Project Requirements Document: Cyclistic

BI Analyst: Viet Pham

Client/Sponsor: Cyclistic stakeholders

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

Cyclistic has partnered with the city of New York to provide shared bikes. Currently, there are bike stations located throughout Manhattan and neighboring boroughs. Customers are able to rent bikes for easy travel between stations at these locations.

Cyclistic's Customer Growth Team is creating a business plan for next year. The team wants to understand how their customers are using their bikes; their top priority is identifying customer demand at different station locations.

The dataset includes millions of rides, so the team wants a dashboard that summarizes key insights. Business plans that are driven by customer insights are more successful than plans driven by just internal staff observations. The executive summary must include key data points that are summarized and aggregated in order for the leadership team to get a clear vision of how customers are using Cyclistic.

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

- Adhira Patel, API Strategist
- Megan Pirato, Data Warehousing Specialist
- Rick Andersson, Manager, Data Governance
- Tessa Blackwell, Data Analyst
- Brianne Sand, Director, IT
- Shareefah Hakimi, Project Manager

*Primary contacts are Adhira, Megan, Rick, and Tessa.

Project goal: Grow Cyclistic's Customer Base

- Understand what customers want, what makes a successful product, and how new stations might alleviate demand in different geographical areas.

- Understand how the current line of bikes are used.
- How can we apply customer usage insights to inform new station growth?
- The customer growth team wants to understand how different users (subscribers and non-subscribers) use our bikes. We'll want to investigate a large group of users to get a fair representation of users across locations and with low- to high-activity levels.
- Keep in mind users might use Cyclistic less when the weather is inclement. This should be visible in the dashboard.

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.)

- A table or map visualization exploring starting and ending station locations, aggregated by location. Use any location identifier, such as station, zip code, neighborhood, and/or borough. This should show the number of trips at starting locations. - Required
- A visualization showing which destination (ending) locations are popular based on the total trip minutes. - Required
- A visualization that focuses on trends from the summer of 2015. - Desired
- A visualization showing the percent growth in the number of trips year over year. - Desired
- Gather insights about congestion at stations. - Desired
- Gather insights about the number of trips across all starting and ending locations. - Required
- Gather insights about peak usage by time of day, season, and the impact of weather. - Required

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

- Specific: The team wants to understand how their customers are using their bikes; their top priority is identifying customer demand at different station locations.
- Measurable: Stakeholders want to explore insights on the number of trips at starting and ending locations; the difference in bike trips from year to year; and how the peak usage by time of day, season, and the impact of weather affect bike trips.
- Action-oriented: Inform new station growth might alleviate the demand of customers in different geographical areas.
- Relevant: How do the customers use Cyclisitic bike service? How can the Cyclistic enhance better experiences for the customers?
- Time-bound: Peak usage by time of day, day/month/year trends

User journeys: (Document the current user experience and the ideal future experience.)

Cyclistic wants to understand how customers use their bike services. Also, they want to know the trends by timescale, weather impact, and so on. That way, the Cyclistic will have appropriate measures to build a better experience for their customers.

Assumptions: (Explicitly and clearly state any assumptions you are making.)
The dataset includes latitude and longitude of stations but does not identify more geographic aggregation details, such as zip code, neighborhood name, or borough. The team will provide a separate database with this data.

The weather data provided does not include what time precipitation occurred; it's possible that on some days, it precipitated during off-peak hours. However, for the purpose of this dashboard, assume any amount of precipitation that occurred on the day of the trip could have an impact.

Starting bike trips at a location will be impossible if there are no bikes available at a station, so we might need to consider other factors for demand.

Compliance and privacy: (Include compliance, privacy, or legal dimensions to consider.)

The datasets will include customer (user) data, which needs to be approved. Also, the project might need approval by the teams that own specific product data, including bike trip duration and bike identification numbers; and make sure that stakeholders have data access to all datasets.

The data must not include any personal info (name, email, phone, address). Personal info is not necessary for this project. Anonymize users to avoid bias and protect their privacy.

Accessibility: (List key considerations for creating accessible reports for all users.)

Dashboard needs to be accessible, with large print and text-to-speech alternatives.

Roll-out plan: (Detail the expected scope, priorities and timeline.)

The dashboard must be created in 6 weeks!

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