SMART CITIES

The Gateway to a New India

Contents

India is experiencing Rapid Urbanization

- Slum population in Urban areas is on constant increase

- Increasing population has strained existing urban infrastructure – Housing, Sanitation and Open Spaces

- Increasing cost of healthcare

- Lack of formal education, unskilled, unemployed population

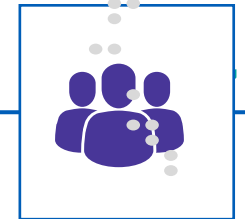- Difficulty in equitable access for mobility

53
One Million+ Cities

31%
Decadal Urban Growth Rate

Mn
Urban Population

Hence we need to build cities that will cater the needs of all citizens

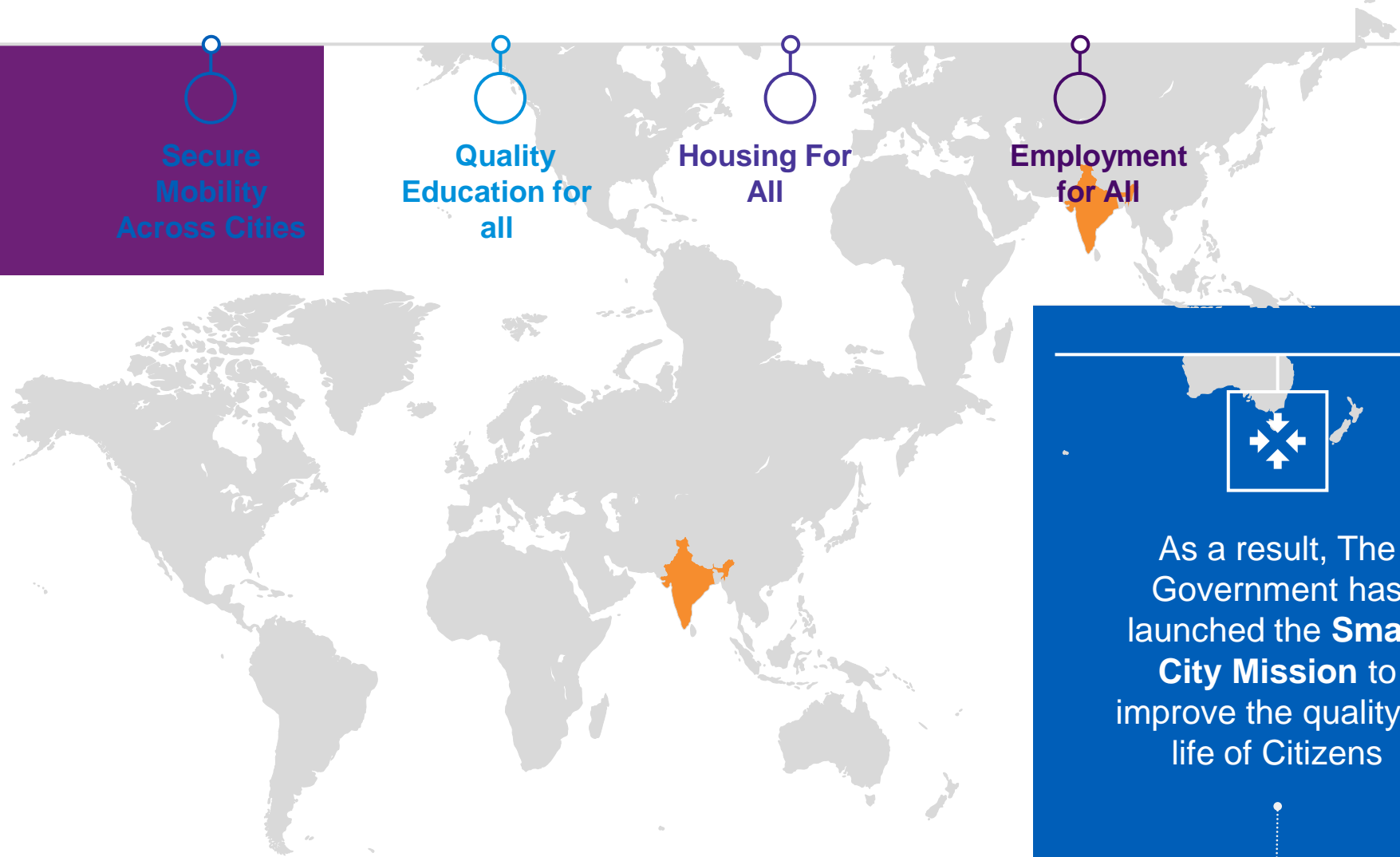**Clean and Hygienic Cities**

Secure Mobility Across Cities

Quality Education for all

Housing For All

Employment for All

As a result, The Government has launched the **Smart City Mission** to improve the quality of life of Citizens

The Smart Cities Mission

A successful Smart City is one that is Citizen Centric & Citizen Driven and is based on the principles of

Smart Economy

A city that invests in innovation and provides a roadmap and infrastructure to support successful business outcomes and attract industry and investment

Smart People

A city that invests in people and attracts talent to the area, which creates opportunities through emerging smart technologies and enables everyone to participate

Smart Mobility

