



BHOPAL SMART CITY

Bhopal Smart City has been envisioned as to be 24/7 activity based, thriving and energetic place where people will live work and play. This integrated **live-work- and play** concept is an approach to sustainable, which giving residents and workers great convenience to commute with a reduce time, within their living environment in terms of convenient access to amenities and facilities around include through land use coordination of carefully balanced areas of residences, office, education, medical and entertainment area.



CITY PROFILE:

- *Bhopal District Area : 2772 km²*
- *Bhopal Municipal Corporation Area: 413 km²*
- *City Population : 2,371,061*
- *Population Density: 855*
- *Population Growth Rate : 28.62%*
- *Proportion of Population to Madhya Pradesh : 3.26%*
- *City Sex Ratio: 918*
- *Child Sex Ratio : 920*
- *Females : 1,134,931*
- *Males:1,236,130*
- *Average Literacy Rate: 80.37%*
- *Female Literacy Rate : 74.87%*
- *Male Literacy Rate : 85.42*

CITY Diagnosis:

Water



Total Water Supply:-
125 LPCD

Total Water Demand
:- 135 LPCD

Pipeline Network :-

- 1781 KM Pipeline Covered
- 494 KM Under Construction
- 225 KM without Pipeline

NRW :-50.31%

Extent of Metering :-
19.75%

Collection Efficiency:-
70%

Storage Reservoirs:-

- Total – 139 reservoirs
- Total Storage Capacity – 171.949 MLD

Sewerage & Sanitation



Total Present Sewerage Network:-466 KM

Required Sewerage Network:- 2000KM

Present Treatment Capacity :-
74.53MLD

Sewerage Treatment Capacity Required:- 2MLD

%Area Coverage by Sewer Lines : 24%
Total Sewerage Pumping Station :-
21

Total Sewerage Treatment Plant :-
7

Sewerage Collection Efficiency :- 31.85%

Sewerage treatment Capacity Efficiency :- 80%

SWM



Total Solid Waste Generation :-
802.35 TPD

Waste Collection Efficiency :-

- 85% in the Middle income group
- 57% in Gated Colonies

Household Level Coverage

- 77% in the Middle income group
- 62% in old city
- 10% in slums

User Charges:-
Rs. 69.68/ton

No. of Vehicles/day running for SWM : 77

Capacity of Compost Plant:
120MT

Transport



Total Length of Roads :- 2500 KM

Total Vehicles Running in Bhopal :- 57,552

Maximum e & Minimum Traffic Zone Respectively :-

- Hoshangabad Road
- Vidisha Road

Average Speed on the network of Bhopal :- 30 kmp/h

Average Trip Duration in Bhopal – 21 minutes

% Distribution of Vehicles: -

- No Vehicle – 31%
- Two Wheelers – 56%
- Both Car & Two Wheeler - : 12%
- Cars Alone: - 1%

Storm Water Management



Total zones of Drain in Bhopal –: 22 Zones

Length of Storm Water Drains:-

- Total Required – 1620 KM
- Constructed – 451 KM
- Natural Drain – 30 KM
- Road Side Drain – 421 KM

Total No. of Drains in Bhopal :- 25

Coverage of Municipal Area by Storm Water

Drainage:-

- 24.57%

Extent of Sewerage Mixing in the drains- : 80%

Extent of Water Logging :- 30%

Energy



Total Energy Supply :

- 1951.46 million units (in 2014-15)
- 1832.75 million units (2013-14)
- 1750.34 million units(2012-13)

Total AT&C & T&D Losses :

- 26.58% (in 2014-15)
- 28.1% (in 2013-14)
- 29.55% (in 2012-13)

No. of Substations :-

- 132/33 KV Substation – 5
- 33/11 KV Substation – 67
- 11/0.433 KV Transformers- 8431

