



SMART CITY  
CHALLENGE

Round

3

SATNA MUNICIPAL  
CORPORATION

Consultant  
Mehta & Associates  
Indore

# Round II Highlights

Selected ABD as Greenfield Site of 662 acres

Total Cost of Smart City Proposal : 1665.50 Cr.

## Area Based Development

(Cost Rs 1176.10 Cr)

- Mixed Use Development
- Residential Development including Affordable Housing
- Small and Medium Scale Industrial Development
- City level green network with innovative Use
- TOD Transit Corridor
- Smart Physical, social and economic Infrastructure

## Pan City Proposals

(Cost Rs 330.40 Cr)

Smart and Safe Environment

- ICT based Air Monitoring
- ICT based Water and Waste Management
- ICT based Safety Management
- City Green Management

Smart Learning and Living

# Proposal | ROUND 2 — PULSE ABD Area



## Precinct SENSES *The Residential Cluster*

The five typologies of Residential Areas within the development form the five senses, through which citizens shall experience the highly designed built environment. Affordable Housing units, Low Income Housing Units, Middle Income Housing Units, High Income Housing Units as well as Mixed Use Units form the five senses within PULSE.

196 Acres



## CORE Precinct *The Commercial Node*

The Core of PULSE is formed by its commercial and business district. It forms the physical and socio economic crux of the whole development with all the other districts dependent on it for their functioning. Accentuated urban form as well as vibrant uses render a strong character to this precinct, forming the identity of PULSE.

98 Acres



## SOUL Precinct *The Green Network*

The extensive network of greens running through the development forms the soul of PULSE. With large city level open spaces, canal front development as well as local level greens, the urban scape of the city shall be unified, offering its residents a pure and soulful urban environment.

92 Acres



## HEART Precinct *The Cultural Centre*

The heart of the development, The Cultural and Recreational Precinct, pumps energy and vigour within PULSE. The active lake front conjoined with arts, crafts and cultural activities forms the recreational hub within the development offering an enjoyable experience to the residents.

55 Acres



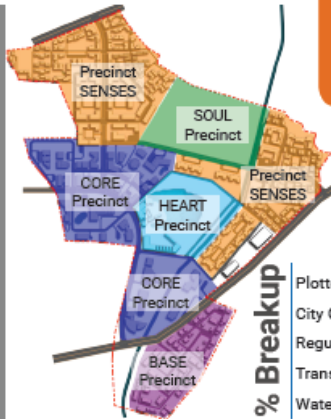
## BASE Precinct *The Industrial Hub*

The industries form the base of the development, providing the necessary thrust for the functioning of PULSE.

67 Acres

Satna's proposal envisions a Greenfield Development of **662 acres** of the city to a vibrant **24x7** destination

PRECINCTS



BUILDING USE



## The Life Cells *Essential Elements*

Smart Learning  
Smart Hospitals  
Air Quality  
Safety and Security

## The Nerves *Smart Signals*

Power Supply, Source and efficiency  
Underground Utilities  
IT Connectivity

## The Support System *Smart Infrastructure*

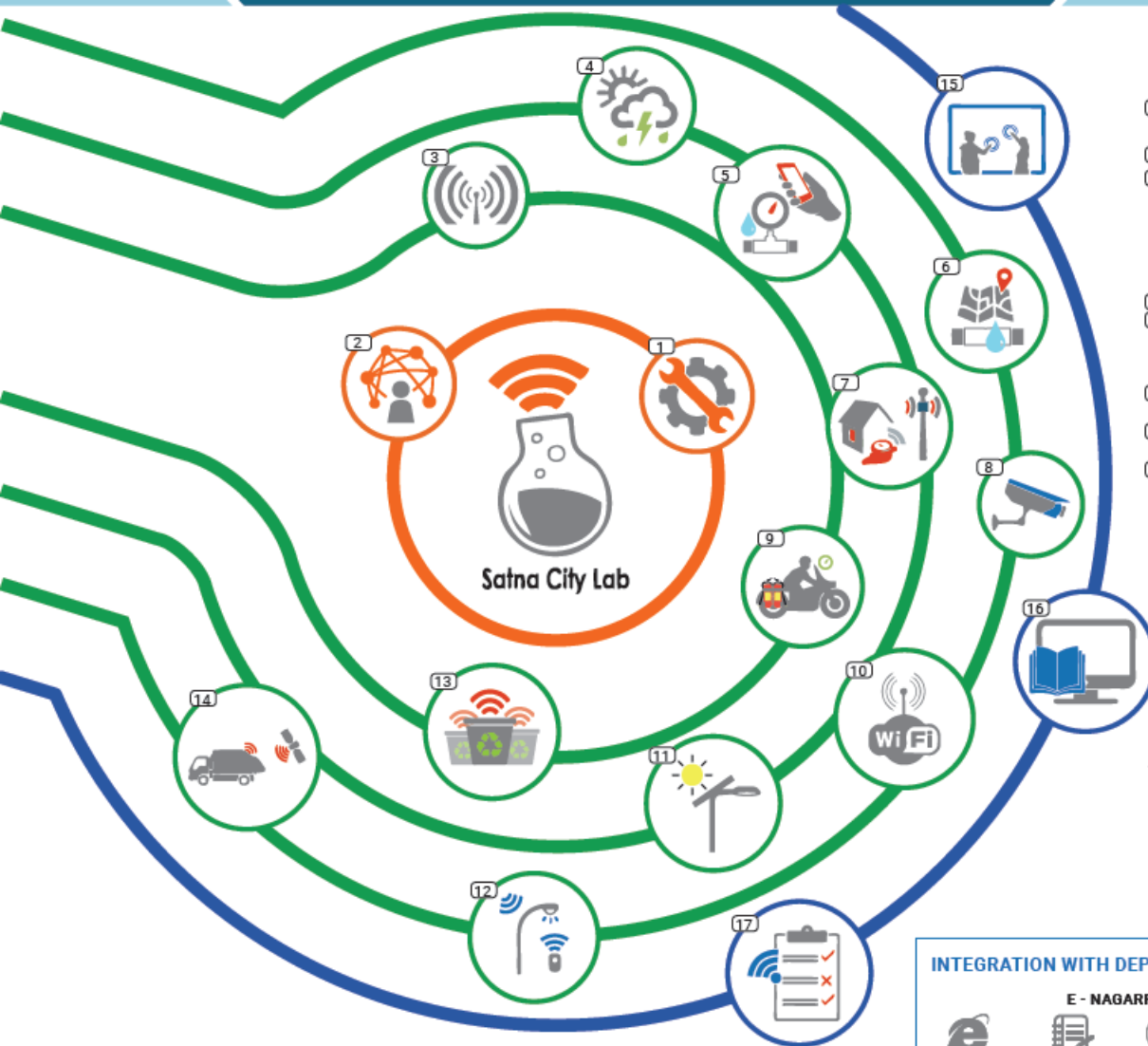
Water Supply & Reuse of Recycled Water  
Waste Water Management  
Storm Water Drainage  
Solid Waste Management

## The Spine *TOD Corridor*

Smart and efficient Mobility



FEATURES



### CENTRAL COMMAND & CONTROL CENTRE (SATNA CITY LAB)

- 1 Central command and control centre at SMC building
- 2 City dash board application
- 2 Multipurpose backbone communication network

### SMART & SAFE ENVIRONMENT

- Air monitoring**
  - 3 Environmental sensors
  - 4 Weather and pollution monitoring software
- Water monitoring**
  - 5 SCADA system and mobile based water supply monitoring
  - 6 GPS based Leak Detection Mechanism
  - 7 Smart meters with AMR and AMI
  - Smart waste water monitoring meters
- City green management**
  - Extensive city wide greening

