

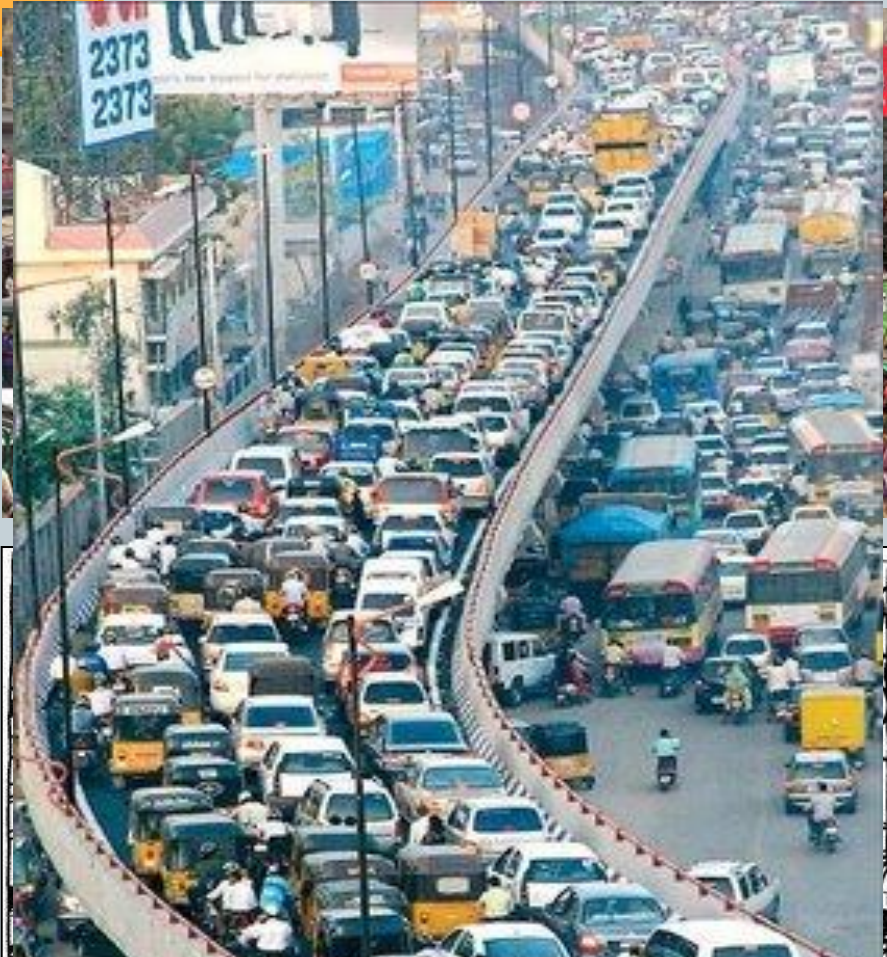
LOW-CARBON MOBILITY PLANS IN INDIA

*Technical Session 8: Sustainable Urban Mobility Planning: Lessons
Learned*

10th November, 2016

Seminar Hall 3

Issues & Challenges of Cities



Cities are Sprawling

Environmental Degradation

Supply Side Focus

Poor Enforcement

Declining PT & NMT

Low Investments

- From 2001 to 2011, the annual growth of population 1.6%, but motor vehicles increased by almost 10%
- Focus on improving mobility for car users

This is Leading to-

**Increased pollution,
adversely impacting health
and quality of life**

**Severely hampered mobility
- adversely impacting social
and economic activities**

**Increased use of non-
renewable resources –
adversely impacting
energy security**

Serious safety concerns

**The poor are worst
affected**

Transport too often implemented and operated in pieces with too little objective decision support information



Need for Improved Mobility



1. Improved economic potential of the city
2. Improved Quality of Life
3. Livable Cities

Targets

- Improvement in operational effectiveness of para-transit and public transport systems
- Completion of the network
- Retain the pedestrian characteristics of the city
- Prevent Urban Sprawl
- Prevent environmental degradation



Desirable Modal Split

City population (in millions)	Mass Transport (%)	Walk Trips (%)	Other Modes (%)
0.1 – 0.5	30 - 40	40	25 – 35
0.5 – 1.0	40 - 50		20 – 30
1.0 – 2.0	50 - 60		15 – 25

Major Component of Sustainable Transport

Priority to Non Motorized Transport

Support Public Transport

Landuse Transport Integration

Parking Management

Safety

Freight Management



Methodology and Approach

Task 1

- Defining the Scope

Task 2

- Data Collection and Analysis of the Existing Urban Transport Environment

Task 3

- Development of a BAU Scenario

Task 4

- Development of Sustainable Urban Transport Scenarios

Task 5

- Development of the Urban Mobility Plan

Task 6

- Preparation of the Implementation Program

Vision of CMP

What is CMP?