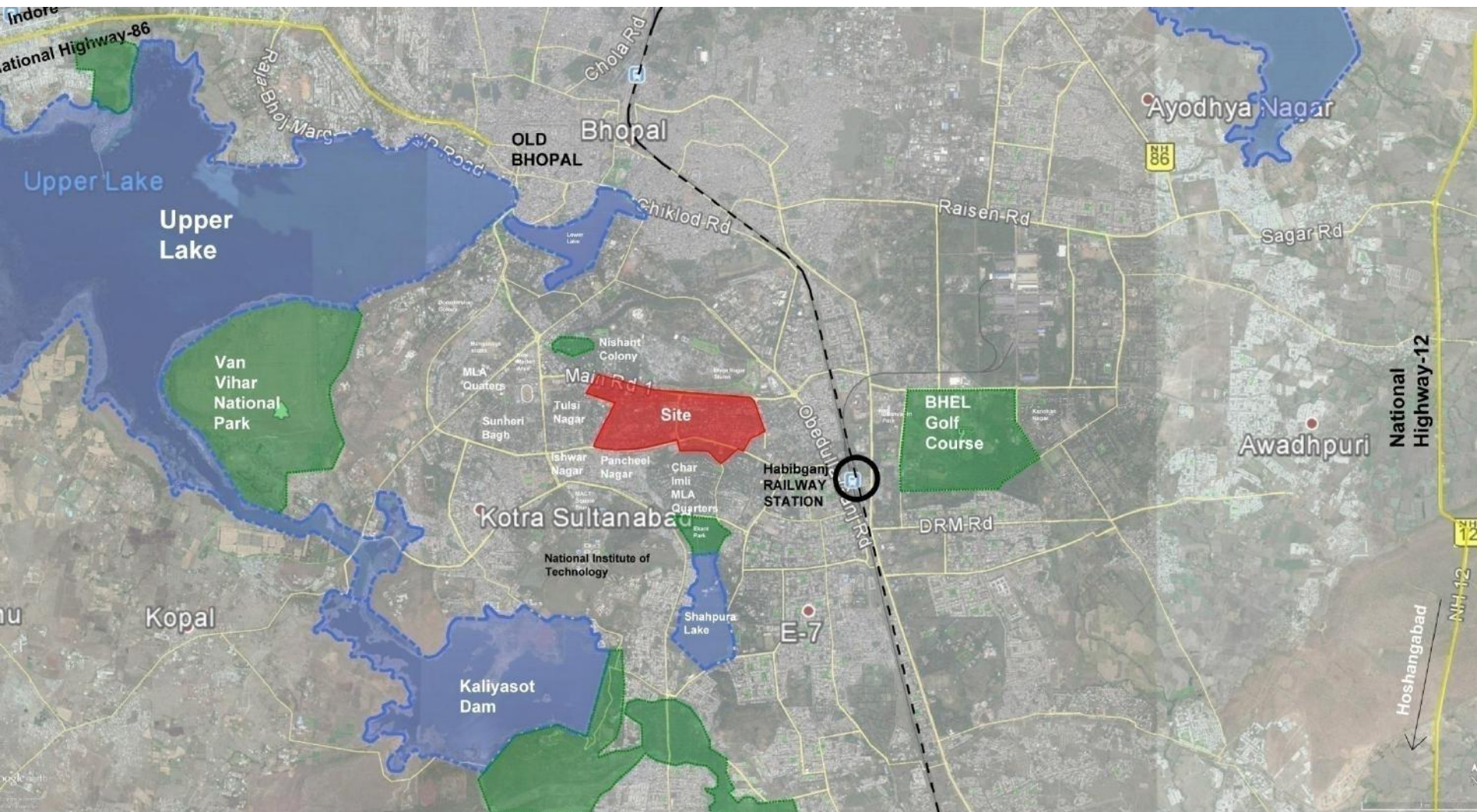
Billing & Collection Efficiency :-

- Average Billing Efficiency : - 74%
