**Case Study: Industrial Waste Management System**

**Scope:**

Existing industrial waste management application of an established group from United Kingdom has to be tailored to meet the specific waste disposal and recovery needs of the various industries that the company caters to. On the technical front, the application is to be re-created in Servoy with more features and a completely new design. The application shall be able to take care of the company from whom the waste has to be collected, the person responsible for collection, enquiries for waste collection, routing the collected waste materials to the specific locations and user management.

**Features:**

* Login for Manager, Company, Waste Collection Agent
* Module to optimize waste collection by suggesting the transport person, the routes they must follow for collection.
* Waste Collection notification to agent
* Enquiry form to get waste collection status
* Invoice generation
* Form to accept waste collection report from agent.
* Payment gateway
* Manage a library of generic wastes.

**Technical Specifications:**

Classes:

1. Enquiry
2. Company
3. Location
4. Collection Agent
5. Collection Request
6. Waste Report

Modules:

1. Company Registration and Management
2. Optimal Route Selection
3. Invoice Creation
4. Real time reporting through SMS
5. Waste Report Analysis

Data-Stores:

1. Generic Waste Library
2. Contact Details

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| --- | --- | --- | --- | --- |
| Component\_id | Description | Required\_Resources | Make/Outsource/Buy | Justification |
| A1 | Company Registration and Management | GUI Forms, Input Data Processing, Database Handling | Make | Low cost, Reduced time to deployment, Available support and staff |
| A2 | Optimal Route Selection | Google Maps API Integration, Travelling Salesman Problem-Implementation | Make | Availability of user manuals and documentation, Limited Integration with other applications is, Less need for flexibility |
| A3 | Invoice Creation | Invoice generation and formatting module | Buy | Many viable products available, Annual license fees are acceptable |
| A4 | Real time reporting through SMS | SMS gateway interaction module | Buy | Need for high success rate , Lower initial costs, Reduced time to deployment |
| A5 | Waste Report Analysis | Data Mining and warehousing ability | Outsource | Implementation timeline is short, Integration with other applications is limited |