



**Smart City**  
MISSION TRANSFORM-NATION



# SMART CITIES INITIATIVES OF INDIA

April 11, 2018

# Indian Urban Sector – poised for rapid growth

Urban  
population  
(million)

285

2001

377

2011

598

2031

Million Plus  
Cities

35

2001

53

2011

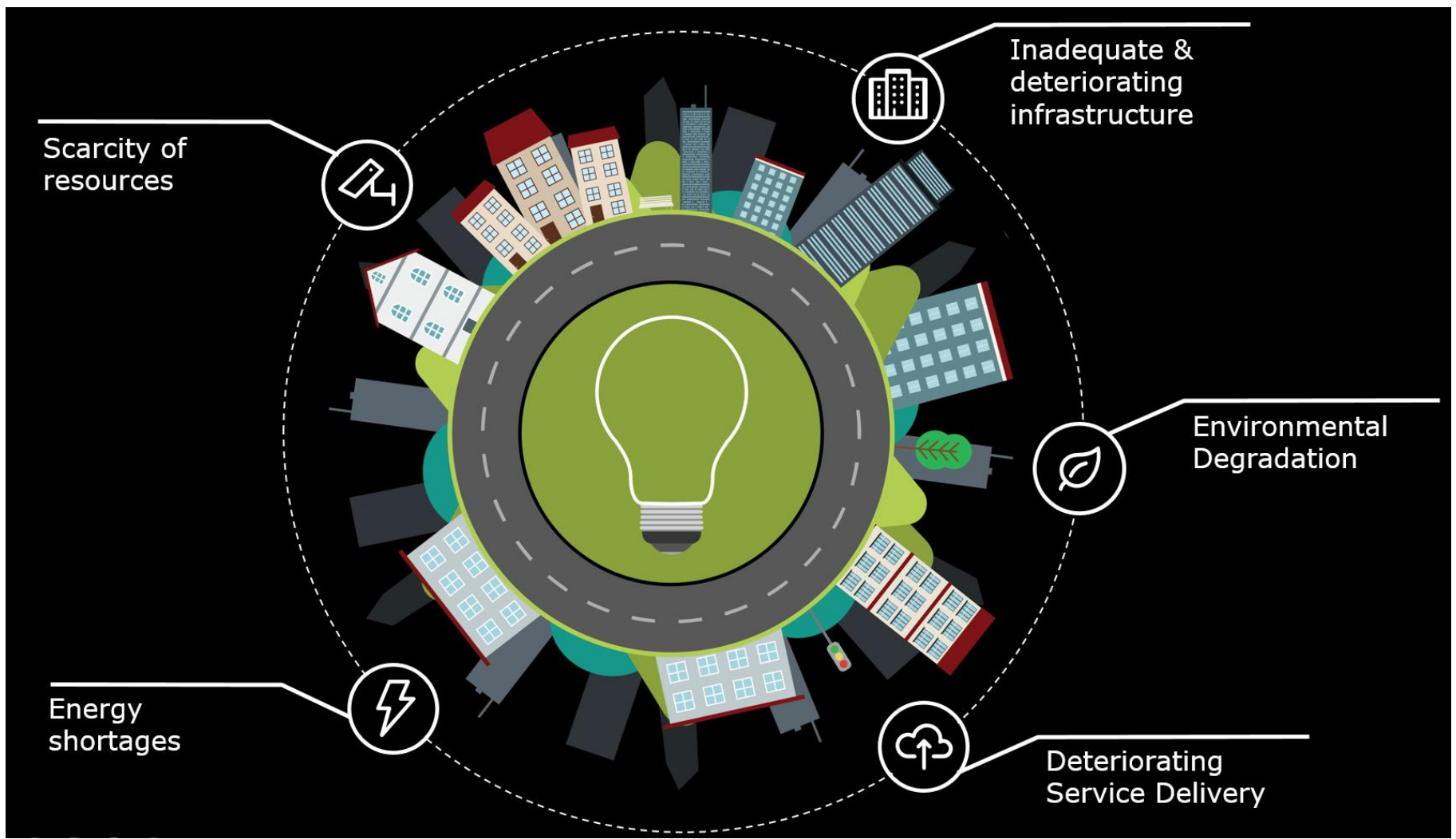
69

2025

**63%** of GDP is contributed by cities in 2016

**~70%** of GDP is contributed by cities by 2030

# Urban India – Key Issues



To overcome these challenges, India has launched some missions

# Four Missions & Objectives

## 1. Smart City Mission

Developing 100 smart cities in next five years improving liveability

## 2. AMRUT

In 500 cities, focus on Urban amenities like water, drainage etc.

## 3. Housing for All

Build 2 crore houses for urban poor including EWS and LIG by 2022

## 4. Swachh Bharat Mission

Clean the streets, roads and infrastructure of the country's 4,041 statutory cities and towns

**Urban  
India:  
Mission mode  
development**

# Smart City Mission - highlights

Smart City Mission  
launched by Honorable  
Prime Minister in June 2015

5-year government  
budget of **USD 15  
billion** for  
**transforming 100  
brown field cities**  
to SMART cities

**2 stage SMART city  
challenge** process for  
selecting 100 cities –  
(i) shortlisting of cities  
by state government;  
(ii) smart city strategy  
development

