

team PLAN

INTEGRATED LAND-USE AND TRANSPORT PLANNING FOR EFFECTIVE DECISION MAKING

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PROBLEM STATEMENT

The present top down planning approach and static master plans are unable to adapt the real time changes in cities of India which have different urban forms resulting in different and specific traffic layouts. There is a need to identify the various characteristics of transportation system with change in land use and identifying different reasons for traffic congestion. Hence, there is a need for a decision making tool by integrating change in land use and traffic impact analysis based upon real time data

Sutra 3: Not static masterplans but evolving ecosystem.

RATIONALE

Decision support tool using real time data in the urban data exchange platform to figure out how cities can actually take real time decision on new development and mobility interventions based on integrated approach toward land use and traffic management. The tool will have a collaborative intelligence gathering mechanism which would foster greater transparency in planning and act as a support system for decision-making and improving efficiency in operations

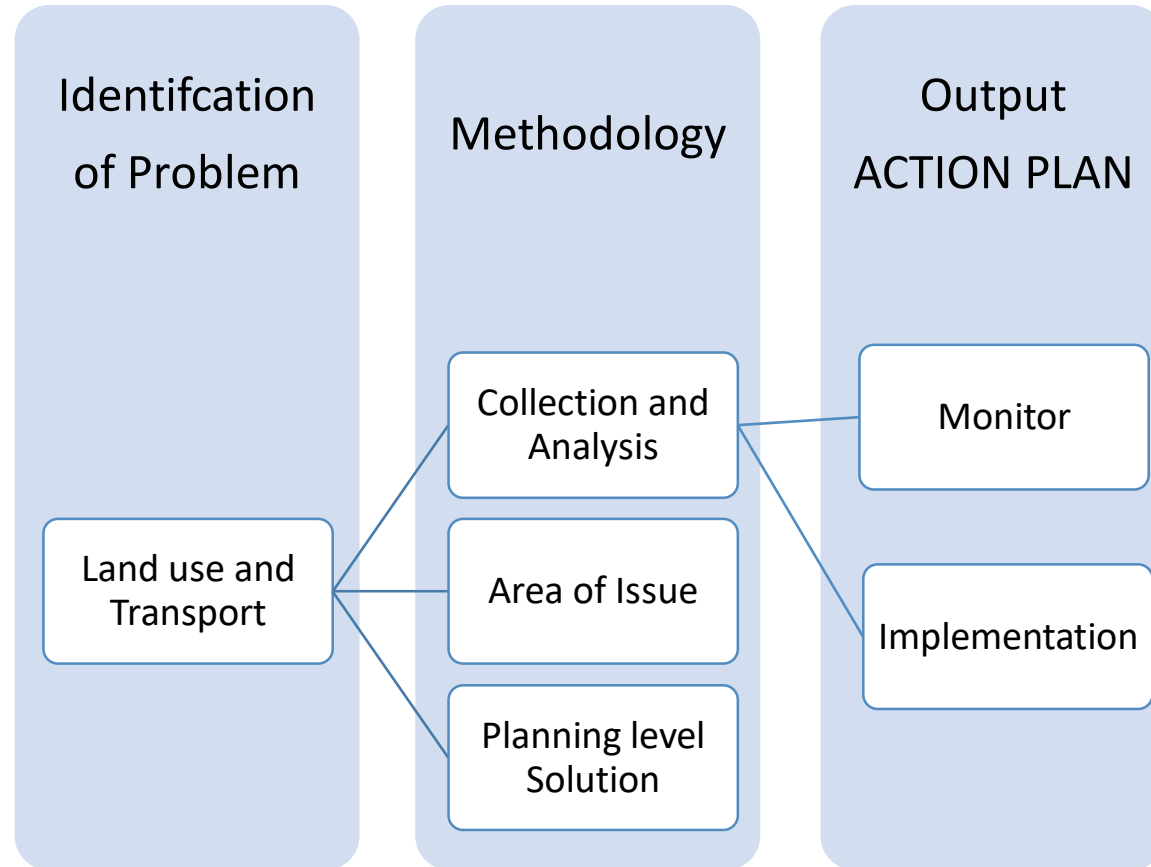
AIM

To integrate land-use and transport planning for effective decision making based upon real time data.

