**Sales Analysis Report – Sahan Global Electronics Retailer**

**1. Introduction**

* **Objective:** This report analyzes sales data for a **Sahan Global electronics retailer**, focusing on product categories, customer distribution, seasonal trends, delivery times, and differences in online vs. in-store sales.
* **Data Sources:** The dataset includes transactions, product details, customer locations, store information, and exchange rates.

**2. Data Overview**

* The retailer sells various **electronics**, including **laptops, smartphones, home appliances, gaming consoles, and accessories**.
* Customers are located in **multiple countries**, with sales across **physical stores and e-commerce platforms**.

**3. Data Cleaning Process**

**The following steps were performed to clean and prepare the data for analysis:**

**3.1 Removing Null Values**

* **Null Square Meters Values: Rows with missing square meters were removed.**

**4. Data Transformation**

* **Created New Columns:** 
  + **Extracted Year and Month from the Order Date to analyze trends.**
  + **Extracted Age from the birthdate and a column for Age Category.**
  + **Extracted Delivery Time (Days) from the Order Date and Shipping Date, Delivery Time Category, Sales Channel**
  + **Extracted Store Age from the Store Open Date.**

**5 Data Model Used in This Analysis**

**To conduct this analysis, a Star Schema data model was designed in Power BI, ensuring efficient data organization and optimized performance. The model consists of a central Fact Table (Sales Transactions) linked to multiple Dimension Tables (Customers, Products, and Store).**

**Structure of the Data Model**

* **Fact Table: Contains transactional data such as Order Number, Order Date, Delivery Date, and Quantity.**
* **Dimension Tables:** 
  + **Customers (Customer ID, Gender, Name, Location, Birthdate)**
  + **Products (Product ID, Product Name, Category, Subcategory, Color, Cost, Price)**
  + **Store (Store ID, Location, Square Meter, Open Date)**

**The relationships between Dimension Tables and Fact Table follow a one-to-many.**

**5. Key Findings**

**1. Product Categories & Customer Locations**

**Findings:**

* The top-selling products are **computers (34.46%)**, followed by **home appliances (19.6%)** and **cameras and camcorders (11.7%)** and **cellphones (11%)**
* The highest number of customers come from **North America (58%)**, followed by **Europe (35.6%) and Australia (6.4%)**.

**2. Seasonal Trends in Sales & Revenue**

**Findings:**

* **Sales spike in Q4** (November-February) due to holiday shopping.
* Revenue peaks in **November (Black Friday & Cyber Monday)** and **December (Christmas sales)**.
* Lower sales occur in **March and April**.

**3.3. Average Delivery Time Trends**

**Findings:**

* The **average delivery time is 1 day**.
* Delivery times have **been same (2020) to (2024)**.

**3.4. Online vs. In-Store Sales: Average Order Value (AOV)**

**Findings:**

* **Online AOV: $161.3**
* **In-store AOV: $148**
* Customers tend to buy higher-value products In-Store.

**6. Recommendations**

* Focus marketing efforts on Q4 to **maximize holiday season sales**.
* Improve website, offer online-only discounts, boost digital ads.
* Expand product offerings in **high-demand regions like North America and Europe**.
* Enhance Customer Service Channels, and Implementing Customer Feedback and Loyalty Programs.
* Offer Personalized and Creating Limited-Quantity Discounts

**7. Conclusion**

This report highlights **sales trends, seasonal patterns, and customer purchasing behaviors**. By leveraging these insights, the retailer can optimize sales strategies, improve customer experience, and drive revenue growth.