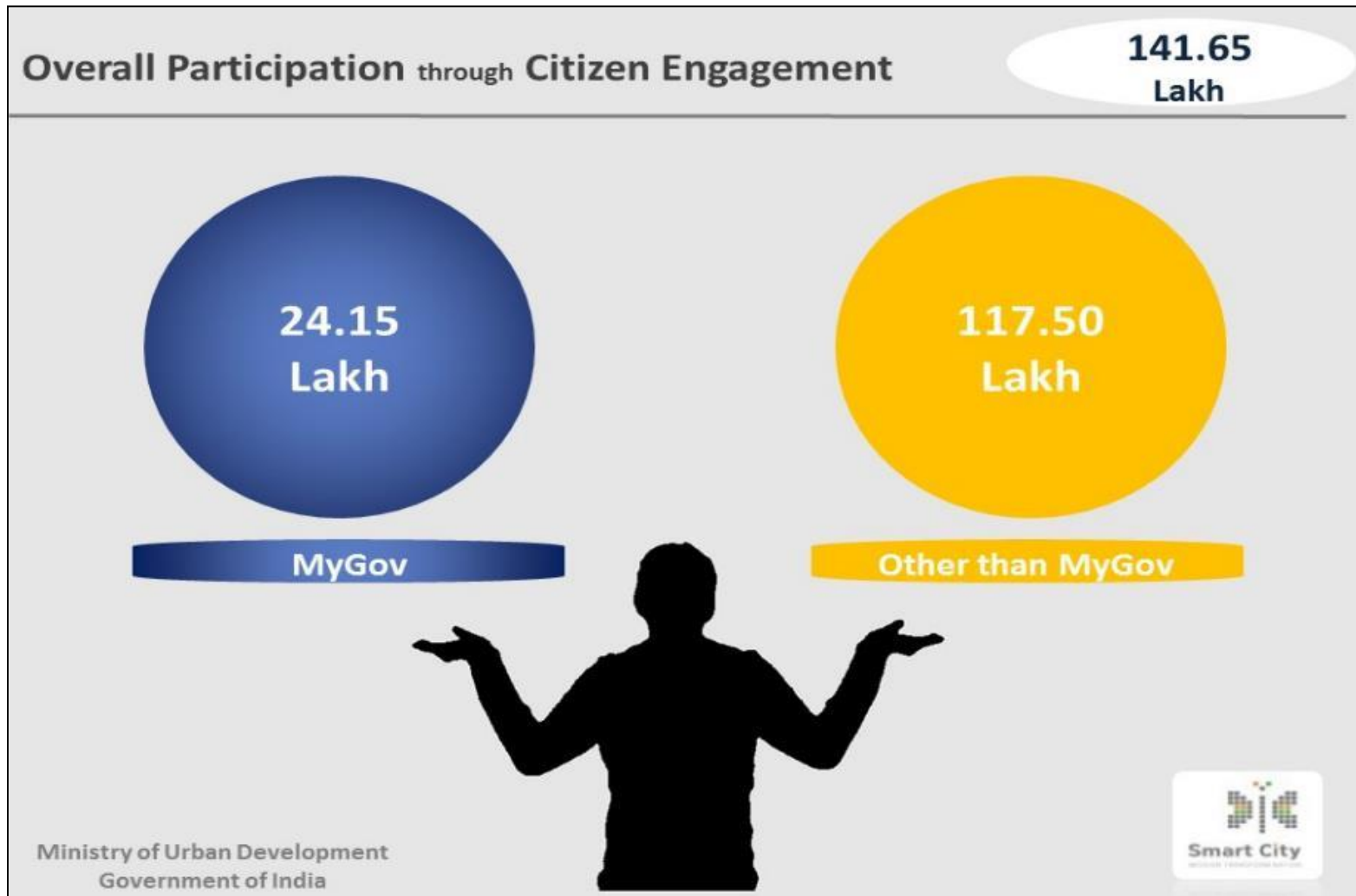
**Investment for  
SMART cities** by  
private sector, CSR  
funds, bonds, loans  
and augmentation  
of revenue by cities

**Convergence with  
other  
complementary  
government  
missions** e.g., Digital  
India, AMRUT, FAME,  
Prime Minister  
Housing Mission etc.

**Implementation  
at the City level  
through a Special  
Purpose Vehicle**  
– a limited liability  
company



# Citizen Consultations : Focus



# Many “Firsts” in the Smart City Mission

**Competition based selection of Smart Cities**

Every city **developed a Vision** with citizen engagement

Implementation through Special Purpose Vehicles (SPVs)