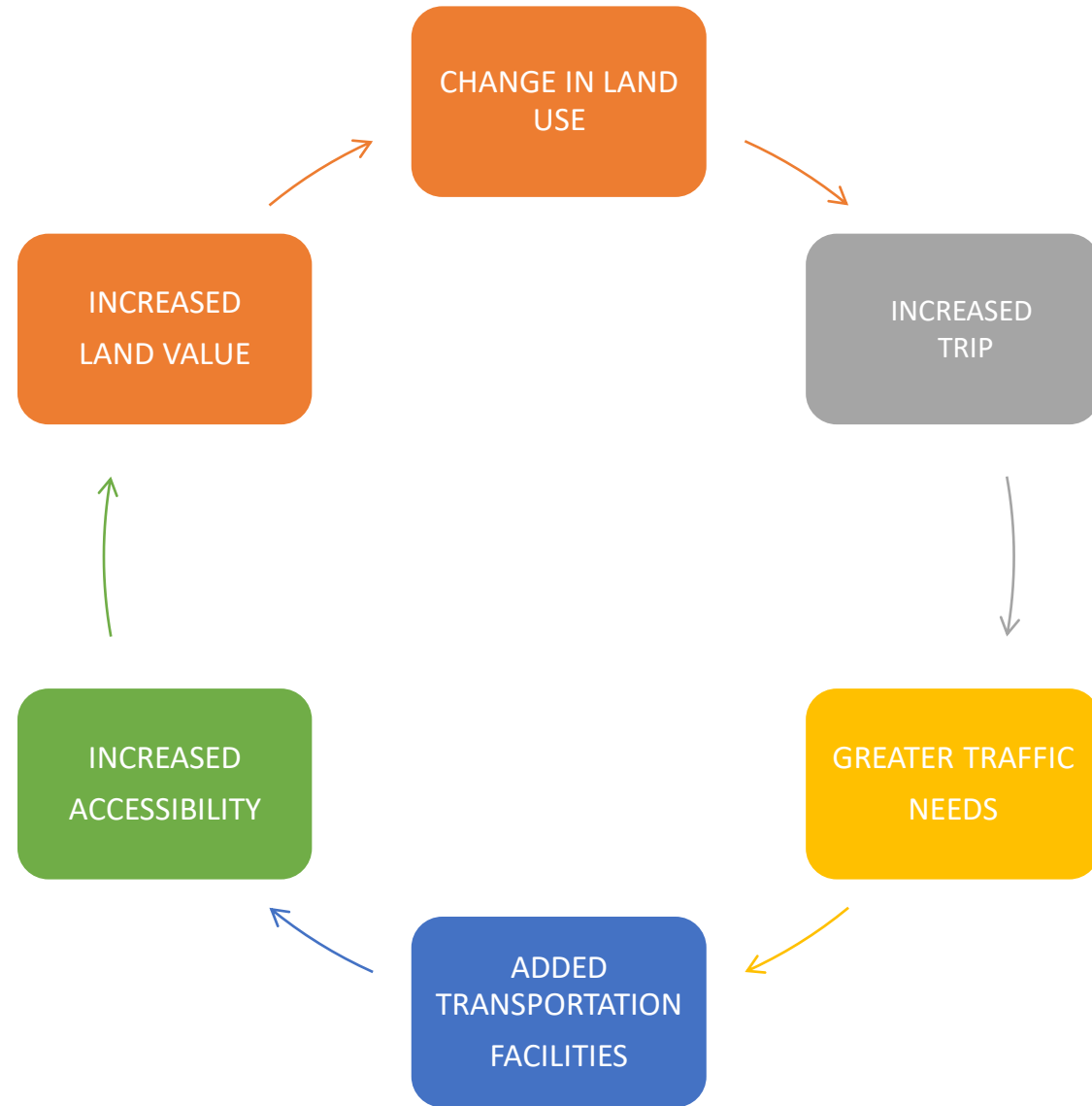
VISION

To strengthen the dynamic planning process by integration of transport and land use as a tool.

Framework



LAND USE — TRANSPORT CYLCE





METHODOLOGY

1

- **Identification of the Problem – Traffic**

- Cities in India have different urban forms resulting in different and specific traffic layout. There is a need to identify the various characteristics of transportation system and identifying different reasons for traffic congestion in different cities.

2

- **Data Collection - Traffic Data**

- Google API, DataCorp Traffic etc. can be used to collect professional transportation data across country.

3

- **Analyze the Data**

- The traffic data needs to be analyzed over a period of time to understand nodes and junctions of traffic using ICCC and different tools available to analyze data

4

- **Identification of Issue Areas**

- Issue areas can be identified by analyzing daily, weekly and monthly traffic data like average speed data etc. This would help to identify major affected areas which can be then studied in detail to identify the root cause behind it. Depending upon the causes, particular solutions would be worked out.

5

- **Solutions**

- A traffic action plan would be prepared to incorporate planning and design level interventions for the issue areas which would be a comprehensive plan made considering the land use, density etc.

6

- **Implementation**

- The plan prepared through the process would be implemented across different areas in the city.

7

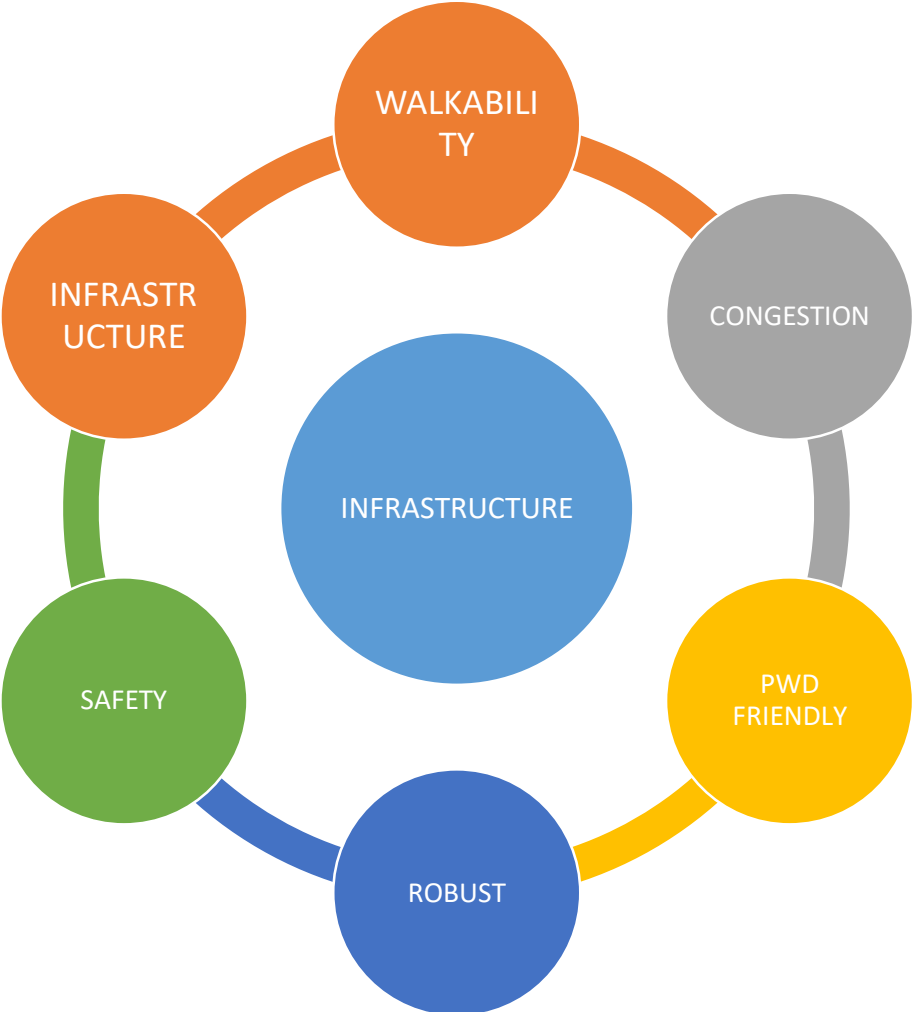
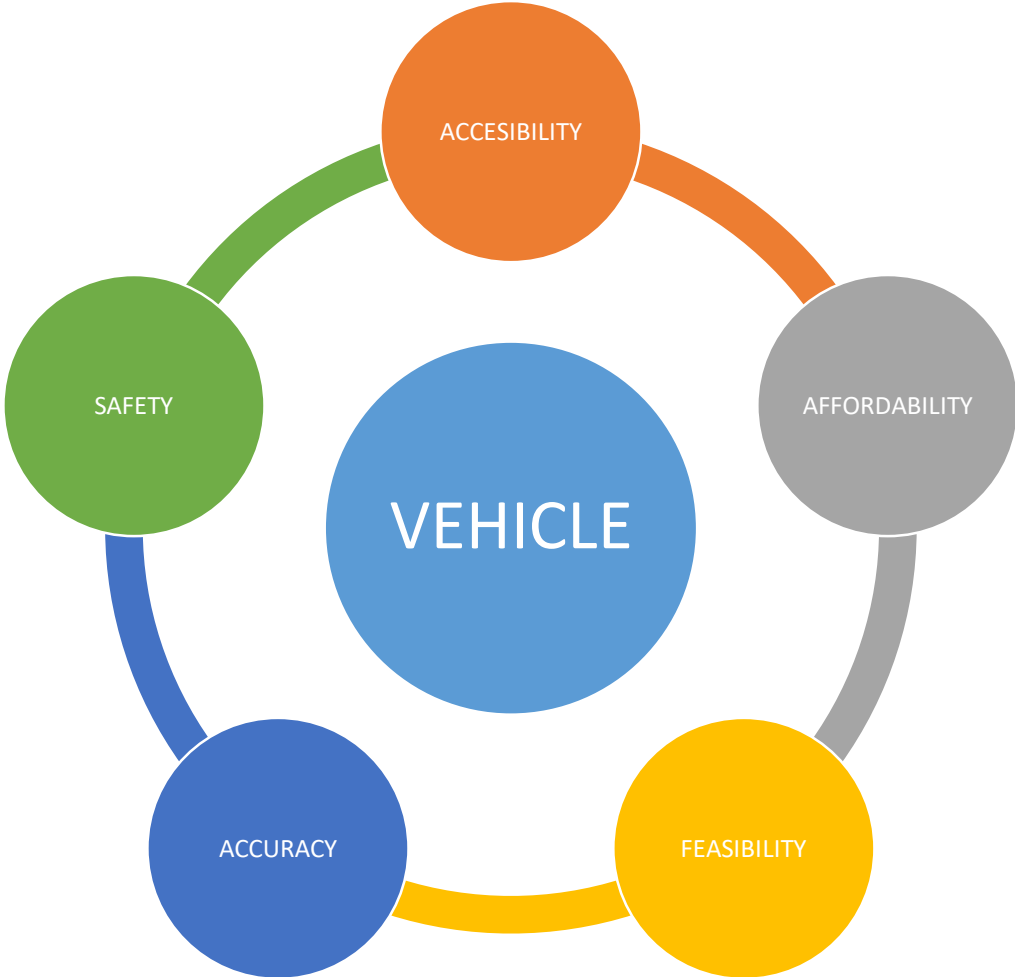
- **Monitoring**

