**Public Transport Analysis Project**

**Phase 1:** Project Definition and Design Thinking

**Project Definition:**

**Objective:**

The primary objective of the "Public Transport Enhancement Project" is to comprehensively evaluate and enhance the public transportation system's efficiency, punctuality, and passenger satisfaction. This project is dedicated to providing actionable insights that will empower transportation authorities to make informed decisions and create a superior public transportation experience for all.

**Project Phases:**

**1. Define Specific Objectives**:

- Assess On-Time Performance: Precisely measure adherence to schedules, identifying and prioritizing routes or times prone to delays.

- Evaluate Passenger Satisfaction: Understand passenger sentiment through surveys, online feedback analysis, and in-person interactions.

- Optimize Service Efficiency: Analyze factors such as route optimization, resource allocation, and cost-effectiveness to improve overall efficiency.

**2. Data Collection Strategy:**

- Identify Data Sources: Map out data sources, including transportation schedules, GPS tracking, passenger feedback channels, and operational records.

- Data Quality Assurance: Implement data quality checks and cleaning processes to ensure accuracy and consistency.

- Data Security Measures: Establish robust data security protocols to protect sensitive information.

**3. Data Analytics and Integration:**

- Data Transformation: Utilize Python for data preprocessing, feature engineering, and aggregation to prepare data for analysis.

- Statistical Modeling: Apply advanced statistical techniques and machine learning algorithms to uncover insights and forecast performance.

- Seamless Integration: Integrate data analytics seamlessly with visualization tools to facilitate real-time data exploration.

**4. Design Thinking and User-Centric Approach:**

- User Persona Refinement: Continuously refine user personas based on ongoing feedback and observations.

- Prototyping and Testing: Implement rapid prototyping of potential solutions, test them with passengers, and iterate based on user feedback.

- Empathetic Decision-Making: Ensure that all project decisions prioritize the needs and preferences of passengers.

**5. Project Plan Finalization:**

- Project Roadmap: Finalize the comprehensive project plan, including timelines, resource allocation, and budgetary considerations.

- Risk Mitigation: Identify potential risks and establish mitigation strategies to ensure project success.

**TEAM MEMBERS:**

1. **Faheema Gullnaas**
2. **Smruthilaya Hariharan**