

Integrated Solid Waste Management

End -To- End Integrated Waste Management Solution

Collection from
Source

Centralized
Monitoring

Segregation &
processing

Upcycling &
recycling

- End to end waste management solution starting from collection of waste from source to final upcycling/recycling.
- Includes collection through manpower and transportation through GPS enabled vehicles to processing site
- Complete management through centralised monitoring for manpower, project performance, complaint handling and live CCTV footages.
- Segregation at source and on site into multiple waste streams like organic, plastic , recyclables etc for processing
- Processing through scientific technologies and upcycling of waste streams into energy, fuel or upcycled products
- Complete traceability of the project through centralised ERP

Project Benefits

- ✓ Solutions are based on circular economy. Upcycling into energy, fuel or products which adds value to the economy
- ✓ Diversion of waste getting dumped into landfills without processing
- ✓ Traceability of manpower, vehicles, processing, and plant operations with central monitoring
- ✓ Single ownership for end-to-end process to avoid any loopholes and leakages
- ✓ Mandatory compliance to EHS and ESG Guidelines
- ✓ Reduction in GHG emissions which would have happened if waste is not processed

The project is completely customizable and can be scaled up or scaled down in decentralized fashion. The methodology can be made suitable for any kind of public establishments like an airport, a residential campus, a township or a big city as well.

1 PROJECT MODEL



Municipal Solid Waste Management

- Awareness Drives for Source Segregation
- Waste Collection and Transportation through Twin Compartment vehicles
- Multi-layered Waste Segregation
- Processing of waste through Sustainable and Scientifically proven technologies
- Centrally controlled monitoring system & ERP

MONITORING SYSTEM

The monitoring system will help and support the system with the below features.

- ✓ Centralised dashboard with multiple access for different kinds of users
- ✓ Supports analytics for resource optimization and efficient operation
- ✓ Live tracking of vehicles which helps in immediate troubleshooting
- ✓ Biometrics-based attendance and reporting of staff engaged to avoid leakages and accountability of responsibilities
- ✓ Live feed from processing facility through CCTV cameras ensuring instant and continuous supervision from remote locations like client's or operator's head offices
- ✓ Mechanisms to keep track of all compliance-related data
- ✓ Remote monitoring of all the machines and generation data for immediate support of the expert team from remote locations for technical troubleshooting
- ✓ Online library for all kinds of report generations for different data required for compliance, by-product traceability, and billing with complete transparency
- ✓ Can provide all performance and complaint-related details on any day of the year.

MONITORED COMPONENTS

The system will get inputs from different sources as mentioned in the table below and display all the information on the centralized dashboard as shown in the image below.

Component	Monitoring System
Staff monitoring and attendance	<ul style="list-style-type: none">• Biometric system and centralized live data
Vehicle tracking	<ul style="list-style-type: none">• GPS-based live tracking system
Plant Operations	<ul style="list-style-type: none">• CCTV live footage from the processing facility• Machine operation details through the PLC System
Waste Generation Data	Weighbridge data of every vehicle collecting waste
Inert Disposal to SLF Data	Weighbridge data of inert waste going to the SLF
Complaint Handling Data	Complaint logs with data from WhatsApp and Toll-free number complaints
By-product disposal Data	Disposal certificate from end consumers in the online system

COMPLAINT HANDLING SYSTEM

- A toll-free number for the beneficiary printed on the collection vehicles and distributed in advance before the commencement of work, to lodge the complaints
- The complaints received will be lodged in the centralised Monitoring system
- The complaints received will be assigned to the supervisor in the complaint area
- After the resolution of the complaint the complaint log will be closed after the mention of the final closure report
- The log reports for the complaints can be downloaded from the centralised monitoring system anytime



PROJECT IMPACTS

	DIRECT IMPACT	INDIRECT IMPACT
Environment	<ul style="list-style-type: none"> Waste prevented from ending up in landfills every year Avoids Carbon Emission by reducing long-distance waste transportation and landfilling Sustainable and Scientifically proven Technologies for processing waste 	<ul style="list-style-type: none"> Reduces Soil, Water and Air Pollution Provides affordable, reliable, sustainable, and modern energy Reduces Carbon Emission Regulating emissions and promoting developments in renewable energy Reducing Land Degradation
Social	<ul style="list-style-type: none"> Impacting the lives of people Employment generation for the next 10 years 	<ul style="list-style-type: none"> Promotes Well Being Promotes Gender Equality in Work Reduces Poverty by generating more employment Making Cities and Communities more sustainable Providing opportunities for green and decent jobs
Governance	<ul style="list-style-type: none"> Circular Economy Model by cross-utilization of by-products in the system Treating waste as a resource by maximizing value Generation from waste components Last Mile Traceability of scientific disposal of waste End-to-End Integrated Waste Management with single-operator responsibility 	<ul style="list-style-type: none"> Promoting Sustainable Economic Growth Promotes Self-Sustainable Industrialization Complete Traceability of waste right from the source till scientific disposal Live tracking and reporting of waste generation and processing



Our Integrated MSW Solution



Description of Technology

In Greater Noida's Knowledge Park area, a pioneering waste management initiative by Blue Planet is revolutionizing sustainability efforts. By adopting a cluster model and cutting-edge technologies, the project efficiently handles diverse waste streams, processing up to 25 tons daily.

Key Features:

- Three-level waste segregation ensures responsible disposal.
- Innovative technologies tackle organic, plastic, hazardous, and inert waste.
- By-products like biogas and polyfuel are repurposed, while liquid fertilizer is converted to compost.
- Robust monitoring systems ensure transparency and efficiency.
- This project not only addresses environmental concerns but also harnesses valuable resources, setting a precedent for greener futures nationwide.



A ZERO WASTE TO LANDFILL MODEL

Organic Waste



Biogas & Manure

RDF



Waste to Energy Plants

Recyclables



Recycling

Inert



Construction Blocks

Waste Components After Segregation

Check out Blue Planet's Integrated Waste Management project in Greater Noida!



Project Features



- Twin compartment vehicles for door-to-door collection
- Segregation at source through awareness activities



- GPS enabled vehicle monitoring system
- Traceability through centralised ERP
- Complaint handling & grievance redressal through toll free no. & mobile applications



- State of the art dispensing system
- Cross utilization of resources



- Fully compliant process with ESG monitoring Mechanism
- Industry best practices in safety standards