- These implemented solutions will be monitored over a period of time to further analyze the critical issues faced due to traffic congestion and would be duly updated depending on the real time monitoring.

PARAMETERS TO ANALYZE TRANSPORT

PARAMETERS to analyze TRANSPORT

Collecting transport data from different agencies and getting them on one platform. Analyzing the data in terms of



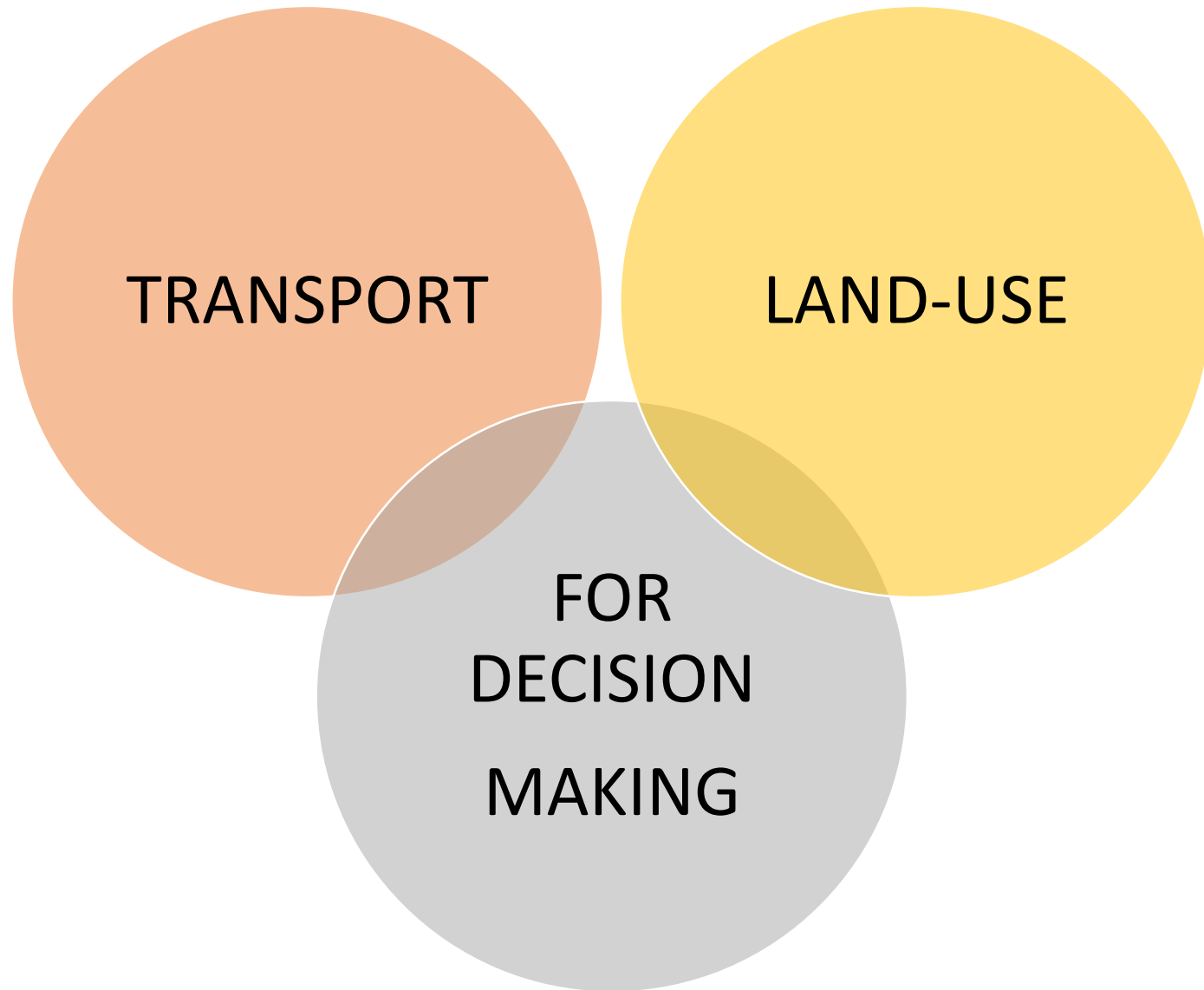
PARAMETERS TO LAND USE

PARAMETERS to analyze LAND-USE

Collecting Land use data from present masterplan and identifying changes by studying previous plans.
Analysing the the data in terms of



Overlapping TRANSPORT and LAND USE layer.