### INTEGRATION WITH ADD SMART FEATURES INCREMENTAL DEPLOYMENTS IN FUTURE

Smart Parking	Intelligent Traffic Management	24X 7 water supply	Smart Energy & Utilities Management
Smart Meter & SCADA	Solar Energy Generation	Smart Education	Smart Bins

### City Safety Management

- 8 Surveillance cameras
- 9 Fire fighting and Disaster Management
- 10 Wi-fi hot spots
- 11 Solar panel on street lights
- 12 Energy efficient street lighting
- Heavy vehicle movement management at city level and monitoring of transport nagar

### Waste Management

- 13 Waste storage and dustbins
- 14 GPS based Vehicle Tracking Management System (VTMS)

### SMART LEARNING & LIVING

- Conversion of existing government schools in to smart schools
- 15 E-boards with screen sharing
- 16 E-digital libraries
- 17 Wifi enabled data management and evaluation system
- E-Anganbadis with online monitoring of mid-day meals, registrations and management, ICT based skill development centre upgradation

### INTEGRATION WITH DEPLOYED MODULES

**E - NAGARPALIKA**

e-Governance	Accountability	Transparency	Info & Services
--------------	----------------	--------------	-----------------

### SAFE CITY

Monitoring, Responsive Centre & Integrated Security Surveillance System  
**Dial 100 Scheme (24x7 Police Service to People)**

within 5 minutes



# Issues

Though the proposal was well conceived, proposal needs to address these issues in more elaborate way

1. Rational justification for choice of Green-field Model of Development
2. Response on the questions on strategic blue-print & vision
  - Improvement in linkage with SWOT analysis and components of ABD Proposals
3. Being a Green-field project response to questions on ABD proposal needs to explain following more elaborately
  - Economic benefits of the project to the existing city
  - Suitability of the project structuring for such an ambitious investment to be financially feasible while ensuring market sustainability
  - Phased and incremental implementation plan to ensure availability of employment opportunities in tune with pace of skill development.
  - Land Pooling as a tool for land assembly with benefits to all stakeholders involved
  - Robustness of financial model, which ensures monitory funds for existing city's Infrastructure as well as replicable future smart city ABD Areas

# Issues

Though the proposal was well conceived, proposal needs to address these issues in more elaborate way

4. The previous Proposal contemplated financial convergence with core urban infrastructure schemes like AMRUT and Swahh Bharat Mission,
  - Rather being a financially lucrative proposal ABD Area surplus revenues should be used to meet municipal corporation contribution for such core infrastructure asset creation Schemes
5. Being Green Field Project many of the proposals need to effectively detailed out with supporting Key indicators to show adherence to all the essential smart city features
6. Previous Pan-City Proposal lacked in
  - Rational Packaging of ICT Components based on core function, ICT hardware and software requirements

Satna is known as the world's largest cement producing district.

Asia's biggest cement factory known as "Prism Cement" is here.

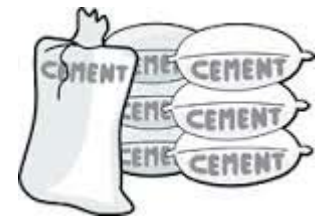
**8**  
Cement plants



**10348**  
Permanent  
Employees



**9% of**  
Total domestic production



## Contribution of different sectors

- Primary sector = 20 %
- Secondary sector = 29 %
- Tertiary sector = 51 %

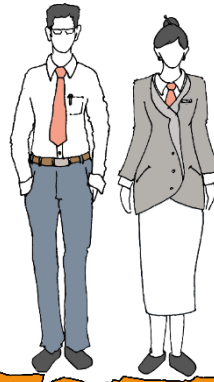
# Employment

A very low employment generation is through industries and services sector

3.5%

*In migration*

SKILLED Workforce

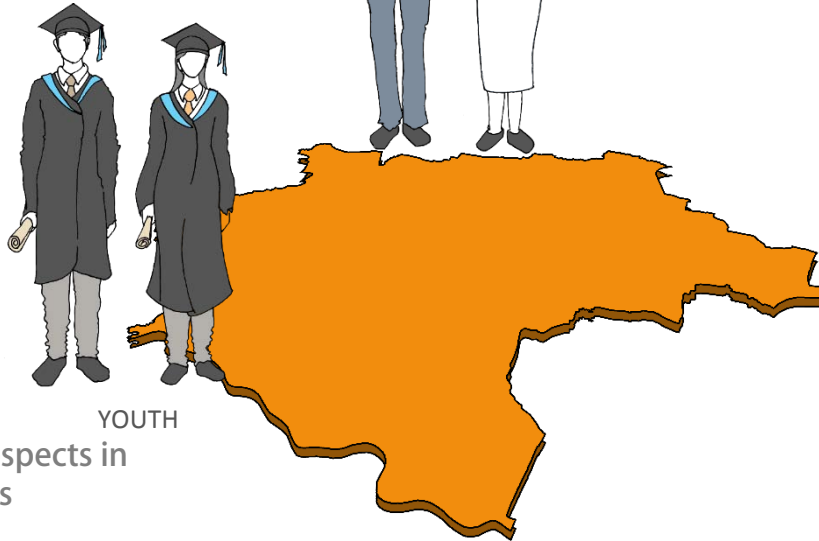


UNSKILLED  
Workforce

Damoh  
Panna  
Rewa  
Chattarpur  
Katni  
Parts  
of southern UP

*Out migration*

Bhopal  
Indore  
Jabalpur



YOUTH

Better employment prospects in other Cities and Regions

*City is losing their Assets*

*Providing Diverse Economic opportunities in the way*

*Un-skilled work force is liability for City Government*

*Upgrading their skill levels is the way*



### Startups

Infrastructure & Tech-environment to compete at the highest level

### Corporate Environment

Multinational corporate –IT and Finance management firms bringing world class expertise to different levels.

### Smart Learning

To match up to the world class standards

### Skill development

Skill & Knowledge Enhancement  
More Job avenues  
Shelter Needs

### Comfortable Living

Affordable Housing  
Smart Health Facilities



NURTURING

YOUNG GRADUATES

UNSKILLED LABOUR

SKILLED LABOUR

DEPENDENT

## STRENGTH

- Lies in the limestone belt of India. The region contributes to around 10% of total cement production.
- Commercial capital of Baghelkhand Region
- Has a very important Railway Junction

## WEAKNESS

- Sole-Natural Resource based Economy
- Out migration of skilled/semi-skilled work force and immigration of un-skilled workforce
- Low work force participation rate
- High Air Pollution, Lack of green areas and public spaces
- Dense core area limits possibilities of expansion
- Housing shortage in Affordable Options

## OPPORTUNITY

- Cement industries are major magnets for growth and development.
- Economically healthy ULB to undertake development works and reforms
- Major urban center in a radius of 200 Km

## THREAT

- Economic base is of a sole natural resource and hence cannot be considered sustainable

## Single Engine Economies

### Ruhr City, Germany

Industrial Town



### Detroit, Michigan

Famous Auto Industry



Over time..



