Role of PPPs in Indian Smart City Mission

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Indian Smart City Mission

- 31% of Indian population lives in urban areas and contributes 63% to GDP
- SCM launched in June 2015 – will cover 100 cities
- Major component is urban infrastructure augmentation, improved livability
  - Urban infrastructure includes adequate water supply, assured electricity supply, sanitation, including solid waste management, etc

Investment requirement in Smart Cities

- Total urban infrastructure requirement is ~$1 trillion over a 20-year period (2012-31)
- Total planned investment in 20 shortlisted Indian Smart Cities - $8 billion
- Assuming the same scale of infrastructure investment - investment in the proposed 100 smart cities would be $40 billion till 2020
- ~ $16 billion will come from governmental sources, which would have to be leveraged

Smart Cities Mission aims at a paradigm shift in city financing

- Given the investment requirement, business-as-usual will not work
- Paradigm shift in how urban infrastructure is financed - **from grant to more commercial sources of funding**
- Alternative sources of funding – PPPs, Municipal Bonds, Loans from Multilateral Banks including World Bank and ADB, Land Monetisation through Tax Incremental Financing, etc and appropriate User Charges

PPPs in winning Smart City Proposals

Sector	Number of Smart Cities
Multi-level Parking	19
Power/ Smart Grid/ Solar Panel	17
Solid Waste Management	12
Water supply	10
Housing/ Slum Redevelopment	9
Public Bike Sharing System & E-rickshaw	7
Sewerage	6

Comparison of Parking Fees in various cities, 2011

India	Parking Fees ($)
Bengaluru	1.54
Delhi	1.32
Mumbai	1.11
Chennai	0.99
Abroad	
Dubai	4.08
Beijing	7.05
Bangkok	13.2
Hong Kong	28.25
New York	41
London	65.97

Rationale for PPP in multi-level Parking – Improving services and revenues

- Asset transferred to SPV/ ULB at the end of concession period
- Regulation of parking charges would be by public agencies
- Aims at improving services without public capital outlay and provides an additional revenue stream
  - No clogging of streets
  - Improves parking experience
  - Improves revenues for the SPV/ ULB that can be used for other priority expenditures

PPP in Municipal Solid Waste Management

- Annual municipal SW generation – 3x ↑ from the current level to 377 m tons by 2030 [McKinsey, 2010]
- Solid waste management accounts for 25-50% of ULB's expenditure [World Bank, 2006]
- Low cost recovery - less than 50% of O&M cost [MoUD, 2010].
- Investment requirement for SWM over 20-year period (2012 – 2031) is estimated at $10 billion [HPEC, 2011]
- Smart City Proposals of 12 (out of 20 selected) cities include PPP projects in Solid Waste Management

Rationale for PPP in Urban Water Supply

- No Indian City has 24*7 piped water supply
- Quality of water supply is poor
- Low cost recovery <20%
- Large uncovered areas and population
- Investment requirement in water supply sector is $80 billion for 20-year period (2012-2031) (HPEC, 2011)
- Smart City Proposals of 10 (out of 20 winning) cities include PPP projects related to Urban Water Supply including Bhubaneswar, Ludhiana, Kochi, Indore and Bhopal

Water supply PPPs in India

	Nagpur	Mysore	Khandwa
Population (million)	2.5	1.0	0.2
Mandate	Rehabilitation + Operations	Reconstruction+ Operations	Bulk + Reconstruction + Operations
Duration (years)	25	6	25
Bid Parameter	Lowest bid price	Least Rehabilitation cost and fee	Least end user tariff
Operator	Veolia & Vishwaraj	JUSCO	Vishwa
Private Investment	30%	Nil	10%
Government Grant	UIG(70%)	UIG(90%)	UIDSSMT(90%)
Revenue Model	Fee/kl	Management Fee	Tariff
Contract Signed	Late 2011	Mid 2009	Late 2009
Contract Management	City	Parastatal	City
Current Status	WS system handed over	Rehab, O&M In progress	Construction in Progress

Appropriate PPP models for Urban Sub-Sectors

Urban sub-sector	Appropriate PPP model
Multi-level parking	BOT (toll)
Integrated Solid Waste Management sector	Operation and Maintenance (O&M) contract; BOT annuity model
Water supply sector	O&M contract; BOT annuity model

- Cities to decide on the model depending on their requirements and political will
- PPPs not for very small projects (0.7 crore for bus shelter)

Considerations for Public Authority - Bankability

- Public authority needs to ensure that the project design is “bankable”—that is, able to raise debt
- For a project to be bankable, operating cash flows need to be high enough to cover debt service, plus an acceptable margin; risk of variation in cash flows should be small
- Lenders carefully assess project risks, and how these have been allocated – annuity model
- Government should ensure financial viability of project while not taking too many risks – no revenue guarantees

Political analysis of PPPs is crucial

- Costs are immediate (costs begin from day 1) and concentrated – beneficiaries will have to pay for infrastructure services
- Benefits are long-term (lower fiscal deficit) and diffused
- “Modest fiscal improvements (of ULB) thrill economists, but not voters”
- PPP projects need to show results in order to be politically sustainable
  - → Results in terms of outcomes – 24*7 water and SWM
  - → Spread benefits to poor for long-term sustainability
  - → Cost changes have to be gradual – transitional subsidy

Thank You