

Phase 2: Innovation - Transforming the Public Transport Optimization

DESIGN:

In the Innovation phase, we will translate the design thinking approach outlined in the previous phase into a concrete implementation plan. Many public transport systems are plagued by inefficient operations, leading to delayed schedules, overcrowded vehicles, and frequent breakdowns. This inefficiency not only inconveniences passengers but also discourages potential users from choosing public transport over private vehicles.

STEPS:

1.Thermal Sensor Installation:

Procure and install appropriate Thermal sensors (e.g., infrared sensors) on each of the public transports.

Install cameras at entry and exit points for vehicle recognition.

2.Data Collection and Transmission:

Develop the necessary hardware and software infrastructure to collect data from sensors and cameras.

Implement a reliable data transmission protocol to send information to a central server in real-time.

3.Real-Time Management Platform:

Design and develop a user-friendly mobile app for Android and iOS platforms.

Implement a visually appealing and intuitive user interface that allows users to:

View real-time tracking of travel on a map.

Receive notifications and updates on location updates.

4.Backend Development:

Create a robust backend system that receives, processes, and stores data from sensors and cameras.

Develop algorithms for real-time location prediction, ensuring efficient safety utilization.

Implement features for monitoring and managing the whole system's operations.

5.Integration with Sensors and Cameras:

Ensure seamless integration between the backend system and safety sensors and cameras.

6.Automated Entry/Exit Systems:

Implement sensors for recognition systems at entry and exit points.

Integrate these systems with the central server for automated access control.

7.Testing and Optimization:

Conduct extensive testing of the entire system to ensure reliability and accuracy of sensor data.

Perform load testing to ensure the system can handle many users.

8.Scalability and Adaptability:

Design the system architecture with scalability in mind to accommodate multiple transport live data's and increasing user demand.

Develop clear documentation and protocols for future expansion and maintenance.

9.Security and Privacy Measures:

Implement robust security measures to protect user data, payment information, temperature information (in case of fire) and system integrity.

Ensure compliance with data protection regulations and privacy standards.

10.Data Analytics and Insights:

Utilize historical data collected from sensors to gain insights into route patterns, peak travel times, and user behavior.

Use these insights to make data-driven decisions for future improvements and expansions.