BHUBANESWAR
SMART CITY PROPOSAL

DECEMEBR, 2015

Outline

Bhubaneswar Smart City Initiative

1 INTRODUCING BBSR IN 2015

2 CITIZEN'S CONNECT INITIATIVE

3 TOWARDS A SMARTER BHUBANESWAR- PAN CITY PROPOSAL

4 TOWARDS A SMARTER BHUBANESWAR- AREA BASED PROPOSAL

5 DRAFT FINANCIAL PROPOSAL

SMART CITY BHUBANESWAR

INTRODUCING BBSR IN 2015

INTRODUCING BHUBANESWAR

- **City of Temples** – Aspires to be UNESCO Heritage City

- **City Planning Initiatives**– Konigsberger's Plan
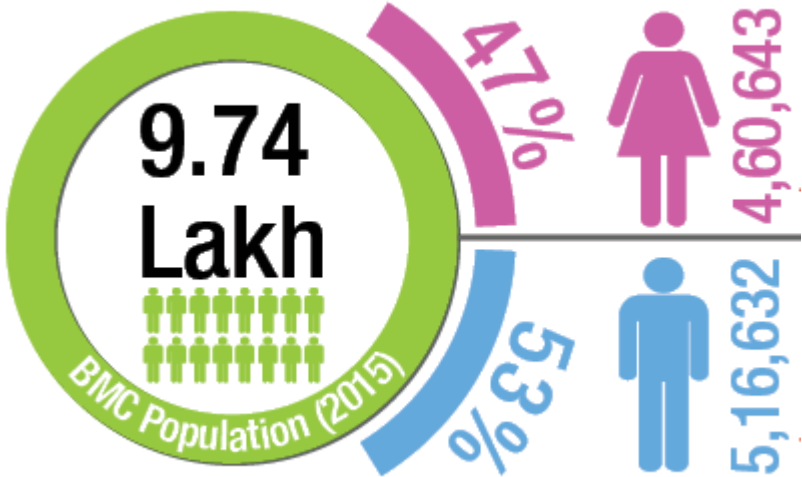
- Emerging Technical Education & Healthcare Hub

- **Knowledge Sectors** – IT investment region, progressive IT policy and perhaps only city 1 million population to have top Indian IT companies

- **Regional Economic Drivers** – Steel Hub (Kalinga Nagar), Petro Chemical Hub (Paradeep), Golden Tourism Triangle (Puri, Konark, Chilika)