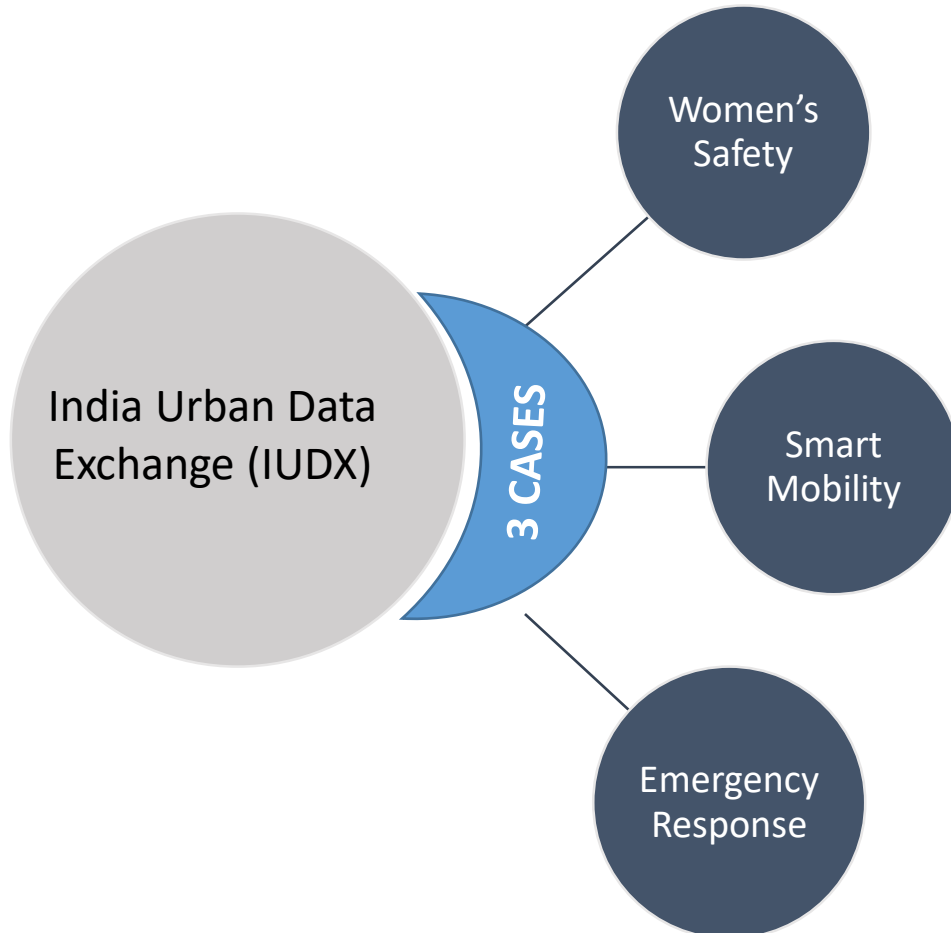


BENEFICIARIES

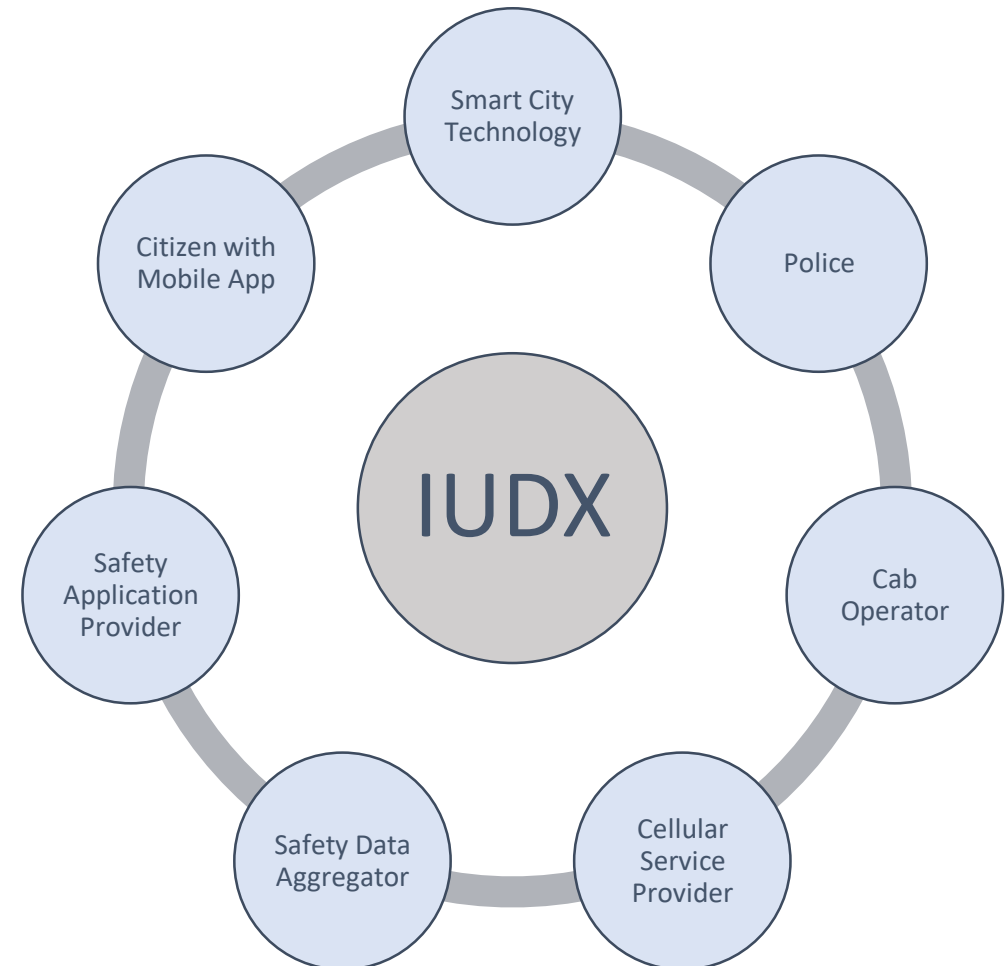


India Urban Data Exchange (IUDX); an open source data exchange software platform by Indian Institute of Science (IISc), Bangalore and Ministry of Housing and Urban Affairs (MoHUA) under Smart Cities Mission

IUDX Use Cases



IUDX Live Safety Index



TECHNICAL SUPPORTS

- I. ESRI India Technologies Limited, Noida, Uttar Pradesh
- II. Indian Institute of Human Settlement (IIHS), Bangalore
- III. City ICCC
- IV. City Transport Department

CITY SELECTION PARAMETERS

1. Ahmedabad

2. Pimpri Chinchwad

3. Kohima

Cities Selection:

I. Project DPR

II. Different Tier

III. Geographical location

IV. CEO's invitation/willingness



SAMPLE STUDY

EXPECTED OUTCOMES

Corelating traffic congestion data with Land Use

- Layers**
- Land Use 2019
 - LandUse 2006
 - grievance
 - Willingness for PBS
 - Circle Rate
 - AQI
 - NMT
 - Bus
 - Metro
 - Roads
 - Off Street Parking
 - Green Space
 - World Traffic Service >



Definition Query

+ Land-Use 2019 []

- Land-Use 2006 []

