

# Shaping new age urban ecosystems: Energy, Connectivity and Climate Resilience



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## Who we are

- Sustainable Business Leadership Forum (SBLF) is an Indian industry focused market development platform which equips organizations, managers and industry stakeholders on the 'how' of sustainability through a unique programmatic approach comprising of round the year programs and 'on-ground industry oriented' work.
- Based on membership inputs and requests for focused research, the Forum facilitates creation of Industry Task Forces guided by industry catalysts and corporates. The advantages of members working as a group on common issues are:
  - Build shared insight on sometimes, complex issues
  - Pool in resources with other like-minded agencies and institutions
  - Generate attention from the relevant customers, stakeholders, etc. that is larger than if done by members individually.
- *Shaping New Age Urban Systems* is an exploratory conversation to collate, demystify and challenge current thinking on 'Smart Cities' & urban resilience



## Shaping New Age Urban Systems is a exploratory conversation....

...to collate, de-mystify and challenge current thinking on 'Smart Cities' & urban resilience.

Smart Cities are those which have smart (intelligent) physical, social, institutional and economic infrastructure – to enable employment creation, attract investment, be socially & environmentally sustainable & improve quality of life



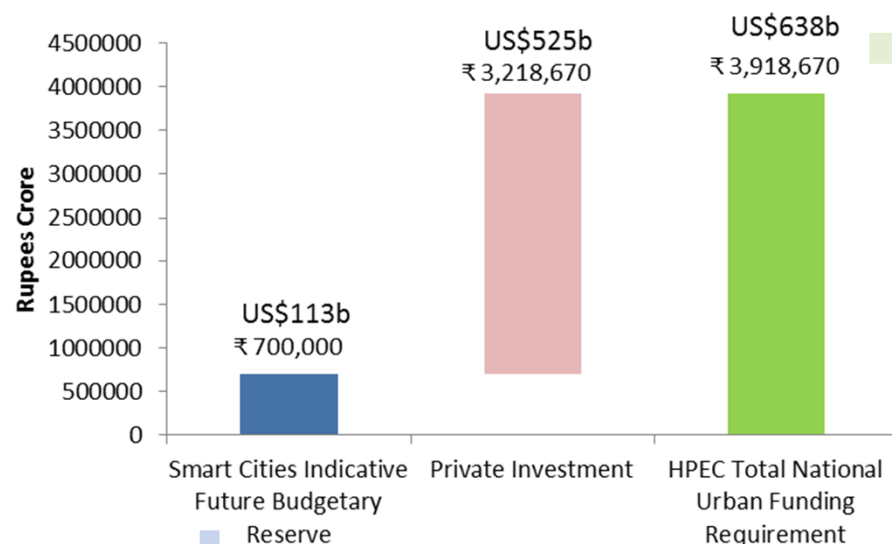
### Provoking Questions

- What should be priorities for Future Cities in India?
- Is 'Smart Infrastructure' necessary for 'urban resilience'?
- What does 'success' look like? How do we measure & track it?
- Burning issues in implementation

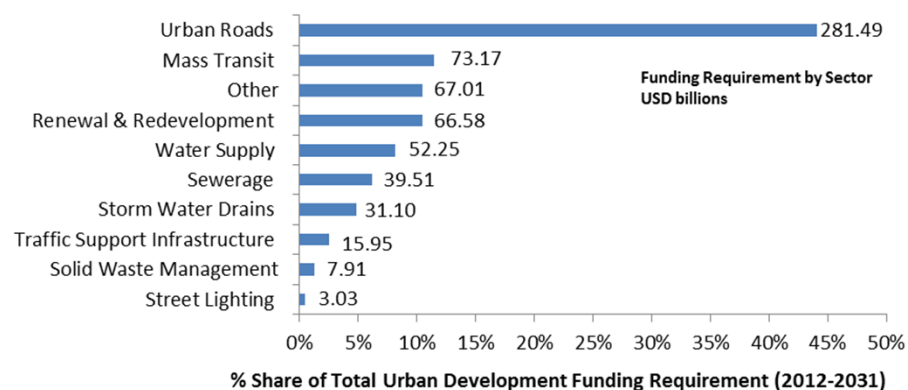


# The 'US \$638 billion challenge' for shaping urban infrastructure in India

## Overview of Total Funding Requirement



## Total Urban Development Spend (2012-2031) Investment Breakdown



## 100 Smart Cities – Funding Highlights

- 100 Smart Cities Union Budget FY15: Rs 7,600 Cr (US\$ 1.2b). Desired Funding Model for Smart Cities: Private Investment/ PPPs
- Government Incentives: 40% VGF for cities in plains; 90% VGF for cities in hills

Entity	Selected Major Investment Plans in India
USA	Anticipated \$41 Billion Private investment pathways into India; clean water & solid waste management for 500 cities
Japan	\$35 Billion – mix of Private & Public investment
China	\$20 Billion – mix of Private & Public investment
Germany (KfW)	EU 1 Billion on solar capacity for next ten years
ADB	\$2.5 Billion to establish 5 Industrial Zones for Andhra Pradesh; \$63.3 m for North Karnataka Urban Sector Investment Program

# What should successful urban resilience look like?

Maturity Model	1		2		3		4	
	BASIC URBAN SERVICES				HIGH URBAN RESILIENCE			
KPIs relate to....	Access		Efficiency		Behaviour		Systems Focus	
What success looks like...	Urban infrastructure and technologies are available and urban services are being delivered		Efficient resource & energy use is actively measured and embedded in a future city		People interact with physical assets in ways which unlocks new pathways for sustainability		Closed-loop & sustainable resource & energy exchanges are being strengthened within a city	
Maturity Model	1		2		3		4	
	LOW URBAN RESILIENCE				HIGH URBAN RESILIENCE			
	Access		Efficiency		Behaviour		Systems Focus	
	ISO	India	ISO	India	ISO	India	ISO	India
Transport	✓✓	✓✓	●	●	✓	●	●	●
Spatial Planning	✓✓	✓✓	●	●	●	●	●	●
Water Supply	✓✓	✓✓	✓	✓	●	●	●	●
Sewerage & Sanitation	✓✓	✓✓	●	●	NA	NA	●	●
Solid Waste	✓✓	✓✓	●	●	●	●	●	●
Storm Water Drainage	NA	NA	●	✓	NA	NA	NA	NA
Energy & Electricity	✓✓	✓✓	✓✓	✓	●	●	●	●
Telecom & WiFi								
Economy, Finance, Education & Health (Grouped)	✓✓	✓	●	●	✓	✓	NA	NA
Environment	✓	●	●	●	●	●	●	●

## Point of Arrival for Today's Discussion

### How should 'new age' differ from the 'status quo' on urban development?

- **Current paradigm for 'successful cities' focuses mostly on access to services and infrastructure**
- **However, there is a very limited focus and scope to drive resource optimization over the 'whole system' of a city, for example the integrated use of physical infrastructure and ICT in:**
  - **Changing behavior of citizens** when interacting with the physical environment
  - **Closing the loop on resource & energy flows** within different parts of a city, as also its exchanges with other cities, peri-urban areas & rural supply bases
  - **Creating negligible response times** to variability events (bio hazards, climate change, security, disasters, crime)
  - Measuring, tracking and **embedding efficiencies** in resource and energy consumption



**Thank You**



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