Long term strategic document which provides the vision and goals to achieve the desirable mobility pattern for the city's populace in a sustainable and cost effective manner



Includes –

- Changing behavior and travel habits
- Priority to Public Transport, IPT, NMT and pedestrians
- Land use Transport Integration

Strategies :

- Congestion relief
- Improved safety
- Improved air quality
- Improved quality of life
- Improved opportunities for economic development



Sustainable Urban Transport Scenarios - Key Strategies

- Reserving ROW
- Planning transport network
- Improvement in NMT infrastructures

Improving Non-motorized Transport

- Route planning & scheduling
- Road Pricing
- Investment in PT
- Taxation of private vehicles

Improving Public Transport

Urban Structure

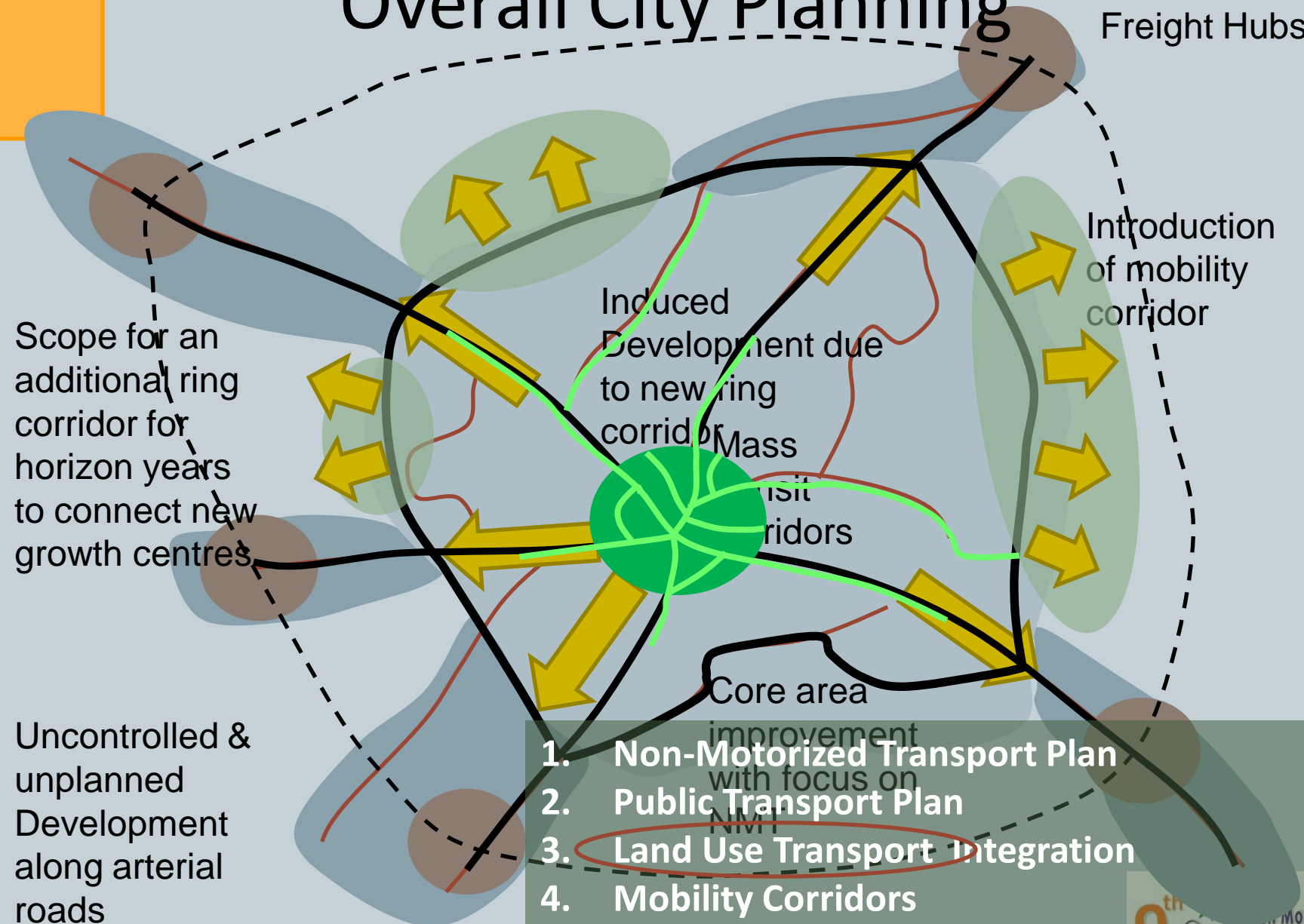
- Zoning Regulation
- Land use and Housing policies
- Floor Area Ratio

Technological Changes

- R&D Investment
- Standards & Labelling
- Tax incentives



Overall City Planning



Freight Hubs

Introduction of mobility corridor

Induced Development due to new ring corridor
Mass Transit Corridors

Core area

Scope for an additional ring corridor for horizon years to connect new growth centres

Uncontrolled & unplanned Development along arterial roads

1. Non-Motorized Transport Plan
2. Public Transport Plan
3. Land Use Transport Integration
4. Mobility Corridors
5. Freight Management Plan