Every city hired a team of Project Management Consultants

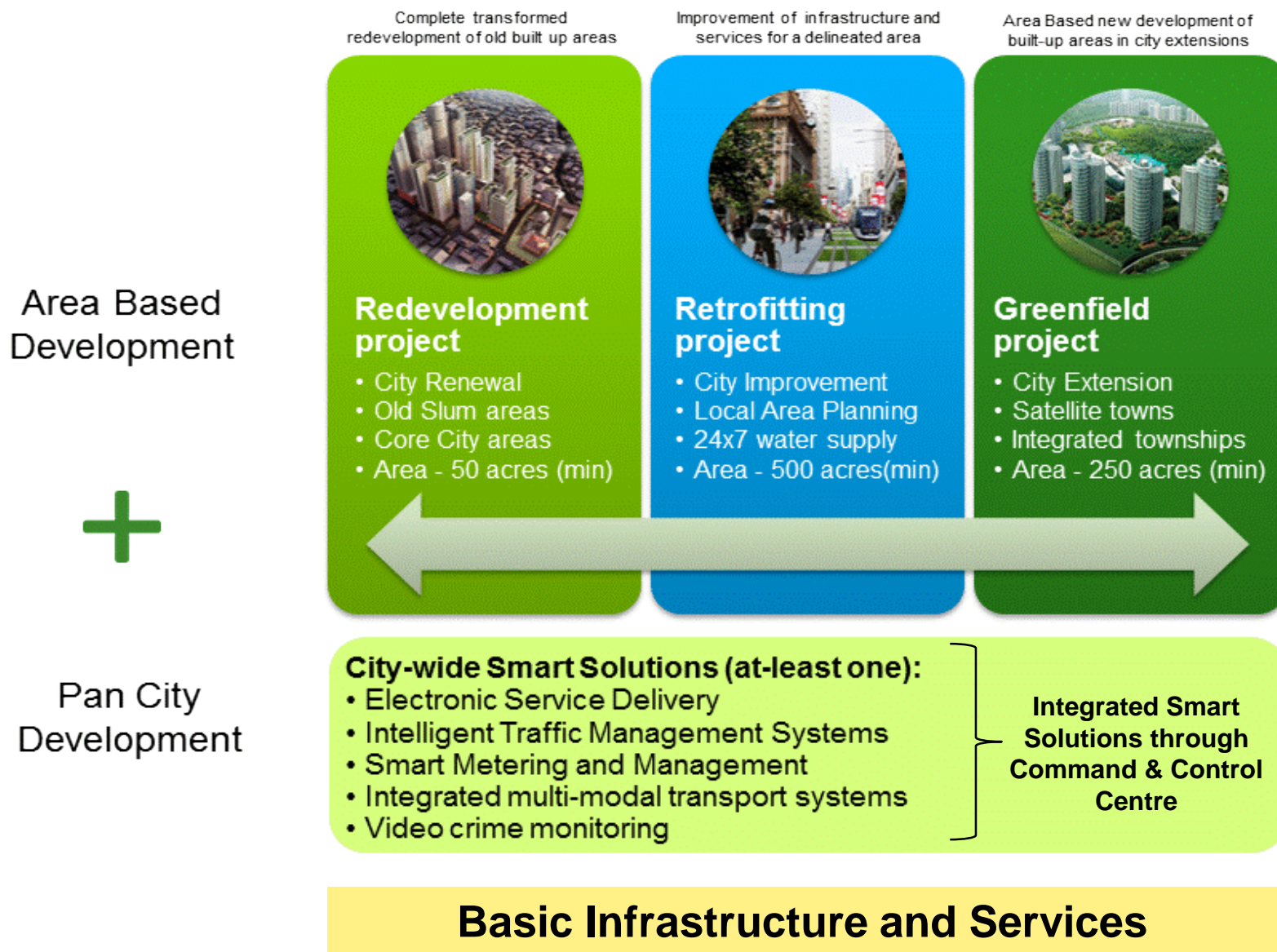
Every city has their own Smart City Proposal to implement

Each Smart City to get Rs. 100 crore/year

Reforms and Capacity building of Municipalities

**Result: Mission has raised the expectation of People**

# Mission Strategy





# Selection Process

- City Selection is based on the idea of Cooperative and Competitive Sub-Federalism
- City Selection Process follows a Challenge method:  
Two stages to select cities

## Stage – I

Intra-State  
city  
selection  
by State  
govts.

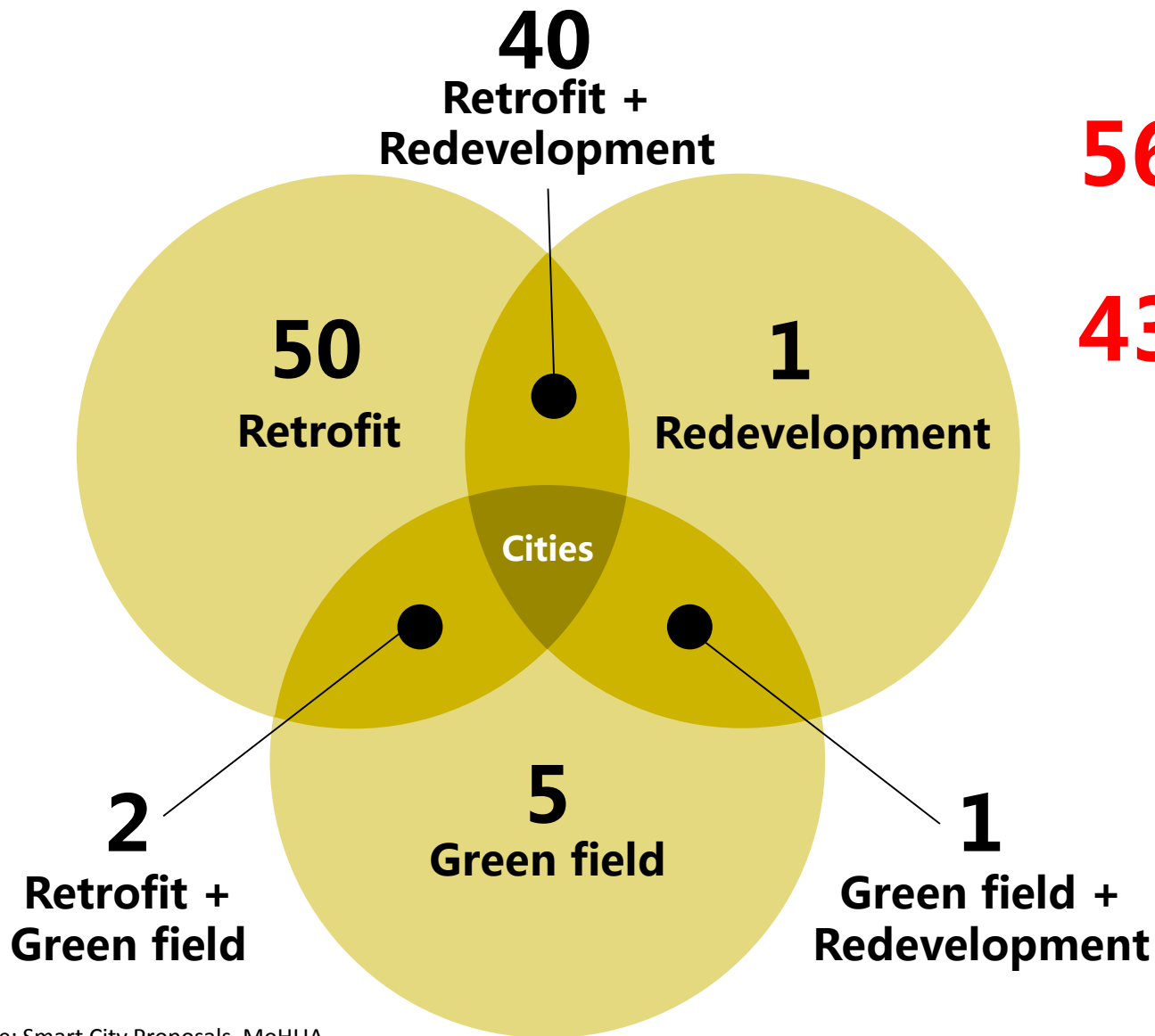
- 100 cities allocated to States
- Intra-state competition
- Cities selected by States
- **110** Potential Smart Cities prepared Smart City Proposals

