Project Overview

The project's core mission is to enhance the public transportation experience through a comprehensive analysis of data, targeting service efficiency, on-time performance, and passenger satisfaction. By delving into these key components, we aim to provide valuable insights that will empower transportation improvement initiatives.

Key Objectives

1. \*\*Analysis Goals:\*\*

- Establish clear objectives for scrutinizing public transportation data.

- Core objectives encompass the evaluation of on-time performance, passenger contentment, and service efficiency.

- Formulate quantifiable key performance indicators (KPIs) related to these objectives.

2. \*\*Data Gathering:\*\*

- Pinpoint data sources and methodologies for capturing transportation data.

- Data sources may encompass schedules, real-time updates, and passenger input.

- Implement robust data collection procedures to ensure consistent and reliable data updates.

3. \*\*Visualization Approach:\*\*

- Develop a robust strategy for conveying insights drawn from the data.

- Leverage IBM Cognos to craft engaging, interactive dashboards and reports.

- Create visual representations that are user-centric, effectively communicating findings to stakeholders.

4. \*\*Code Integration:\*\*

- Identify areas where code can enhance the analytical process.

- Consider code for data cleansing, transformation, and statistical analysis.

- Emphasize well-documented, modular, and maintainable code.

Design Thinking in Action

Understanding the Challenge

- The primary project objective is to refine public transportation services.

- We intend to achieve this through a deep analysis of data, focusing on on-time performance, passenger satisfaction, and service efficiency.

- The insights derived will guide decision-makers in executing meaningful improvements.

Ideation and Strategic Approach

Defining Analysis Objectives

- Specific objectives are outlined to comprehensively address the challenge.

- Objective 1: Punctuality Assessment

- Monitor and report the punctuality of public transportation services.

- Analyze historical data to detect patterns of delays.

- Objective 2: Passenger Contentment Assessment

- Collect and analyze passenger feedback via surveys or online reviews.

- Identify common pain points and areas for enhancement.

- Objective 3: Service Efficiency Analysis

- Evaluate the overall efficiency of transportation routes and schedules.

- Optimize routes to minimize travel time and enhance connectivity.

Data Collection

- Identify data sources:

- Schedules and timetables from transportation authorities.

- Real-time GPS data from vehicles.

- Passenger feedback gathered through surveys or online platforms.

- Develop data collection and update processes to ensure current data availability for analysis.

Visualization Strategy

- Leveraging IBM Cognos for visualization:

- Develop interactive dashboards for ongoing KPI monitoring.

- Create informative reports delivering insights at different levels of detail.

- Incorporate user feedback for visualization refinement, ensuring alignment with decision-makers' needs.

Code Integration

- Identify areas where code can optimize the analysis:

- Implement data cleansing routines to manage missing or inconsistent data.

- Transform data for visualization and analysis.

- Conduct statistical analysis to uncover trends and correlations.

- Prioritize well-documented and organized code for ease of maintenance.

Implementation and Assessment

- Execute the data collection, analysis, and visualization processes.

- Continuously monitor KPIs and solicit feedback from stakeholders.

- Regularly update visualizations and reports to reflect the latest data.

- Evaluate the impact of implemented improvements on public transportation services.

In Conclusion

This problem-solving approach unites well-defined objectives, efficient data collection, informative visualization, and strategic code integration to address public transportation challenges. Ultimately, the success of this project promises to lead to improved transportation services and a more delightful experience for passengers.