



INTEGRATING FREIGHT IN TRANSPORT AND URBAN PLANS SESSION ON GATISHAKTI MASTER PLAN - THE ROLE OF CITIES



Source: Business Today, 2022

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GATISHAKTI NATIONAL MASTER PLAN (NMP)

Envisages development of integrated infrastructure and network planning for efficiency in services and human resources

The Next Generation Multimodal Infrastructure aims to improve Ease of Living as well as Ease of Doing Business by

- **Providing integrated and seamless connectivity** for the movement of people, goods and services from one mode of transport to another.
- **Facilitating the last mile connectivity of infrastructure** and also reduce travel time for people.

A Giant Stride in India's \$5 Trillion Economy Goal

Gati Shakti National Master Plan

Multimodal Connectivity Infrastructure to various Economic Zones

Targets upto 2024-25 for Ministry of Shipping



- Increase in Cargo capacity at the Ports to 1,759 MMTPA from 1,282 MMTPA in 2020
- Cargo movement on all National Waterways will be 95 million MT from 74 million MT in 2020
- Cargo movement on Ganga to be increased from 9 to 29 million MT

LOGISTICS AND FREIGHT

Logistics Planning & Management

involves a broad set of activities dedicated to the **transformation and distribution of goods**, from raw material sourcing to final market distribution as well as the related information flows.

Freight Planning & Management is the movement of goods and services

— Predominantly **Demand Management** and **Land use policy** in the long term

- **Urban mobility** - facilitator of economic growth, employment and improvements in quality of life
- **Freight vehicles (LCV, MCV, HCV)** - essential to service manufacturing, distribution and consumption
- **Freight transport is diversifying with large multi-axle trucks to e-rickshaws, e-commerce, DFC, Multi-modality**

CHALLENGES OF URBAN FREIGHT

Higher Emissions

- ❑ About 10% of India's freight-related CO2 emissions are due to urban freight
- ❑ 23 kilo-tonnes of PM emissions and 305 kilo-tonnes of NOx emissions annually impact on air quality.



Road Accidents

- ❑ Freight vehicles contributed to 9% and 6% of road fatalities in million-plus populated cities in 2019 and 2020 – Higher the rate of fatalities/ vehkm.



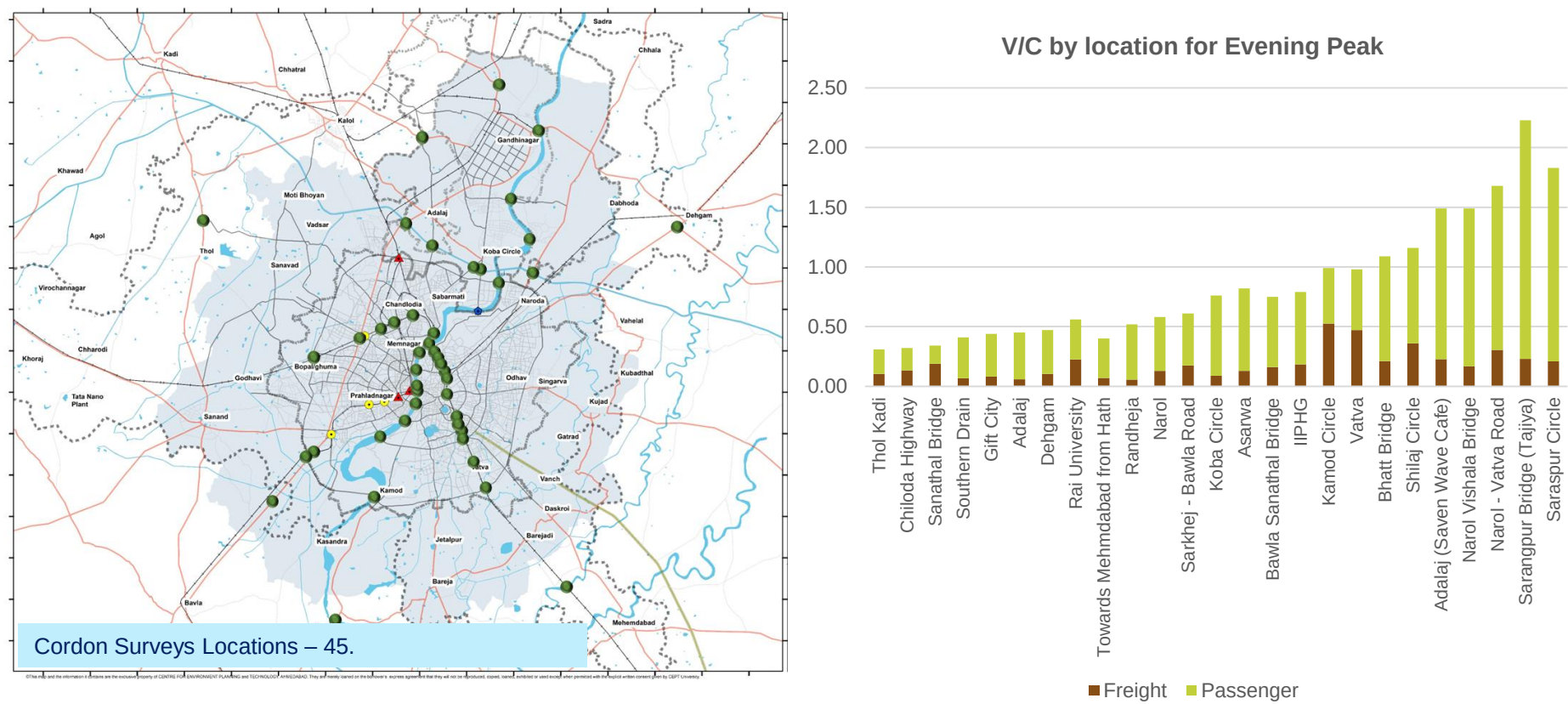
Last-mile delivery Challenges

- ❑ Last mile deliveries in cities contribute to nearly 50% of total logistics costs in India's e-commerce supply chains