- Collection Efficiency : 99%

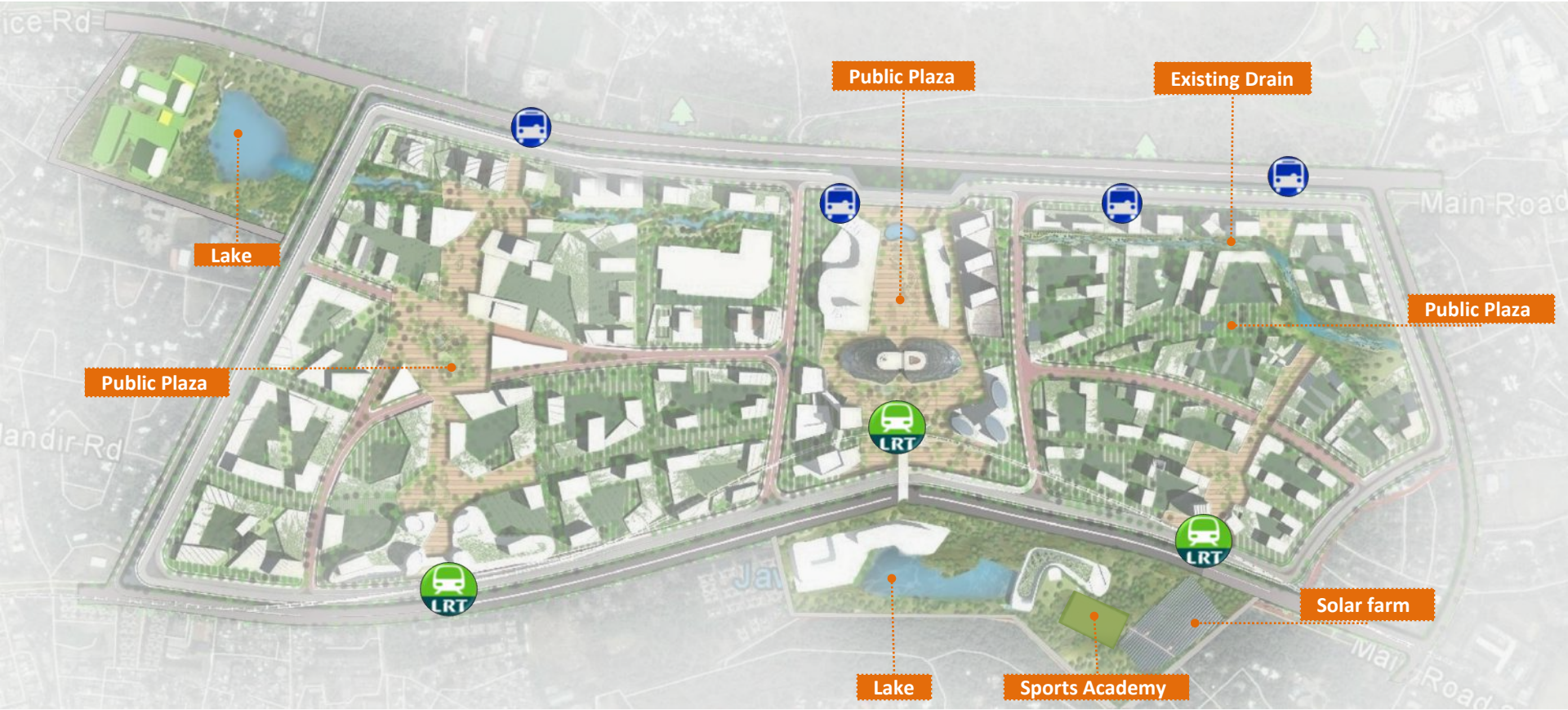
Extent of metering : Till consumer level

SITE CONTEXT:

