Smart City Waste Collection & Recycling CRM

# Phase 1: Problem Understanding & Industry Analysis

## Requirement Gathering

Cities face challenges in managing waste collection efficiently, tracking recycling performance, and ensuring sustainability goals are met. Citizens need an easy way to request pickups, while municipalities need dashboards for monitoring performance. Waste collectors and recycling plants need streamlined processes.

## Stakeholder Analysis

1. Citizens – Raise waste pickup requests (organic, plastic, e-waste, bulky).  
2. Waste Collectors – Assigned to trucks, responsible for pickups.  
3. Recycling Plant Admins – Track incoming waste and recycling processes.  
4. City Officials – Monitor overall performance, recycling rates, and sustainability impact.

## Business Process Mapping

1. Citizen submits a Pickup Request via CRM.  
2. System auto-assigns the nearest available Truck.  
3. Waste Collector picks up the waste and updates status.  
4. Waste delivered to Recycling Plant, which updates processing status.  
5. City dashboards update in real-time with metrics on pickups, recycling %, and CO₂ reduction.

## Industry-Specific Use Case Analysis

• Route optimization for waste trucks reduces costs and emissions.  
• Recycling compliance and sustainability metrics for Smart City programs.  
• Potential for IoT integration with smart bins to auto-generate pickup requests.  
• Can expand to include e-waste and hazardous material management.

## AppExchange Exploration

• Salesforce Maps – For optimized truck routing.  
• IoT Connectors – For integration with smart bin sensors (Optional: Useful in real-world projects with actual IoT hardware. Not required for MVP build).  
• CRM Analytics – For sustainability dashboards and predictive analytics.