Raw material  
Issues



Machinery  
outdated



Labour costs  
increased



Outsourcing

The Town could not be revived

**CLOSE DOWN**



## Diversified Economies

### Dubai, UAE

Oil and Gold trading



Economy Diversified



Tourism

Corporate  
Infrastructure

Financial  
Institutions

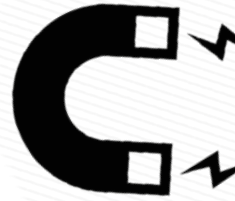
One of the most developed and  
future ready cities



# Greenfield is the Way ! For Diversification

## 1 Limestone Belt — Cement Industry

Vast limestone availability in the region is attracting more and more Cement Industries including International players.



More In-Migration of Labour Force

*Un-skilled work force is liability for City Government*

INVESTMENT OF MORE THAN **Rs 5000 CRORE** IS ENVISAGED IN RADIUS OF 35 KM, IN NEXT 5 YEARS

NEED CORRESPONDING PHYSICAL SOCIAL and ECONOMIC INFRASTRUCTURE CREATION TO ATTRACT SUCH INVESTMENT

CURRENT GAP OF **8490** AFFORDABLE HOUSING UNITS WILL BE A CONSTRAINT

## 2 Economic Diversification within existing City?

Land availability for Redevelopment within the City is a constraint. So as to ensure economic diversification **green field development** is required

## 3 City Within a City

The Greenfield development to serve as **light house** for smart living and at the same time provide opportunity to create **diverse job opportunities** for all





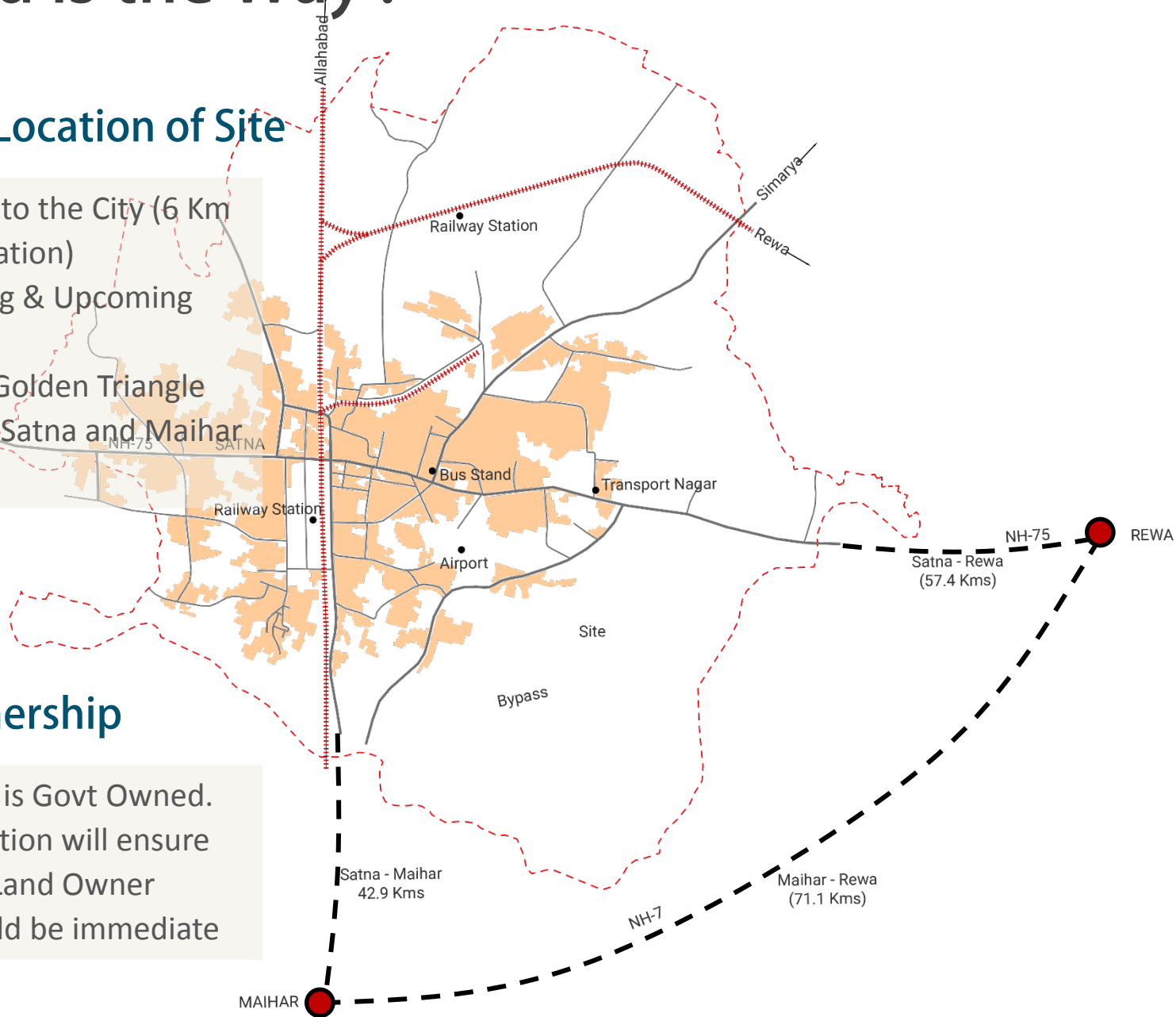
# Greenfield is the Way !

## 4 Strategic Location of Site

- Well connected to the City (6 Km from Railway Station)
- Between Existing & Upcoming Bypass
- On Juncture of Golden Triangle between Rewa, Satna and Maihar

## 5 Land Ownership

- 65% of the land is Govt Owned.
- Land Pooling option will ensure benefits to Pvt Land Owner
- the Impact would be immediate



# Round III Proposal

## Improvements Made

1. Re-writing of Complete proposal addressing the issues in Round – II Proposal and improving responsiveness to mission guidelines
2. SCP focuses on following key themes to justify green field development
  - Providing for diverse economic base and employment opportunities to stop migration of skilled work force to Jabalpur, Bhopal and Indore.
  - Learning and skill development for immigrated un-skilled workforce from regional hinterland.
  - Incubation of urban youth in Satna to develop entrepreneurship with focus on start-ups in hospitality, service sector, IT/ITES, retail and other manufacturing sector.
3. Rational Project Structure and implementation plan
  - Early Bird Projects on 15% of the Net Plotted Area (NPA) within first 3 years to create buzz & provide impetus for green field development
  - Early Bird Projects on another 15% of the NPA will be developed on PPP mode within 5 years
  - All the Trunk infrastructure will be in place within 5 Years
  - Remaining 70% of development will be implemented on PPP Mode (gross plotted area basis) and/or by private land owners on compensatory plots within 15 years

# Round III Proposal

## Improvements Made

4. Functional Re-zoning of the ABD proposal with 5 Precincts and 2 Infrastructure Project Packages with focus on job creation & skill development
  - Mixed Use Walkable TOD Community
  - Multiproduct Non-Polluting Industrial Park
  - Medium Density Residential Neighbourhoods in Transition Zone
  - Recreational Green Networks
  - Economic, Institutional and Social Infrastructure
  - Transit Corridor and Facilities
  - Smart Physical Infrastructure
5. Creation of City Infrastructure Development Fund and Smart City Development Fund
  - 50% of the surplus revenues from the ABD Area will be used to replenish City Infrastructure Development Fund created for capital investment on Core Infrastructure schemes such as AMRUT and SBM
  - Remaining 50% revenues will be used to fund future replicable smart city proposals through replenishment of smart city development fund



# Vision

*Restructuring Satna into a smart, compact and vibrant regional hub, providing diverse economic opportunities for varied skill levels by leveraging its resource based economy and harnessing investments in industrial sector*