Implementation Program

Phasing of the Projects

Identification and Prioritization of Projects

Funding of the projects

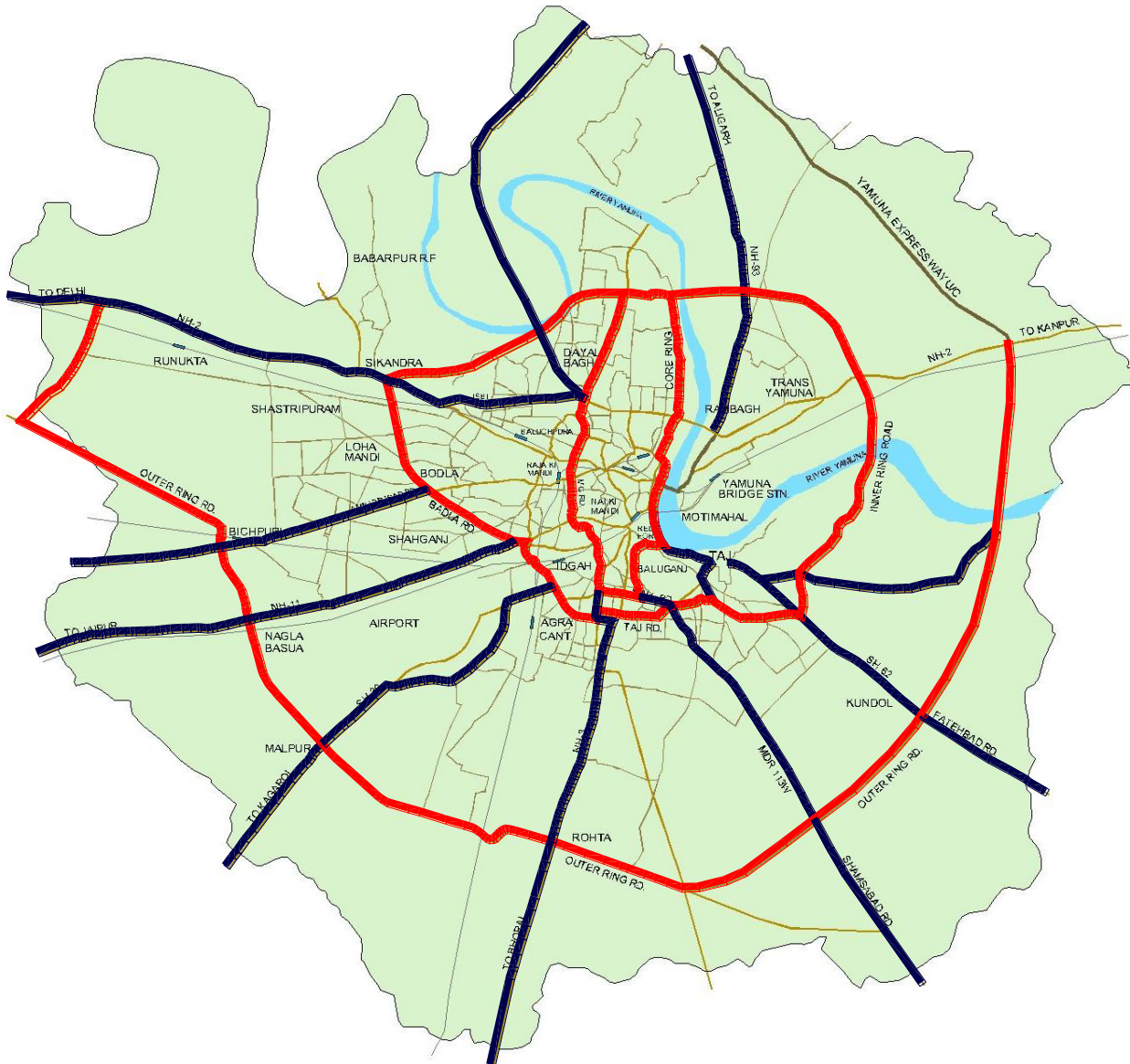