A city with connected technology-enabled infrastructure for multiple modes of mobility, that innovates towards future transport modes and prioritizes walking

Smart Living

A city that makes life easier for everyone, which uses smart technology in its public places, and that develops new ways of connecting people and improving city amenity

Smart Governance

A city with coordinated leadership and collaboration across government, industry and business and connects with its citizens

Understanding the Smart City Ecosystem

Stakeholders

Local Citizens	Civil Servants	Businesses	Residents	Students	Business Travellers	Tourists

Channels

Smart Card	Smart TV	Wearable Devices	Smart Phone	Tablet	Digital Signage	PC	Smart Vehicles

Smart Services

Mobility	Safety	Energy	Buildings	Health	Education	Tourism	Retail	Environment	Government

Next generation infrastructure

City connectivity infrastructure	City digital infrastructure	City security infrastructure	Citizens as sensors

Enabling levers

Governance	Open data	Innovation	Human Capital	Cyber-security	Policies /standards	Comms	PPP / funding models

BSNL's Offerings in Smart City Mission

- Integrated Command Control Center
- Network Backbone
- Intelligent Transport
- City Surveillance

- Waste Management
- Smart Education

BSNL in Smart Cities

- E-Governance
- Citizen Portals
- Citizen Safety

- Smart Parking
- GIS Maps
- Smart Campus
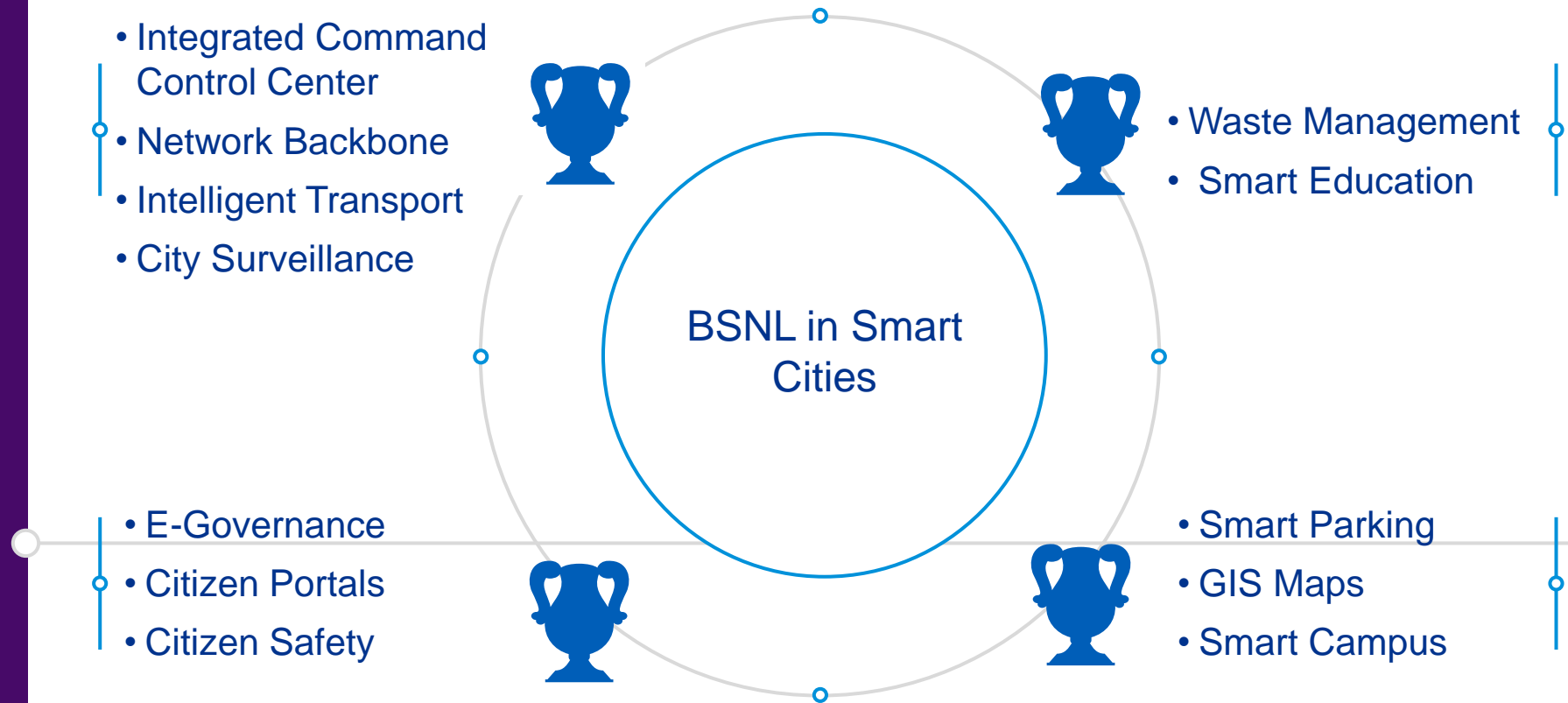
BSNL's Experience in Smart Cities