## Stage – II

All India  
competition

- **4** rounds completed
- **99** cities selected in **4** rounds

# Three models of development – 90 cities



**56** Cities have chosen either of the models: Retrofit, Greenfield or Redevelopment

**43** Cities have chosen Combination of models

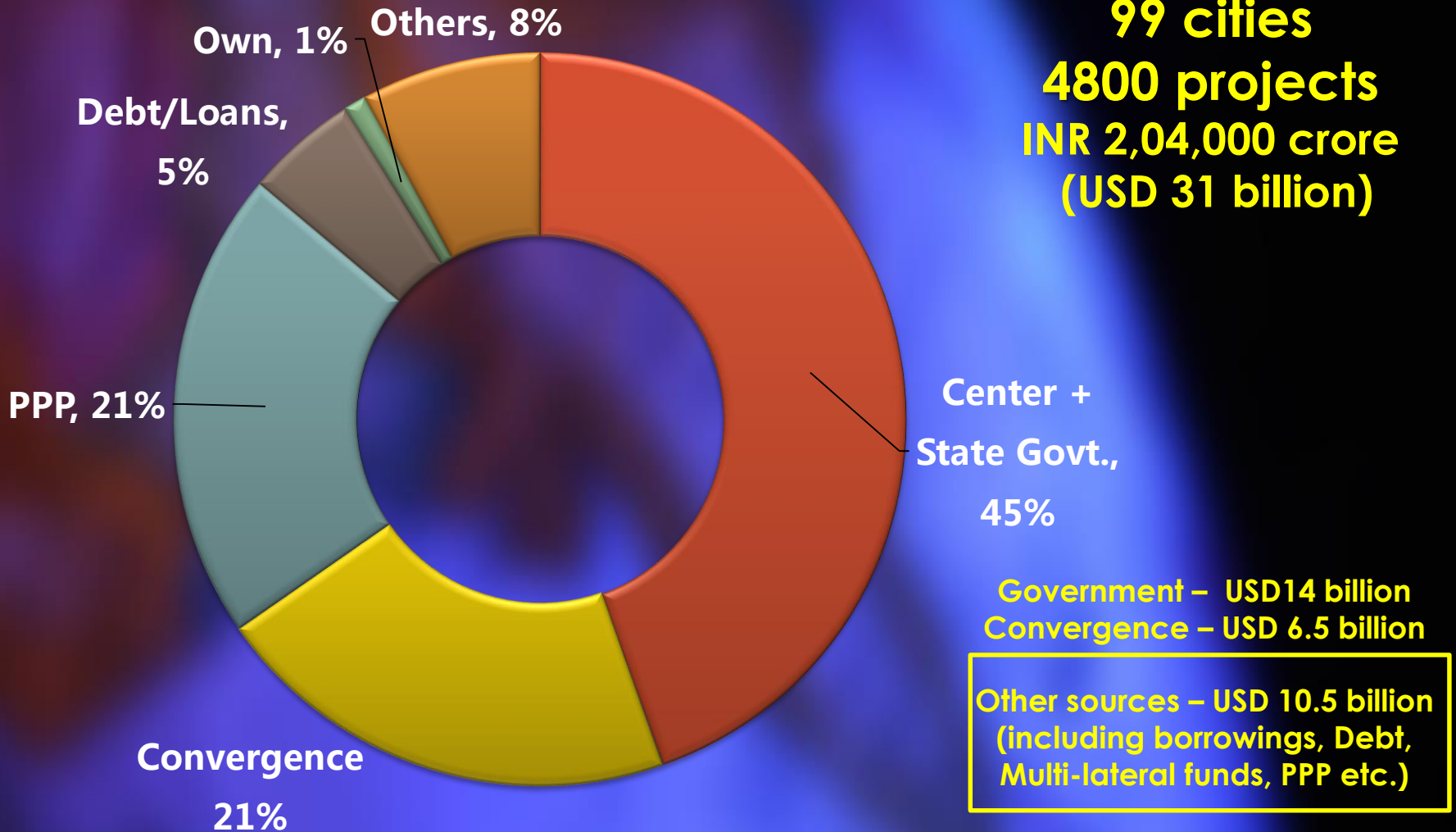
# Selection of cities

## Four rounds of competition

	<b>Light house Cities</b>	<b>Fast track Cities</b>	<b>Round 2 Cities</b>	<b>Round 3 Cities</b>	<b>Round 3 Cities</b>
No. of Selected Cites	<b>20</b>	<b>13</b>	<b>27</b>	<b>30</b>	<b>9</b>
Period of selection	Jan 2016	May 2016	Sept 2016	June 2017	Jan 2018
Total no. of Projects	829	600	1209	1890	262
Investment (in Rs Crores)	<b>39,454</b>	<b>28,040</b>	<b>55,500</b>	<b>58,700</b>	<b>12,823</b>
Investment (Million USD)	<b>6,070</b>	<b>4,314</b>	<b>8,538</b>	<b>9,031</b>	<b>1,970</b>