FREIGHT IN INTERNAL TRAFFIC

A Case of Ahmedabad – Traffic composition within the city

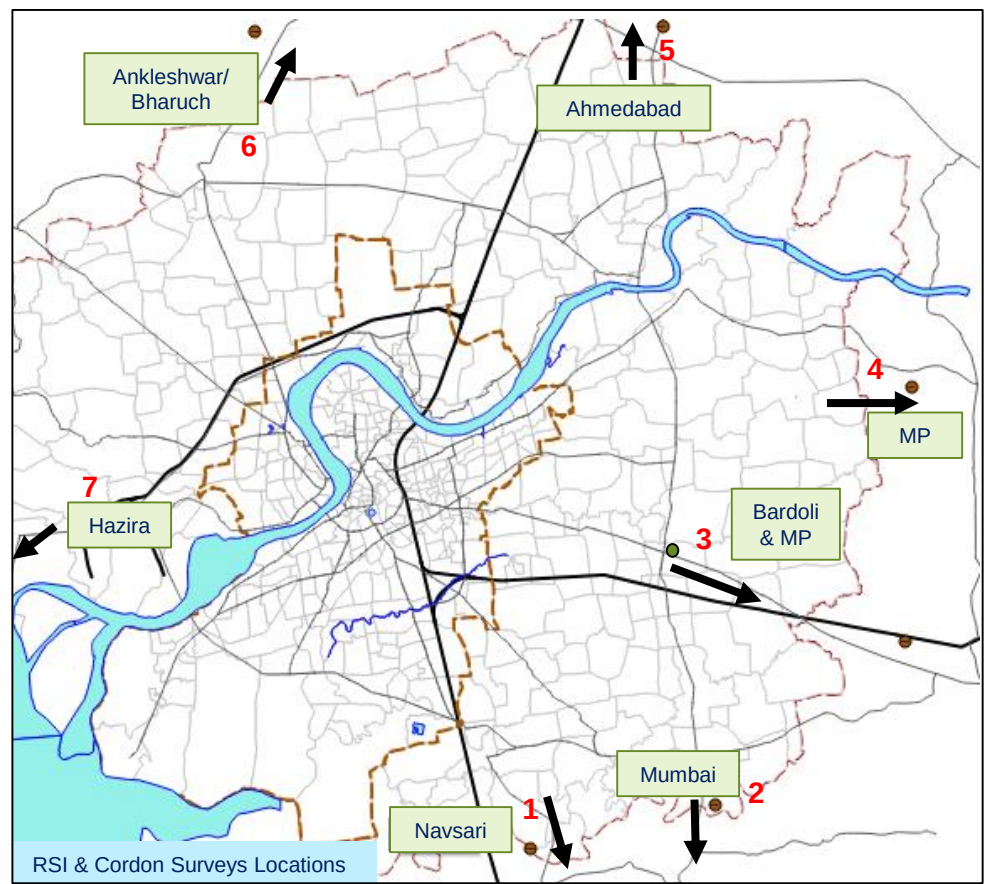


Freight transportation in traffic composition across 5 locations exceeds by 40%.

Source: CVC Survey, Ahmedabad, 2022

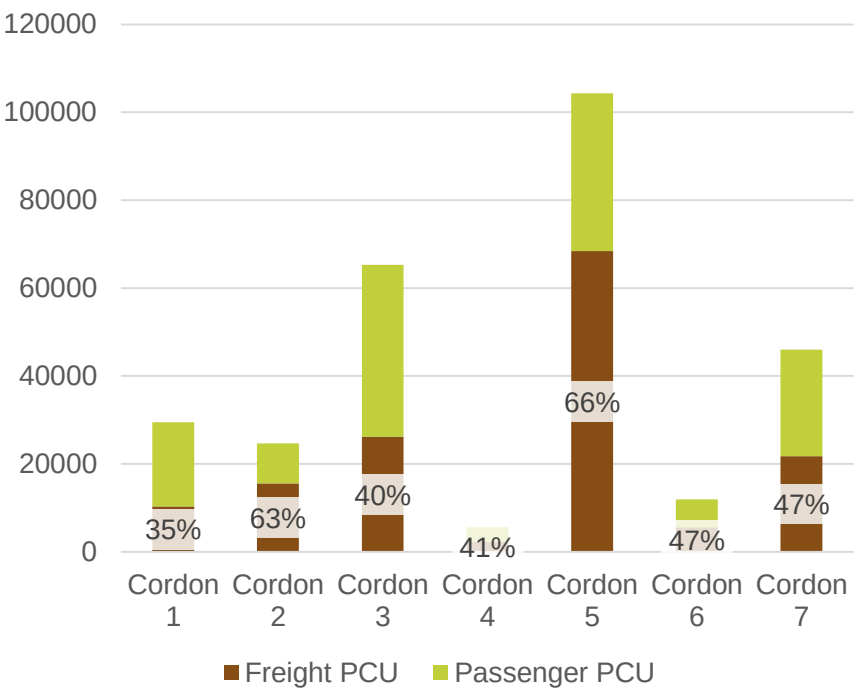
FREIGHT IN EXTERNAL TRAFFIC

A Case of Surat – External Traffic composition



Source: RSI & CVC Survey, Surat

Freight demand in total External Demand: 52%
(Include All – Private & Freight demand)

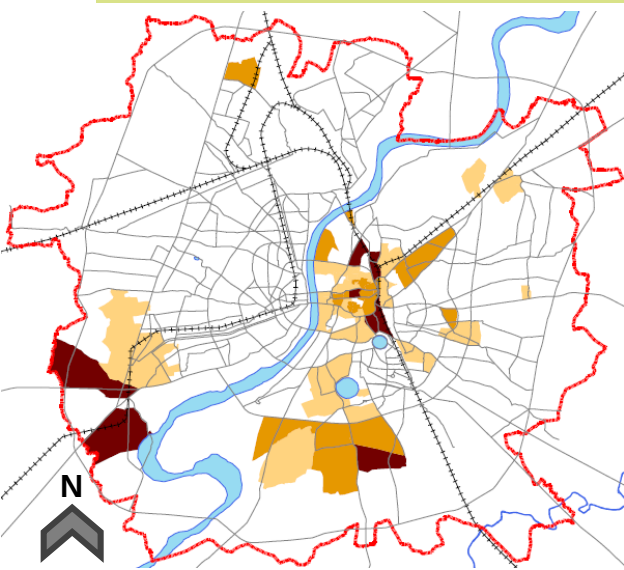


About 30% vehicles are E-E.