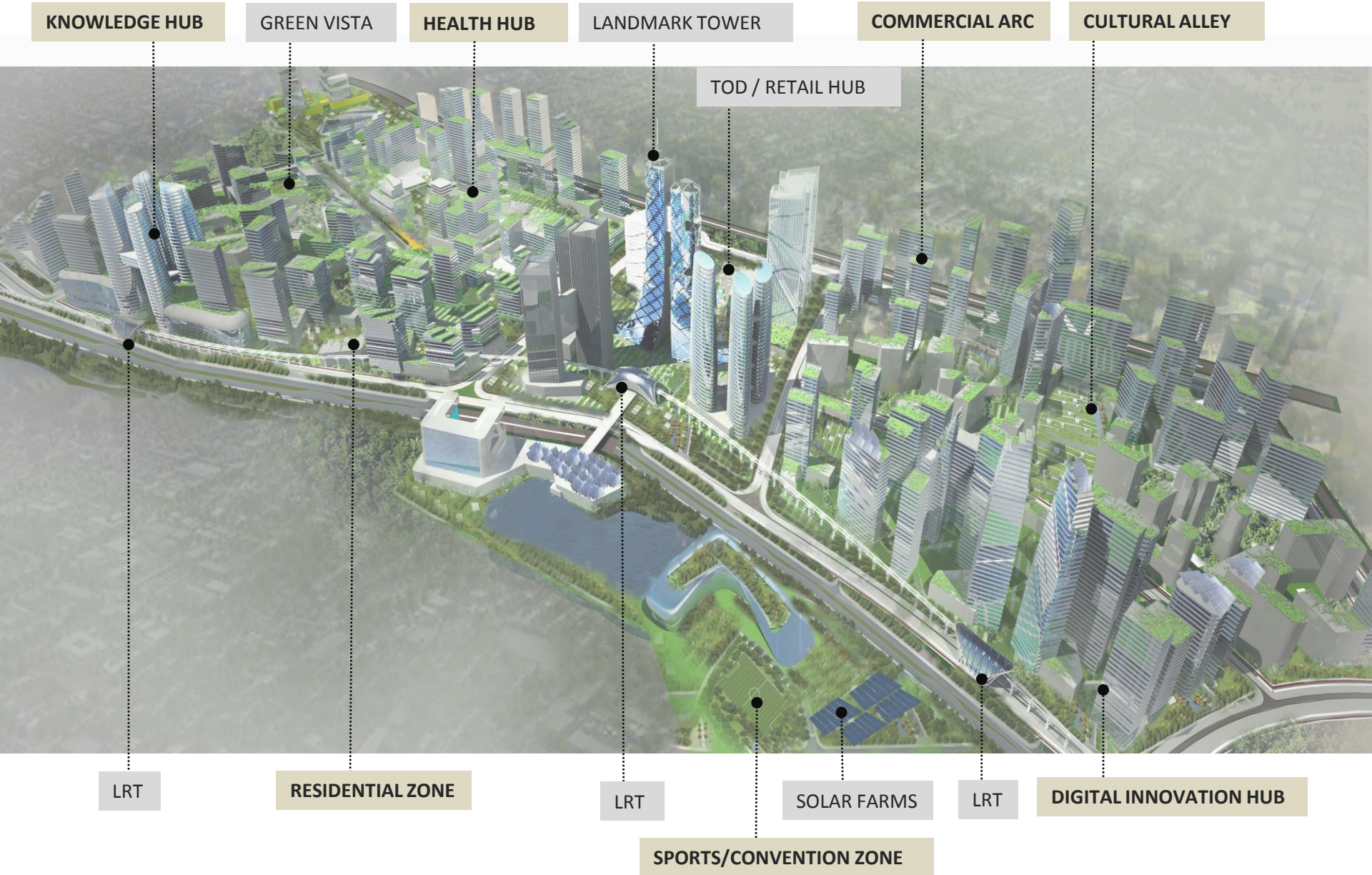
The Proposed Site for Redevelopment is located in Shivaji Nagar Area, with approx. area of 350 acres. The Site is near to Habibganj Railway Station and next to existing BRT corridor.



