Garbage Management System Using Salesforce

Phase 2 – Project Planning Phase

The Project Planning Phase transforms the ideas from the ideation phase into a concrete roadmap, outlining tasks, timelines, resources, risks, and deliverables. It ensures that the project is executed efficiently, on schedule, and within scope.

2.1 Objectives of Project Planning Phase

The planning phase aims to:

1. Define the project scope and deliverables.
2. Identify required Salesforce components and tools.
3. Allocate resources, roles, and responsibilities.
4. Develop a timeline with milestones.
5. Assess risks and mitigation strategies.
6. Establish success criteria and performance metrics.

2.2 Project Scope

In Scope:

- Creation of Salesforce objects to manage garbage bins, collection schedules, and complaints.
- Integration with IoT-enabled bin sensors for real-time monitoring.
- Citizen portal and mobile interface for complaint registration.
- Automation using Salesforce Flows and Process Builder for task assignment and notifications.
- Reports and dashboards for monitoring KPIs and operational efficiency.

Out of Scope:

- Physical hardware installation (sensors, trucks) beyond basic integration.
- Waste treatment and recycling plant management.
- Offline manual reporting processes.

2.3 Key Deliverables

1. Functional Requirements Document (FRD):

- Defines the system functionality, automation rules, and user interactions.

2. Salesforce Object Design:

Custom objects for:

- Garbage Bins – Track location, type, fill level.
- Collection Schedules – Assignments to trucks and teams.
- Citizen Complaints – Issues, feedback, and status.
- Recycling Records – Track recyclable waste collected.

3. System Architecture Diagram:

- Illustrates how Salesforce integrates with IoT sensors, mobile apps, and the citizen portal.

4. Automation Workflows:

- Automatic task assignment for field teams.
- Escalation flows for overdue complaints.

5. Reports and Dashboards:

- Bin occupancy trends, collection efficiency, citizen satisfaction, and recycling rates.

6. Testing & Deployment Plan:

- User Acceptance Testing (UAT) schedule.
- Deployment and rollout strategy.

2.4 Project Timeline & Milestones

Phase	Task	Duration	Milestone
Planning	Requirement Gathering	1 week	FRD approved
Design	Salesforce Objects & Architecture	2 weeks	Object design finalized
Development	Automation & Workflows	3 weeks	Automation implemented
Integration	IoT sensor & Portal integration	2 weeks	Integration completed
Testing	Unit & UAT Testing	1 week	Test reports approved
Deployment	Production Rollout	1 week	Live system operational

Total estimated project duration: ~10 weeks

2.5 Resource Allocation

Role	Responsibility
Project Manager	Oversee project execution, manage timelines, risk assessment
Salesforce Developer	Configure objects, automation flows, reports, dashboards
Salesforce Admin	Manage data setup, permissions, and user profiles
IoT Specialist	Integrate bin sensors with Salesforce
QA Tester	Conduct functional testing and UAT

Field Team Lead	Provide inputs for routing, collection, and field requirements
Citizen Engagement Officer	Assist with portal and feedback system design

2.6 Risk Assessment & Mitigation

Risk	**Impact**	**Mitigation Strategy**
Delay in sensor data integration	High	Use API mocks for development while waiting for real-time data
Resistance from field staff	Medium	Conduct training sessions and workshops
Data accuracy issues	High	Implement validation rules in Salesforce and IoT calibration
Scope creep	Medium	Stick to approved FRD and manage change requests formally
Citizen portal adoption	Medium	Awareness campaigns and user-friendly UI design

2.7 Success Criteria & KPIs

1. Operational Efficiency:

At least 90% of garbage bins are collected on schedule.

2. Citizen Satisfaction:

Minimum 85% of complaints resolved within SLA.

3. Data Accuracy:

IoT sensor readings have >95% reliability.

4. Automation Effectiveness:

100% of tasks assigned automatically using Salesforce Flows.

5. Sustainability Metrics:

Increase recycling rates by 20% within the first 6 months.

2.8 Conclusion

- The Project Planning Phase sets a clear roadmap for the implementation of the Garbage Management System using Salesforce. By defining scope, deliverables, timelines, resources, risks, and KPIs, the project ensures that ideation translates into a practical, scalable, and efficient solution.
- The next phase would be Requirement Gathering & System Design, where detailed Salesforce configurations, field structures, and automation rules will be designed.