Project Requirements Document: Cyclistic BI Dashboard

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Client/Sponsor: Sara Romero, VP, Marketing

Purpose

Cyclistic aims to grow its customer base by analyzing how users interact with its bike-share service. The Customer Growth Team needs insights from trip data to:

- Identify high-demand station locations.
- Analyze subscriber vs. non-subscriber usage.
- Understand congestion and optimize fleet distribution.
- Plan for new station placements using customer data.
- Examine seasonal and weather-related variations in usage.

Investing in this BI project will enable data-driven decision-making and improve business outcomes.

Key Dependencies

Major Elements of the Project:

1. **Team & Primary Contacts:**
    - Sara Romero (VP, Marketing) – Project Sponsor
    - Adhira Patel (API Strategist) – Data Integration
    - Megan Pirato (Data Warehousing Specialist) – Data Storage
    - Rick Andersson (Manager, Data Governance) – Data Quality & Compliance
    - Tessa Blackwell (Data Analyst) – Data Analysis & Visualization
2. **Data Sources:**

- **Primary Dataset:** NYC Citi Bike Trips
- **Secondary Dataset:** Census Bureau US Boundaries
- **Weather Data:** To correlate weather conditions with bike usage
- **Geospatial Data:** Latitude/longitude of stations with aggregated geographic details

3. **Deliverables:**

    - BI dashboard with multiple visualizations
    - Aggregated usage reports
    - Customer demand and congestion insights

Stakeholder Requirements

Requirement	Priority
Map/table visualization of trip start and end locations	R
Visualization of top ending locations based on trip duration	R
Year-over-year growth analysis	R
Peak usage analysis by time, season, and weather impact	R
Station congestion insights (net bike availability per station)	R
Large print and text-to-speech accessibility	R
Integration with weather data	D
Inclusion of borough/neighborhood-level insights	D

Success Criteria

Success will be measured using SMART criteria:

- **S**pecific: Provide actionable insights into bike usage trends.
- **M**easurable: Dashboard adoption by key stakeholders; analysis covering at least one year of data.
- **A**chievable: Completion within a **6-week timeline**.
- **R**elevant: Insights applied to customer growth strategies and station placement.
- **T**ime-bound: Dashboard deployed and reviewed within the project timeline.

User Journeys

- **Current Experience:** Cyclistic's decision-making is primarily based on internal observations rather than customer data.
- **Future Experience:**
    - Marketing team tailors promotions based on real usage patterns.
    - Product team improves bike distribution and station placement.
    - Procurement team optimizes bike allocation to meet demand.
    - Executives make data-driven expansion decisions.

Assumptions

- All required datasets will be accessible.
- Weather data will be used to infer impact on trip demand.
- Personal information will not be included in the dataset.
- Stakeholders will regularly use the dashboard to inform business decisions.

Compliance and Privacy

- Data must be anonymized to protect user privacy.

- No personally identifiable information (PII) will be included in the dataset.
- Data usage must comply with NYC's data privacy policies.

Accessibility

- The dashboard must be **visually accessible** (large print, high contrast colors).
- **Text-to-speech alternatives** must be available for visually impaired users.
- **Navigation should be intuitive**, supporting both keyboard and mouse interactions.

Roll-out Plan

Phase	Timeline	Tasks
Week 1	Dataset assigned	Validate fields & BikeIDs
Weeks 2-3	SQL & ETL development	Data pipeline creation
Weeks 3-4	Dashboard design	First draft & peer review
Weeks 5-6	Dashboard development & testing	Final updates and approval

Dashboard access will be granted to key stakeholders upon completion, with ongoing reviews for enhancements. Measurements will be taken to assess adoption and impact, with potential iterations based on stakeholder feedback.