

Business Salience: Waste Management Project Lifecycle Part 1

Main Process	Pre-Tender	Tendering	Contract	Design/ Planning	Procurement	Project Execution	Commission
Key Consideration	MIS PQ/Enlisting	Technical Bid Commercial Bid	SLAs BOOT/PPP	Survey; SCM; Social – -Sensitization;	Inflation SCM Quality	Sub-Contract Local Labor ROW	Transition from Project Development Team to Ops team
Engineering Excellence		Engineering Background helps in optimal Project Automation and hence right solution hence right pricing		Tech-enabled Survey; Anticipating Engineering Challenges early	Strong Quality Assessment;	Quick On- ground challenge mitigation; due to engineering background	
Project Management	Dedicated & State of the Art MIS Mechanism as part of PM	Strong PM helps in right “requirement definition” & hence right pricing	Right SLAs due to experience in working with Infrastructure Projects with high Social Interface	Inclusive Approach helps bringing all the stakeholders of the City/Town and better reception of the project	Strong Vendor Development helps in Apt procurement strategies; Strong Logistics Management Skills;	Robust Project Monitoring Cell helps in timely delivery	OR driven operations approach

Services

Main Process	Collection	Transfer	Processing	Disposal	Waste to Energy
Key Consideration	Doorstep Collection Discipline; Collection Daily Time Scheduling	Route Planning; Fleet Vs Capacity Planning	Segregation; Recovery; Recycling; Composting;	Scientific Landfill	Fuel Characteristic Uncertainty
Engineering Excellence	Engineering Excellence helps in Optimal Consumer Indexing for Planning	Engineering Background helps in choosing the right material handling and material transfer equipment/ vehicle	Engineering Gene Pool helps in Optimal Resource Recovery out of the Waste by deploying bespoke techniques	Engineering gene pool helps in minimal landfill requirement and whatever is required is done in best scientific manner	Power Background has helped in identifying a promising technology for maximum power generation out of waste.
Project Management	Strong PM helps in deploying state-of-the art collection techniques for time issues	Operational Research Driven Approach helps in optimal route planning			Group's Power Project Management Background helps in a great way.

Waste Management Project: Implementation Model

Public Private Partnership Model

PPP provides a mechanism wherein the private Operator brings in Capital, Technology & Manpower to create and operate the waste management infrastructure

The Private Operator is engaged for typical period of 2 – 30 years on BOOT (Build, Own, Operate, and Transfer) basis through transparent bidding process

With proper monitoring, PPP ensures Innovation, Efficiency and improved level of Services together with compliance to Environment, Health & Safety (EHS)

Since government is a stakeholder in the project, the project planning, permissions, execution are facilitated.

The environment regulator keeps the Operator under tight leash through monitoring, Penalties, Performance Guarantees, Escrow Accounts etc

PPP allows for involvement of users and other stake holders and inculcates the habit of 'User Charges' through service delivery

Cluster Approach

- The State government should encourage cluster approach for a group of municipalities to select a common Operator – 'Economies of Scale' & make business sense for the private operator
- The suggestion is to have a project with 300 TPD (tons per day) or more

Waste Management Project: Implementation Model

Consortium Partners

No.	Company	Business / Area of Expertise
1	Karnataka Compost Development Corporation	Govt. of Karnataka Enterprise for the Processing of MSW
2	Monica Processing	Oldest and largest of the equipment manufacturers for processing and shredding of waste
3	Bhumika Transport	Expertise in door to door collection and secondary transportation in Mumbai
4	M P Patel Construction	Sanitary Landfill (SLF) construction and maintenance
5	SMS Infrastructure	Sanitary Landfill (SLF) construction and maintenance
6	Maccaferri, Italy	Committed supply and technical support of Geo-synthetics for Sanitary Landfills

Revenue Streams

- Tipping fee for transportation to be paid by ULBs
- Proceeds from the sale of compost/fuels/construction aggregates
- Proceeds from the sale of recyclables
- Proceeds from the sale of Electricity etc
- Proceeds from the sale of other high end downstream products, like diesel from plastics, and ethanol from bio-degradables, as has been proved at various locations world over

Waste Management Project: Implementation Model

Costs Incurred

- Initial capital expenses for setting up of treatment plants and development of disposal sites
- Raw material costs
- O&M expenses, which include:
 - Primarily, establishment expenses including salaries,
 - Transportation expenses like fuel and maintenance of vehicles
 - Communications expenses like telephones, GPS charges etc
 - Ingredients like inocculums etc