## PROVIDING UBER LIVING & SUSTAINABLE ECONOMY

- *Will become the heart of future ready Satna & serve as light house for rest of the city as a aspired quality of life.*
- *Will Provide opportunities for economic diversification to overcome limitations of natural resource based economy*
- *Will promote entrepreneurship development for skilled work force and skill upgradation of immigrating un-skilled labour*
- *Will Provide affordable housing options with sustained work to home relation in compact, walkable, mixed-use and sustainable neighborhoods*

# PULSE— ABD Area Site Planning

**Imageable entry point**  
from bypass

Maihar Bypass  
(18 m wide)

**Creation of an integrated green network** running through the development

**Creation of a vibrant central spine** with prominent building form as the thrust of the development .

Introvert Residential clusters

**Green fingers acting as buffer** between the active spine and inner residential clusters

A **mix of housing types** planned within residential areas to offer a heterogeneous living environment

**Offices / Work centers** zoned in proximity to commercial as well as residential areas and remain easily accessible.

A **city level park** proposed catering to the new development as well as an attraction for Satna city

**Commercial Precinct** acting as the cynosure of the development with active uses as well as pronounced building form. also a visual focal point

**Creation of a central active recreational hub** within the development which has been zoned in close proximity to residential areas, commercial as well as work centers.

## Road Category

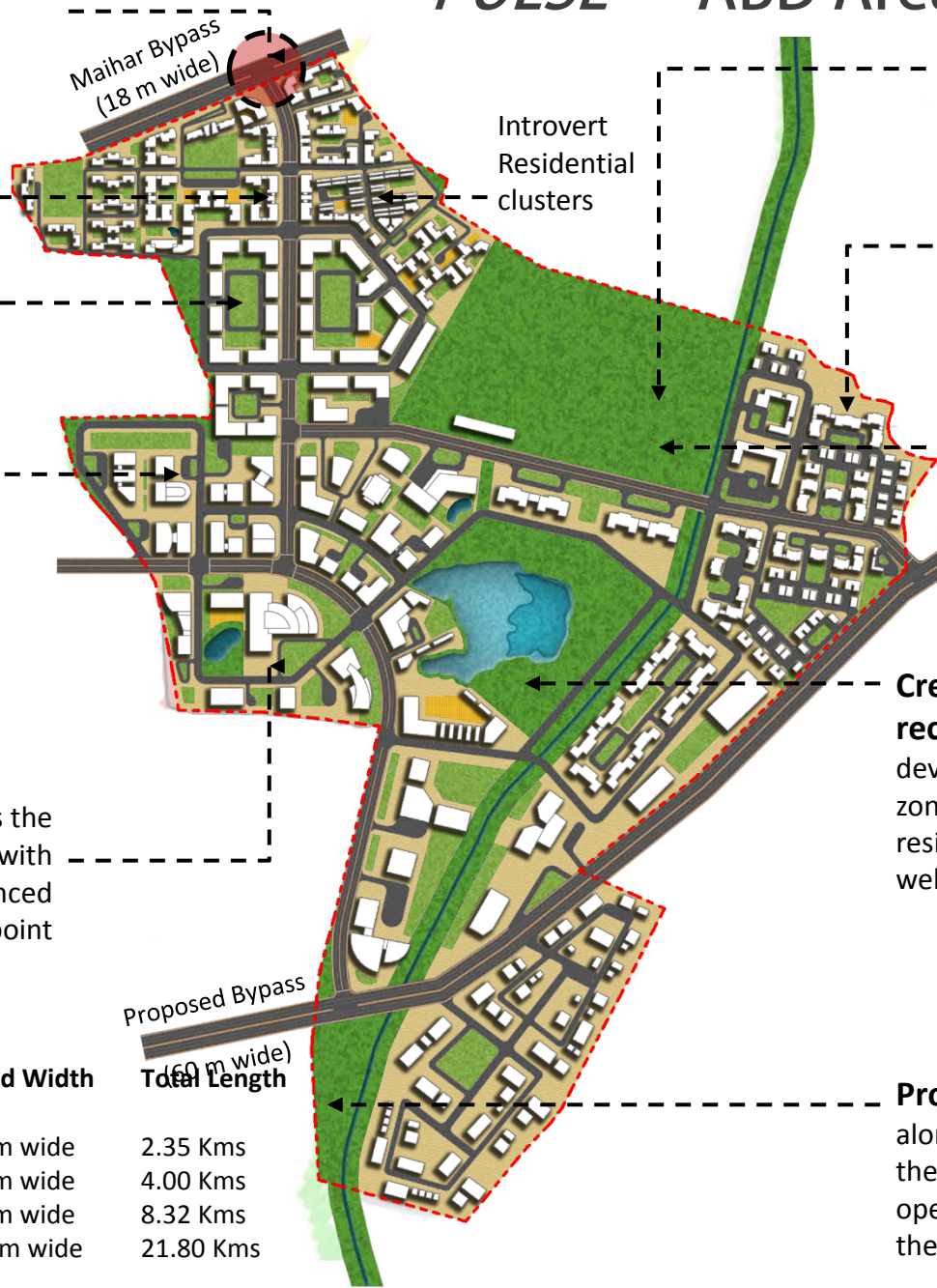
## Road Width

## Total Length

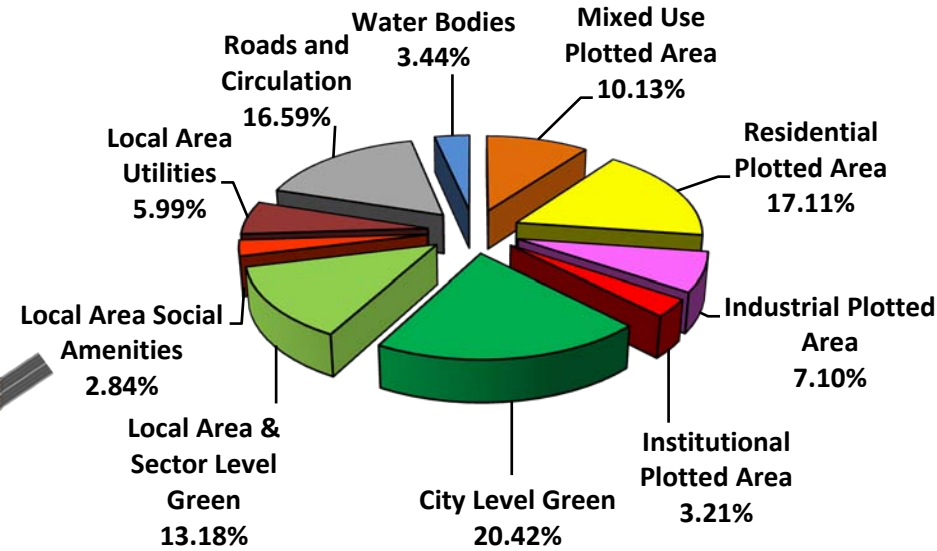
Road Category	Road Width	Total Length
Arterial & sub Arterial Roads	60 m wide	2.35 Kms
Collector Streets	36 m wide	4.00 Kms
Local area Roads	18 m wide	8.32 Kms
	<18m wide	21.80 Kms

Proposed Bypass

**Proposed Green Buffer** running along the existing canal segregates the residential areas and offers rich open space experience throughout the development



# PULSE — ABD Area Statement



S.No	Land Utilization	Acres
1	Mixed Use Plotted Area	67.06
2	Residential Plotted Area	113.24
3	Industrial Plotted Area	46.99
4	Institutional Plotted Area	21.23
5	City Level Green	135.18
6	Local Area & Sector Level Green	87.23
7	Local Area Social Amenities	18.81
8	Local Area Utilities	39.69
9	Roads and Circulation	109.81
10	Water Bodies	22.77
	<b>Total ABD area</b>	<b>662.00</b>