INTRODUCING BHUBANESWAR

9.74 Lakh
BMC Population (2015)

47% ♀ 4,60,643

53% ♂ 5,16,632

35%

(3,40,860) Population lives in Slums, spread over 5% of BMC area

BDP Area: 419 SQKM

BMC Area: 146 SQKM

— · — · — BMC Boundary

- - - - - BDPA Boundary

Town Centre Smart District

0   2.5   5 KM
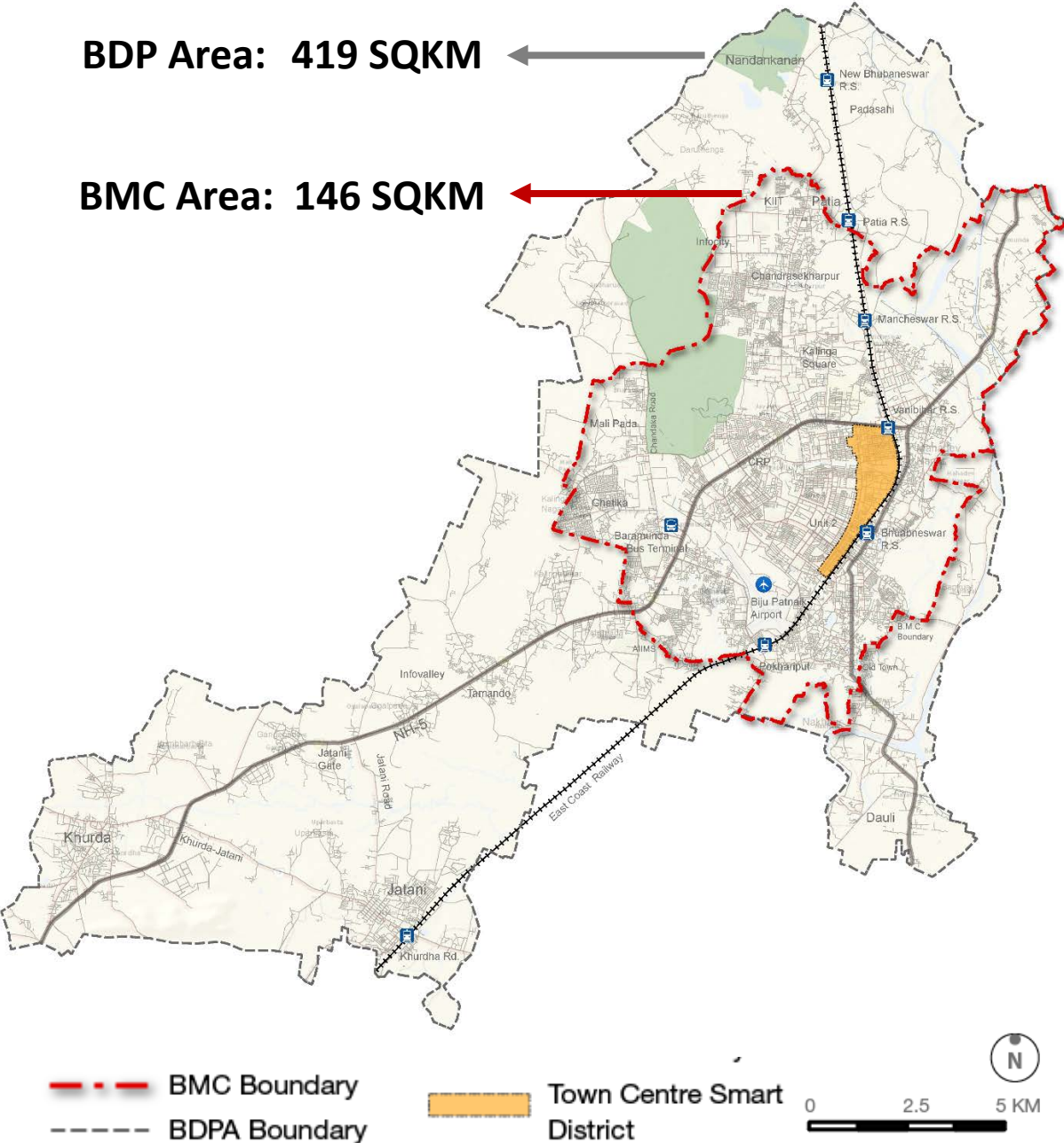
INTRODUCING BHUBANESWAR

City Context | Demography | **Self Assessment**

80%
Household level coverage

85%
Collection Efficiency

0%
Segregation

86
Parks

2%
Recreational Space in the city

95%
water supply connections

250lpcd
Water Supplied

2hrs
Duration of supply

19,69,575
Annual Tourist Flow

24
Events throughout the year

16%
Public Transport Available

76km
Sidewalks in the city

21%
Signalized Intersections

74
Protected monuments

19%
Natural forest

CITIZEN'S CONNECT INITIATIVE

CITIZEN'S ENGAGEMENT- CITIZEN'S CONNECT INITIATIVE

WEBSITE

Visits: 1.7 lakh | Polling: 29,184 | Votes: 47,238

FACEBOOK

Likes: 86,851 | Reach: 3.4cr | Comments: 1630

TWITTER

Tweets: 427| Follower: 810 | Likes: 307

YOUTUBE

Views: 905

MyGOV

Submissions: 285 | Comments: 1500
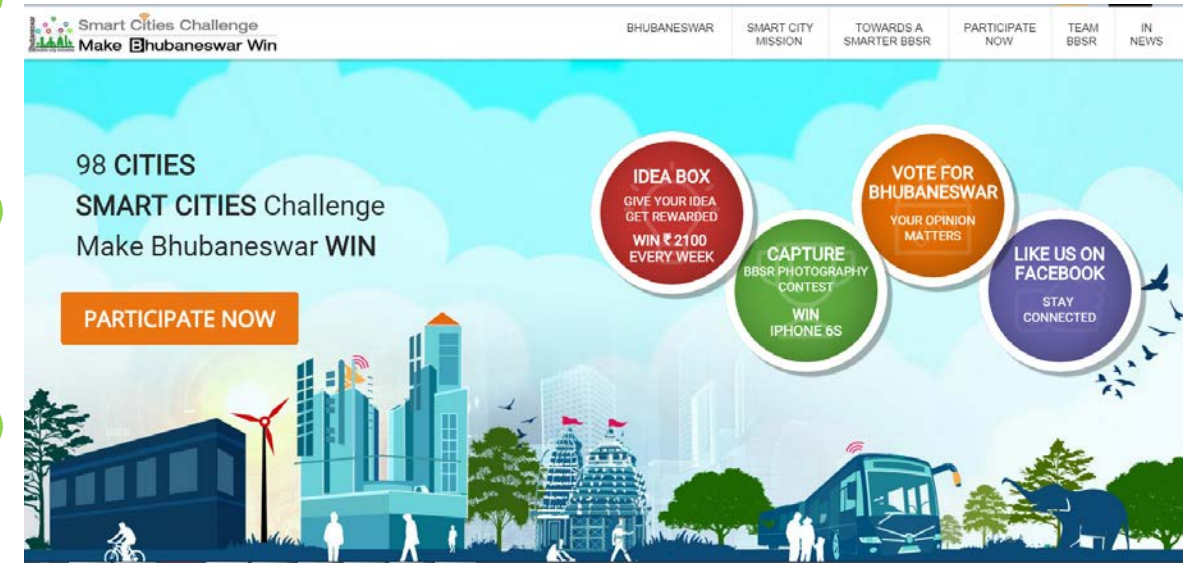
CITIZEN'S ENGAGEMENT- CITIZEN'S CONNECT INITIATIVE

Online Engagement | **Offline Engagement** | Outreach

SMS
Reach: 25.7 Lakhs

Radio
Reach: 22,62,739

MASS EMAIL
Reach: 5 Lakhs

Seminars
Events: 86 | Participants: 20,650

Offline Reach:
Suggestions: 1.6 Lakhs | Votes: 19 lakhs | Participants: 3 Lakhs

CITIZEN'S ENGAGEMENT- CITIZEN'S CONNECT INITIATIVE

Online Engagement   Offline Engagement   **Outreach**

Nodal officers for security of elders

LELIN KUMAR MALLICK

Bhubaneswar, Dec. 6: Nodal officers will be appointed at police stations in urban and rural areas of Bhubaneswar and Cuttack to take care of problems faced by senior citizens.

Director general of police K.B. Singh made this announcement during an interface with the elderly people here today.

Singh told that despite manpower crunch, the state police were determined to look after the security of the senior citizens.

"A nodal officer would be there in each police station to look into the problems of the elderly people. The cops would also visit them to know about their grievances," said Singh.

Security of senior citizens has come to focus after the murder of a septuagenarian doctor couple in Sailashree Vihar on November 15. However, the police are yet to arrest anyone in this case.

Senior citizen cell, which has been functioning in five police stations in Cuttack and

Senior citizens attend the meeting in Bhubaneswar on Sunday. Picture by Ashwinee Pati

citizens live in Bhubaneswar.

President of Federation of Senior Citizens' Association of Odisha Krupasindhu Sahoo said the police should frequently call on senior citizen who lived alone.

"The responsibility of the cops towards them should not end only with registration. They should hold frequent meetings with them to know about their grievances," said Sahoo.

Cops advised the senior citizens to install closed circuit television cameras in their houses besides verifying the antecedents of domestic help before engaging them.

"We are also planning to keep a database of the elderly residents that would help us visit them frequently," said police official.

Senior citizens demanded the police to introduce a mobile-based application for them. "Police have recently launched mobile based application, Mo Saathi, especially for women in distress. A similar kind of app for senior citizens can definitely benefit us," said Santosh Moharana, senior citizen.

Smart city survey to spot change

BIBHUTI BARIK

Bhubaneswar, Nov. 15: The municipal corporation is carrying out a baseline survey in the town centre district — 670 acres between Ashok Nagar and Maharshi College Road.

The survey intends to find out personal information of residents above 18 years, employment type, income level, house or establishment ownership, Internet and telephone connectivity, access to education and mobility, public space and their use, especially for children, and community centre.