Data Center & NOCs

MeitY Empaneled Cloud Service Provider

6 Internet Data Centers

Nation wide Network Operations Center

Network Connectivity

More than 25000 WI-FI Hotspots

7 Lakh RKm+ Optical Fiber Network

Safe and Secure Cities

More than 1500 City Surveillance Cameras

Multiple Traffic Enforcement Projects in different smart cities

System Integration Projects

Multiple Country Wide System Integration Projects

Implemented Nation Wide Digital Platform

Solid Waste Management

ICT Based SWM in more than 100+ ULBs

ICT based toilet feedback polling in more than 100 ULBs

Citizen Portal

Launched E-Governance Portals & Applications

Case Studies – BSNL's Key Smart Solution Projects

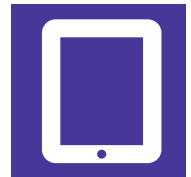**Presenting you BSNL's Key Projects across smart cities**

- ITMS and Surveillance
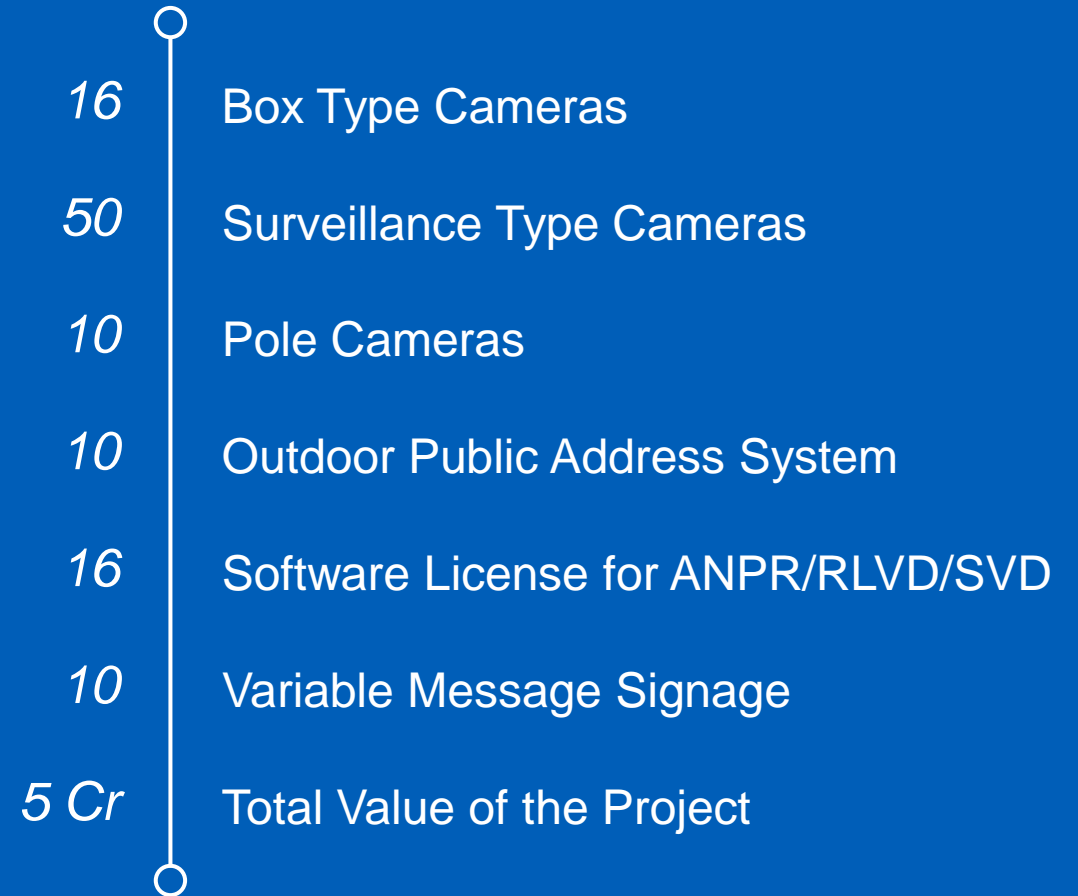- ICT Based Solid Waste Management
- Smart Class Rooms
- City Wide W-ifi

Intelligent Traffic Management in Kanpur

- Advanced cameras for 'Automatic Number Plate Recognition/ Red Light Violation Detection with video and data analytics & Response management
- Corridor Management and Area Traffic Control System

16	Box Type Cameras
50	Surveillance Type Cameras
10	Pole Cameras
10	Outdoor Public Address System
