Status	HCMTR – Feasibility Study is under preparation which will be ready by end of year 2016

8 Proposed Phase 1 Plan – 31 kms of metro line

Underground Corridor 2
Elevated For Phase 2



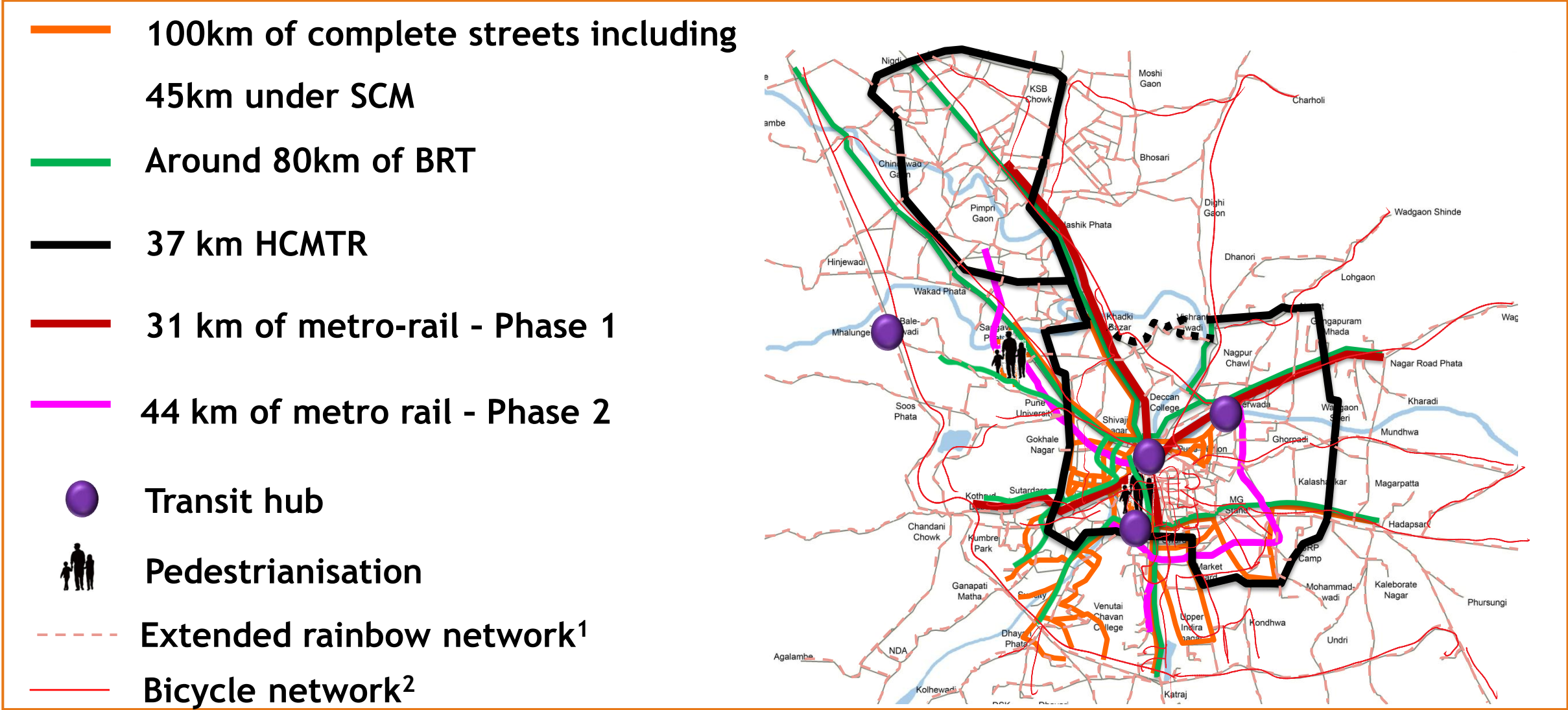
8 Metro Carries same amount of traffic as 5 lanes of bus traffic or 12 lanes of private car