The questionnaire also has queries on the type of housing in which the respondents live, water supply source and consumption amount, sanitation facilities, including the frequency of garbage collection.

On the social development front, the people are being asked questions on education, health centres and their distance from the residential locality. The survey also has

Volunteers from Sikshya O Anusandhan University interact with a shop owner near the Master Canteen Square in Bhubaneswar on Sunday. Picture by Ashwinee Pati

The survey, which started yesterday and is likely to continue for another day, intends to cover 40,000 people or 10,000 households, including business establishments.

Dutch organisation Bernard van Leer Foundation, which is a partner of the civic body along with Hamara Bachpan Campaign and Delhi-based participatory research and evaluation body Praxis,

has engaged volunteers for the survey.

how the city centre has developed qualitatively and quantitatively five years after the implementation of the smart city project. The questions also have points on the formation and functionality of resident welfare associations and e-governance initiatives."

Sources said Bhubaneswar was probably going to be the only city in the country to have a child and family-friendly smart city.

"In order to include the issues during the launch of the citizens' interactions, the civic body first took suggestions from the children and their opinions will be included in the final smart city document," said a senior corporation official.

Municipal commissioner Krishan Kumar said: "In order to include children, the smart city logo has their picture and

we have included their causes in all our citizens' connect initiatives. We are going to include their suggestions in our smart city proposal."

Patnaik said: "Students of Sikshya O Anusandhan (SOA) University and Centurion University of Technology and Management are taking part as volunteers after they were trained by social researchers."

Siv Souvam Prakash, an engineering student, who was a respondent to the questionnaire, said: "The survey will help the civic authorities plan their smart city document."

MTech student Satish Kumar Biswal from SOA University said: "Yesterday, we covered Ashok Nagar and Bapuji Nagar and today we finished the survey at Kharavela Nagar, Master Canteen Square and Station Square areas."

Smart twist to kids' exhibits

OUR CORRESPONDENT

Bhubaneswar, Nov. 21: A school dedicating its annual exhibition to the smart city concept marks the popularity that the municipal corporation's campaign is gaining among residents.

Students of DAV Public School, Pokhariput, today organised its annual exhibition under the theme "Cleanliness and Smart City", in which over 250 students displayed their models, explaining areas in science, social studies, mathematics, life skills, yoga, art, dance and music — but with a smart twist.

"Every year the annual exhibition gets a theme. This year as the city is in the running to be listed as one of the first 20 smart cities in the country, we have decided to have a theme on the same," said principal Sujata.

Barnali Das, a Class VI student, said: "Various exhibits by students on the different com-

Students of DAV Public School, Pokhariput, take part at the annual exhibition in Bhubaneswar on Saturday. Picture by Ashwinee Pati

ponents of smart city, that is urban transport, drinking water supply, waste disposal, pollution control and maintaining green cover, were displayed through interesting models."

This afternoon, 500 students of Sikshya O Anusandhan (SOA) University took part in a mass social media campaign and tweeted messages on various smart city themes. The students also

joined the Bhubaneswar Municipal Corporation's Facebook page with the intention of making the campaign popular on social media.

Satish Kumar Samal, who is pursuing his MTech from Institute of Technology Education and Research under the SOA, said: "Apart from taking part in social media campaigns, the varsity students had also volunteered to do a baseline sur-

vey on the smart district survey that held last week."

Mayor Ananta Narayan Jena said the city, with 53,300 members (at 6.10 this evening) on its Facebook page, is on the top of the chart from among the 20 cities, which are in the running to be developed as the first smart cities in the country. "Once the final proposal is submitted to the Centre, second-level citizens' connect activities will be organised," he said.

Jena said that engaging 11,300 people in various interactive sessions to find smart solutions such as urban mobility and waste disposal apart from choosing the smart district had helped the city get around 1.5 crore hits on social media in a month.

The corporation today organised a meeting of the transgender community and took their views and suggestions. These will be included in the final proposal of the smart city. A smart city lab was also organised at IIT Bhubaneswar.

Bhubaneswar Municipal Corporation councillors writing suggestions before the launch of the Smart City mission in the capital Saturday.

MOVE PART OF CITIZEN'S CONNECT INITIATIVE UNDER THE SMART CITY PROJECT

BMC website to ease service delivery

POST NEWS NETWORK

Bhubaneswar, Sept 26: State

development secretary G Mathivathanan, department secreta

cility which has already completed department secreta ground water. Behera said.

ଟାଉନ୍ସେଣ୍ଟରରେ ଶେଷ ହେଲା ସର୍ଭେ

୭ଟି ୱାର୍ଡରେ ଚିହ୍ନଟ ବ୍ୟବସାୟୀଙ୍କୁ ଥଇଥାନ ଯୋଜନା

ଭୁବନେଶ୍ୱର,୨୧ ୨ (ବୁ.ପ୍ର) - ସ୍ୱାର୍ଟସିଟି ମିଶନରେ ସ୍ୱାର୍ଟ ସିଟିରୁ ଭାବେ ନିର୍ବାଚିତ ହୋଇଥିବା ପ୍ରସ୍ତାବିତ ଗୁଡିକ ସେବ୍ରେ ସ୍ତିଙ୍ଗ ଅଞ୍ଚଳରେ ଥିବା ସମସ୍ତ ଯେ କୌ ଗୁଡିକ, ୭ ରୁ ୮ଟା ଦୋକାନମାନଙ୍କୁ ନେଇ ବିଶେଷ ଯୋକ ରୋ ଆଲୋଚ ହୋଇଥିବାବେ ଜିୟାଯ୍ୟ ମୀସ୍ତି ସୂ ନୀ ରବିବାର ଶେଷ ହୋଇଛି । ବିଭାନ୍ତି ଘ ନୋ ଭା

 be also suggested printing of city route maps in Braille to make it easy for the blind people to locate

other representative of blind people, Sanyas Behera, said human guides need to be deployed at

s stands and the railway station to help blind people. Behera also mooted sensory parks in the y. The parks will help the blind people feel the ambience, he added.

ଓ Odisha Association For Blind suggested establishment of a Braille library at Harekrushna htab State Library. "If the government sets up common facility centres in the libraries by pointing readers for us, we will get updated about news," said a blind student.