16	Software License for ANPR/RLVD/SVD
10	Variable Message Signage
5 Cr	Total Value of the Project

Smart Classrooms

- Won National Award for Smart Classroom Project, Jabalpur in 2018

- Implementing smart class rooms projects for more than 400 schools across the country

- Specially curated content in multiple languages from nursery to class 10th

- 2D / 3D digitized content of school syllabus Industry training / skilling

BSNL Smart Pole – Bhagalpur & Ghazipur

HR/HD Video Camera
- ✓ Security Monitoring
- ✓ Vehicle Monitoring

Information Display
- ✓ Advertising
- ✓ Political news
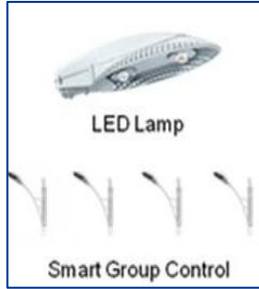- ✓ Information release

Emergency Call
- ✓ Field Contact with Monitoring Centre/ Helpline stations

Intelligent Lighting
- ✓ LED streetlights
- ✓ Solar power based illumines
- ✓ Centralized Controlled

Wi-Fi Access Point
- ✓ Wi-Fi Hotspot

Sensors
- ✓ Environmental Sensors
- ✓ Pollution detecting sensors

Hazaribaug City Surveillance

- *Designed an end to end city surveillance solution*
- *Installed a Central Control Room for Police Department Hazaribaug*
- *Developed a Response Management System*
- *Covered more than 50 major traffic crossings*

BSNL designed, planned, and supplied and installed complete CCTV surveillance solution

