# Cyclistic BI Capstone: Mock Tableau Dashboard Layout Plan

## 🎯 Dashboard Objective:

To visualize customer demand patterns, usage trends, and congestion insights to inform new station placement and bike distribution optimization.

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## 1️⃣ Layout Structure (Single-Page Dashboard)

### Header:

- Cyclistic Logo + "Customer Usage and Demand Dashboard"
- Date Range Filter + User Type Filter (Subscriber / Non-Subscriber)

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## 2️⃣ Filters Panel (Top or Left Sidebar)

- ✅ **Date Range Selector** (Year, Month, Day)
- ✅ **User Type:** Subscriber / Non-Subscriber / All
- ✅ **Weather Filter:** Rainy / Clear / All (to explore weather impact)
- ✅ **Time of Day Slider:** Hour ranges (AM/PM/Peak/Off-Peak)

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## 3️⃣ KPI Card Strip (Below Filters)

- 🚴 **Total Trips** (selected period)
- 📈 **YoY % Growth** in Trips
- 🕐 **Peak Usage Hour**
- 🌧️ **Avg Trips on Rainy Days**
- 📍 **# High-Demand Stations**

## 4️⃣ Main Visual Panels:

### ✅ A. Map Visualization (Left Main Panel)

- Start Locations (bubble map or density map)
- Color by trip volume
- Tooltip: Station Name, # Trips, % YoY change

### ✅ B. Destination Popularity Chart (Top Right Panel)

- Bar chart: Top 10 end stations by total trip minutes (focus on peak months)
- Color by borough or neighborhood for geographic clarity

### ✅ C. Seasonal Usage Trends (Middle Right Panel)

- Line chart: Trips by month (highlight Summer 2015 trends)
- Overlay weather pattern (rain days highlighted) for correlation

### ✅ D. YoY Growth Panel (Bottom Right Panel)

- Area or line chart: % Growth in trips year-over-year
- Filterable by station or borough

### ✅ E. Congestion Insights Table (Bottom Panel)

- Station | Net Inflow/Outflow | Avg Trips In | Avg Trips Out
- Conditional color formatting for congestion hotspots

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# 5 Accessibility Design

- Large, high-contrast fonts
- Alt text for visual elements
- Text-to-Speech labels on hover/tooltips
- Mobile-friendly layout with scrollable panels

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# 6 Color & Visual Style

- **Cyclistic Brand Colors:** Teal, White, Charcoal, Accent Yellow
- Use color gradients to represent volume (low to high).
- Consistent color codes for subscriber vs. non-subscriber.

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# 7 Drilldowns & Tooltips

- Clicking on a station zooms map and updates charts for that station.
- **Tooltips with:**
  - Total trips
  - Avg trip duration
  - Weather impact notes
  - % change vs. previous period

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# 8 Data Notes

- Display disclaimers about weather data granularity.
- Clarify that PII is removed and data is anonymized.

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# 9 Export Options

- **PDF export** with insights summary.
- **CSV download** of key table data for advanced stakeholder analysis.