BMC commissioner Krishan Kumar said they have received the proposals. "These would find ce in the Smart City project. We will work on some of them according to our plan," said Kumar.

Blind people provide inputs for Smart City project

TNN | Nov 14, 2015, 10.28 AM IST

BHUBANESWAR: Blind people, have mooted some ideas before the Smart City team of the Bhubaswar Municipal Corporation (BMC) to make the city disabled-friendly.

Last week, the blind people discussed with team about their proposals. Another meeting regarding the issue would be held next week, said BMC sources.

The blind people, led by NGO Swabhiman, proposed installation of auditory signals at the traffic points. "As they could not see the traffic lights, the signals will help them," said Swabhiman

ief Sruti Mohapatra. The auditory system is the sensory system for the sense of hearing.

Citizens 'Mapping out' Smart City Plan

Express News Service

Bhubaneswar: The State Government is banking on ideas from citizens to design a SMART map for the Capital City. An initiative towards this step was adopted by the Bhubaneswar Municipal Corporation on Sunday with a series of Citizens' particip-

Transgenders Suggest Smart City Proposals

Express News Service

Bhubaneswar: After taking view of the women, students, youth and senior citizens on shaping the future city, Bhubaneswar Smart City Mission on Saturday held discussions with the transgenders.

Around 75 representatives from the community participated in the orientation meeting and suggested their plans for a smart city.

The transgenders had filled up the off line idea box papers and submitted to the smart city team. Various ongoing activities for Bhubaneswar smart city were briefed to the participants.

Suggestions made by the

representatives are special toilets for the third genders, provisions of community hall for various social/recreational activities of the kinnars, employment opportunity and skill development, special ward in the Government hospitals and separate shelter homes. Among the participants, Meera Kinnar, Sadhana Kinnar, Megha Kinnar and president of Kinnar Sangha Pratap Sahu spoke.

BMC Additional Commissioner Alok Kar, Assistant Public Relations Officer Gopal Panigrahi, Preeti Prada Panigrahi, Anwishika and Sraddhanjali Sahu of Humara Bachpan campaign were present.

Smart suggestion to identify squatters

BIBHUTI BARIK

Bhubaneswar, Oct. 28: There will be an eye in the sky to nab civic tax defaulters and flight encroachments.

Chief secretary G.C. Pati today asked the municipal corporation to use geo-positioning system (GPS) based land management technology to curb encroachment and identify people tax defaulters.

Speaking at the technology meet under the smart city programme organised by Bhubaneswar Municipal Corporation (BMC) and Information technology (IT) department, Pati said: "Once a new database on land in the corporation area is generated, the encroachers can be tracked easily through the IT-enabled system and the problem can be tackled at a preliminary stage."

With online collection of holding tax already under way, a satellite-linked IT service platform will make it easy to identify households and book defaulters.

Later while talking to The Telegraph, the chief secretary said that the shift to the property tax regime would happen shortly after legislative processes required for it was complete.

Once it is introduced, the tax collection of the civic body, which is now pegged at Rs 25 crore per year, may touch Rs 100 crore.

Sources said to make the collection of holding tax effective, the BMC had already engaged the Orissa State Remote Sensing Agency (ORSAC) to create a detailed database on the number of houses. The project will cost Rs 2.5 crore.

Similarly, Infrastructure Leasing and Financial Services Limited was given the responsibility to develop a complete software package for the city so that citizens can submit their property tax online and without hassles. This develop the software, the civic body will invest more than

Chief secretary GC Pati addresses the meet in Bhubaneswar on Wednesday. Picture by Ashwinee Pati

CITIZEN'S ENGAGEMENT- CITIZEN'S CONNECT INITIATIVE

Online Engagement   Offline Engagement   **Outreach**

Competitions

Mass Outreach

Stakeholder Meetings

Mass Campaign- Street Plays

Ward Committee

Seminars
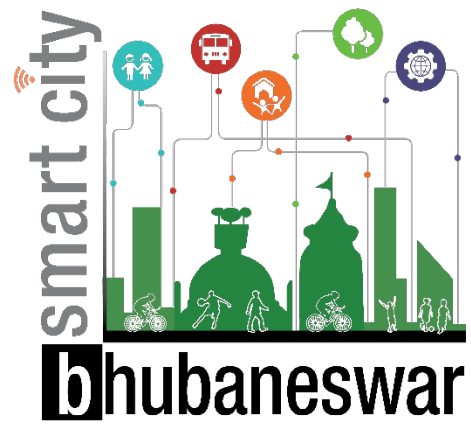
TOWARDS A SMARTER BHUBANESWAR

VISION

Bhubaneswar, through **participatory decision-making**, **responsible governance and open access to information and technology**, to be a:

Transit oriented city with a compact urban form that promotes active, connected and sustainable mobility choices

Livable city providing diverse range of housing, educational and recreational opportunities; while enhancing its heritage, arts and traditional communities

Child-friendly city providing accessible, safe, inclusive and vibrant public places

Eco-city co-existing in harmony with nature for nurturing a resilient, clean, green, and healthy environment

Regional economic centre attracting knowledge based enterprises and sustainable tourism activities by leveraging and empowering its institutions, local businesses and informal workforce

TOWARDS A SMARTER BHUBANESWAR- SELECTION PROCESS

POLLING RESULTS | CITYWIDE SMART SOLUTION

Category	Percentage
Heritage & Tourism	1 %
Open Space	2%
Governance	2%
Energy	20%
Waste Management	21%
Drinking Water	22%
Mobility	32%

POLLING RESULTS | AREABASED DEVELOPMENT

District	Percentage
Lake Zone District	2 %
Khandigiri District	7%
Lamisagar District	10%
Heritage District	12%
South City District	21%
Infocity District	22%
Town Centre District	26%

MOBILITY

TOWN CENTRE DISTRICT

Total Votes: 2.69 Lakhs (26% of total populaton)

AREA BASED DEVELOPMENT- Bhubaneswar Town Centre District (BTCD)- Models for Development- Retrofitting + Redevelopment

