Project Requirements Document: Cyclistic

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Client/Sponsor: Jamal Harris, Director, Customer Data

Purpose:

Develop a comprehensive dashboard that provides insights into customer bike usage patterns. By analyzing millions of ride data points, the Customer Growth Team aims to pinpoint customer demand across various station locations. The dashboard will summarize key insights derived from the dataset, enabling informed decision-making based on customer behaviors rather than solely internal observations. This approach aligns with the principle that business plans rooted in customer insights yield greater success. The executive view of the dashboard will present summarized and aggregated data, offering the leadership team a clear understanding of Cyclistic's customer usage trends for strategic planning and decision-making purposes.

Key dependencies:

This project will require a dataset of customer data, so the Director of Customer Data will need to approve the request. Additionally, validation from teams responsible for specific product data such as bike trip duration and identification numbers is crucial to ensure accurate interpretation. Primary contacts for approval and coordination include Adhira Patel, Megan Pirato, Rick Andersson, and Tessa Blackwell. Successful execution of the project relies on securing these approvals and collaborations to access and interpret the requisite data accurately, facilitating the development of the dashboard and subsequent insights into customer usage patterns.

Stakeholder requirements:

In order to continuously improve and effectively market products, the dashboard must help Cyclistic decision-makers understand how their customers are using the bikes and the demand at different locations, including factors that might influence that demand at different times.

- 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 must delineate the attributes of a successful product, revealing current bike usage patterns and factors influencing station demand.
- **Measurable:** Trip analysis should encompass start/end locations, duration, and variables like time, season, and weather, determining impacts on usage.
- **Action-oriented:** Findings must validate hypotheses on location, time, and weather effects on demand, guiding future product refinements.
- **Relevant:** Metrics should address the central question: How to enhance the Cyclistic experience?
- **Time-bound:** Analyze year-long data to understand seasonal usage trends and variations, capturing usage peaks and valleys for informed decision-making and product development.

User journeys:

Cyclistic aims to enhance the bike share experience by analyzing trip trends to understand customer usage patterns better. User journeys will delve into various aspects such as trip duration, frequency, and popular routes. By mapping out these journeys, decision-makers can identify pain points and areas for improvement, ultimately enhancing the overall user experience. The goal is to gain insights into how customers interact with Cyclistic bikes and to leverage this understanding to optimize services and infrastructure, ensuring a seamless and satisfying experience for all users.

Assumptions:

The dataset contains latitude and longitude coordinates of stations but lacks finer geographic details like zip codes or neighborhood names. The team will supplement this with a separate

database. Weather data provided lacks specific precipitation timing, potentially occurring during off-peak hours. For dashboard analysis, any precipitation on trip days is assumed to impact usage.Bike trips may be hindered by station unavailability, necessitating consideration of alternative demand factors.

Compliance and privacy:

The project mandates exclusion of personal data like names, email addresses, phone numbers, and physical addresses. While users provide this information during device activation, it's unnecessary for this project. Ensuring user anonymity is paramount to prevent bias. All data used in analysis must be anonymized to safeguard user privacy and comply with relevant regulations regarding data protection and privacy.

Accessibility:

The dashboards should offer text alternatives including large print and text-to-speech.

Roll-out plan:

The stakeholders have requested a completed BI tool in six weeks:

- Week 1: Dataset assigned. Initial design for fields and BikeIDs validated to fit the requirements.
- Weeks 2-3: SQL & ETL development
- Weeks 3-4: Finalize SQL. Dashboard design. 1st draft review with peers.
- Weeks 5-6: Dashboard development and testing