About 57% (30500) of vehicles are I-E & E-I

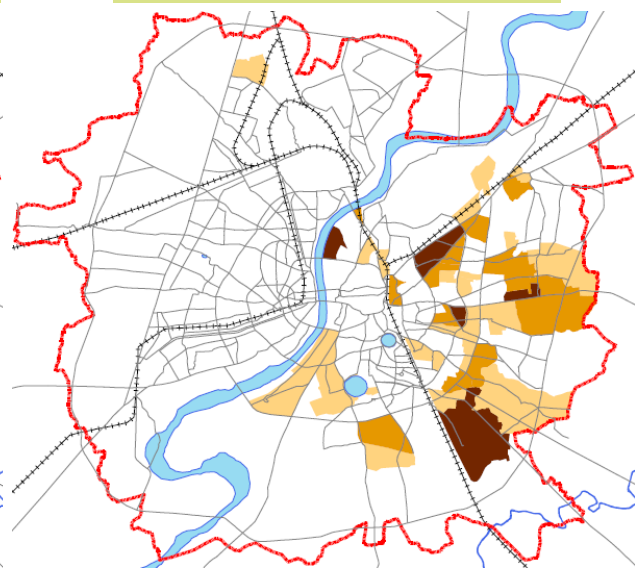
AHMEDABAD FREIGHT ACTIVITY DISTRIBUTION

Transporters & Warehouses



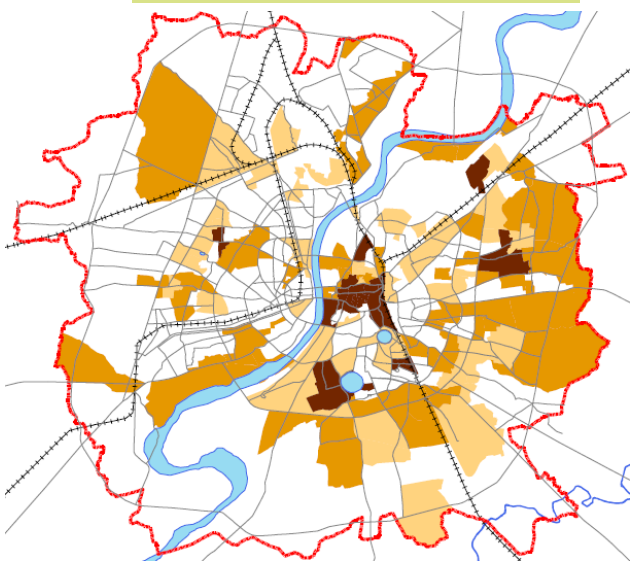
- » Total No.- **29020**.
- » Predominantly located in **Central, Southern-Western** Ahmedabad.

Factories & Industries



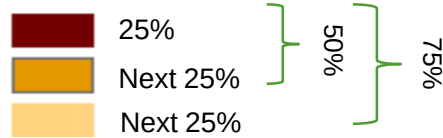
- » Total No.- **54867**.
- » Predominantly located in **Eastern** Ahmedabad.

Trade Centers



- » Total No.- **202914**.
- » Spread all over the city; major concentration in **City Core**.

Total no. indicates no. of properties

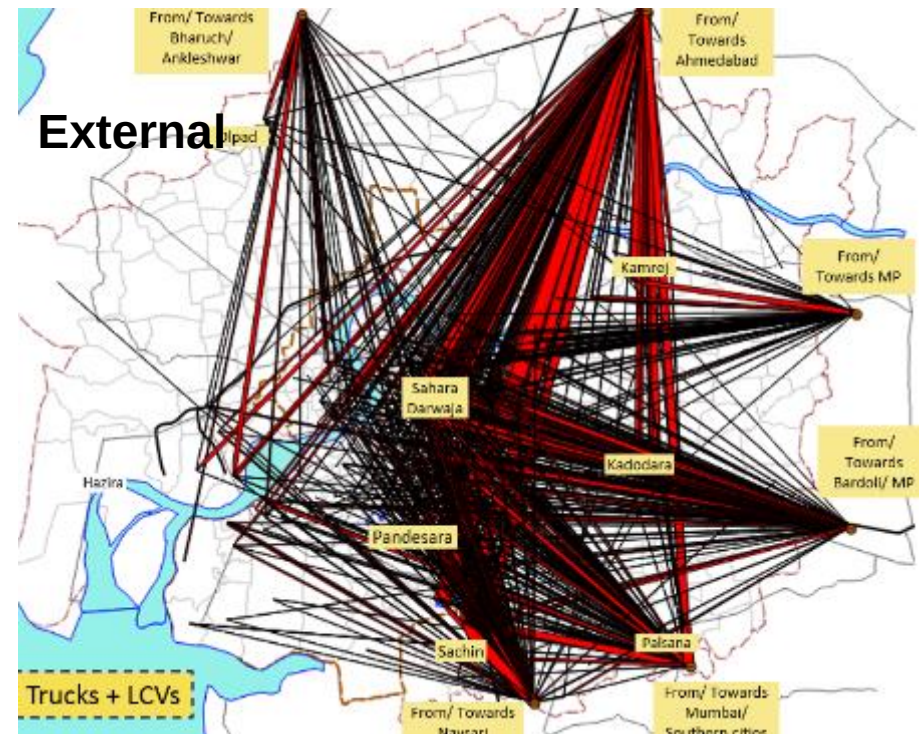
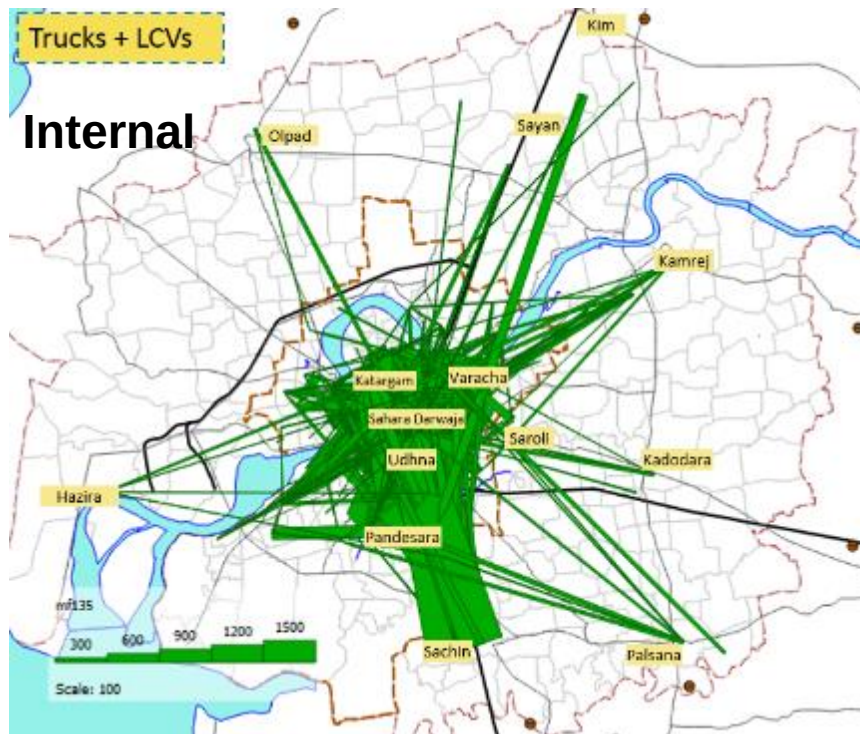