15
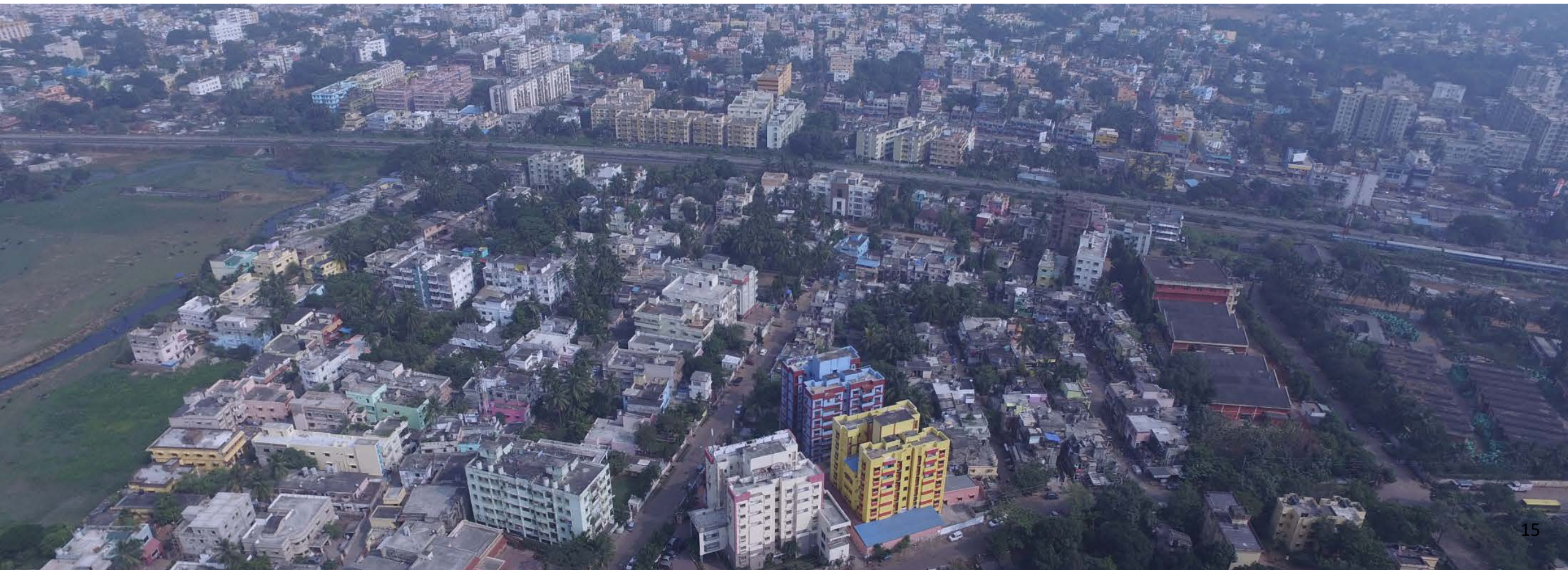
INTRODUCING BTCD

Strategically placed at the center of the city ●

Well Connected: BBSR Railway Station, City Bus Stand ●

Prominent Landmarks: Master Canteen Chowk; Janpath ●

Development: Both "organic" and "planned" types ●
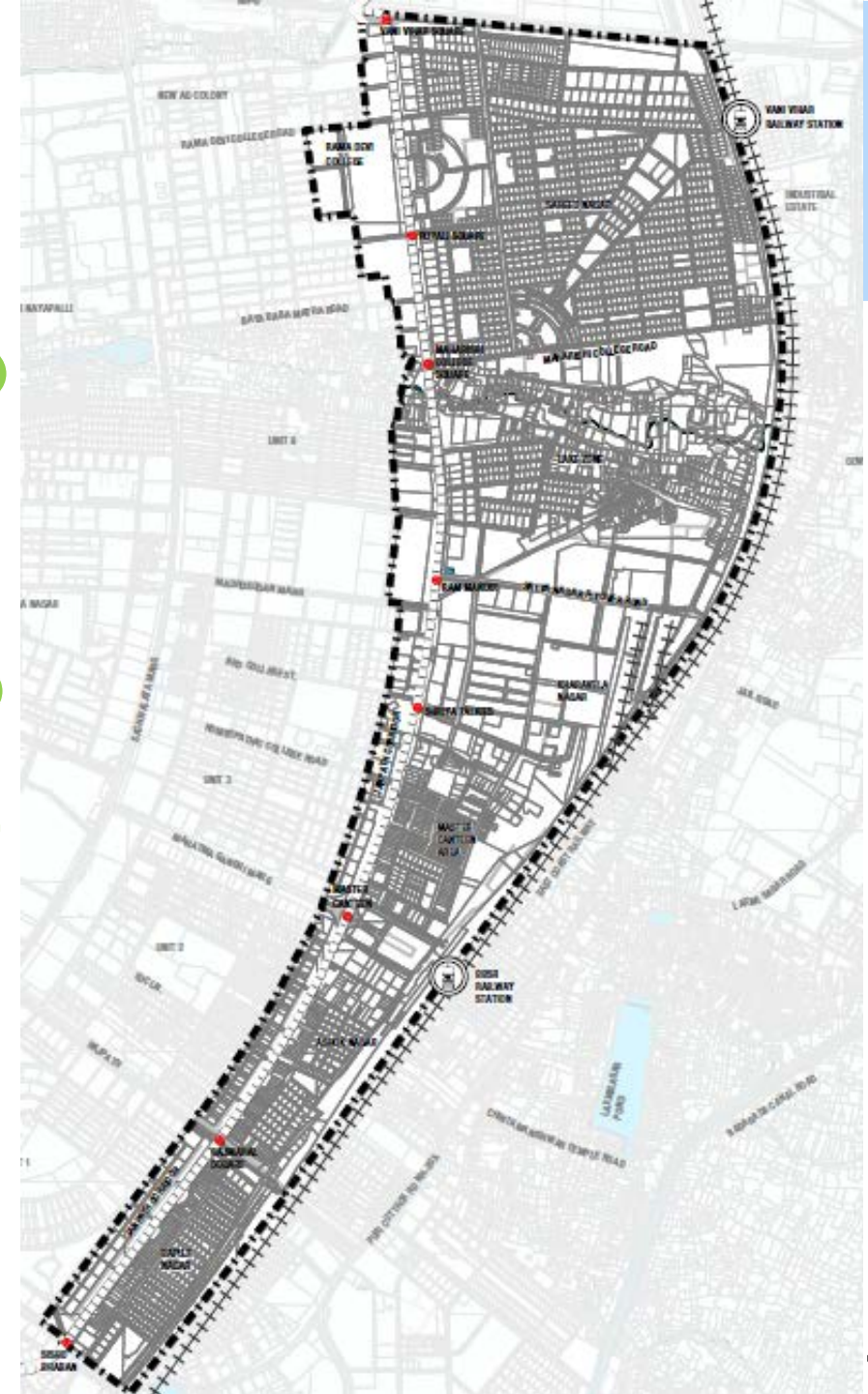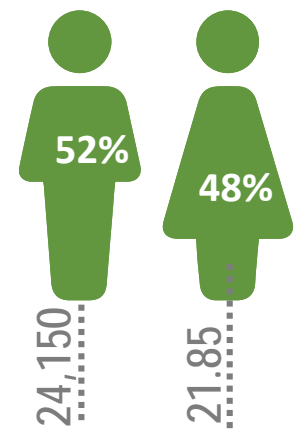
Acceptance for Mixed Use ●