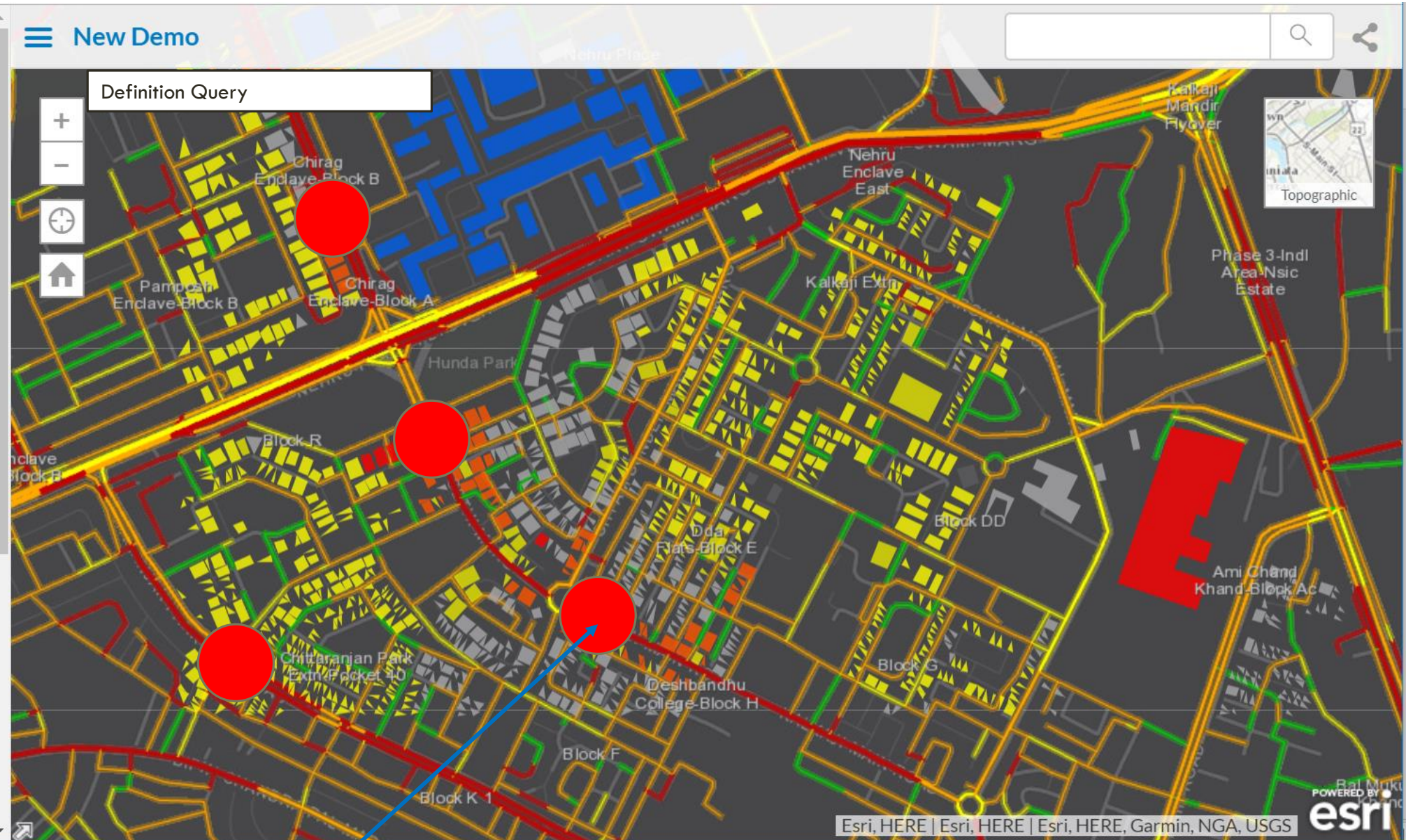
Home Traffic Movement- Critical []

name	type	Height	Landuse_20	property_T	Willingnes	Household
45, District Centre, Nehru Place	Commercial	32.00	Commercial	20,000.00	No	0
Eros	Commercial	32.00	Commercial	20,000.00	No	0
		3.00	Hospital	0.00	NO	0
	Commercial	32.00	Commercial	20,000.00	YES	0

Legend About Layers

Layers

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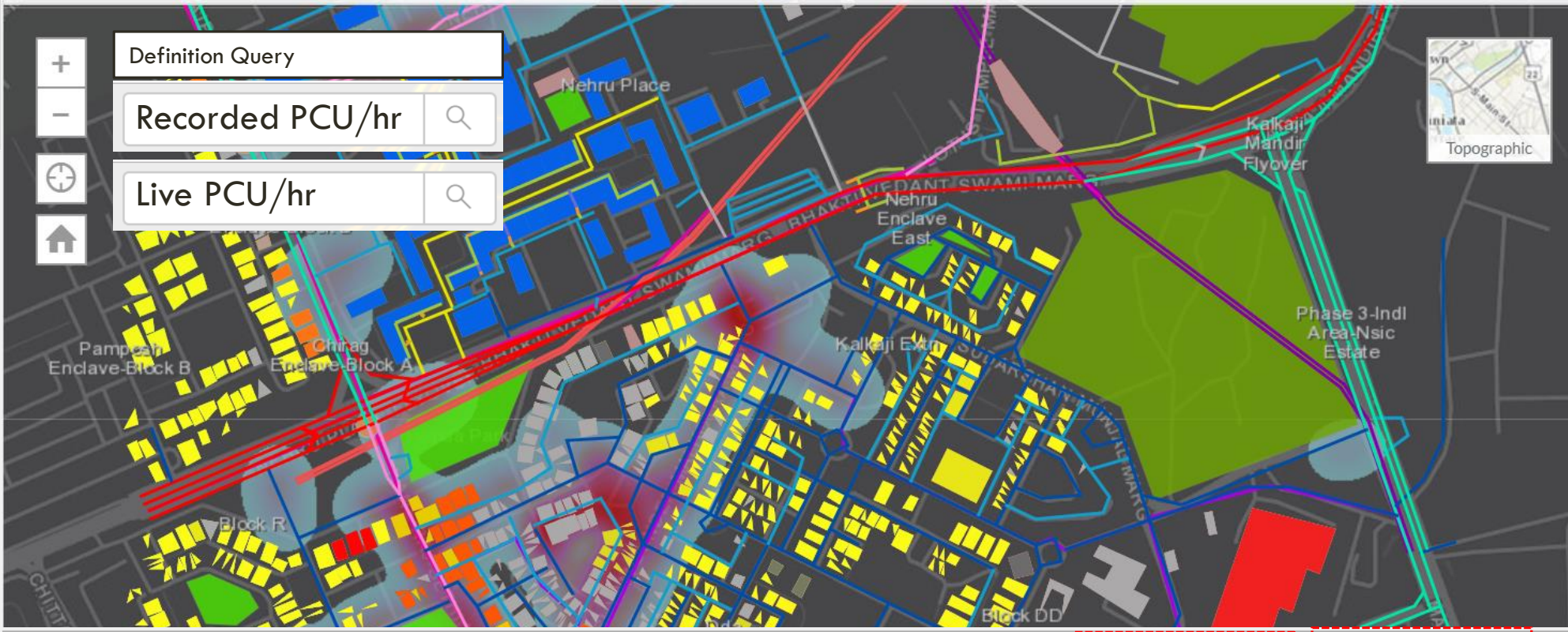