Monitoring CMP implementation

9th Urban Mobility India 2016

EXAMPLE

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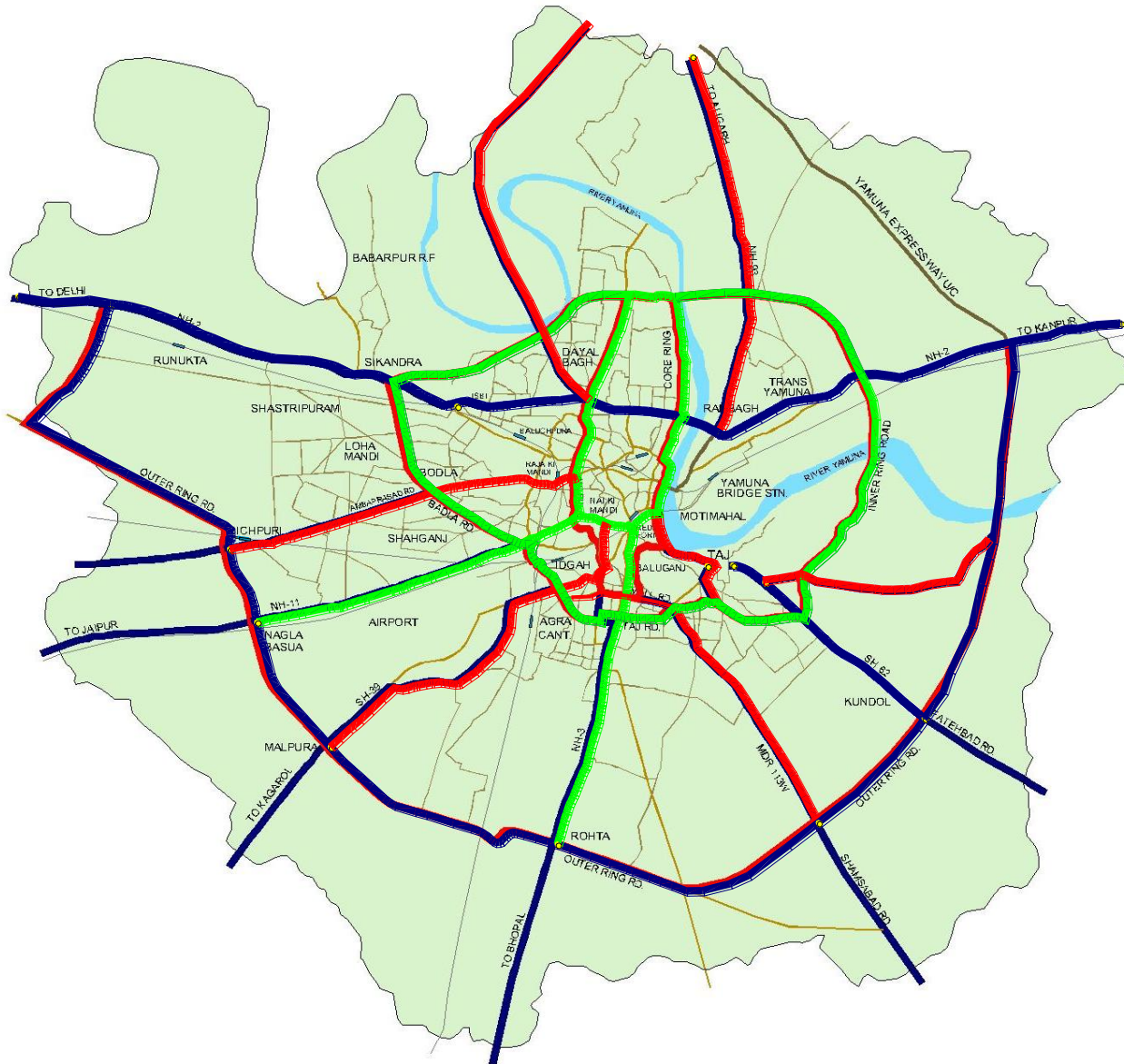
Mobility Plan