Source: Property Tax Department, Ahmedabad, 2010

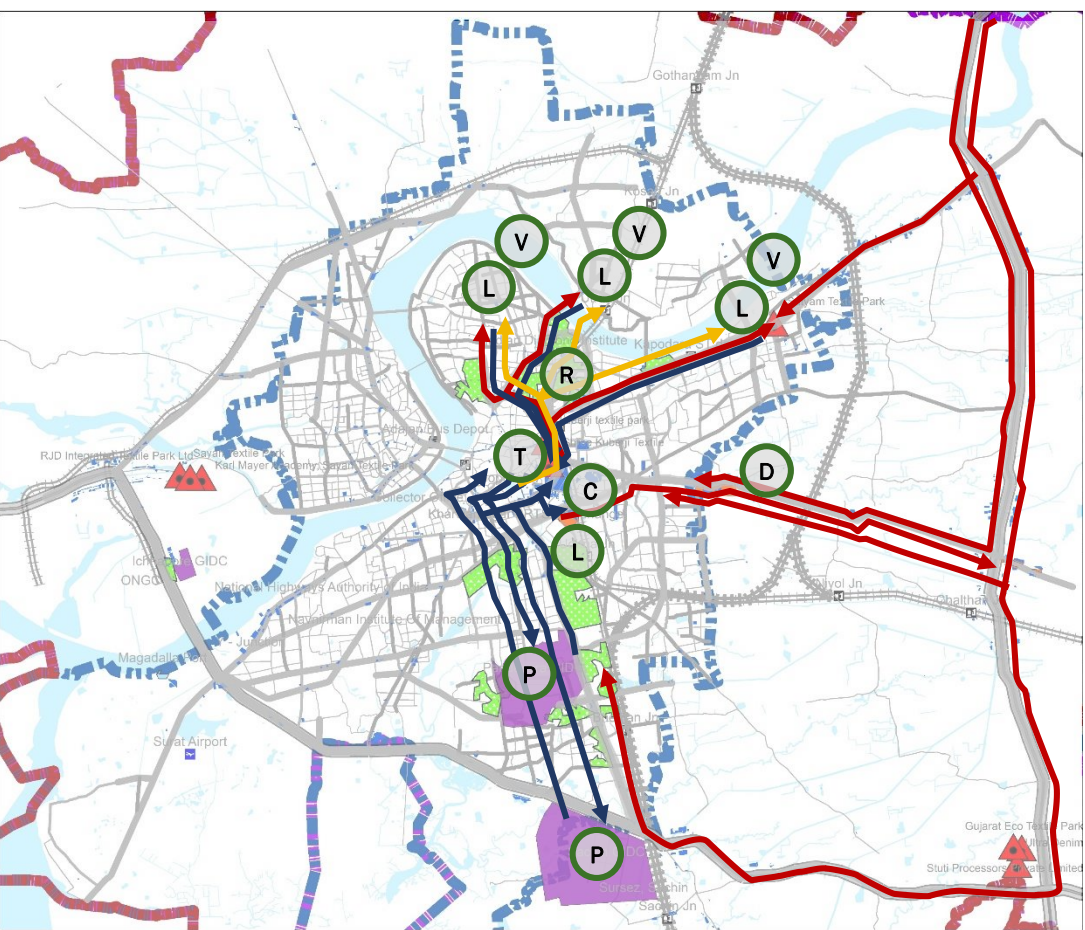
FREIGHT VEHICLES MOVEMENT

Activity Surveys + RSI & Cordon Surveys

Surveys	Employment/ Activity Surveys	RSI and Cordon Surveys (Study area w/o Hazira)		Total
Type of Interaction	Internal - Internal (within SMC)	Internal - External	External - Internal	
Total Veh.	269122	6519	8156	283797
Trucks (MCVs, MAVs)	8041	3929	5405	17375 (6%)
LCVs	261081	2591	2751	266423 (94%)



SURAT TEXTILE MANUFACTURING SUPPLY CHAIN



LEGEND

- HCV, MCV
- LCV
- 2 WHEELER
- LOOM CLUSTER
- PROCESSORS
- RAW MATERIAL
- LOOM INDUSTRIES
- TEXTILE MARKET
- PROCESSORS
- VALUE ADDITIONS
- CONSOLIDATION CENTRE
- DISTRIBUTION CENTRE

STAGES	ZONE	TRIPS / DAY	VKT	ISSUES
Stage 1: Raw Material To Power looms	North	744	17037.6	
Stage 2: Power looms to Textile Market	North	1711	70493.2	2259 Empty Trips (1,58,549 VKT)
	South	695	7992.5	
Stage 3: Textile Market To Processors	South	3481	40031.5	
Stage 4: Processors To Textile Market	South	3481	40031.5	
Stage 5: Textile Market and Value addition interactions	North			
Stage 7: Textile Market To Consolidation Centre	Central	5876	18803.2	5280 Empty Trips (30,482 VKT)
		2716	11678.8	
Stage 8: Consolidation to Outside Surat	Central		29524	

Operating empty vehicles significantly within the city is the huge losses in terms of its efficiency and also leads to externalities.

Source: RSI & CVC Survey, Surat

FREIGHT PLANNING IN TRANSPORT PLANS

- ❑ The focus of city planning does not fully include transport, both passenger and goods..!
- ❑ Even urban transport planning does not adequately address the needs of freight transport

Freight is included with negative connotation in Transport Plans

Freight transport is a business problem, and the market will take care of itself!

Transport Plans includes;

- To exclude freight from certain areas, & roads
- Locate freight generators at places with access constraints, not aligned with all modes!
- Shifting of markets from the old city
- Non-provision of freight infrastructure

results in

These measures may address some of the negative externalities and lead to higher economic costs for the goods movements

WHO ARE THE PRIMARY STAKEHOLDERS CONCERNED WITH URBAN FREIGHT?

Does the city/state governments have role?