8 Metro has several other benefits

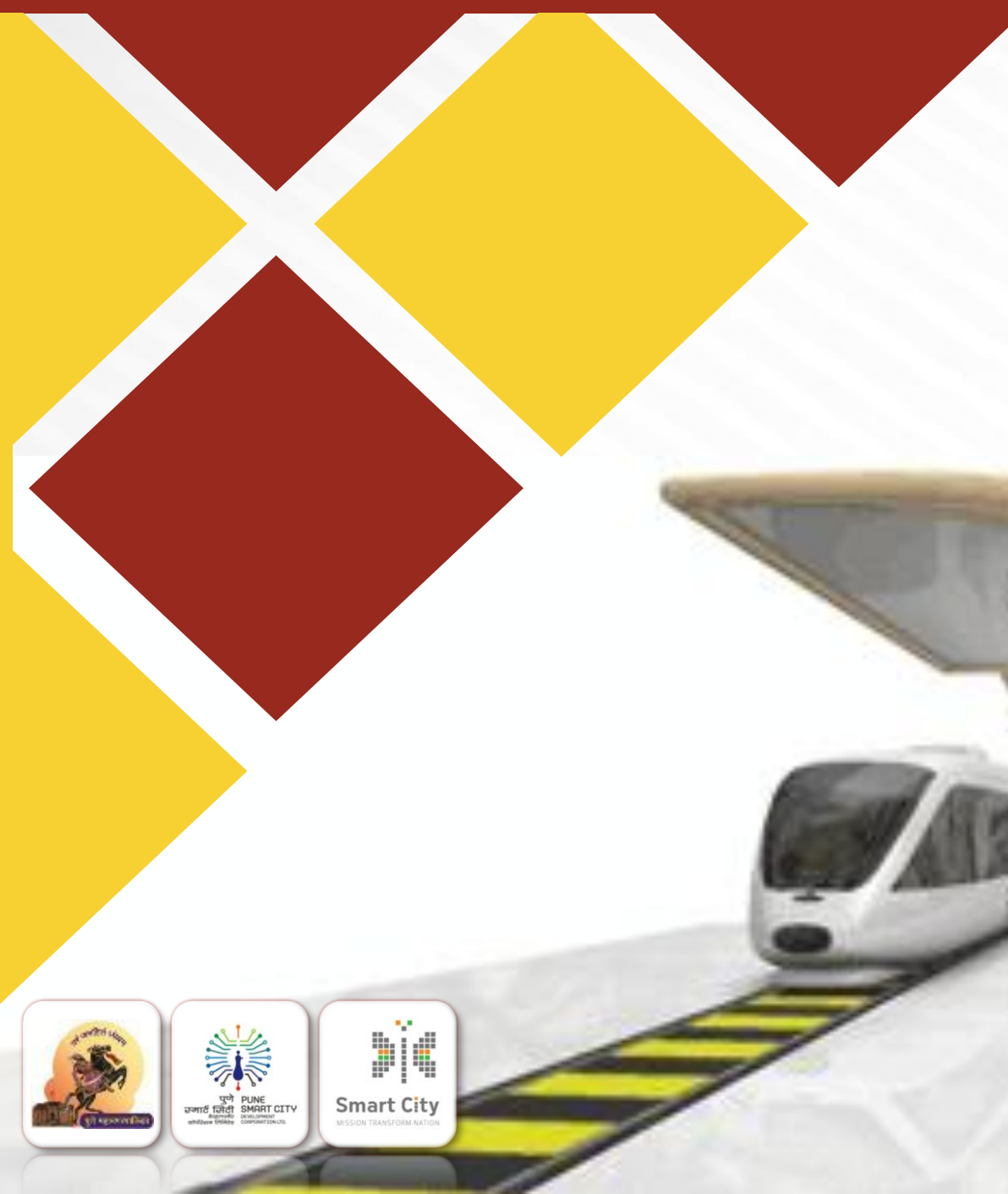
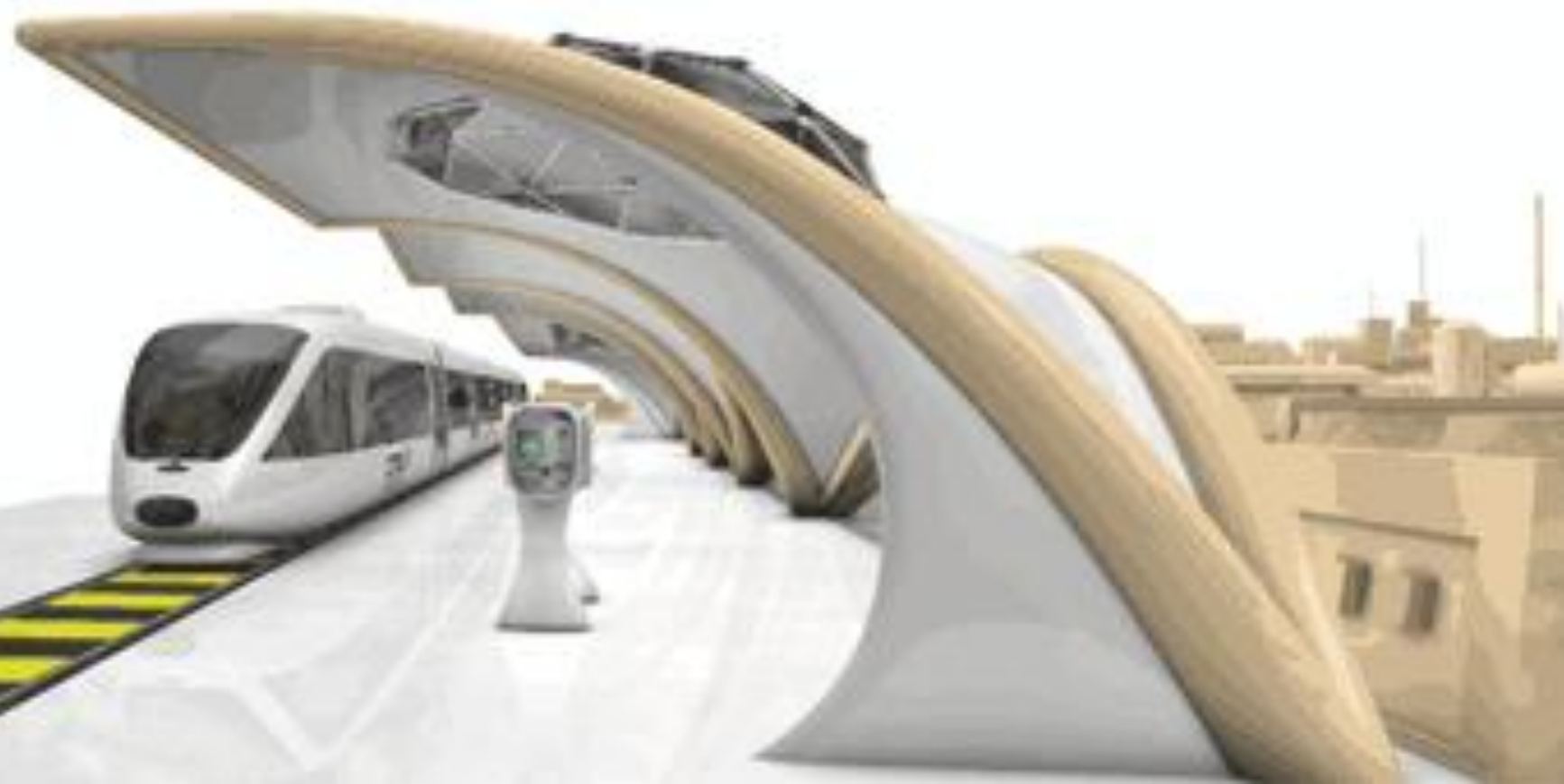
- Requires 1/5th energy per passenger km compared to road-based system
- Causes no air pollution in the city.
- Causes lesser noise level
- Occupies no road space, if underground and only about 2 metres width of the road, if elevated.
- Is more reliable, comfortable and safer than road based system
- Reduces journey time by anything between 50% and 75% depending on road conditions.

Bringing it all together



1 Indicative network; extended rainbow network links all of Pune to BRT and other modes of transit ;
 2 Indicative for major arteries, doesn't cover roads with ROW <18m
 Source: Pune Municipal Corporation

THANK YOU!



BACKUP