# SATNA SMART CITY : *PULSE* ABD Proposal



## CORE Precinct

Mixed use Transit Oriented Development

Mixed Use TOD Community along "The Spine" – Transit Corridor

- Early Bird Projects on 30% of the plotted area within first 5 years

- Shopping Malls
- Restaurants
- Multiplexes
- Boutique Shops
- Financial Information Centers
- Wholesale Markets
- Benchmark Offices
- Banks
- Shared 'Start-ups' Platforms
- IT Work Centers/BPOs/Call Centers
- Conference Halls

## LIFE CELL Precinct

Economic, Institutional and Social Infrastructure

Skilling Centers, Institutions, Educational, Health, Socio-Cultural, Amenities

- Socio-cultural infrastructure
- Educational infrastructure
- Health infrastructure
- Economic infrastructure
- Institutional infrastructure

## SOUL Precinct

Recreational Green Networks

Baghelkhand Art & Craft centre, Lake "Nector" Development, "Synthesis" - A Fitness and Wellness Center, Canal Front Development

- Naturopathy Center
- Nurseries
- Fitness & Well being Center

## Precinct SENSES

Medium Density Residential Neighborhoods

Medium Density Residential Neighborhoods in transition zone

- Early Bird Projects on 30% of the plotted area within first 5 years

- Recycle/Reuse of water
- Solar rooftop panels
- Green Buildings
- Dual Pumping & Permeable Surface/ Low Heat Island Effect
- 40% of Area under shade for more than 4 hrs

## BASE Precinct

Multi-Product Non-Polluting Industrial Park

Integrated complex for small and medium scale Non-polluting industrial units on Subsidized Plots

- Early Bird Projects on 30% of the plotted area within first 5 years

- Cloth Manufacture
- Agro Processing
- Cement Allied Units
- Gems & Jewellery
- Food Processing





# SATNA SMART CITY : *PULSE* ABD Proposal



## CORE Precinct

Mixed use Transit Oriented Development

Mixed Use TOD

Community along "The Spine" – Transit Corridor

- Early Bird Projects on 30% of the plotted area within first 5 years

Compact & walkable, mixed-use, mixed income, high density transit oriented development (TOD) communities along the project spine

- **2,447 commercial units**
- **Employment for 11,326 workforce** in retail, trade, service and IT/ITES sector
- **4,626 housing units** including **3,238 units** (70%) for EWS & LIG by 2032

(Net Plotted area–61.06 acres)



Commercial



Iconic Buildings



Convention Centre



# SATNA SMART CITY : *PULSE* ABD Proposal

Multi-product, non-polluting industrial park with small and medium scale industries on subsidized plots in agro-processing, pharma, electronics, electrical & gems/jewellery

- **173 units (121 Small scale and 52 Medium scale)**
- **Employment for 3,803 workforce** by 2032



(Net Plotted area—46.99 acres)



## BASE Precinct

### Multi-Product Non-Polluting Industrial Park

Integrated complex for small and medium scale Non-polluting industrial units on Subsidized Plots

- Early Bird Projects on 30% of the plotted area within first 5 years



Cloth Manufacture



Agro Processing



Cement Allied Units



Gems & Jewellery



Food Processing



Waste Recycle Plant



# SATNA SMART CITY : *PULSE* ABD Proposal

Medium density, walkable, residential neighborhoods in transition zone

- **9,895 housing units** including **6,926 units** (70%) for EWS & LIG by 2032)

(Net Plotted area—113.24 acres)

## Precinct SENSES

Medium Density Residential Neighborhoods

Medium Density Residential Neighborhoods in transition zone

- Early Bird Projects on 30% of the plotted area within first 5 years



-  Cycle reuse of rain
-  Solar rooftop panels
-  Green Buildings
-  2x Dual Pumping
-  Permeable Surface/ Low Heat Island Effect
-  40% of Area under shade for more than 4 hrs



City level green networks piercing the ABD area between various precincts comprising of baghelkhand art & craft center, lake "Nector" & canal buffer development, "Synthesis" - a fitness & wellness center with sports complex, botanical garden & urban forest.

**(135.18 acres of city level public open spaces & 87.23 acres of sector/local area level public open spaces)**

## SOUL Precinct

### Recreational Green Networks

Baghelkhand Art & Craft centre, Lake "Nector" Development, "Synthesis" - A Fitness and Wellness Center, Canal Front Development



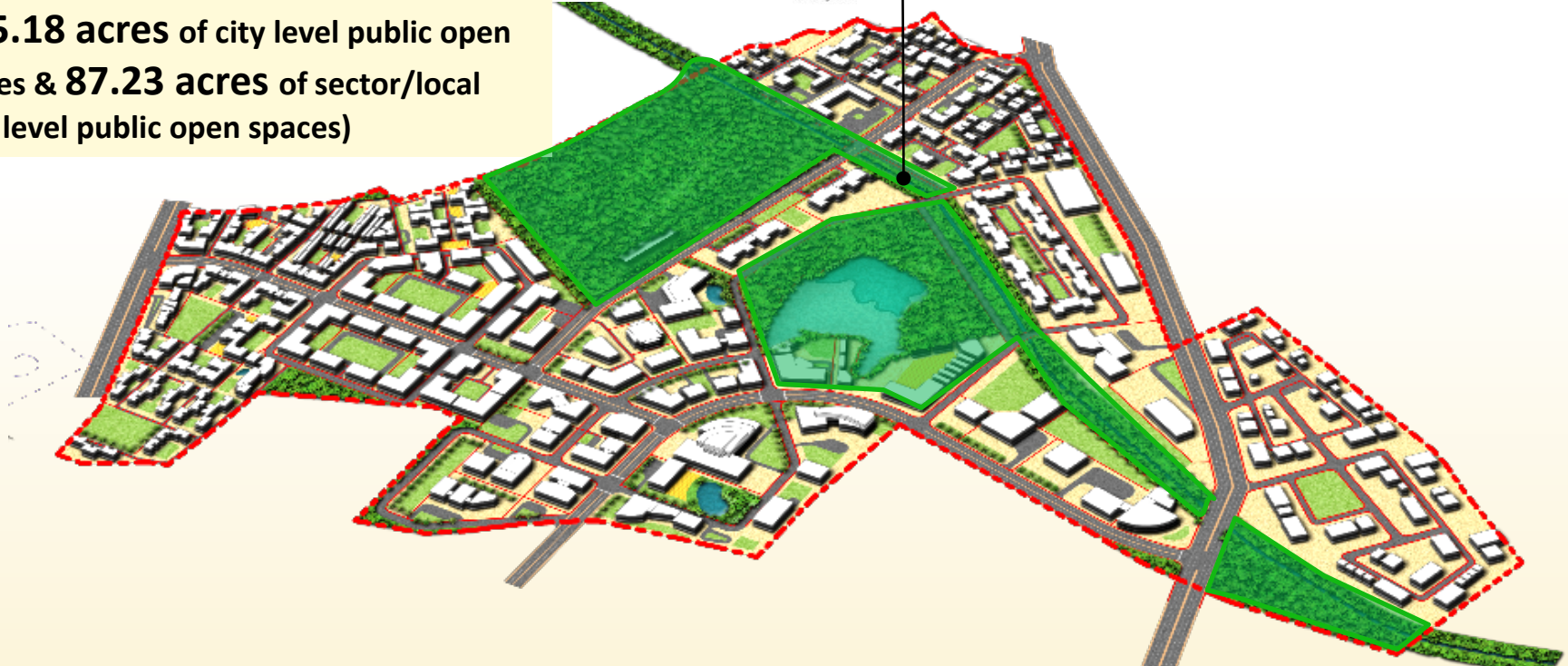
Naturopathy Center



Nurseries



Fitness & Well being Center





## LIFE CELL Precinct

Economic, Institutional and Social Infrastructure

Skilling Centers, Institutions, Educational, Health, Socio-Cultural, Amenities

Economic, Institutional and Social infrastructure comprising

- Vocational Training Institute & Industrial Training Institutes for **400 students** each,
- **4** incubation centers developing **800 entrepreneur per year**
- **4** skill development centers upgrading skills of **1000 workforce per year,**
- **9 Smart** primary, secondary schools, **11** community rooms/halls and libraries (for early bird project area) and
- **1 80 bed health facility**