**99 cities to spend ~ INR 2,03,979 crore (USD 31 billion) for implementing Smart City Plans**

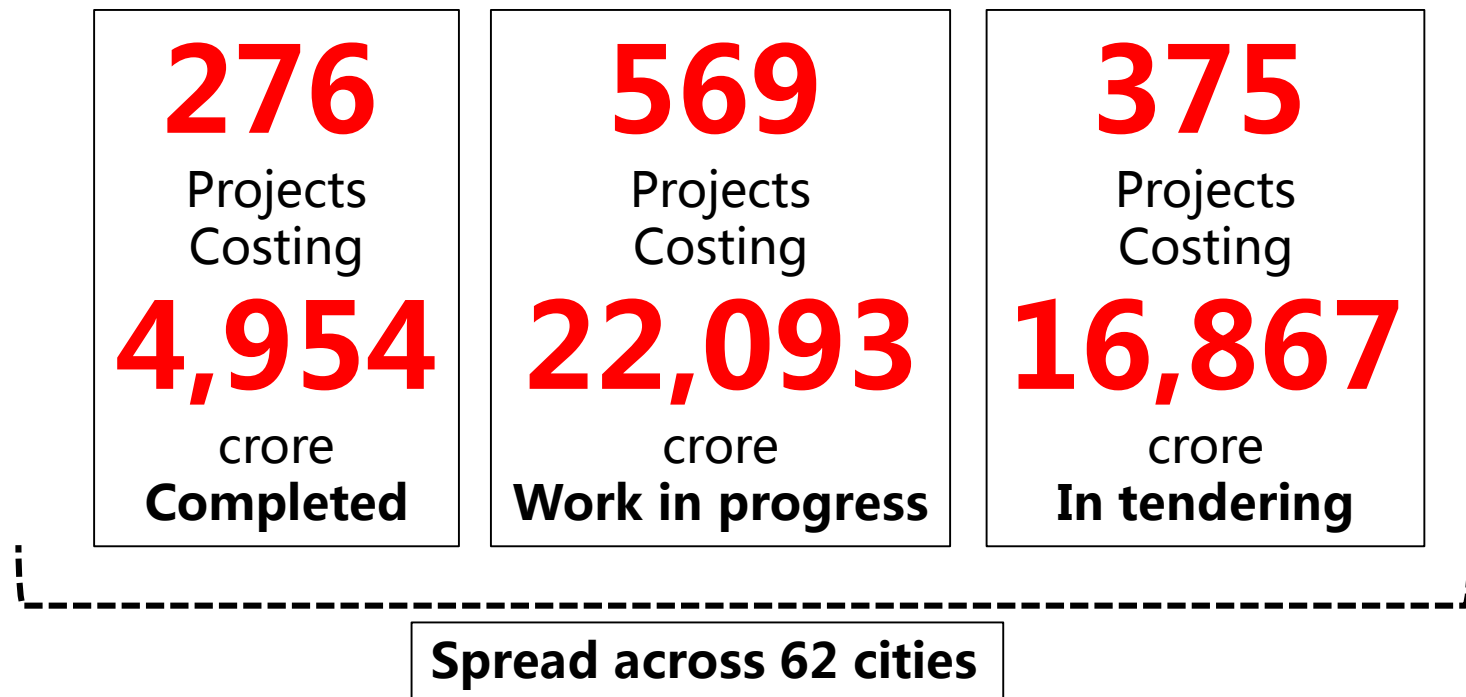
# Financial Landscape of Smart Cities



Over **USD 31 Billion** Planned Expenditure for 100 Smart Cities

# Mission Progress

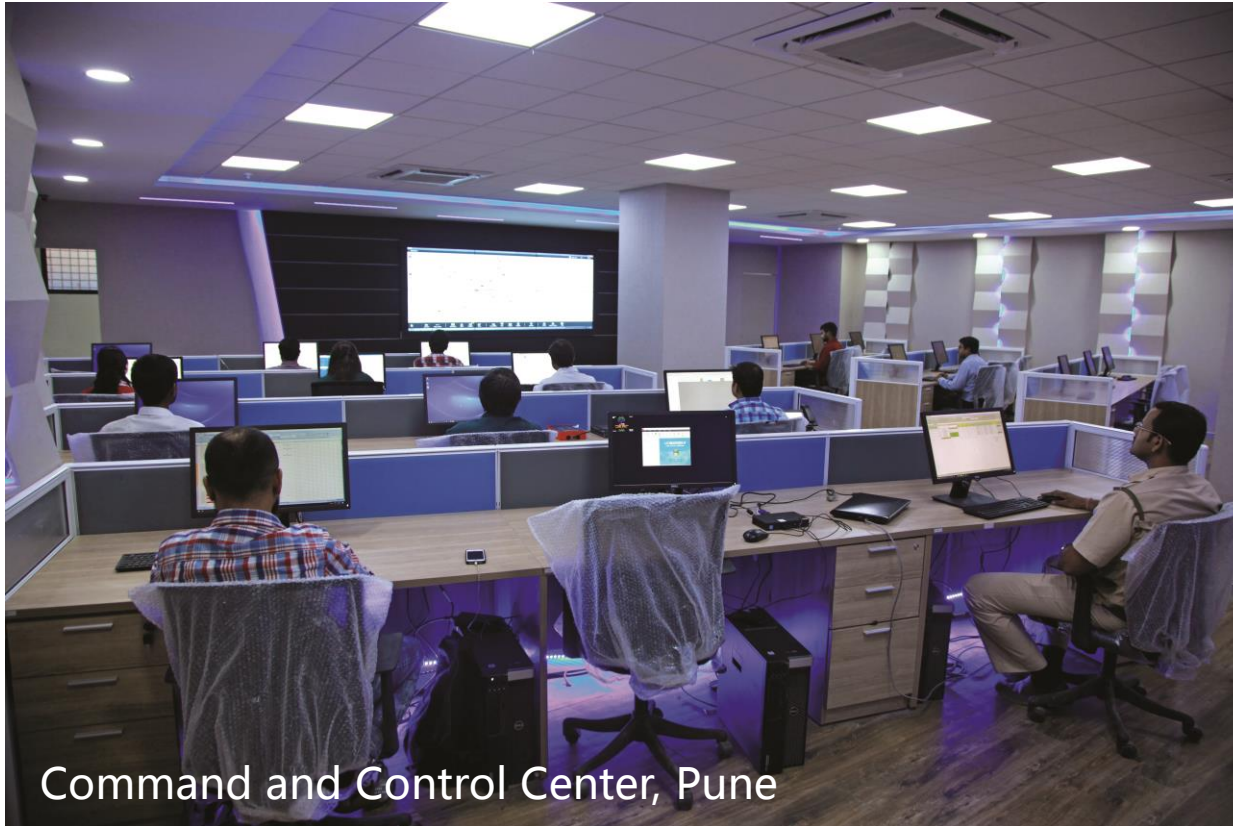
- 90 cities have established SPVs
- 67 cities have hired PMCs



**Note: 1 INR Crore = 0.154 Million USD**

# Smart City Centers

**Integrated Command & Control Centres are going to become the brains of the Smart Cities dealing with safety, surveillance, transport & traffic management, environment monitoring of the cities**



Projects completed in **8** cities, Under implementation in **15** cities  
& Under tendering in **30** cities

# Smart Roads



Samrt roads, Pune

**6 m carriageway, universal accessibility, walkability, bicycle friendly, free wi-fi**

**Projects completed in 4 cities, Under implementation in 29 cities  
& Under tendering in 9 cities**

# Roof top solar projects

Promotion of cleaner energy through Solar, Wind, Waste to Energy etc. in almost all smart cities

Chandigarh

Solar Rooftop



Bus stop at Sector 43



**All 99 selected Mission Cities** will implement solar rooftop projects.  
**Generate 700 MWp** at cost of Rs. 7000 Cr., on public and private buildings

Projects completed in **6** cities, Under implementation in **38** cities  
& Under tendering in **6** cities



# Riverfront / Water front projects

60 cities have waterfront projects, with focus to reduce the pollutant discharges in natural resources



Proposed Kahn Riverfront Development in Indore (2019)

- › About **100 Waterfront** Development projects
- › Beach, lake and, riverfronts with an investment of Rs. 6380 crores (60 cities)

# Solid Waste Management

**Solid Waste Management projects to reduce waste generation through prevention, reduction, recycling and reuse**



Illustrative image



# Parks & Open Spaces

Projects worth 7,000 crores proposed by Mission Cities for development of green open spaces

Provisions for enhancing walkability, increased green cover, universal accessibility, safety and security.