Traffic Congestion due to change in Land Use

Legend

roads_kalkaji

- primary
- primary_link
- secondary
- collector
- tertiary
- pedestrian
- service
- footway
- steps
- corridor
- Other



	type	oneway	bridge	maxspeed	Road_Width	Road_Wid_1	Reco_PCU_h	RT_PCU_hr
	primary	1	0	0	0.00	0.00	5,400.00	6,005.00
	primary	1	1	0	0.00	0.00	3,600.00	4,200.00
	secondary	1	0	0	0.00	0.00	1,500.00	1,200.00
	secondary	1	0	0	0.00	0.00	1,200.00	1,300.00

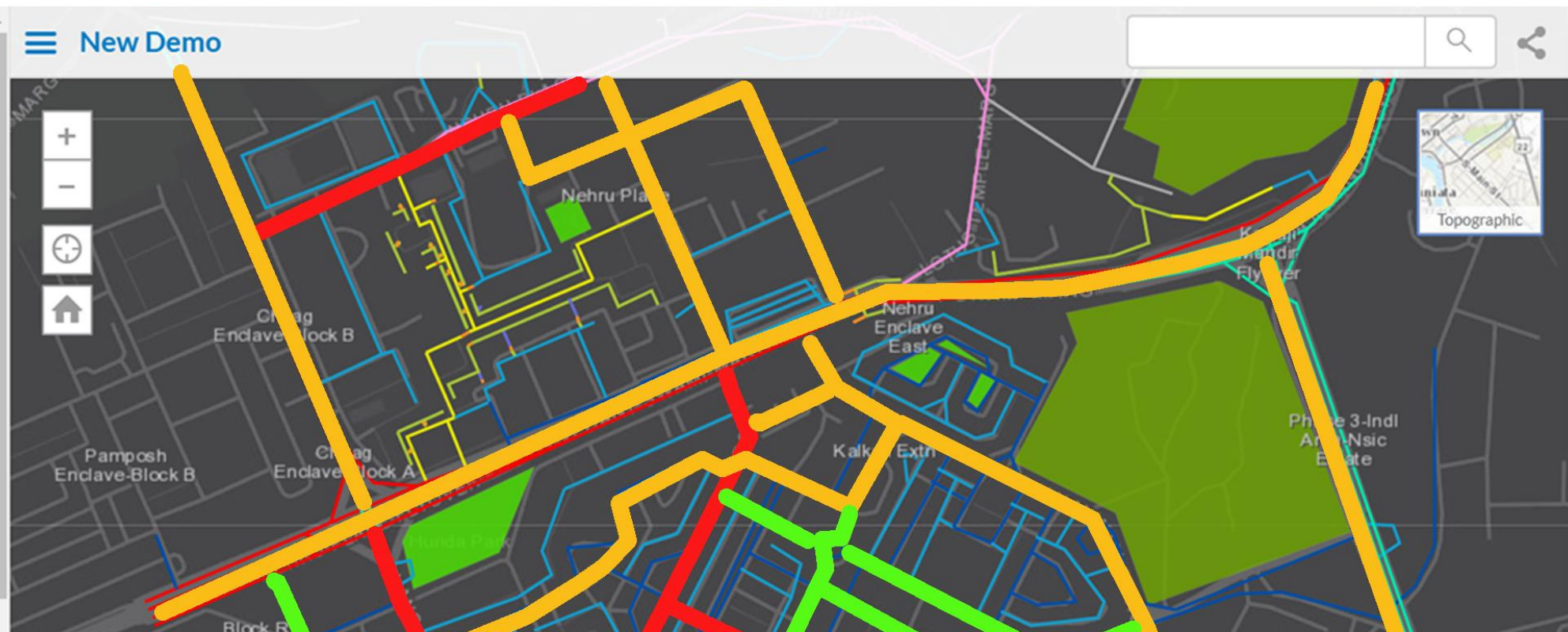
Recommended PCU/hr (IRS)

Live PCU/hr

Legend About Layers

Layers

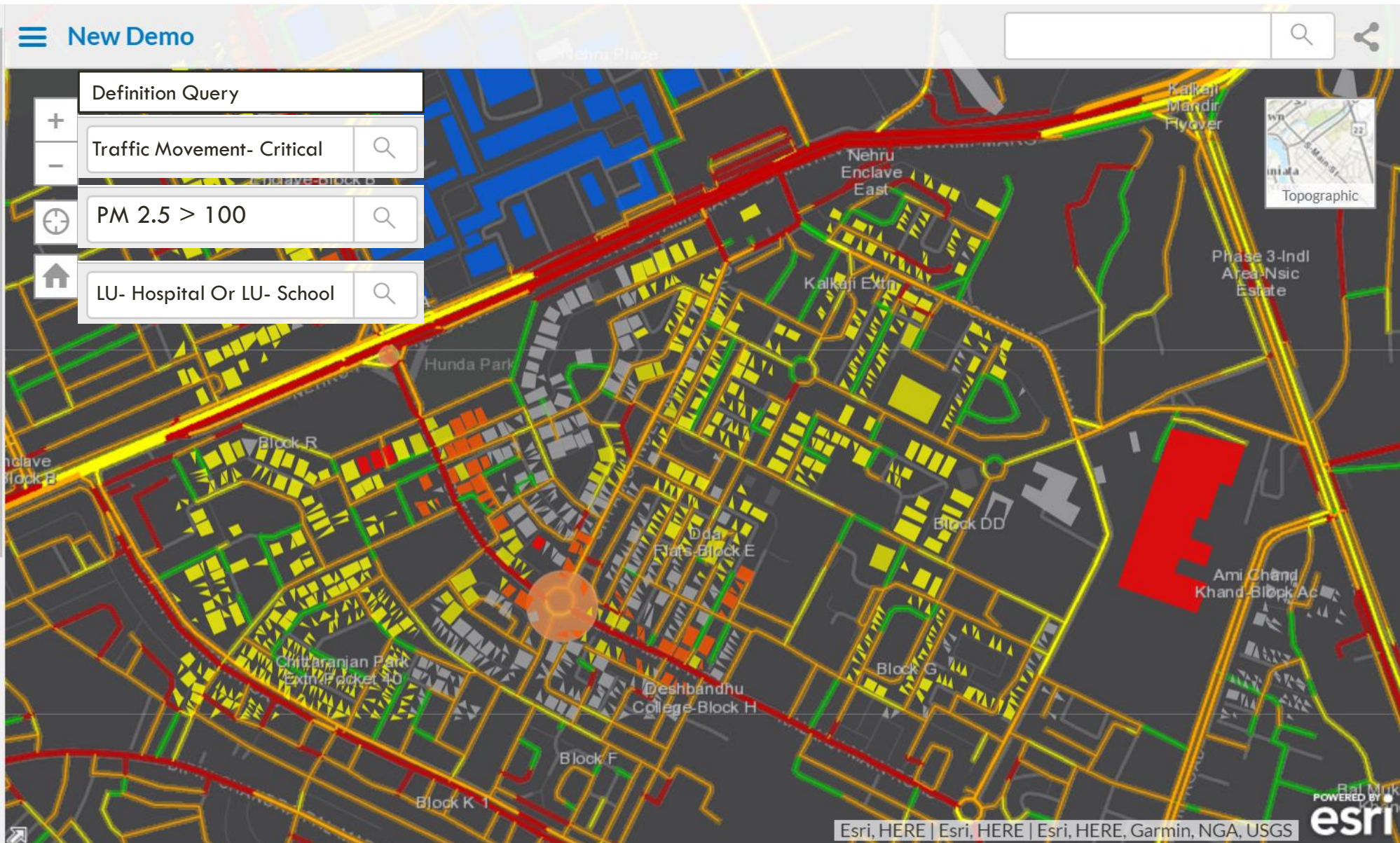
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type	oneway	bridge	maxspeed	Road_Width	Road_Wid_1	Reco_PCU_h	RT_PCU_hr
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primary	1	1	0	0.00	0.00	3,600.00	4,200.00
secondary	1	0	0	0.00	0.00	1,500.00	1,200.00
secondary	1	0	0	0.00	0.00	1,200.00	1,300.00