Mobility Corridors

- Radial Roads
- Orbital Roads

Mobility Plan

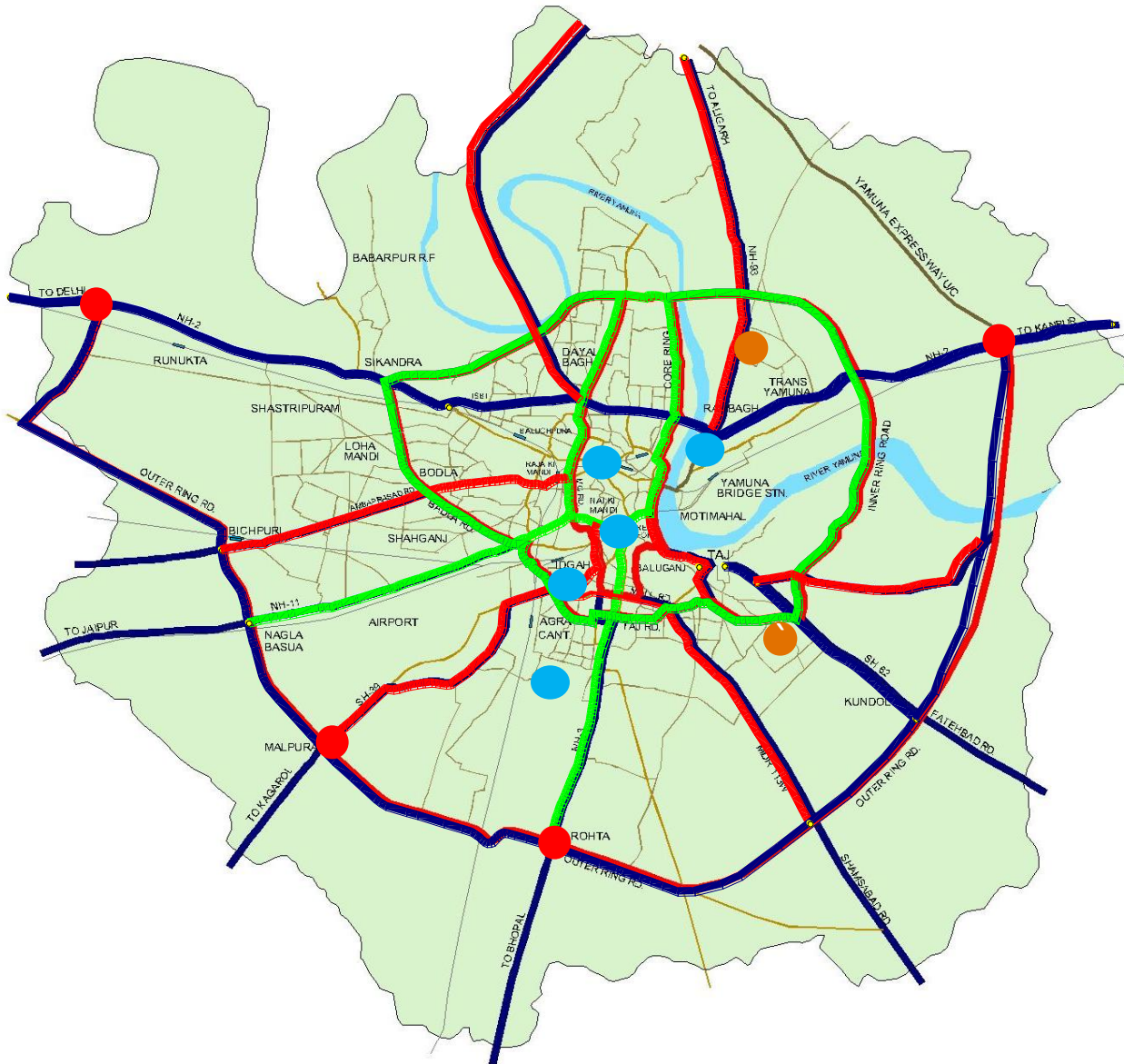


Mobility Corridors

Public Transport Network

- Bus Corridors
- High capacity Bus Corridors
- Mass Transit Corridors

Mobility Plan



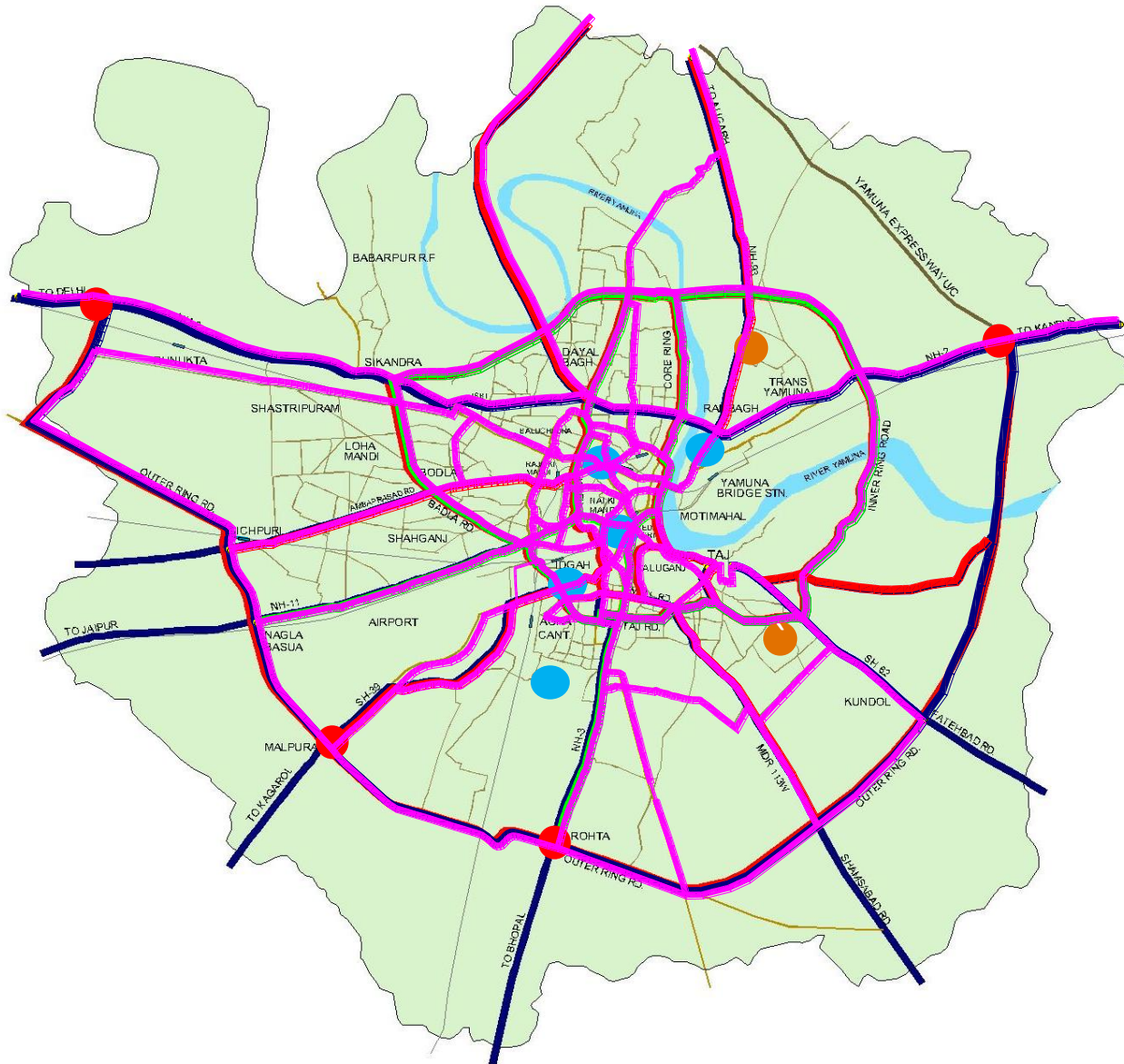
Mobility Corridors

Public Transport Network

Public Transport Infrastructure

- Bus Terminals
- Sub terminals
- Workshop

Mobility Plan



Mobility Corridors

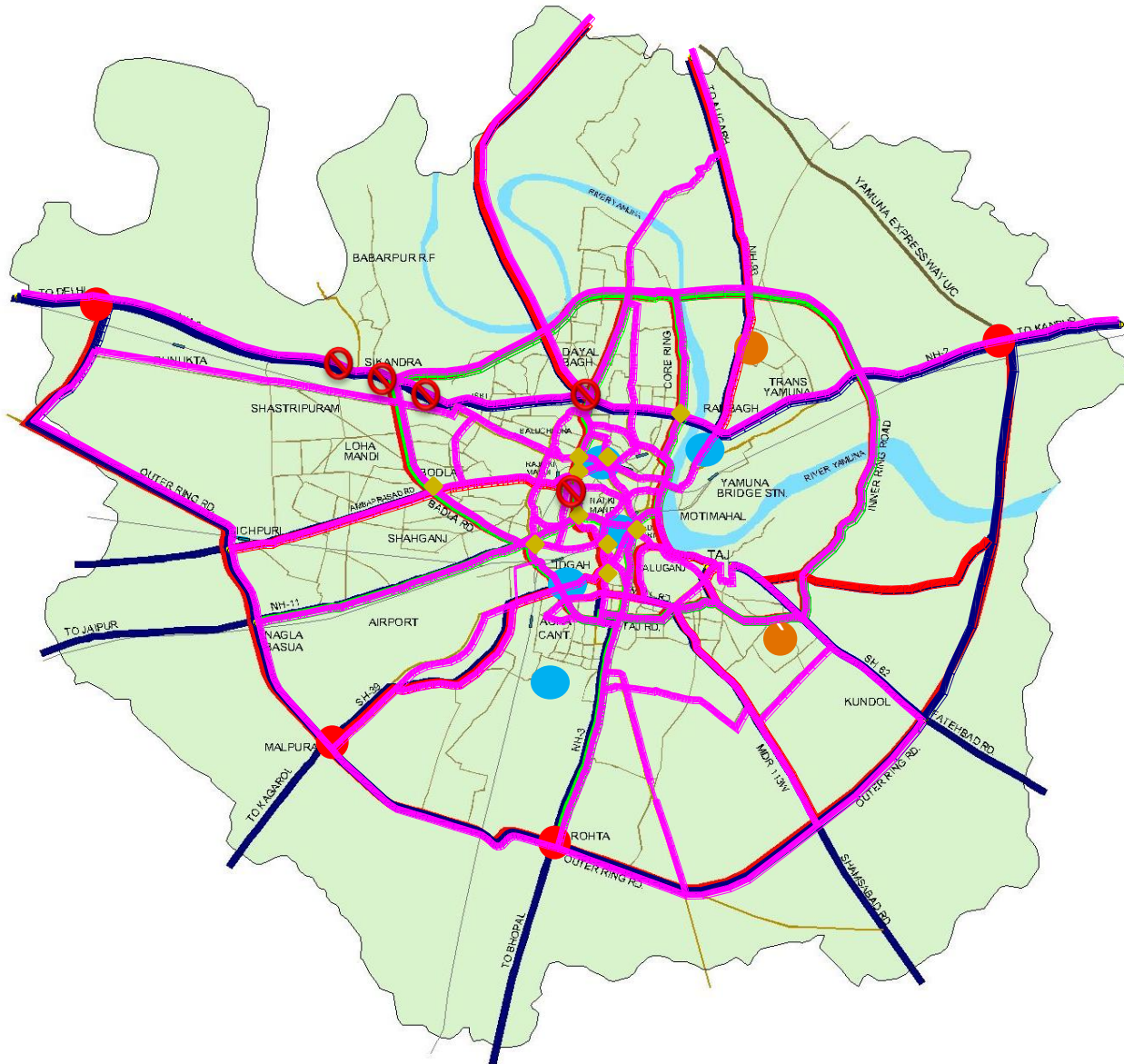