All Abilities Park, Visakhapatnam

# Social Development projects

**Projects like Social Equity Centre at Bhubaneswar, Shelters for poor, App. based Food Banks, Soup Kitchens etc.**

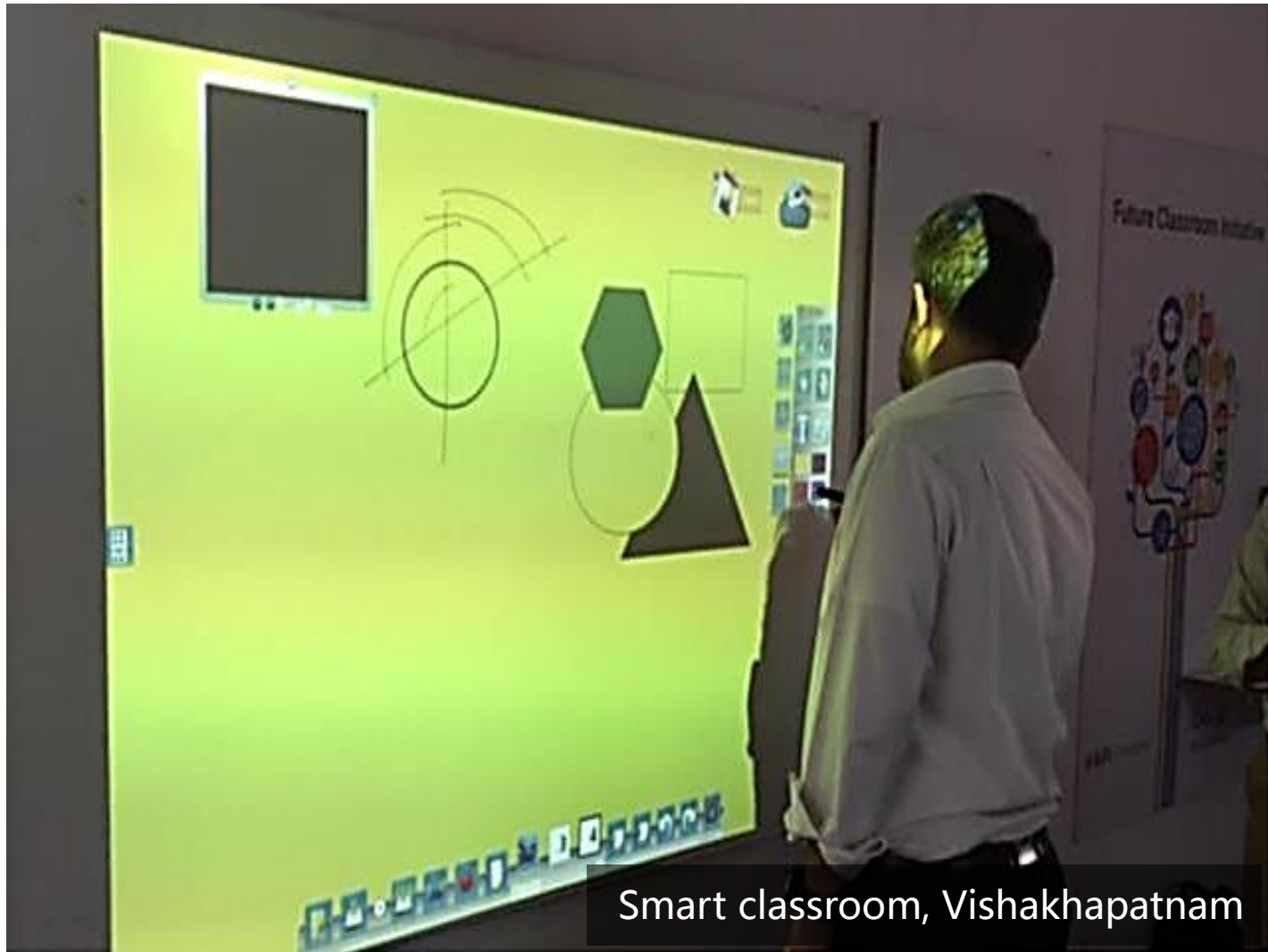


**Social Equity Centre, Bhubaneswar**

1. Rental housing for construction workers , accommodation for Urban homeless along with an Aahar Centre, Water ATM & other required amenities.
2. Project Cost – 5.40 Cr – Execution is in progress. To be completed by mid 2018

# Smart Education

## Smart Classrooms: Adding technology in education



Smart classroom, Vishakhapatnam

# Public Utilities

**Clean drinking water ATMs and public conveniences (specially for women) proposed in all cities**



Smart Toilets, Chennai



# Non Motorised Transport

Pedestrian friendly cities, promoting Non-motorised transport

Similar projects in 32 Smart Cities !



**12 km** of dedicated bicycle tracks around 50 locations

**Project Cost ~ Rs 7 crore** developed with PPP, Rs 3 crore from Smart City Mission

**25000** registered bikers new registration every 5 minutes.

**34,000+ clean kilometers** 7400kg of CO2 emissions offset already after logging.

# Environment Monitoring

Environment sensors to regularly monitor climate-related hazards and natural disasters

Smart poles with environment sensors, Bhopal



ENVIRONMENTAL INFORMATION										
MEMBERSHIP No. : HEMS ..CML/GGH/029 AUTHORIZATION NO HSPCB /CONSENT/ 2005/ 4029 VALID 31-3-2006.										8-07-2006
HAZARDOUS WASTE GENERATION				TREATED EFFLUENT		EMISSIONS		HAZARDOUS CHEMICALS		
TYPE OF WASTE	WASTE CATEGORY	AVERAGE QUANTITY (TON/DAY)	CHARACTERISTICS	DISPOSAL	PARAMETERS	LAST TEST RESULTS (mg/l)	PARAMETERS	LAST TEST RESULTS (mg./Nm <sup>3</sup> )	NATURE	AVERAGE CONSUMPTION (TON/DAY)
USED/ SPENT OIL	51	007	HYDROCARBON	RECYCLING	pH <sup>*</sup>	72	S.P.M.	61	INFLAMMABLE LIQUIDS	5.76
PHOSPHATE SLUDGE	12.5	004	MOISTURE, PHOSPHATE SALTS	LAND FILLING	T.S.S	34	SO <sub>2</sub>	64	INFLAMMABLE GAS	18.1
CHEMICAL SLUDGE	34.3	045	MOISTURE, NICKEL & CHROMIUM HYDROXIDE	LAND FILLING	O & G	22	NO <sub>x</sub>	30	CORROSIVE	0.99
INCINERATION ASH	36.2	014	CARBON & HEAVY METALS	LAND FILLING	B.O.D	22	CO <sub>2</sub> <sup>^</sup>	72	REACTIVE	0.09
OIL & GREASE SKIMMED RESIDUES	34.4	007	MOISTURE, OIL RESIDUES & LIME	INCINERATOR	C.O.D	80	HCl VAPOUR	7.7	TOXIC	0.06
PAINT SLUDGE	211	197	MOISTURE, HEAVY METALS & HAS CALORIFIC VALUE	INCINERATOR	Cr(VI)	BDL	* = NO UNIT, # = KL/DAY, ^ = %w/v, BDL = BELOW DETECTION LIMITS, ND = NOT DETERMINED.			
OTHER NO			US WASTE GENERATION		Cr(T)	BDL	HAZARDOUS WASTE DISPOSAL FACILITIES AVAILABLE ARE SECURED LAND FILL & INCINERATOR			
OTHER WASTE		185	METAL CHIPS/ PIECES, WOOD, POLYTHENE ETC.	RECYCLING	Ni	BDL	NOTE - FOR ANY CLARIFICATION, OR HINDI TRANSLATION PL. CONTACT EHS DEPARTMENT.			
नोट :- किसी भी प्रकार के स्पष्टीकरण एवं हिन्दी अनुवाद के लिये कृपया पर्यावरण, स्वास्थ्य एवं सुरक्षा विभाग से सम्पर्क करें										



