**CUSTOMER DEMOGRAPHICS & SALES ANALYSIS**

**Business Requirement**

AdventureWorks, a global e-commerce company, wants to better understand its customer demographics, revenue distribution, and purchasing patterns. Currently, customer and sales data is spread across multiple systems (customer, geography, date, and sales), making it difficult for stakeholders to track performance and identify trends.

The company requires a centralized Power BI dashboard that integrates sales and demographic data, calculates KPIs and visualizes results using different chart types to support data-driven decisions.

**KPI’s Requirements (with Measures)**

1. **Total Customers-**Counts the number of unique customers.
2. **Total Revenue-**Calculates total sales by multiplying quantity and unit price for each order, then summing it up.
3. **Average Customer Age-**Finds the mean age of all customers.
4. **Customers With vs Without Children**

With Children → Counts customers who have one or more children.

Without Children → Counts customers who have zero children.

1. **Top Customers by Revenue-**Assigns a rank to each customer based on their total revenue, with 1 being the highest spender.

**Chart’s Requirements (with Measures & Types)**

1. **Revenue by Age Group**
   * **Chart Type:** Clustered Column Chart with an Average Line.
   * **What it does:** Shows how much revenue is generated by different customer age groups (e.g., 21–30, 31–40). The average line highlights the overall mean revenue, making it easy to see which age groups perform above or below average.
2. **Revenue by Gender**
   * **Chart Type:** Pie/Donut Chart.
   * **What it does:** Breaks down total revenue into male vs female customers, showing the percentage contribution of each gender. Useful for identifying spending differences between genders.
3. **Geographic Insights**
   * **Chart Type:** Map or Bar Chart with Dynamic Text.
   * **What it does:** Displays revenue by country or region. The dynamic text automatically highlights the leading country (e.g., “United States leads with 35% of revenue”). Helps compare performance across geographies.
4. **Customer Profiling (Loyal / Periodic / VIP)**
   * **Chart Type:** Donut/Bar Chart.
   * **What it does:** Segments customers into groups based on purchase frequency or behavior (e.g., Loyal = frequent buyers, VIP = high spenders, Periodic = occasional buyers). Shows which segment contributes most to revenue.
5. **Dynamic Commentary**
   * **Chart Type:** Text Card.
   * **What it does:** Provides automatically generated insights (e.g., “75% of revenue comes from customers with children” or “Australia leads with 44% customers without children”). It turns raw data into easy-to-read statements for quick decision-making.

Would you like me to also **add these chart explanations** into your **Business Requirements document** so it matches the format of your template?