MASTERPLAN



PLANNING ELEMENTS



ESSENTIAL FEATURES OF SMART CITY



Rain Water Harvesting / Detention

Energy Efficient Buildings

Robust Internet Connectivity

Affordable Housing

24x7 Electricity
Solar Energy Rooftop

Vehicle Free Development

Vibrant Open Spaces

Energy Efficient Street Lighting

Mixed Use

Smart Sensors / CCTV

Intelligent Traffic System / Smart Parking

Adequate Water Supply

Encouragement to Walking & Cycling

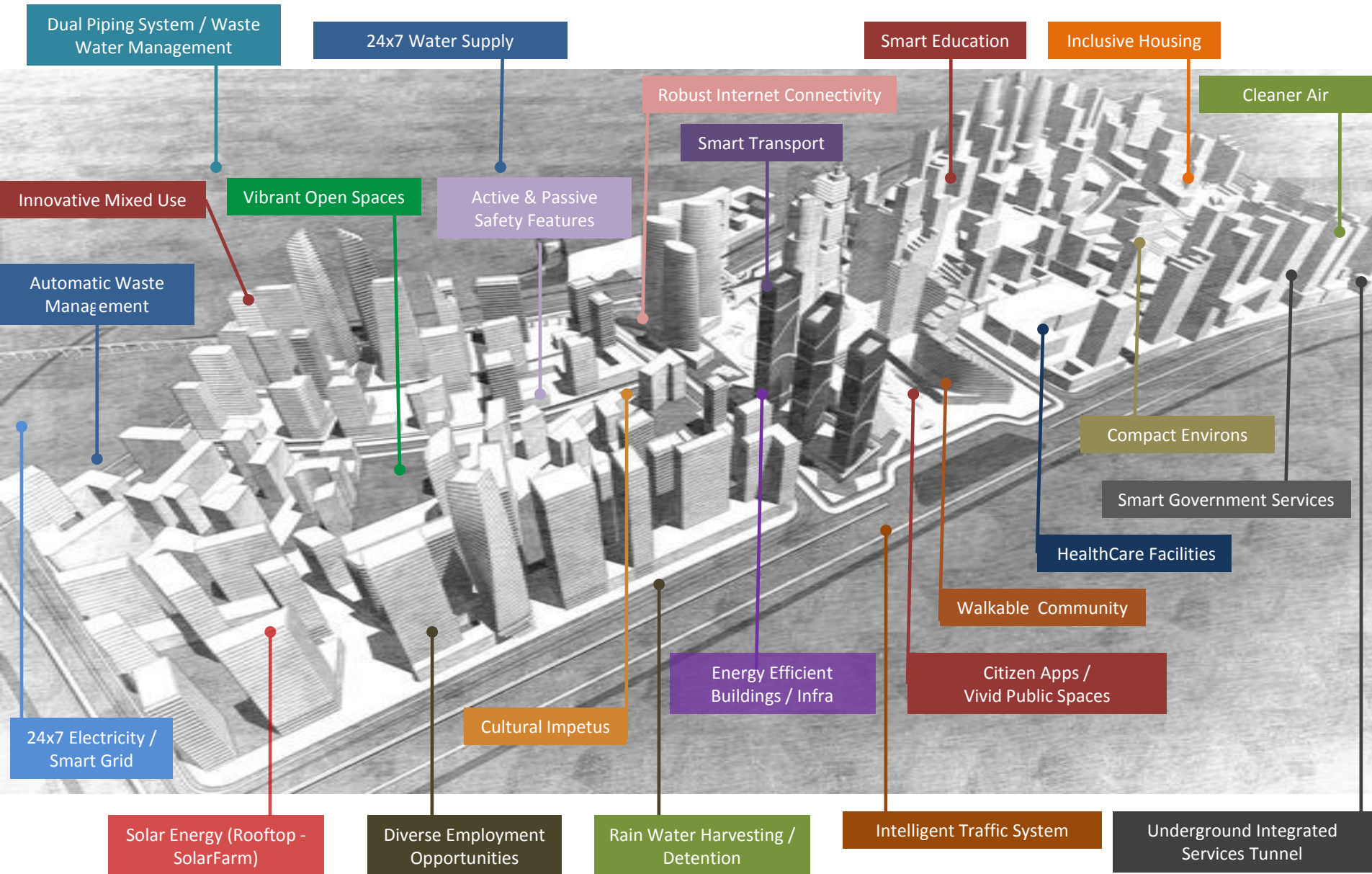
Public Toilets / Solid Waste Management

Underground Integrated Services Tunnel

MULTI-MODAL TRANSPORT INTERCHANGE



SMART COMPONENTS



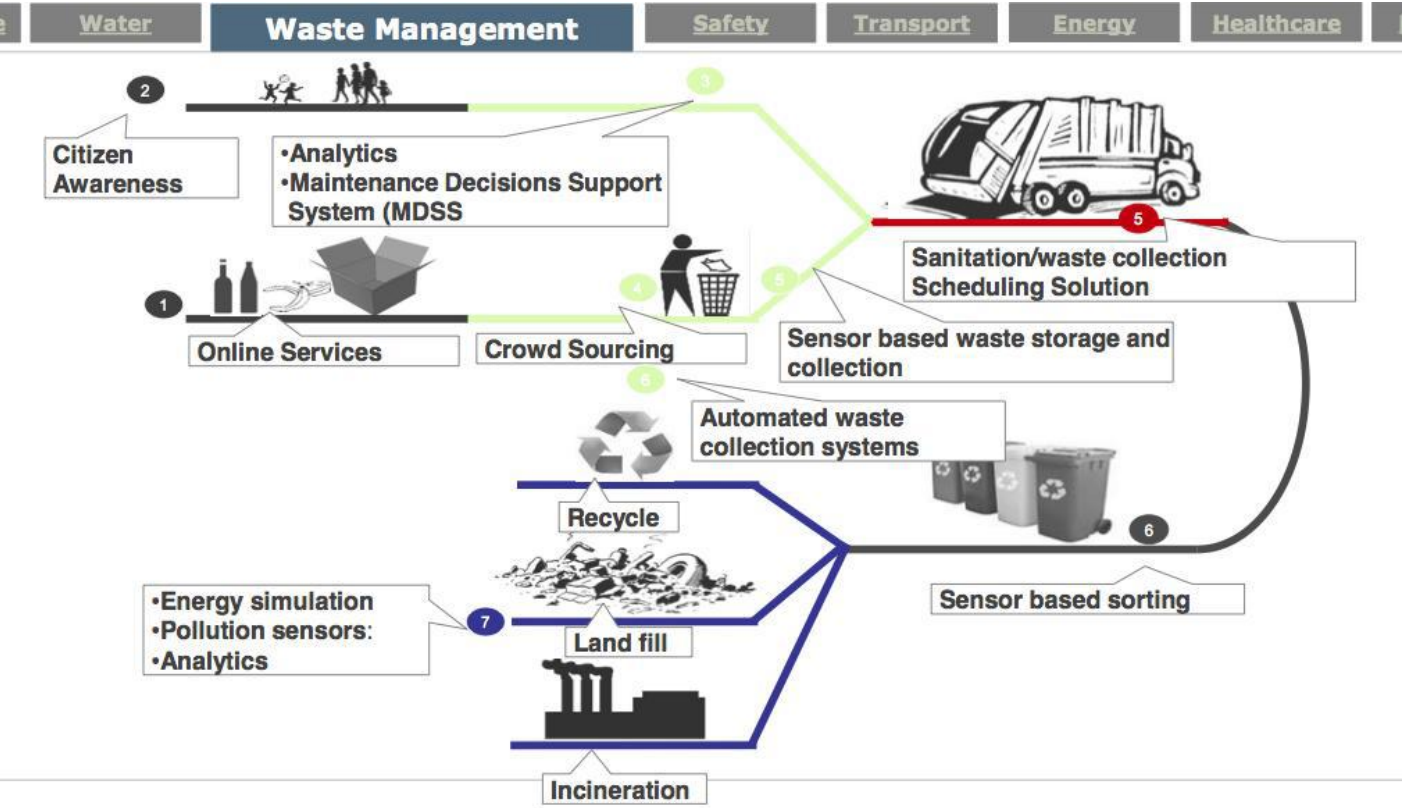
Pan city

Bundle of city governance, public services and infrastructure projects.



Smart Cities Mission Bhopal.....Accelerating Transformation !

SOLID WASTE MANAGEMENT



SMART AND INTELLIGENT STREET LIGHT

SMART LIGHTING SYSTEM