Corelating traffic congestion data, Pollution data with Land Use

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Legend



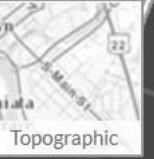
About



Layers



New Demo



Topographic

Layers

Land Use 2019

LandUse 2006

grievance

Willingness for PBS

Circle Rate

AQI

NMT

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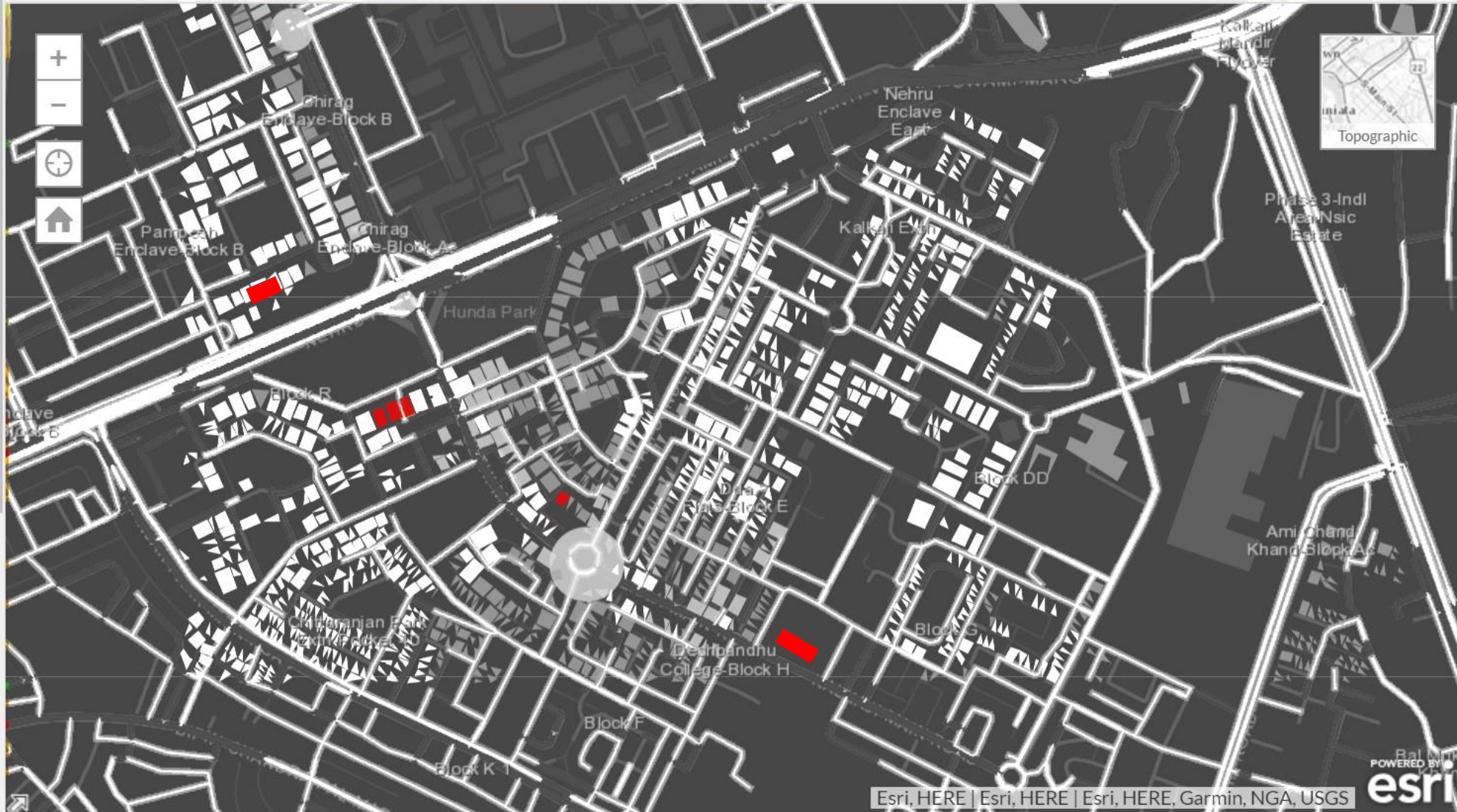
Metro

Roads

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Green Space

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Possible scenarios according to algorithm modelling