240+ Cameras installed

ICT – Based Solid Waste Management – 100+ Cities
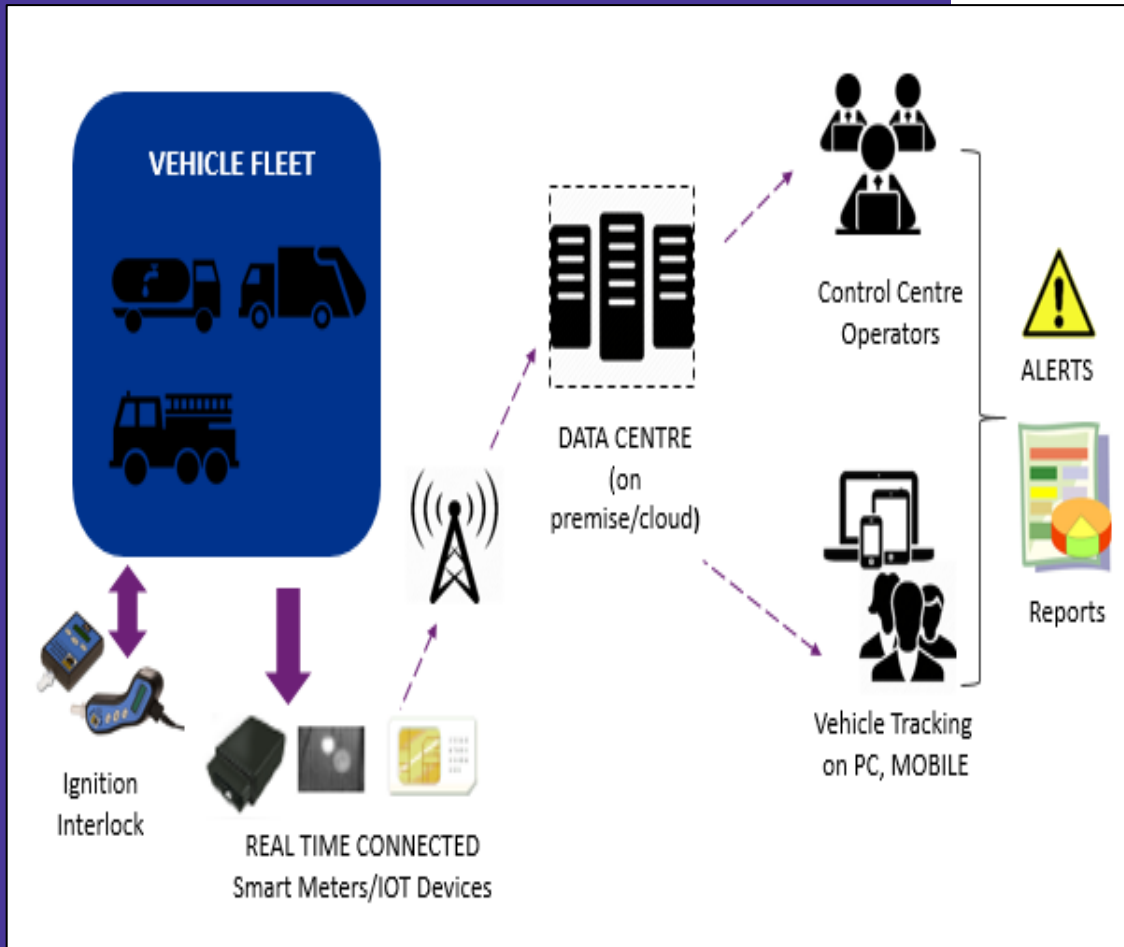
1
- Monitoring of fleet status by GPS
- MIS for waste collection and transportation
- Real time SMS delivery for vehicle breakdown and maintenance

2
- Citizen complaint management system and its redressal through SMS

3
- Mobile application for capturing the status of cleaning site using date, time and location stamp and for attendance of staff
- Mobile / Web-based applications to access relevant data around vehicle schedules, ETA/ETD, route deviations, vehicle performance etc.

Let us end this presentation by concluding that

We have reached a stage where Smart City Mission has crossed multiple milestones because of active participation from multiple players across different industries.

However, A long journey still needs to be undertaken that requires development of new solutions that are more aligned as per the diverse geographical and cultural requirements of the Smart Cities in India

As a result despite implementing multiple projects, BSNL is constantly working towards evolving its Smart City product offerings to offer more solutions that are indigenous and cost efficient such as development of Integrated Command and control Centre as a Service Solution

Thank You