

Operational Definitions

Waste Management: Waste Management is leading the way in sustainability and environmental stewardship

Freight management is a strategic system to optimize the efficiency of freight and commercial transport.

1. Request Data Log

- **Definition:** A record of all requests for waste collection received from citizens or businesses.
- **Measurement:** Number of requests, type of requests (e.g., residential, commercial), and timestamp of requests.

2. Schedule Efficiency Metrics

- **Definition:** Measures the efficiency of scheduling waste collection.
- **Measurement:** Time taken to schedule after receiving a request, percentage of on-time schedules versus delayed schedules.

3. Pickup Efficiency Metrics

- **Definition:** Measures the efficiency of waste pickup operations.
- **Measurement:** Time taken to pick up waste from the scheduled time, number of pickups completed on schedule, and delays in pickup.

4. Sorting Accuracy Metrics

- **Definition:** Accuracy of waste sorting into recyclables, compostables, and landfill.
- **Measurement:** Percentage of correctly sorted materials versus contamination rates (incorrectly sorted items).

5. Processing Efficiency Metrics

- **Definition:** Measures the efficiency of processing sorted waste.
- **Measurement:** Time taken to process different types of waste, volume of waste processed per unit of time.

6. Environmental Impact Reports

- **Definition:** Reports showing the impact of waste management practices on the environment.
- **Measurement:** Recycling rates, reduction in landfill use, greenhouse gas emissions from waste processing.

7. Transport Efficiency Metrics

- **Definition:** Measures the efficiency of transporting waste to disposal sites.
- **Measurement:** Transport time, fuel consumption per unit of waste, and vehicle utilization rates.

8. Disposal Effectiveness Metrics

- **Definition:** Measures the effectiveness of final waste disposal methods.
- **Measurement:** Volume of waste disposed of in landfills versus alternative methods (e.g., recycling, incineration), emissions data from disposal processes.

Freight Management

1. Request Processing Metrics

- **Definition:** Measures the efficiency of processing freight requests.
- **Measurement:** Time taken to process a request, accuracy of request details, and number of requests processed per day.

2. Scheduling Efficiency Metrics

- **Definition:** Measures the efficiency of scheduling freight deliveries.
- **Measurement:** Time taken to create a schedule after receiving a request, percentage of on-time deliveries versus delays.

3. Pickup Efficiency Metrics

- **Definition:** Measures the efficiency of freight pickup operations.
- **Measurement:** Time taken to pick up freight after the scheduled time, number of pickups completed on schedule, and any delays.

4. Tracking Accuracy

- **Definition:** Accuracy of real-time tracking information for in-transit freight.
- **Measurement:** Real-time data accuracy, adherence to scheduled routes, and frequency of tracking updates.

5. Delivery Efficiency Metrics

- **Definition:** Measures the efficiency of freight delivery operations.
- **Measurement:** Time taken to deliver freight to the destination, accuracy of delivery (correct items delivered to correct locations).

6. Analysis Metrics

- **Definition:** Metrics used to analyze freight operations data.
- **Measurement:** Delivery performance metrics (on-time delivery rates, delivery times), cost-effectiveness (cost per delivery, fuel costs).

7. Optimization Effectiveness

- **Definition:** Measures the impact of routing and process optimizations.
- **Measurement:** Improvements in route efficiency, cost savings, reduction in delivery times.

System Administration

1. Data Completeness and Accuracy Metrics

- **Definition:** Measures the completeness and accuracy of data collected.
- **Measurement:** Percentage of complete data entries, accuracy of data entries (error rates).

2. Data Analysis Effectiveness

- **Definition:** Measures the effectiveness of data analysis in generating actionable insights.
- **Measurement:** Accuracy of analysis reports, impact of insights on decision-making, time taken to generate reports.

3. System Performance Metrics

- **Definition:** Measures the performance and reliability of the system.
- **Measurement:** System uptime percentage, average issue resolution time, frequency of system errors or downtime.

4. Update Effectiveness

- **Definition:** Measures the impact of system updates and maintenance activities.
- **Measurement:** Reduction in issues post-update, performance improvements, user satisfaction with system updates.

5. Support Resolution Metrics

- **Definition:** Measures the effectiveness of user support services.
- **Measurement:** Average response time to support requests, resolution effectiveness (percentage of issues resolved), user satisfaction with support.

6. Feedback Analysis Metrics

- **Definition:** Measures the effectiveness of incorporating user feedback into system improvements.
- **Measurement:** Number of feedback items addressed, improvements made based on feedback, user satisfaction with changes