2 Propose new NMT routes or Cycle routes



1 Change in built-use



3 Propose possible one lane (one ways)



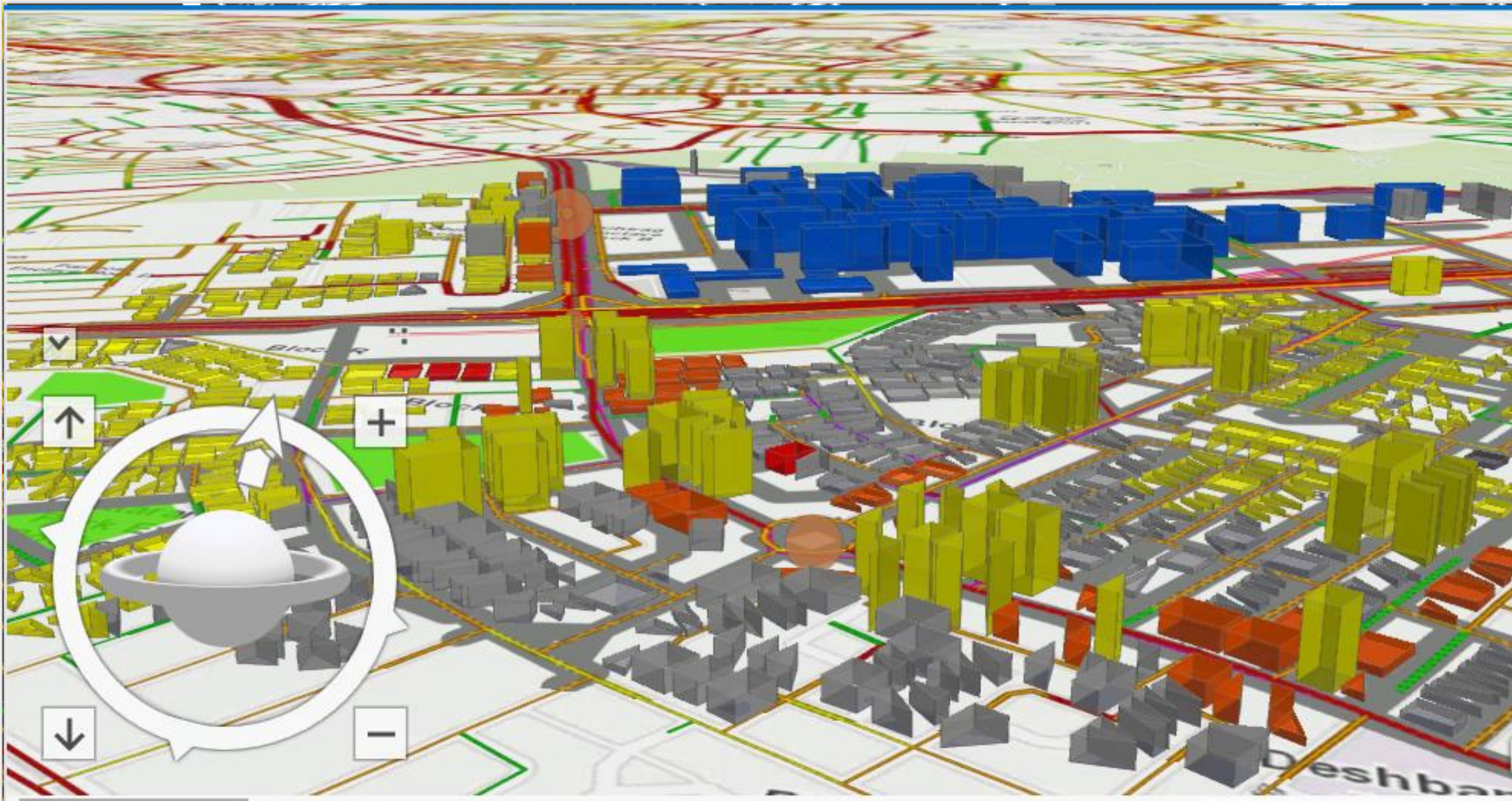
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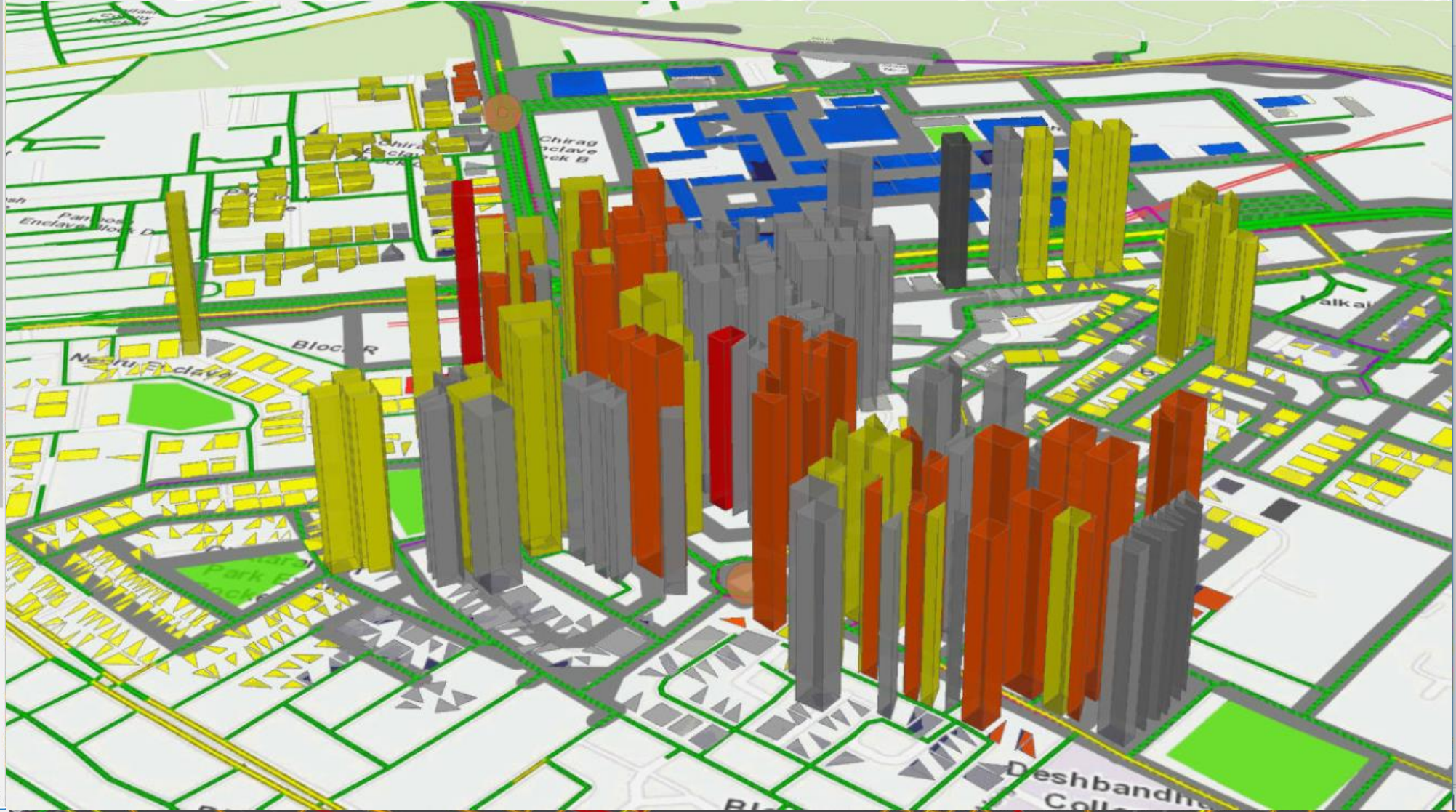


PLAN ACCORDING TO DENSITY

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THANK YOU