ULB/DA/RTO/Police

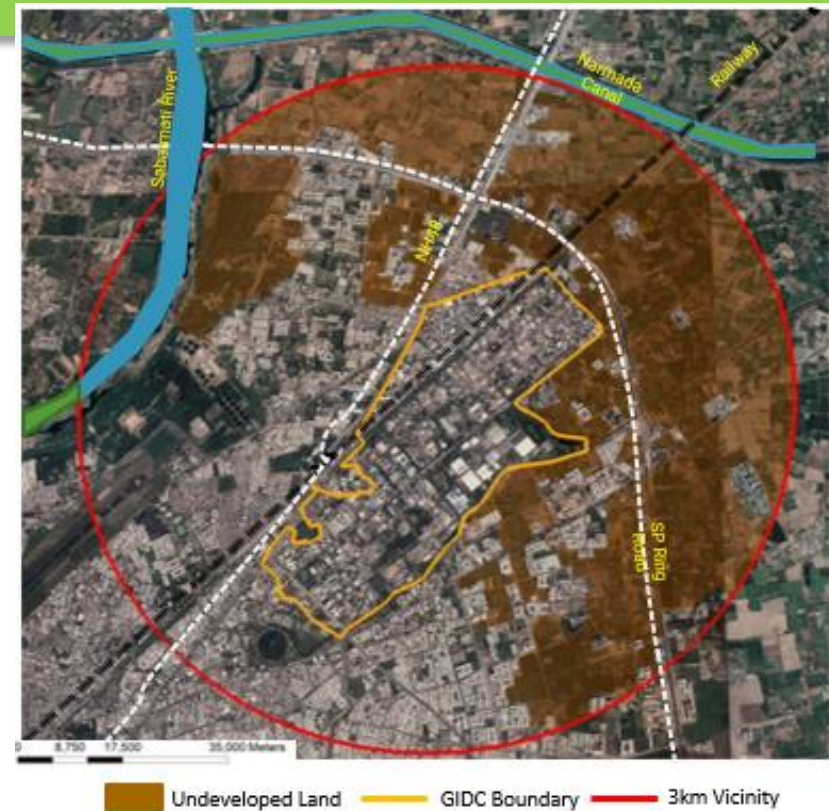
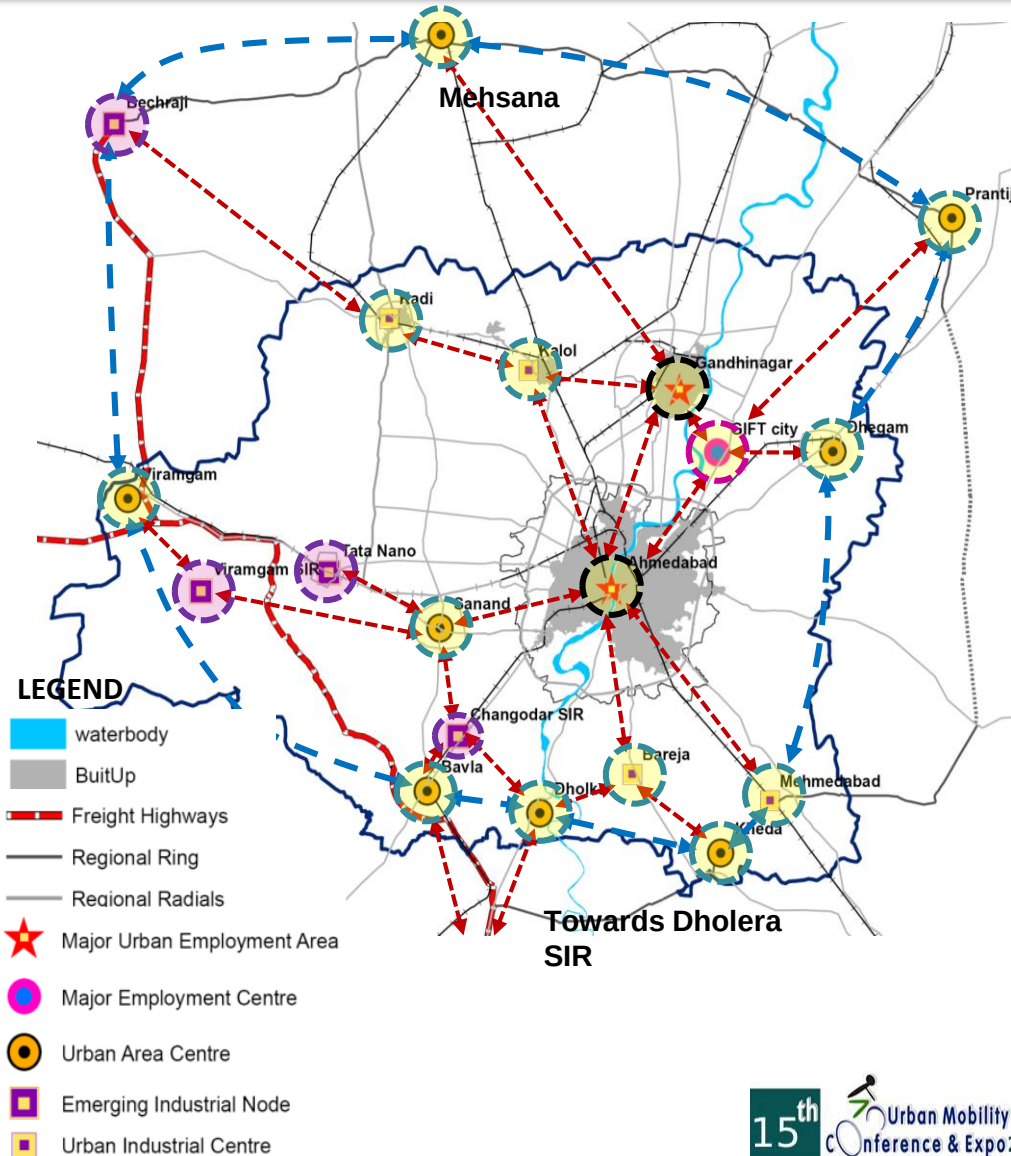
- Land use plan (activity zones, networks, infrastructure)
- Operation and management of networks
- Regulation
- Traffic management - optimisation

What role will the private sector play?

Manufacturer/shipper/distributor/warehouse/
transport operator/ driver/consumer.

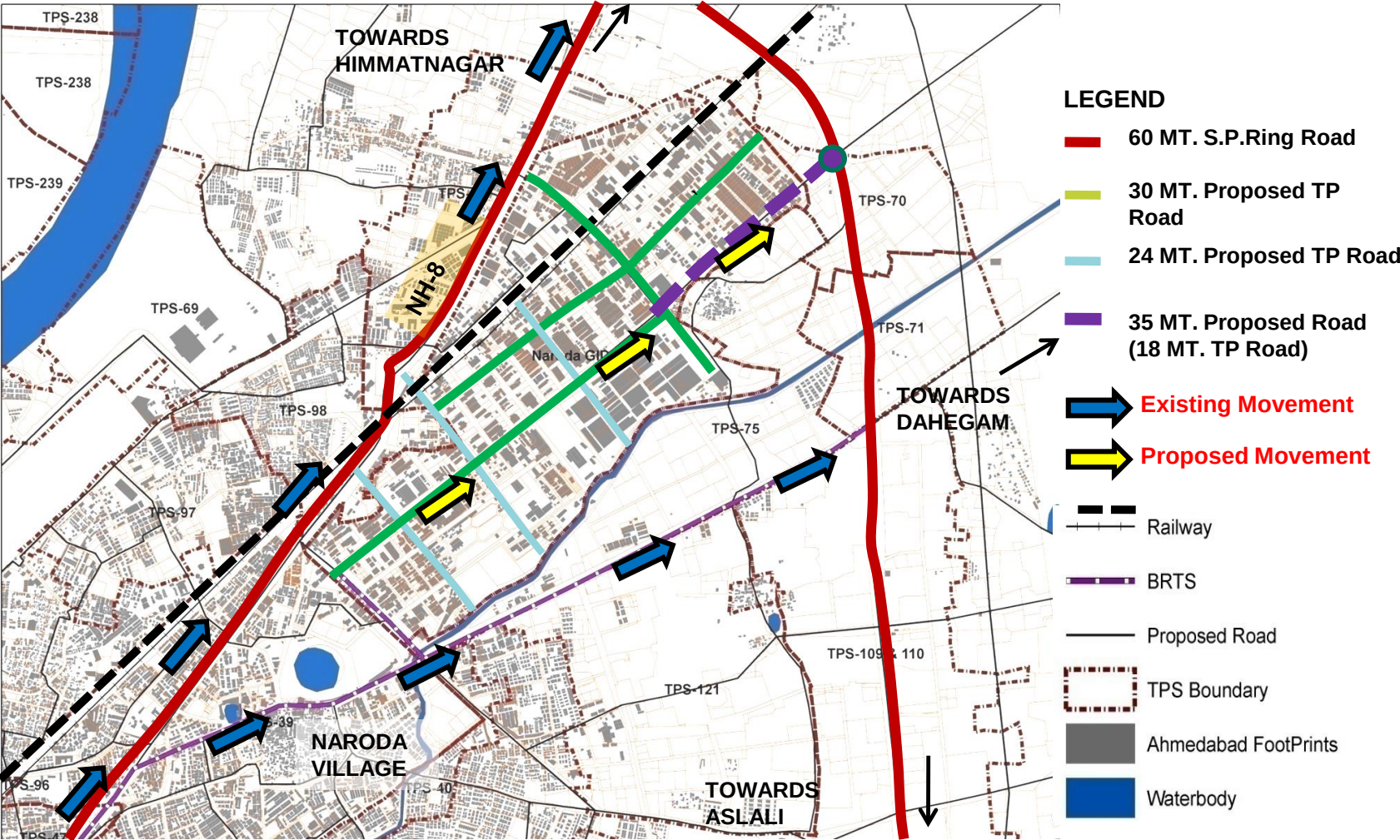
- Market operates within the provisions of the system.
- Private Sector focuses on profit maximization and each acts individually