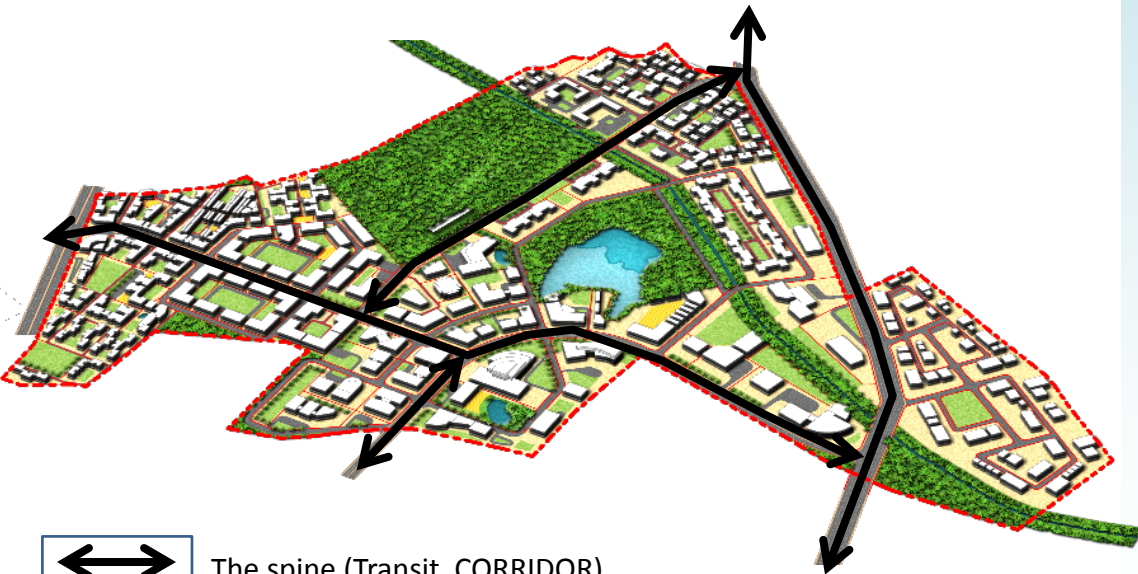
(Net Plotted area—21.23 acres)




## The SPINE

Transit Corridor & Facilities

- **Development of transit corridor & intersections** for high capacity bus system,
- **NMV lanes,**
- **pedestrian pathways** in-line with code of practice for urban roads



 The spine (Transit CORRIDOR)

 The nerves ( SMART INFRASTRUCTURE)

## The NERVES Smart infrastructures

- **Smart infrastructure** comprising 24X7 SCADA enabled water supply with smart meters ensuring re-use of treated wastewater,
- **100% coverage of sewerage system** with decentralised wastewater treatment effecting re-use,
- **100% coverage of underground storm water drainage network,**
- **door-to-door collection, transportation & disposal of solid waste,**
- **24X7 SCADA enabled power supply** with smart meters,
- **smart grid,solar power generation on roof top of buildings and canal top,**
- **distribution network for processed natural gas,**
- **solar powered energy efficient street lighting,**
- **safety and security surveillance,**
- **air quality & environment monitoring, fire hydrant system, public wi-fi hotspots, telecom lines and underground utility duct for all utilities.**



