Project Design Phase

The Project Design Phase defines the logical, technical, and functional foundation of the solution. It ensures that your proposed Salesforce CRM not only solves the right problems but is also scalable, maintainable, and aligned with Salesforce architecture principles.Where validated problems transform into structured, scalable, and implementable solutions.

In our project, “A CRM Application for Public Transport Management System,” this phase bridges the gap between ideation and execution by converting insights from the previous requirement analysis into a well-structured CRM solution.

🔷Problem–Solution Fit

Problem Recap:

RTC (Regional Transport Corporations) operate in a domain that requires real-time tracking of buses, trips, employees, and fare collection. However, operations are largely manual or siloed in spreadsheets, causing:

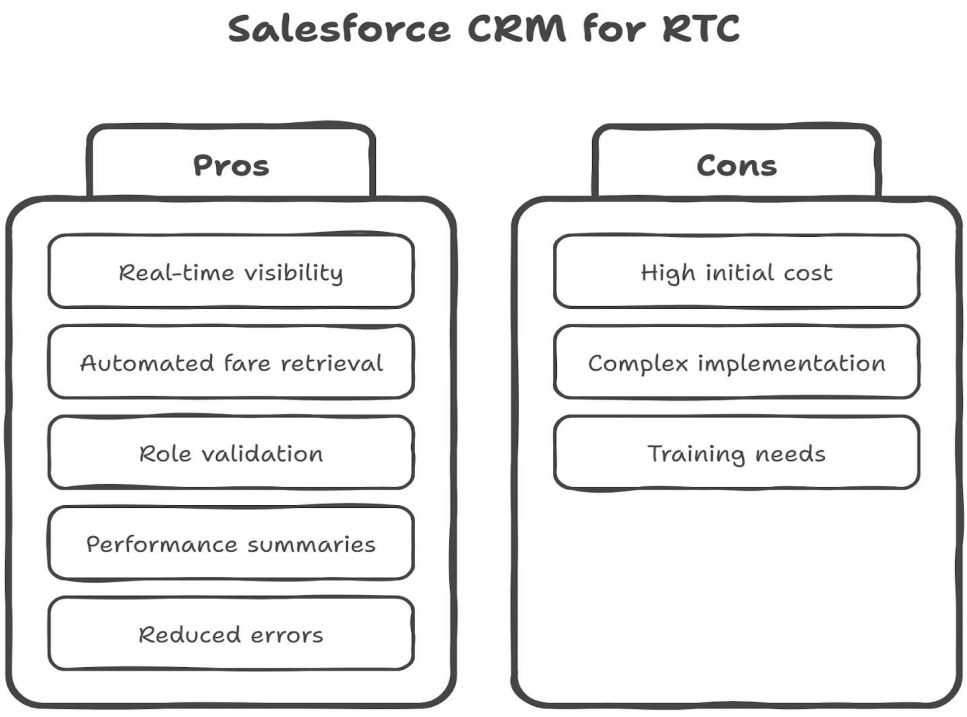
- Data entry errors and redundancy
- No real-time visibility for decision-makers
- Poor assignment of drivers/conductors
- Difficulty in fare management and trip reporting

Does the Proposed Solution Fit?

Yes. The Salesforce CRM solution:

- Introduces **object-level control** for Buses, Stations, Employees, Trips, and Ticket Fares
- Enables **automated fare retrieval** through Flows
- Validates driver and conductor roles using **Apex Triggers**
- Summarizes performance using **Reports and Dashboards**
- Uses formula fields to reduce calculation errors
- Creates centralized views using **Lightning App Builder**

Thus, it directly fits the core operational pain points of RTC workflows.



🔷 Proposed Solution

How Our CRM Will Solve the Identified Problems

Our proposed CRM application is designed to digitize and streamline RTC operations using Salesforce's declarative and programmatic capabilities.

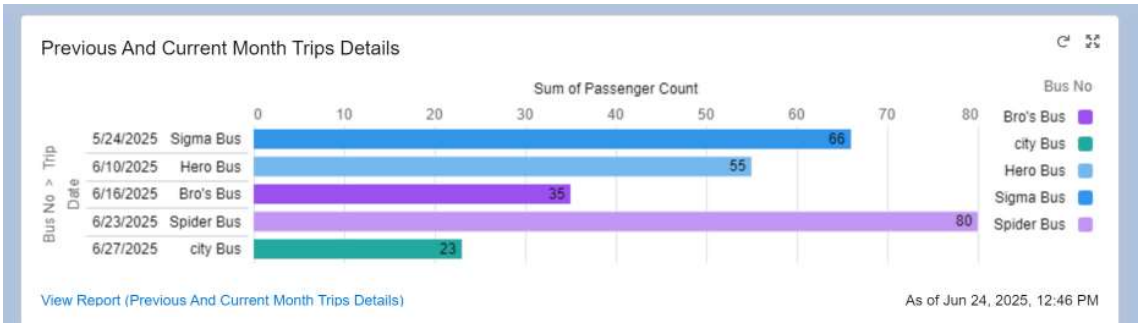
Key Functional Features:

- **Custom Objects**:
    - Bus Station, Bus, Trip, Ticket Fare, Employee
- **Automation & Validation**:
    - Role verification (Driver/Conductor) via **Apex Triggers**
    - Fare calculation automation via **Flows**
    - Input control via **Validation Rules**
- **Formula Fields for Efficiency**:
    - Age, Experience, Date of Retirement for employees
    - Total Fare = Passenger Count × Ticket Fare
    - Driver & Conductor Names (auto-derived via lookups)
- **UI & Navigation**:
    - Public Transport App using **Lightning App Builder**
    - Tabs for all custom objects

- Page layouts designed by object and role

- **Reports and Dashboards**:
  - Trip Summary Reports
  - Driver/Conductor Assignment Reports
  - Monthly Revenue and Passenger Count Dashboards

Together, these components will offer a centralized, role-driven, and insight-ready system.



🔷 Solution Architecture

Visualizing the Technical Structure and Object Relationships

Object Relationship Overview:

Object	Key Fields / Features
Bus Station	Name, Category, Amenities, Address
Bus	Linked to Bus Station, Category, Model, Capacity
Employee	Name, Role (Picklist), DOB, Experience, Lookup to Station
Trip	Linked to Bus, Driver, Conductor, Ticket Fare, Date, Passenger Count, Total Fare (Fx)
Ticket Fare	Route, Bus Model, Fare

Lookups:

- Employee → Bus Station
- Trip → Bus, Employee (Driver), Employee (Conductor), Ticket Fare
- Bus → Bus Station

Formulas:

- Total_Amount__c = Passenger_Count__c * Ticket_Fare__c
- Driver_Name__c = Driver_Id__r.Employee_Name__c
- Conductor_Name__c = Conductor_Id__r.Employee_Name__c

Automation:

- Flows for fare fetch logic
- Triggers for role validation
- Reports & dashboards for output

Summary

The Project Design Phase ensured that our CRM not only met the users' needs but also followed Salesforce best practices in object modeling, validation, automation, and user experience. This clear blueprint guided our execution in upcoming development and configuration phases.