LINKING GROWTH IN THE REGION

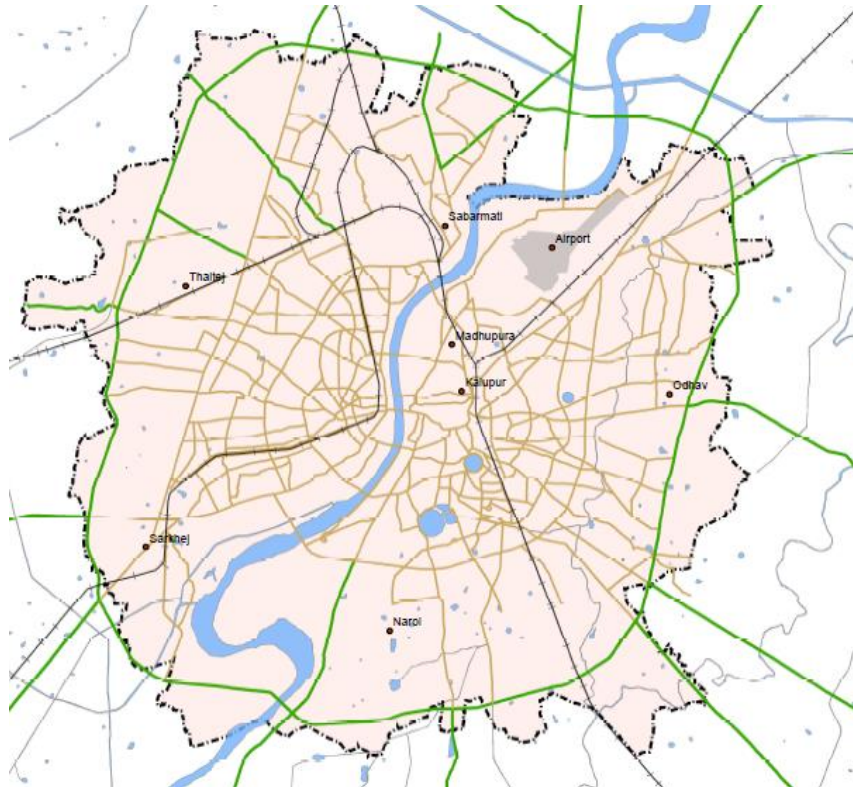


- Rail line passes through industrial area.
- About 30% of goods vehicles are multi-axle vehicles and use diesel fuel
- **About 55% of goods traffic has potential to shift to rail**

NARODA GIDC FREIGHT MOVEMENT PROPOSAL



FREIGHT MANAGEMENT



- No Restriction
- Allowed 9 pm to 9 am
- ▭ AMC Boundary

Redefined freight Routes and Time zones

- Night time delivery period : 11pm to 7 pm
- It is also advisable to discontinue off-peak time zone (from 1 pm to 4 pm).

Redefine Freight Access in GIDC Area

Provision for Parking and Transporter Facilities within GIDC Estates

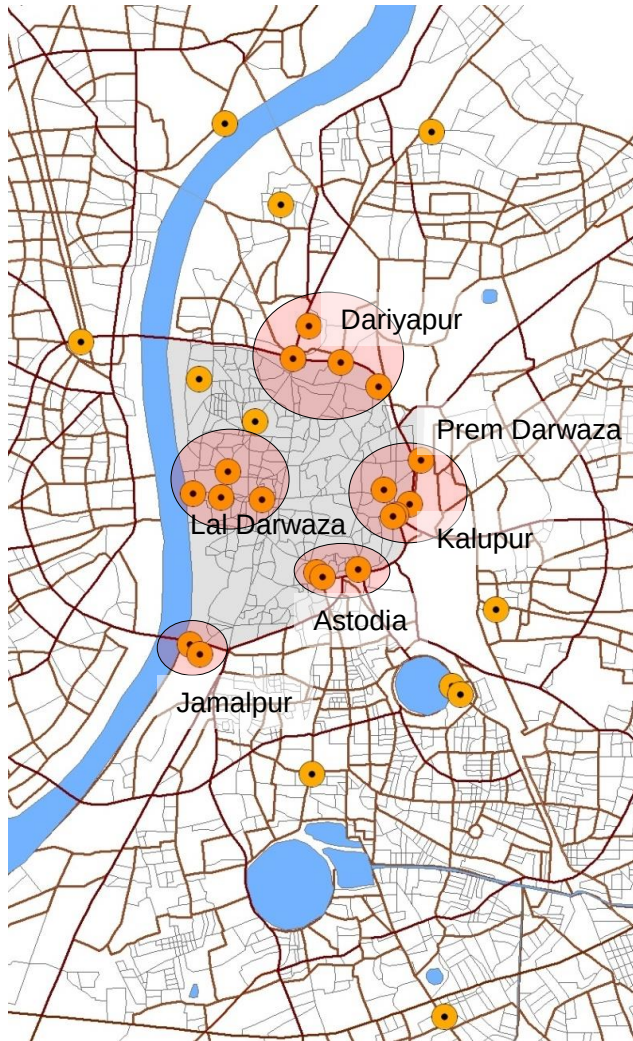
- - Naroda GIDC
- - Vatva GIDC
- - Odhav GIDC