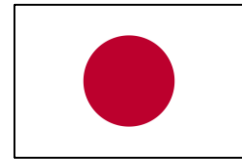
# Knowledge partnership

Revitalize the global partnership for sustainable development

**Convergence betn. inter-departments is a priority. ADB, World Bank, DFID, AFD are partners. 15 cities have selected for knowledge partnership with leading countries.**



- Vishakhapatnam
- Ajmer
- Allahabad



- Varanasi
- Ahmedabad
- Chennai



- Pune
- Amravati
- Indore



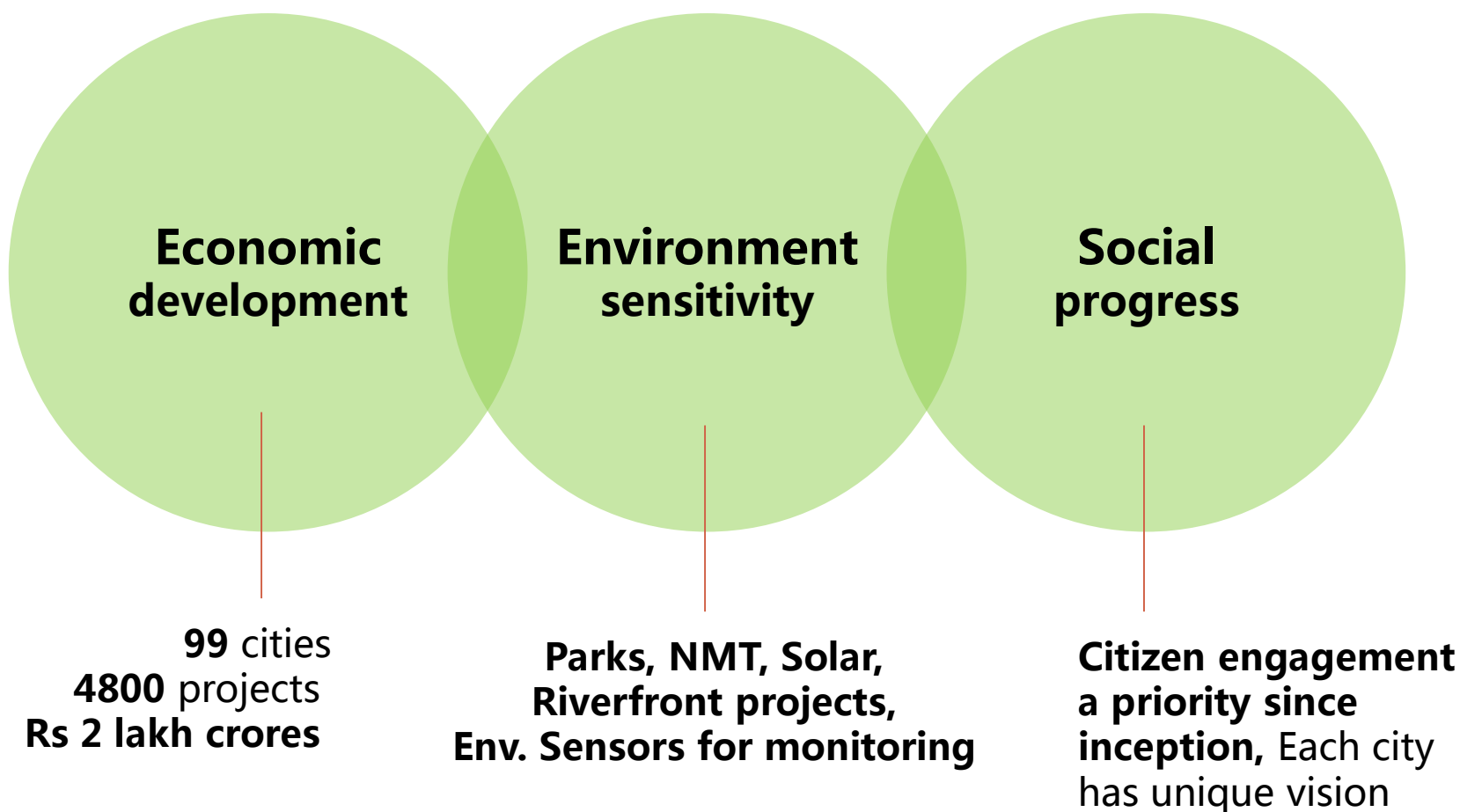
- Bhubaneswar
- Coimbatore
- Kochi



- Chandigarh
- Puducherry
- Nagpur

# Conclusion

- › Urban India + Smart City Mission = leads to Sustainable development





# Thank you for your attention

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**Smart City Mission**  
Ministry of Housing & Urban Affairs  
Government of India