

Cyclistic Bike-Share Case Study

Project Requirements Document: [Cyclistic Bike-Share Project]

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Client/Sponsor: [Sara Romero, VP, Marketing]

Purpose:

The purpose of this project is to develop a comprehensive dashboard that provides insights into bike usage patterns across Cyclistic's stations. This will help the Customer Growth Team identify high-demand areas and inform decisions on new station placements and improvements. Investing in this project will enhance the company's ability to make data-driven decisions, ultimately supporting growth and improving customer satisfaction.

Key dependencies:

Team:

Adhira Patel (API Strategist), Megan Pirato (Data Warehousing Specialist), Rick Andersson (Manager, Data Governance), Tessa Blackwell (Data Analyst)

Primary Contacts: Sara Romero (VP, Marketing), Ernest Cox (VP, Product Development), Jamal Harris (Director, Customer Data), Nina Locklear (Director, Procurement)

Expected Deliverables:

Dashboard visualizations showing trip start and end locations, popular destinations, peak usage times, and growth trends.

Insights into congestion at stations and the impact of weather on usage.

Final report and executive summary detailing key findings and recommendations.

Stakeholder requirements:

- A table or map visualization exploring starting and ending station locations, aggregated by location. R

- A visualization showing which destination (ending) locations are popular based on the total trip minutes. R
- A visualization that focuses on trends from the summer of 2015. D
- A visualization showing the percent growth in the number of trips year over year. R
- Gather insights about congestion at stations. N
- Gather insights about the number of trips across all starting and ending locations. R
- Gather insights about peak usage by time of day, season, and the impact of weather. R

Success criteria:

Specific:

BI insights should clearly outline the distinct attributes of a successful product. They must illustrate current bike usage patterns and highlight factors influencing demand at different station locations.

Measurable:

Evaluate each trip based on starting and ending locations, duration, and variables such as time of day, season, and weather. For instance, does bike usage decrease during rainy weather? Does demand remain steady or fluctuate? Are there differences based on location and user types (subscribers vs. non-subscribers)?

Action-oriented:

The results must validate or challenge the hypothesis that factors like location, time, season, and weather influence user demand. This understanding will enable the Cyclistic team to enhance future product development strategies.

Relevant:

All metrics must align with the main objective: How can we enhance the Cyclistic experience?

Time-bound:

Analyze data covering at least one year to assess the impact of seasonality on usage. Reviewing data across multiple months will reveal trends and variations in usage patterns.

User journeys:

Current Experience: Stakeholders currently rely on manual reports and limited data visualizations to understand bike usage and customer demand.

Ideal Future Experience: Stakeholders will have access to an interactive dashboard that provides real-time insights into bike usage, customer behavior, and demand patterns, allowing for informed decision-making.

Assumptions:

- Data provided will be complete and accurate, with no significant missing values or errors.
- Stakeholders will provide timely feedback and approval during the design and development phases.
- Weather data impacts are assumed to be uniform across the day.

Compliance and privacy:

- Ensure all data used in the dashboard is anonymized to protect user privacy.
- Comply with data protection regulations by excluding personal information such as names, emails, and addresses from the analysis.

Accessibility:

- Implement large print and text-to-speech features in the dashboard to ensure accessibility for users with visual impairments.
- Ensure that all visualizations and data points are easy to interpret and interact with, adhering to accessibility standards.

Roll-out plan:

- Week 1: Dataset assigned and initial design validated.
- Weeks 2-3: Develop SQL queries and ETL processes.
- Weeks 3-4: Finalize SQL, design dashboard, and conduct first draft review.
- Weeks 5-6: Complete dashboard development, conduct testing, and finalize the project.