INTRODUCING BTCD

AREA: 985 Acres (3.9 sq.km)

2.4% of BMC | **0.3%** of BDPA

Wards: 29,30,34,35,40,41,53

Demography (2015): 46,000

52%   48%

24,150   21,85

BSD
Bhubaneswar Smart District
Town Centre District
Area:
985Acres / 3.9 Sq.km.
Wards Covered:
29, 30, 34, 35, 40, 41 & 53

- - - Smart District Boundary
+++++ Railway Line
Roads
BBSR Railway Station
Population (2011 Census)

Source: BMC & BDA Database

0 200 400 800 Meters

17

3 EXISTING POPULATION

INTRODUCING BTCD

Road Network: 70.5 Km

5 km of 60m wide (7%)

6.5 km of 45m-18m wide (9.3%)

59 km of less than 18m wide (83.6%)
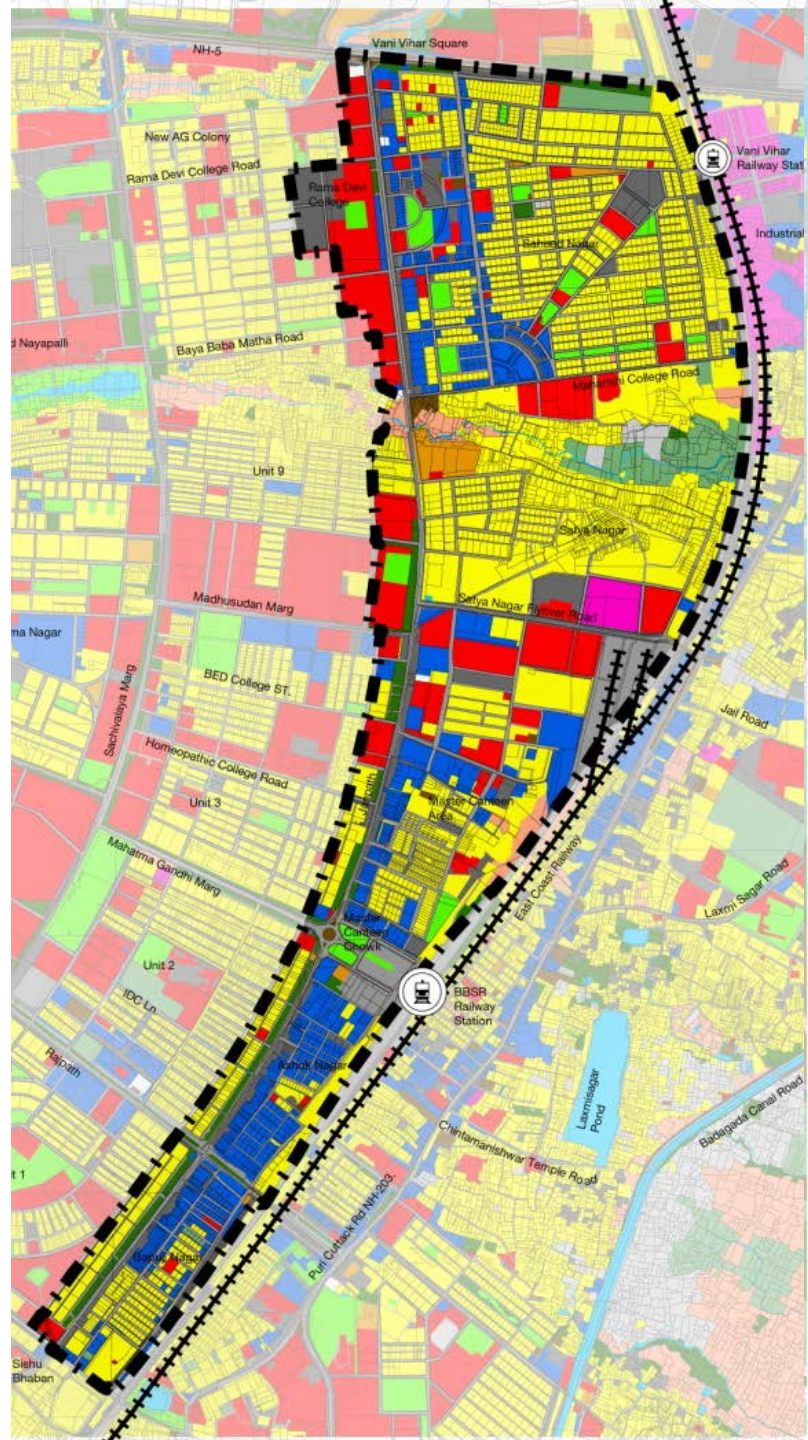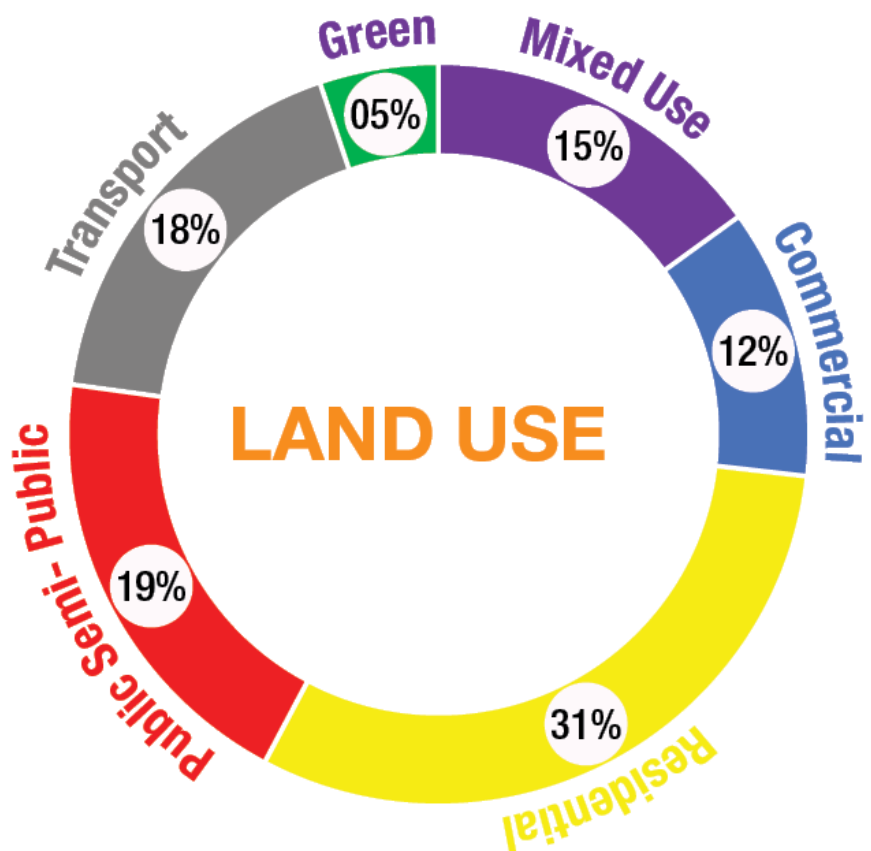
BSD
Bhubaneswar Smart District
Town Centre District
Area:
985 Acres / 3.9 Sq.km.
Wards Covered:
30, 34, 35, 40, 41 & 53