Trucking Information Systems, Signage and Truck Traffic Control

Upgrading Warehousing and Transport Facilities

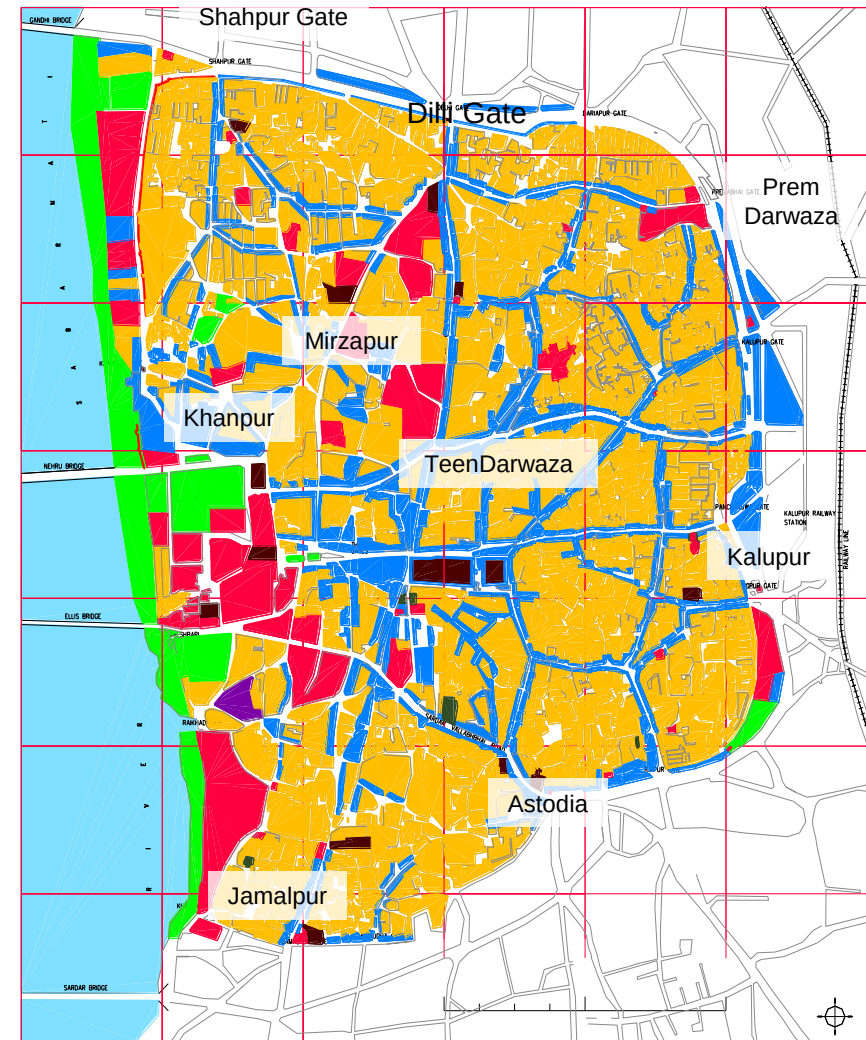
- Logistic Hub (Sarkhej & Aslali)