The Spine – Transit  
Corridor

Mixed Use TOD

Medium Density  
Residential  
Neighborhood

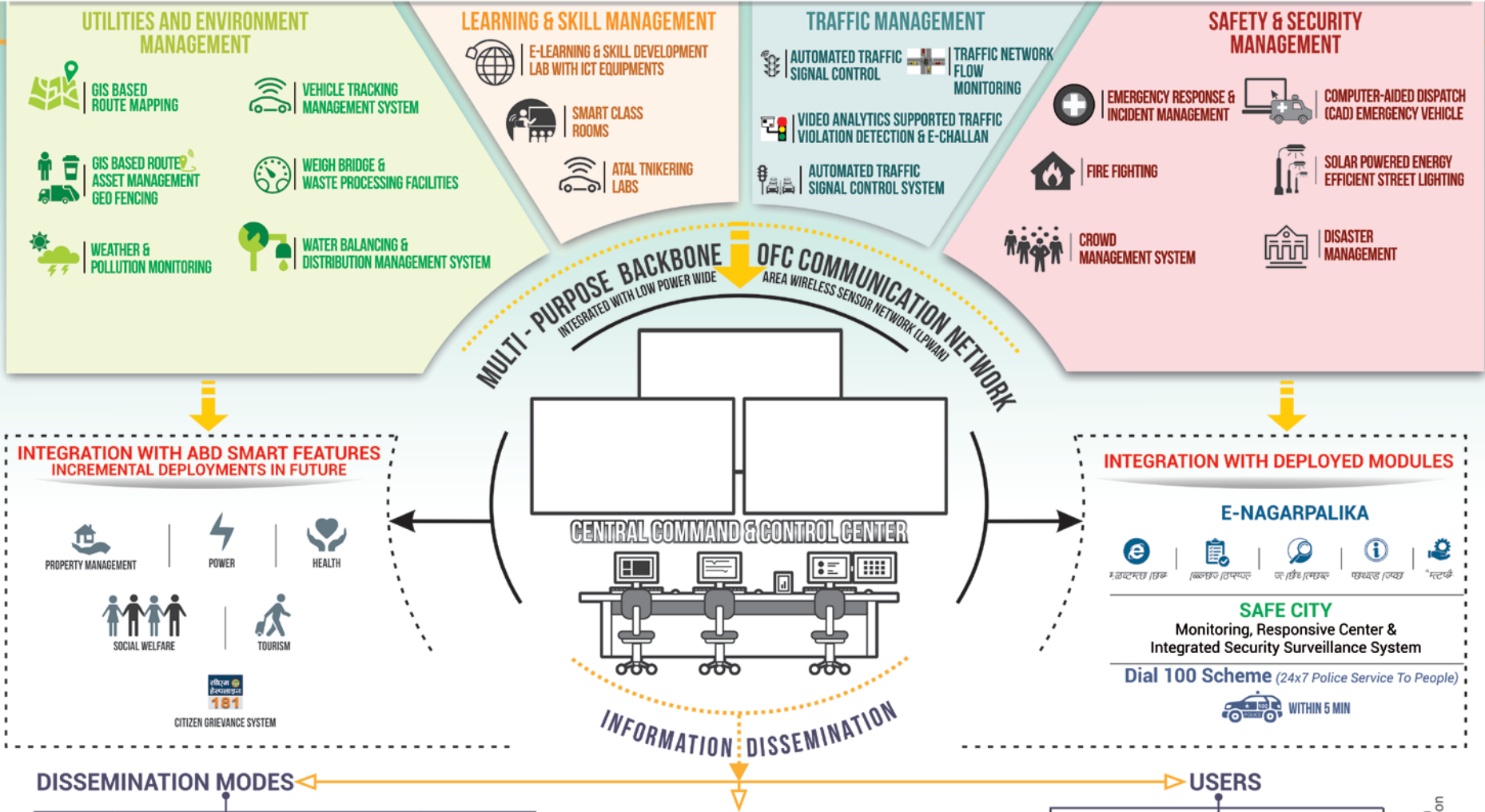


# SATNA Synergy Lab - PAN CITY-PROPOSAL



SENSORS

- Traffic Monitoring** Surveillance Cameras
- Dynamic Message** Sign Board
- Co-ordinated** Traffic Signal
- PTZ** Surveillance Cameras
- Environmental** Sensors
- SCADA** System
- CCTV** Security Surveillance
- RFID**
- WI-FI** Access Points
- Automated** Street Lighting
- Vehicle Tracking** Police & Waste Transport Vehicles



"CORE" Precinct	S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
	<b>A</b>		<b>"Core Precinct" – Mixed use Transit Oriented Development</b>	
	1	A1	Early Bird Project of Mixed Use TOD Community along "The Spine" – Transit Corridor (15% of the Plotted Area within 5 Years)	198.46
	2	A2	Early Bird Project of Mixed Use TOD Community along "The Spine" – Transit Corridor on PPP Mode (15% of the Plotted Area within 5 Years Phase - I)	9.18
	3	A3	Mixed Use TOD Community along "The Spine" - Transit Corridor on PPP Mode (70% of the Plotted Area within 5th to 15th Year Phase - II)	0.00
		<b>Total "Core Precinct" – Mixed use Transit Oriented Development</b>	<b>207.64</b>	

"BASE" Precinct	S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
	<b>B</b>		<b>"Base Precinct" - Multi-product Non-polluting Industrial Park</b>	
	1	A4	Phase - I - Development of Industrial Park (Plots for Small & Medium scale industrial units on 30% of the Plotted Area within 5 Years)	16.76
	2	A5	Phase - II - Establishment of Small & Medium Scale Industrial Units through PPP Mode (70% of the Plotted Area within 5th to 15th Year)	0.00
			<b>Total "Base Precinct" – Multi-product Non-polluting Industrial Park</b>	<b>16.76</b>

"SENSES" Precinct

S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
C		<b>"Senses Precinct" – Medium Density Walkable Residential Neighborhoods in Transition Zone</b>	
1	A6	Early Bird Project of medium density walkable residential neighborhoods (15% of the plotted area within 5 years)	164.60
2	A7	Early Bird Project of medium density walkable residential neighborhoods through PPP Mode (15% of the plotted area within 5 Years)	9.93
3	A8	Medium Density Walkable Residential Neighborhoods in Transition Zone on PPP Mode on SPV Land Bank and by private Land Owners on Compensatory Land (15% and 55% of plotted area respectively within 5th - 15th year) on Compensatory Land to Private Land Owners	0.00
		<b>Total "Senses Precinct" – Medium Density Residential Neighbourhoods in Transition Zone</b>	<b>174.52</b>

"SOUL" Precinct	S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
	D		<b>"Soul Precinct" – Recreational Green Networks</b>	
	1	A9	<b>Baghelkhand</b> Art & Craft centre	21.56
	2	A10	Lake <b>"Nector"</b> Development	10.57
	3	A11	<b>"Synthesis"</b> - A Fitness and Wellness Center	41.27
	4	A12	Canal Front Development	15.14
		<b>Total "Soul Precinct" – Recreational Green Network</b>	<b>88.53</b>	

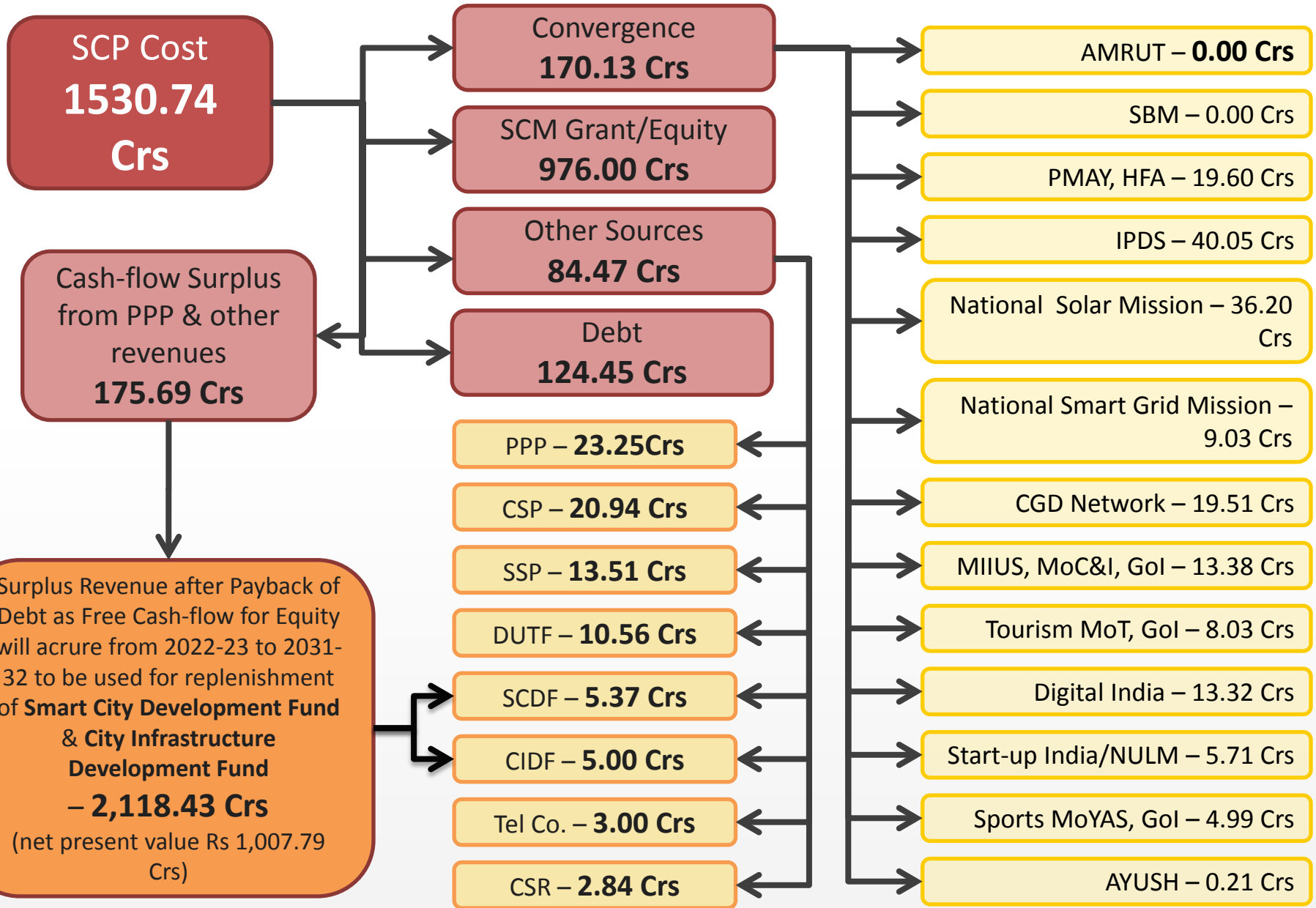
"LIFE CELLS" Precinct	S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
	E		<b>"Life Cells Precinct" – Economic, Institutional and Social Infrastructure</b>	
	1	A13	Economic Infrastructure	31.00
	2	A14	Institutional Infrastructure	46.29
	3	A15	Social Infrastructure	71.50
			<b>Total "Life Cells Precinct" – Economic, Institutional and Social Infrastructure</b>	<b>148.78</b>