Legend:
- - - Smart District Boundary
+++++ Railway Line
▢ Roads
Ⓣ BBSR Railway Station
● Intersections

ROW Width
— Above 45 m
— 31 - 45 m
— 19 - 30 m
— 10 - 18 m
— 3 - 9 m

ROAD NETWORK HIERARCHY

5

Source: BMC & BDA Database

INTRODUCING BTCD

Green 05%
Mixed Use 15%
Commercial 12%
Transport 18%
Public Semi- Public 19%
Residential 31%

LAND USE

BSD
Bhubaneswar Smart District
Town Centre District
Area:
985 Acres / 3.9 Sq.km.
Wards Covered:
30, 34, 35, 40, 41 & 53

■ ▪ ■ Smart District Boundary
┼┼┼┼┼ Railway Line
🚉 BBSR Railway Station

Land Use
- Residential
- Commercial
- Industrial
- Public Utilities
- Public/Semi-Public/Institution
- Agricultural Land
- Recreational
- Transportation
- Vacant Land Under Development
- Vacant Land Within Developed Area
- Vegetation / Forest Land
- Waste Land
- Water Bodies / Wetland
- Others

0 200 400 800 Meters
Source: BMC & BDA Database

3 LAND USE

19

PROPOSAL FOR BTCD

Mobility | Physical Development | Social Development

Multimodal Integration- Integrated bus terminal and railway station

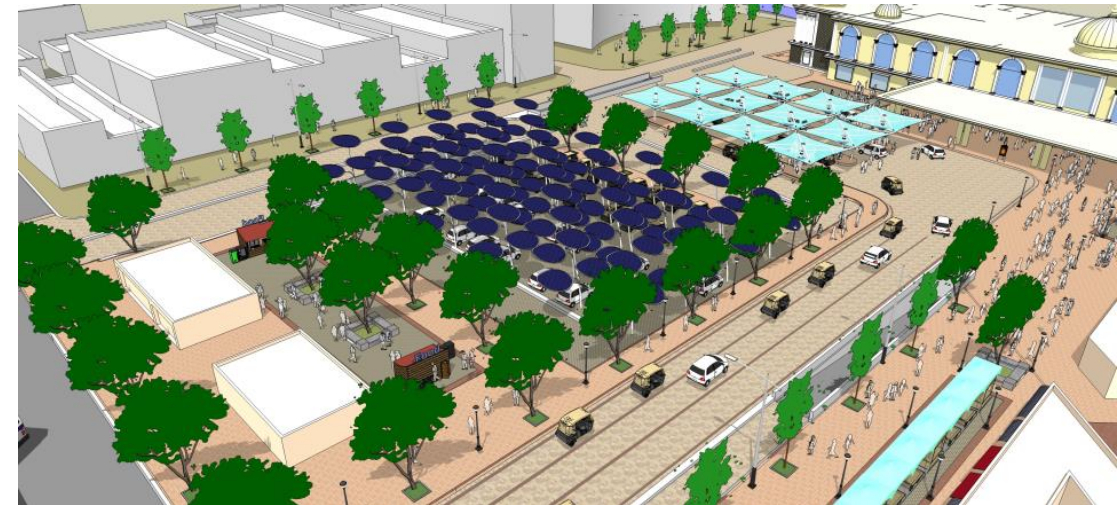**NMT Zones-** Pedestrian friendly roadways

Complete Streets

NMT Network- Dedicated, continuous pedestrian and cycle network

PBS Scheme

IPT & Rickswaw Management

PROPOSAL FOR BTCD

Mobility | **Physical Development** | Social Development

- **LED Streelighting Project**
- **Solar Roof Tops**
- **Waste Recycle Centres**
- **Sewerage Treatment System**
- **Water Recycling System**
- **Integrated Water Management Initiatives**
- **City Fiber Ducting**