Public Transport Network

Public Transport Infrastructure

NMT Network

— NMT Network

Mobility Plan



Mobility Corridors

Public Transport Network

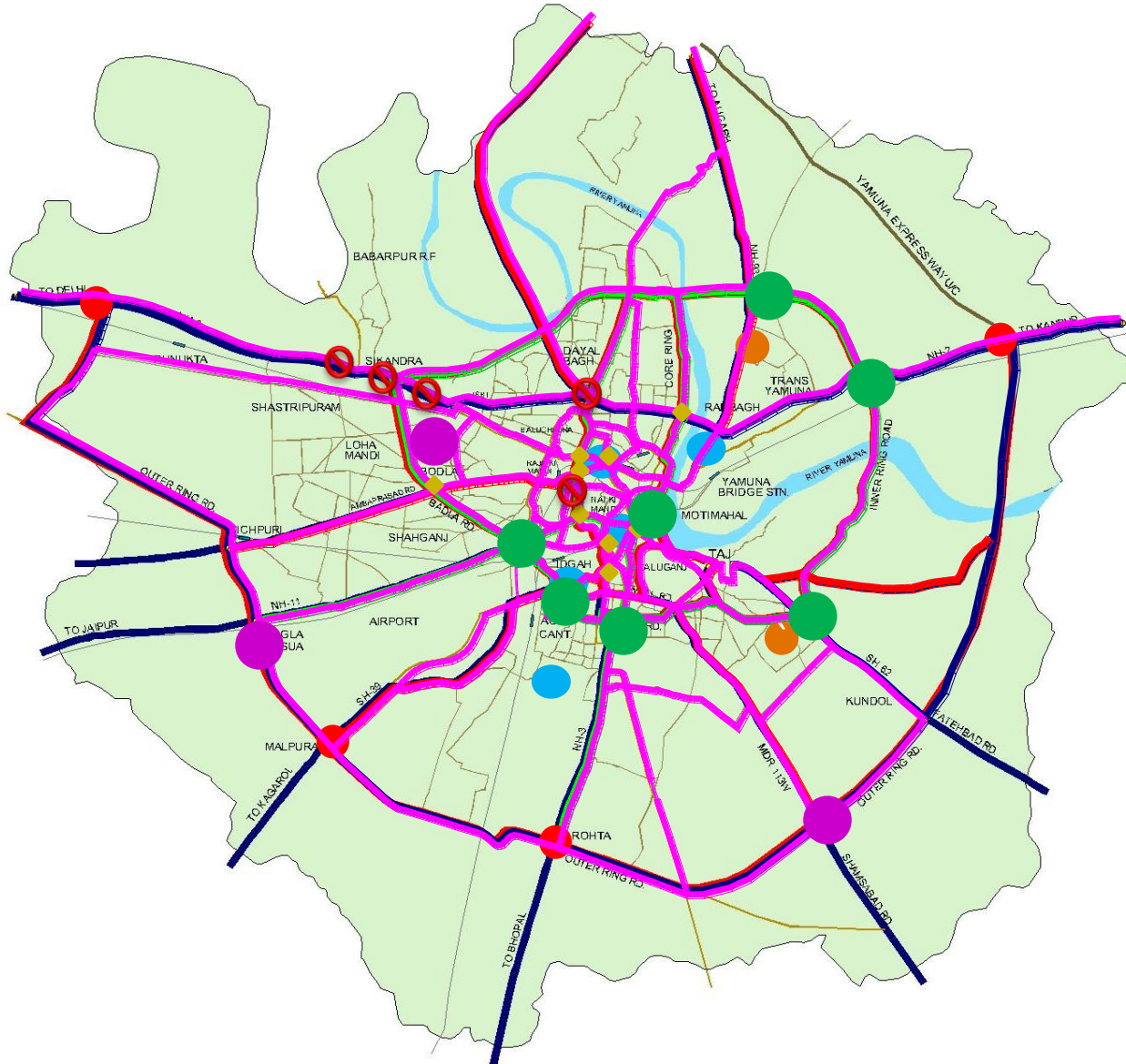
Public Transport Infrastructure

NMT Network

Pedestrian Signal

Grade Separated Pedestrian Crossings

Mobility Plan



Mobility Corridors

Public Transport Network



Public Transport Infrastructure

NMT Network

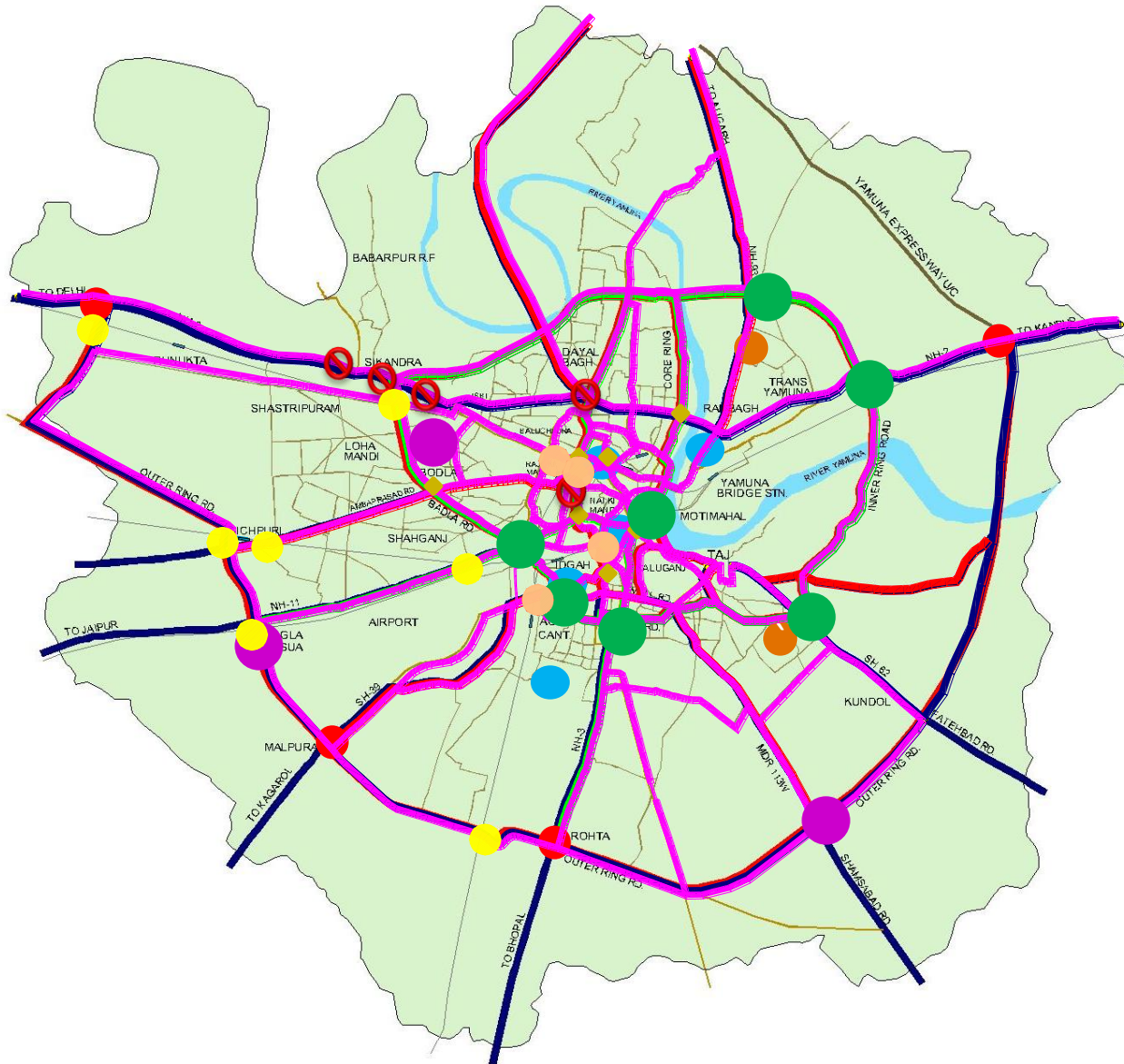
Pedestrian Signal

Grade Separated Pedestrian Crossings

Freight Infrastructure

-  Freight Terminals
-  Loading/ Unloading Area

Mobility Plan



Mobility Corridors

Public Transport Network

Public Transport Infrastructure

NMT Network

Pedestrian Signal

Grade Separated Pedestrian Crossings

ROBs

- Widening of existing ROBs
- New ROBs

Travel Characteristics

Scenario	PV share(%)	IPT share(%)	PT share(%)	Average network speed (kmph)	Per Capita Trip Rate (PCTR)
Base year	52	42	6	< 16	0.55
Do Nothing-2031	54	40	5	16	
With Proposed Interventions	51	24	26	29	

Outcomes

	Indicators	LOS - Existing	LOS - Improved
A	Overall Public Transport facilities City wide	3	2
B	Overall Pedestrian Infrastructure Facilities	3	2
C	Overall NMT Facilities	4	1
D	Level of usage of ITS facilities	4	2
E	Travel Speed along major corridors	3	2
F	Availability of Parking Spaces	4	2
G	Road Safety	4	2
H	Pollution Levels	2	1
I	Integrated Land-use Transport Integration	3	2
J	Financial Sustainability of Public transport	3	2

THANK YOU