PPP and Procurement Training Workshop for Top 33 Smart Cities

Revenue Models, Financing Options and Value Capture

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Urban PPPs Snapshot

- **Water Supply**: Too many models for implementation, no standardization, cost recovery major issue, increase in contracts awarded in the recent past

- **SWM/ Sanitation**: Models in disposal through scientific landfill standardized, constant supply of compost/waste is issue, New policy for WTE; user charges and advertisements insufficient

- **Urban Transport**: City Mobility Plans developed for major cities, BRTS & metro popular projects, financial viability is an issue, financing innovations required

- **Urban Housing**: Not many PPPs materialized, private sector more interested in high end luxury housing projects which are more profitable

- **Parking**: Technology Choices; supplementing user charges with real estate/advertisement streams

- **Street Lighting**: Energy Savings/ Capital sharing/ Service level definition

- **Newer Projects**: Roof top solar, e rickshaw, IT Connectivity, Smart bus stops – largely unexplored models; Need to have appropriate development process for successful implementation
Key Questions

• Whether solely on the basis of returns on investments, is the project do-able through PPP framework?
• Whether the financial returns from the project are more than the cost investments?
• Whether the project returns are attractive for the private sector to partner?
• What revenue the private partner could share with the government is in case the project is attractive for private partnership?
• Are there any economies across projects that could be captured?
Financial Assessment

Formulate Reasonable and Realistic Assumptions

Life Cycle Cost Analysis & Source of Finance

Revenue Estimation

Financial Feasibility Assessment

Optimise Financial Viability
## SWM Business Models

<table>
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<tr>
<th>MSWM Activity</th>
<th>Details</th>
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| **Collection** | • Cost toward door to door collection recovered through user charges  
• User charges accrue to waste collectors (Deployed by RWAs/NGOs/ULBs) |
| **Transportation** | • No revenue source; trip based/ weight based/ lumpsum |
| **Treatment** | • Revenues from sale of compost/ fuel pellets/power/ carbon  
• However low sale price, limited demand/ acceptability, high capital costs, limited tenure of PPA has restricted the revenue potential  
• Most of the treatment facilities (with mechanized facilities) are not self sustainable |
| **Disposal** | • Landfill facilities are cost centers with limited revenue |

- Need for Tipping Fees  
  - Appropriate Amount? (~200 Blr, ~1500 Hyd, ~1200 Delhi, ~ 800 Belgaum etc.)  
  - Like a NPV of a Mutual Fund  
  - To make project viable, depends on components covered, scope, extent of preparedness and so on.
MSW - Select Project Experience

• Lucknow SWERF
  - Was the technology inappropriate, or did the ULB literally expect ‘grit-to-gas’?

• Thiruvananthapuram Composting
  - How much waste does the city generate

• Bangalore – the first (PPP) sanitary land-fill in the country
  - Land?

• GHMC – the largest one yet
  - Waste to Energy (AP cities, Bangalore, UP etc.)
    - Kasturirangan Committee

• A number of tipping fee based contracts have been awarded

Some developers continue to rest hopes on SWERF
Hyderabad SWM

- Integrated SWM project
- JnNURM financing structure
- Gap to be recovered through tipping fees

Transaction and Implementation
- Across all components of MSW chain
- Entire city – Greater Hyderabad
- Existing contracts to be factored
- Sequential handover of sites/areas
Water

- Tiruppur Water Supply – the first attempt?
  - About 20% urban, and 80% industrial
    - by the time the project was made, circumstances were unmade...
- Visakhapatnam Water Supply
  - Similar structure 20% urban and 80% industrial
- Pilots – KUWASIP, Nagpur etc.
  - Management contracts – near risk free
    - Is upscaling on similar model practical?
- Full city models
  - Tariffs and adherence to agreements
- Central schemes, user charges, annuities
- Assumptions/ base line info is important

- Too many models, limited bidders
- Lesser financial bids; more questions (pre bid queries)
- Growing interest in participation
Urban Transport

• One of the earliest LRT system awarded was in Bangalore, but later cancelled

• A few large projects bid/ awarded
  – With capex
    • Mumbai, Hyderabad (!), Haryana
  – Without capex
    • Delhi Airport Link
  – Bangalore airport rail link, Hyderabad (encore)

• Buses:
  – Indore, a successful model
    • Interestingly, why is this model not widely replicated?
  – Ahmedabad BRT
  – A number of BRT systems (Delhi, Bangalore, Mysore) studied and structured on PPP, but being executed by the Authority
Financing Options

• Tax Buoyancy
• Project specific/ general purpose loans from banks/ FIs/ MLAs, securing municipal revenues
  – Loan conditionality; State Government guarantees
• Bond issues of Ahmedabad, Hyderabad, BMP, Nashik, KUIDFC etc., have not led to large-scale replication
  – Issues of market appetite, end-use
  – Limited number of ULBs which can access financing on a standalone basis
  – Small ‘pilots’ Rs. 40-100 Crores. Enormous amount of effort and arm twisting to close.
  – Pooled Finance ‘seems’ a more appropriate structure for small ULBs
• No perceptible efforts to leverage
Are we on right track?

- Feasibility studies in urban sector provide only a partial picture – projects not financially free standing!!
  - Water: Tariffs set to recover only O&M costs, and after factoring efficiencies, there is a deficit in finances.
  - SWM: Hardly any user charges or markets for sale of products/ recyclables
  - Most sub sectors (Parking, urban transport etc) experimented with revenues from real estate
  - Dependence on government finances in some form (capital grants/ annuities/ tipping fees etc.)
  - Other project parameters are matters of detail

- Not so smart structure! “Project = land available with Authority + Some public use + commercial development”
- Assuming we get the above elements right, will the project(s) go ahead?
- Lots of “concerns” remain unanswered!!
Key Takeaways

• PPPs in urban sector need to be hybrid models
  – less focus on ‘typology’……more focus on tailored solutions + results

• Get project development process right
  – Information to take right decisions
  – Business case scenarios

• Commence with service standards needed, and work backward towards governance structures, transaction & contractual documentation, and procurement process
Thank you