Project Requirements Document: Cyclistic

BI Analyst: Jianyang Wu

Client/Sponsor: James Lee, Director, Customer Data

Purpose: (Briefly describe why the project is happening and why the company should invest resources in it.)

The Customer Growth team at Cyclistic is developing a plan to grow the business over the next few years. The team wants to understand how customers use bikes in different situations and gain key insights that may help shape business development strategies; their first priorities are to identify customer needs at different station locations and to determine user differences in user behavior between customers and subscribers. The team plans to gain key insights from the dataset, as insights gained solely through internal employee observations can be biased and not holistic. The dataset contains a large number of trip records, and the team decided to create some dashboards and charts to display key insights derived from the dataset. The executive view must include key data points that are summarized and aggregated so that the leadership team has a clear understanding of how customers are using Cyclistic.

Key dependencies: (Detail the major elements of this project. Include the team, primary contacts, and expected deliverables.)

This project will require the customer data datasets, so the Director of Customer Data will need to approve the request. The team that owns the specific product data (including bike travel times and bike identification numbers) should also give approval to verify that the data is interpreted correctly. In addition to this, a climate dataset and a postcode dataset will be collected from the internet. The main contacts are Martin Li, Megan Andersson, and Jack Ng.

Stakeholder requirements: (List the established stakeholder requirements, based on the Stakeholder Requirements Document. Prioritize the requirements as: R - required, D - desired, or N - nice to have.)

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.

- Table visualization showing average trip minutes and number of trips by starting station location. R

- Bar chart of total trip minutes sorted in descending order by all destination stations. R
- Bar chart of total trip minutes sorted in descending order by all origin stations. D
- Maps of different metrics focusing on trends for the summer of 2015. R
- Three separate maps focusing on trends for July, August, and September 2015. N
- Several line charts showing the number of trips and trip minutes for customers and subscribers at different temperatures and precipitation levels. R
- Line chart and table showing the number of trips and trip minutes by month in two consecutive years. R
- Gather insights on station congestion. R
- Gather insights on the number of trips for all origin and end locations. R
- Gather insights on peak usage by time of day, season, and weather impacts. R

Success criteria: (Clarify what success looks like for this project. Include explicit statements about how to measure success. Use SMART criteria.)

Specific: BI insights must clearly identify the specific characteristics of a successful product. They must demonstrate how customers are currently using bikes and what impacts demand at station locations. **Measurable:** Each trip should be evaluated using starting and ending location, duration, variables such as time of day, season, and weather. For example, do customers use Cyclistic less when it rains? Or does bikeshare demand stay consistent? Does this vary by location and user types (subscribers vs. non-subscribers)? **Action-oriented:** These outcomes must prove or disprove the theory that location, time, season, and weather impact user demand. Then, the Cyclistic team will use this knowledge to refine future product development. **Relevant:** All metrics must support the primary question: How can we build a better Cyclistic experience? **Time-bound:** Analyze data that spans at least one year to see how seasonality affects usage. Exploring data that spans multiple months will capture peaks and valleys in usage.

User journeys: (Document the current user experience and the ideal future experience.) Cyclistic's main purpose is to provide customers with a better bike-sharing experience. Key BI insights can help decision makers understand how customers currently use Cyclistic bikes and how their experience can be improved, such as reducing costs and making bikes more accessible.

Assumptions: (Explicitly and clearly state any assumptions you are making.)
The dataset does not include geo-aggregated details such as postal codes, neighborhood names, or boroughs, so the team will find a separate database that contains these data.

The weather data provided does not include when precipitation occurs; some days may have precipitation during off-peak hours. However, for the purposes of this dashboard, the team plans to estimate the impact of rainfall on bike trips by total rainfall by day.

Compliance and privacy: (Include compliance, privacy, or legal dimensions to consider.)
The data must not contain any personal information, such as name, email address, phone number, or physical address. Users provide this data when using the service, but it is voluntary. It is crucial that users remain anonymous to avoid any bias.

Accessibility: (List key considerations for creating accessible reports for all users.)
The dashboards should offer text alternatives including large print and text-to-speech.

Roll-out plan: (Detail the expected scope, priorities and timeline.)
The stakeholders have requested a completed BI tool in five weeks:
- Week 1: Dataset assigned. Initial design for fields and BikeIDs validated to fit the requirements.
- Week 2: SQL & ETL development and finalize SQL.
- Weeks 2-3: Dashboard design. 1st draft review with peers.
- Weeks 4-5: Dashboard development and testing
- Week 5: Draw key insights from visualizations and conclusions