PROPOSAL FOR BTCD

Mobility Physical Development **Social Development**

4 Slum Redevelopment Projects

Public Art Installations

Safety: Community Policing "Ama Police"
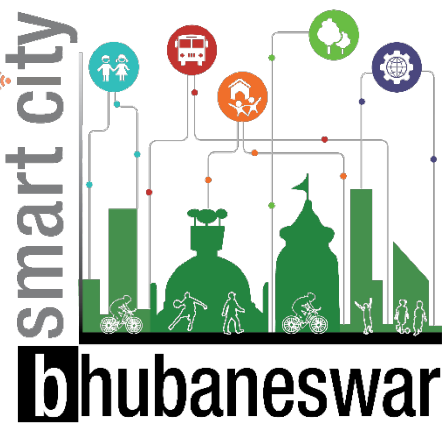
Modern Education Facility

Women & Child Health Care

Health Care Centre

PAN CITY PROPOSAL- Mobility

INTRODUCING MOBILITY IN BHUBANESWAR

MODAL SHARE: PT share: 10%; IPT: 30%; NMT: 30%; Car+2 wheeler: 30%

Public Transport: Low frequency- 20 mins headway; 73 % area covered; Overlapping routes

Poor supporting infrastructure – 1 depots (3.5 acres); 165 buses; 3 Terminals; bus stops without shelter

Parking: **minimal control on parking** encroachments; leading to congestion

Unorganized IPT with increasing numbers

Lack of NMT infrastructure
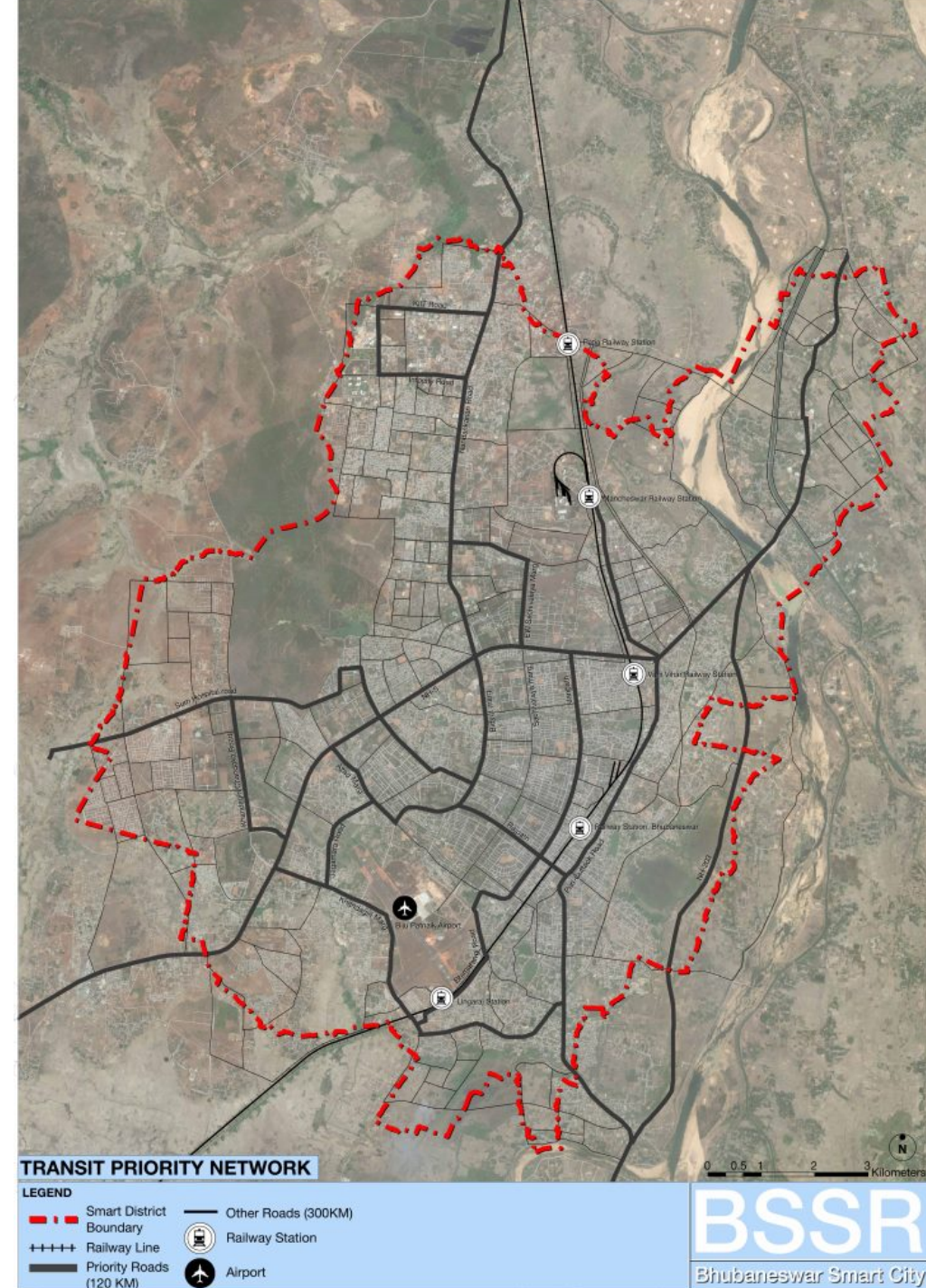
PROPOSAL FOR MOBILITY

Traffic Management: Traffic signalling | Video surveillance | e- challan | simulation and modelling

Parking: Electronic parking systems | Parking availability data | Parking mobile app.

Transit Operations: Fleet tracking | Depot management | Bus scheduling | PIS

Common payment card: Integrated fare card | Prepaid and card facility

Emergency Response and City Incidence Management System

TRANSIT PRIORITY NETWORK

LEGEND

Smart District Boundary — Other Roads (300KM)
Railway Line — Railway Station
Priority Roads (120 KM) — Airport

BSSR
Bhubaneswar Smart City

DRAFT FINANCIAL PROPOSAL

DRAFT FINANCIAL PROPOSAL

Description	Total Project Cost	
Sub-Plans	Cost	%age Share
Governance Solutions	2,800	0.63%
Land Use Interventions	151,500	34.00%
Transportation Improvement	31,100	6.98%
Affordable Housing Projects	167,800	37.66%
Social Welfare Programmes	3,330	0.75%
Economic Initiatives	4,493	1.01%
Infrastructure Investments	36,030	5.78%
ICT Solutions	48,571	10.90%
Total	445,524	100%

Total Cost: 4,450 cr | SCP Funding: 973 cr

Thank You