

Project Requirements Document: Cyclistic

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Client/Sponsor: Jamal Harris, Director, Customer Data

Purpose: The company's Customer Growth Team is creating a business plan for next year. They want 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 view 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:

This project will require a dataset of customer data, so the Director of Customer Data will need to approve the request. Approval should also be given by the teams that own specific product data including bike trip duration and bike identification numbers to validate that the data is being interpreted correctly. The primary contacts are Adhira Patel, Megan Pirato, Rick Andersson, and Tessa Blackwell.

Stakeholder requirements:

Required:

- A table or map visualization exploring starting and ending station locations, aggregated by location.
- A visualization showing which destination (ending) locations are popular based on the total trip minutes.
- A visualization that focuses on trends from the summer of 2015.
- A visualization showing the percent growth in the number of trips year over year.
- Gather insights about the number of trips across all starting and ending locations.
- Gather insights about peak usage by time of day, season, and the impact of weather.

Nice to have:

- Gather insights about congestion at stations.

Success criteria:

Specific:

understand how their customers are using their bikes; their top priority is identifying customer demand at different 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: The main purpose of Cyclistic is to provide customers with a better bike-share experience.

Assumptions:

1/ 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, I should assume any amount of precipitation that occurred on the day of the trip could have an impact.

2/ The dataset includes latitude and longitude of stations but does not identify more geographic aggregation details like zip code, neighborhood name, or borough. The team will provide a separate database with this data.

3/ 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:

- The datasets will include customer (user) data, which Jamal will need to approve.
- the data must not include any personal info (name, email, phone, address)

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

Roll-out plan:

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