**Section 2.3: Problem Statement – Ideation Phase**

**Overview**

Problem definition is a cornerstone in designing enterprise-grade applications, especially for mission-critical systems like public transportation. For the RTC (Regional Transport Corporation) Salesforce CRM application, defining a crystal-clear problem statement ensured that the system would be relevant, scalable, and transformational.

During this phase, a combination of root cause analysis, stakeholder interviews, and business process reviews were used to isolate the fundamental issues plaguing RTC operations. These insights were converted into system-level challenges that Salesforce features could solve, forming the bridge between conceptual needs and technical design.

**Core Operational Challenges Identified**

1. **Decentralized and Redundant Data Systems**  
   Each department (HR, finance, depot management) operates in silos. There is no single source of truth for employees, buses, schedules, or revenue. This leads to duplication, outdated records, and cross-functional inefficiencies.
2. **Manual Workflows and Human Error**  
   Trip logs, fare records, and shift assignments are maintained on paper or in basic spreadsheets. This increases the risk of loss, manipulation, and error.
3. **Delayed Decision-Making**  
   Report compilation is delayed due to scattered and inaccurate data. Leadership lacks real-time visibility into revenue, trip metrics, and operational performance.
4. **Lack of Data Integrity and Validation**  
   Missing or invalid entries (e.g., incorrect fare collection, mismatched trip assignments) are common, as no system enforces validation.
5. **Inability to Track Performance KPIs**  
   KPIs like average trip revenue, fuel efficiency per route, and passenger headcount are not measured in real-time or at all.

**Problem Statement**

The existing operational framework of the Regional Transport Corporation is fragmented, paper-driven, and unscalable. This results in inefficiencies across employee management, bus scheduling, fare tracking, and performance reporting.

There is no centralized platform to validate, store, and analyze operational data, leading to frequent errors, delayed decisions, and lack of transparency. These challenges prevent RTC from modernizing services and responding to passenger and revenue trends effectively.

To overcome this, we propose the development and deployment of a Salesforce-based Public Transport CRM Application. This platform will:

* Centralize operational data across departments
* Automate routine processes such as trip logging, fare tracking, and shift assignments
* Provide real-time dashboards and reports for quick decision-making
* Improve data integrity through validation and controlled access
* Support future scalability with modular and cloud-first architecture

**Business and Technical Objectives**

| **Objective** | **Description** |
| --- | --- |
| Central Data Repository | All trip, fare, employee, and bus data managed in Salesforce |
| Validation Rules | Automated field validation to prevent incorrect entries |
| Workflow Automation | Flow-based shift assignment, trip creation, fare calculation |
| Performance Monitoring | Real-time dashboards on revenue, trip count, and passenger load |
| User Role Segmentation | Profile-based UI and permissions for different roles |

**Suggested Visual: Fishbone Diagram (Ishikawa)**

Create a root cause analysis diagram showing major problem categories such as:

* People (e.g., untrained staff, manual processes)
* Process (e.g., lack of SOPs, redundant workflows)
* Tools (e.g., paper logs, Excel sheets)
* Data (e.g., inconsistency, duplication)

📌 *Use Draw.io, Creately, or Miro to generate and insert the diagram here.*

**Key Impact Areas to Be Transformed**

1. **Employee Management** – Clear visibility of staff roles, shifts, and availability.
2. **Revenue Tracking** – Accurate, automated fare records.
3. **Trip Management** – Scheduled trips with assigned personnel and buses.
4. **Compliance & Auditing** – Historical logs, change tracking, and validations.
5. **Operational Dashboards** – Immediate access to live metrics.

**Conclusion**

The clearly articulated problem statement set the tone for targeted system design using Salesforce. It enabled the project team to stay grounded in actual business needs and prioritize features that address the highest-risk inefficiencies.

With the problem defined and its business impact quantified, the RTC Management System moved confidently into the next phase: gathering solution requirements and crafting a data model that ensures speed, integrity, and scalability.