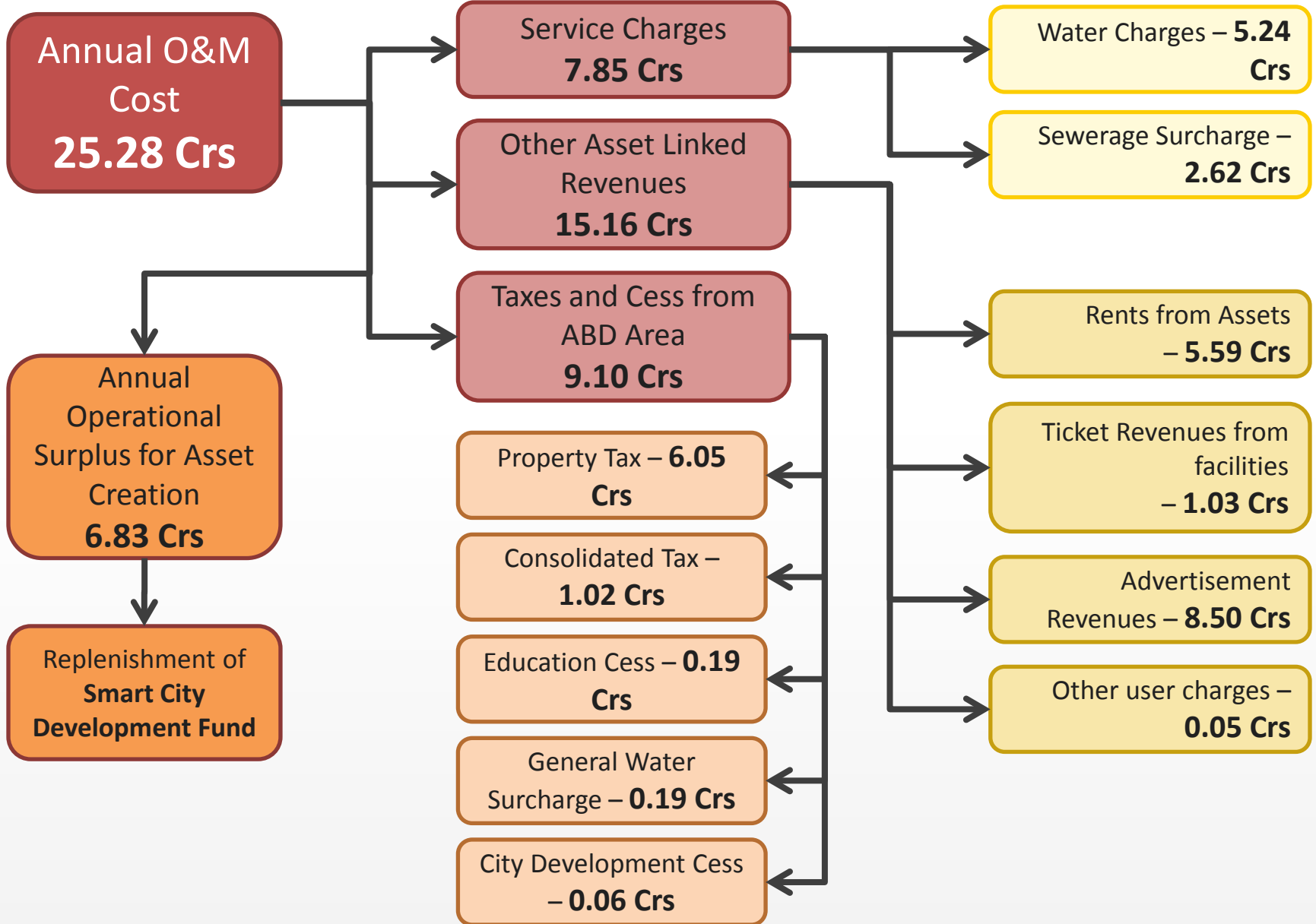
Project "SPINE"	S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
	<b>F</b>		<b>Project "Spine" – Transit Corridor and Facilities</b>	
	1	A16	Development of Arterial Roads, Sub-Arterial Roads and Collector Streets	96.52
	2	A17	Other Urban Mobility Components	20.41
			<b>Total Project "Spine" – Transit Corridor and Facilities</b>	<b>116.93</b>
Project "NERVES"	S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
	<b>G</b>		<b>Project "Nerves" – Smart Physical Infrastructure</b>	
	1	A18	24 X 7 Water Supply	34.25
	2	A19	Waste Water Treatment, Storm Water Management and Reuse	80.59
	3	A20	Solid Waste Management	1.96
	4	A21	24 X 7 Power Supply	207.99
	5	A22	Gas Distribution	19.51
	6	A23	Street Lighting, Security and Surveillance	32.83
	7	A24	Telecom and IT Connectivity	7.00
	8	A25	Under Ground Utility Duct	34.11
		<b>Total Project "Nerves" – Smart Physical Infrastructure</b>	<b>418.24</b>	



S N	Activity Code	Project/Component/Activities	Total Cost (in Rs Crs)
1	A26	Satna Synergy Lab – Central Command & Control Center (CC&C)	20.00
2	A27	Multi-purpose Dedicated Back Bone OFC Communication Network integrated with Low Power Wide Area Wireless Sensor Network (LPWAN)	20.00
3	A28	Utilities and Environment Management	31.01
4	A29	Safety & Security Management	102.18
5	A30	Traffic Management	36.50
6	A31	Learning and Skill Management	25.56
7	A32	Information Dissemination and Universal Payment Card	50.39
<b>Total Satna <i>Synergy</i> Lab – Pan-city Proposal</b>			<b>285.64</b>

S N	Project/Component/Activities	Total Cost (in Rs Crs)
I	Providing Uber Living & Sustainable Economy – Area Based Development ( <b>PULSE</b> – <b>ABD</b> ) Proposal	
A	<b>"Core Precinct"</b> – Mixed use Transit Oriented Development	207.64
B	<b>"Base Precinct"</b> – Multi-product Non-polluting Industrial Park	16.76
C	<b>"Senses Precinct"</b> – Medium Density Walkable Residential Neighbourhoods in Transition Zone	174.52
D	<b>"Soul Precinct"</b> – Recreational Green Networks	88.53
E	<b>"Life Cells Precinct"</b> – Economic, Institutional and Social Infrastructure	148.78
F	Project <b>"Spine"</b> – Transit Corridor and Facilities	116.93
G	Project <b>"Nerves"</b> – Smart Physical Infrastructure	418.24
	Total <b>PULSE</b> – <b>ABD</b> Proposal	1171.41
II	Satna <b>Synergy</b> Lab – Pan–city Proposal	285.64
III	Administration and Other Expenses (@ 5% of the Smart City Mission Funds)	50.00
IV	Interest During Construction Period (IDCP)	23.69
	<b>Grand Total Capital Cost of Satna Smart City Proposal</b>	<b>1530.74</b>





**Thank You**

---