FREIGHT MANAGEMENT – HERITAGE SITES

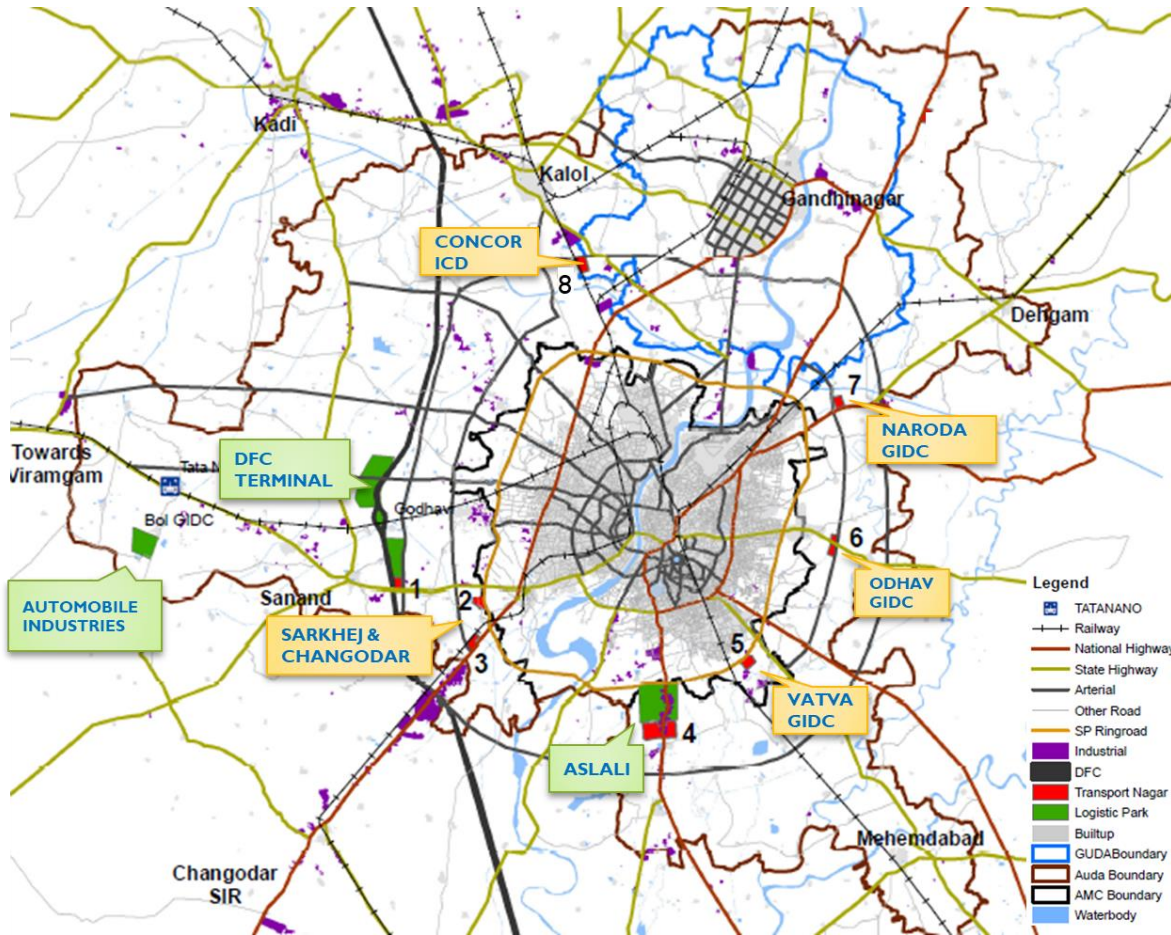


Legend

- Walled city area
- Heritage sites
- Major Roads
- Restricting Freight Movement



LOGISTIC HUB AND TRANSPORT NAGAR



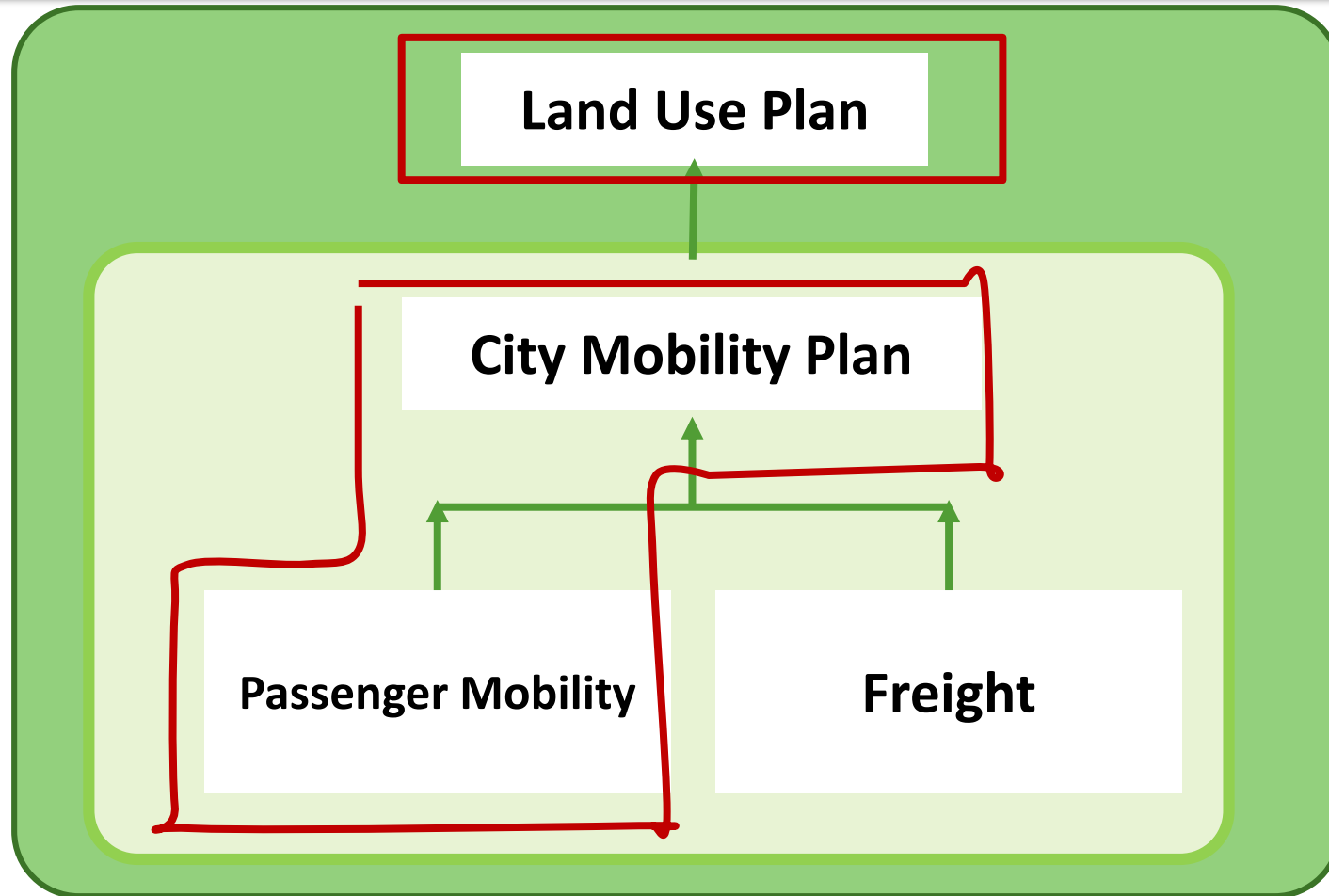
Establish Logistic Hubs Consolidation/Distribution Centers near commercial centers & city area.

Logistics hubs & Transport Nagar need to be integrated with the city logistic areas for smooth movement of goods.

Institutional Arrangements for developing UCCs

- Preference for legally constituted bodies involving main players to establish and oversee UCCs
- Commercial organization or logistics operator to take sole lead and decide legal and commercial framework to operate a UCC

URBAN PLANNING – MISSING LINKS



Local government/UDA should be responsible

SUSTAINABLE URBAN FREIGHT TRANSPORT SYSTEM

- ❑ To ensure the **accessibility** offered the transport system to all categories of freight transport
- ❑ To reduce **air pollution, greenhouse gas emissions, waste and noise** to levels without negative impacts on the health of the citizens or nature
- ❑ To **improve the resource and energy efficiency and cost-effectiveness** of the transportation of goods, taking into account the external costs
- ❑ To contribute to the enhancement of the **attractiveness and quality of the urban environment** by avoiding **accidents** and **minimizing the use of land** without **compromising the mobility of citizens**.

Source:

ACTIONS TO INTEGRATE FREIGHT IN TRANSPORT AND URBAN PLANNING

- ❑ **Knowledge and awareness** – To ULB, Technocrats, Politicians, Private players
- ❑ **Institutions:** Distributed responsibilities – UMTA
- ❑ Tweak Town Planning Act to include sections:
 - Prepare CLP
 - Prepare CMP to include both passenger and freight transport
 - Integrate CMP with Landuse planning
- ❑ Transport/Mobility Planning Divisions within Development Authority & ULB
- ❑ Incentivise infrastructure planning and development: Financing, PPP
- ❑ Database development (E-waybill, GST etc.)

DATA SOURCES

Primary Survey

Establishment Survey

Traffic survey

In-out

CVC

Parking Survey

Perspective Survey

Truck operator survey

Truck driver survey

Stakeholder consultation

Technology Based Data Management

- ❑ Technology based traffic data for regional and city level by commodities using GST, E-way bills and Satellite traffic monitoring systems through road side camera videos
- ❑ Creating **national, state and regional level data base** for freight and its commodities **using GST mechanism.**

DATA SOURCES

Primary Survey

Establishment Survey

Traffic survey

In-out
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Perspective Survey

Truck operator survey
Truck driver survey
Stakeholder consultation

Technology Based

E-Way Bill

Seasonality of movement

Origin of the Commodity

Destination of the Commodity

Nature/Type of the Commodity

Transportation Pattern/Purpose

Type/Size of the Vehicle

E-Way Bill No. : E-Way Bill date :

Generator : Valid from : Valid until :

PART-A	
A.1	GSTIN of Supplier
A.2	Place of Dispatch
A.3	GSTIN of Recipient
A.4	Place of Delivery
A.5	Document Number
A.6	Document Date
A.7	Value of Goods
A.8	HSN Code
A.9	Reason for Transportation
PART-B	
B.1	Vehicle Number for Road
B.2	Transport Document Number/Defence Vehicle No./Temporary Vehicle Registration No./Nepal or Bhutan Vehicle Registration No.

Approximation for the volume of commodity supported by Primary and Secondary information.

Thank You

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