

Web Events and Sales Orders Dashboard with Analysis 2013 - 2017

Analysis Finding

The data shows that the year 2016 had the highest total orders with around 1.05M and \$5.89M revenues, With Northeast region contributing \$1.89M in total revenue (18.14%).

About Dataset

1. Orders Dataset:

- Contains details of customer orders, including order dates, total order amounts (in USD), and associated customer IDs.
- Help analyze revenue trends, customer purchasing behavior, and seasonal patterns.

2. Accounts Dataset:

- Represents customer account information such as account IDs, names, and sales representative assignments.
- Useful for understanding customer demographics and their engagement with the company.

3. Regions Dataset:

- Defines geographical regions managed by sales representatives, including region names and IDs.
- Enables regional sales performance analysis and comparative insights across regions.

4. Sales Representatives Dataset:

- Includes data on sales representatives, their IDs, names, and the regions they serve.
- Helps link customer accounts to specific regions and analyze rep performance.

5. Web Events Dataset:

- Logs customer interactions on the company's website, including timestamps, event types, and user IDs.
- Helps track user activity, identify trends in website engagement, and optimize the online user experience.

DATA ANALYSIS REQUEST

Subject: Request for Web Events and Sales Orders Dashboard with Analysis

Objective: Our goal is to analyze the correlation between web traffic channels and sales performance across different regions. We would like to track key metrics such as web event volume, channel effectiveness, order quantity breakdown, and sales revenue. The analysis should be presented via a Power BI dashboard for easy reporting and decision-making.

Key Metrics and Insights Requested:

1. Web Traffic Analysis:

- Volume of web events segmented by channel
- Identify which web channels are generating the most engagement based on the number of web events.
- Trends in web events over time

2. Sales Performance Analysis:

- Total orders by accounts and associated sales representative
- Breakdown of order quantities (standard, gloss, poster) and sales revenue (standard, gloss, poster)

3. Regional Sales Performance:

- Sales revenue and order quantities by region and sales representative.
- Identify top-performing regions based on total total amount and number of orders.

4. Customer Account Insights:

- Overview of account performance: total quantity and revenue per account.

Deliverables:

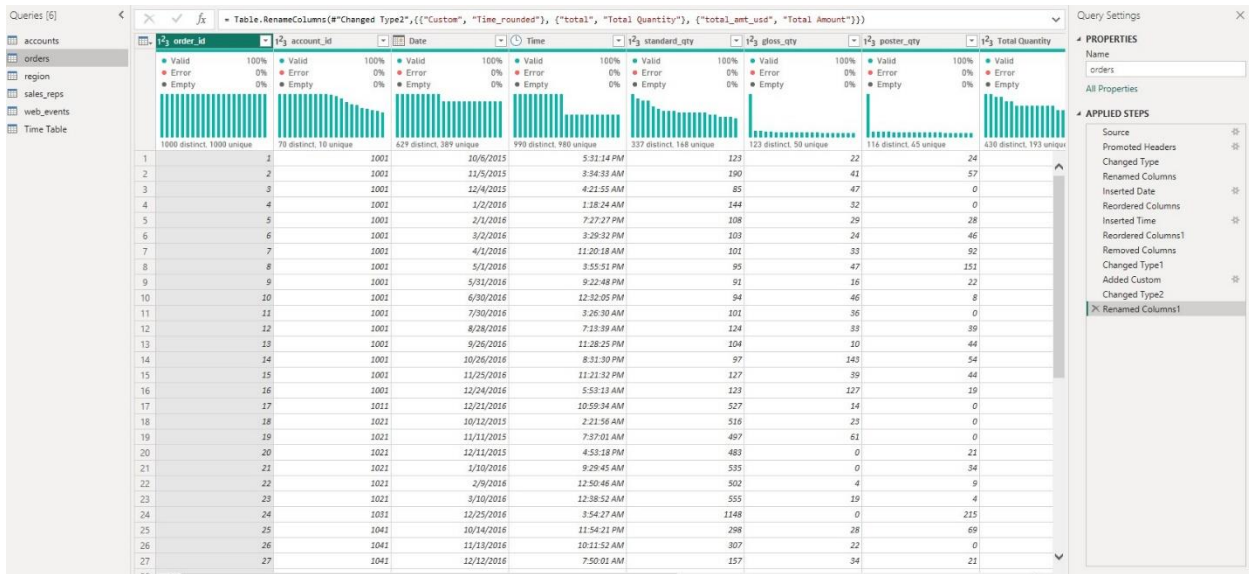
Power BI Dashboard:

- Overview Dashboard of **Web Traffic Metrics, Regional Sales Performance**
- A Detailed **Sales Performance Analysis** on another page

THE ACTUAL PROCESS

Data Preparation

- Clean and Transform Data Using Power Query
 - Rename all id column to their respective table name + id to avoid confusion for later in data modeling
 - Split the Date-Time columns into Date and Time.
- Create Calendar Table using the DAX formula below
 - The dataset have a date-time column which means we need to create a stand alone calendar table



1 Calendar Table =

2 ADDCOLUMNS(

3 CALENDAR(DATE(2010, 01, 01), DATE(2025, 12, 31))

4 // Create Columns in Numeric Values

5 , "Year", YEAR([Date]))

6 , "Quarter", QUARTER([Date]))

7 , "Month Number", MONTH([Date]))

8 , "Week Number", WEEKNUM([Date]))

9 , "WeekDay Number", WEEKDAY([Date]))

10 , "Day", DAY([Date]))

11

12 // Create Columns with their name values

13 , "Month", FORMAT([Date], "Mmm")

14 , "Day Name", FORMAT([Date], "Dddd")

15 , "Quarter Name", "Q" & QUARTER([Date])

16

17 // Combine Y and Q, Y and M

18 , "Year Quarter", YEAR([Date]) & " " & "Q" & QUARTER([Date])

19 , "Year Month", YEAR([Date]) & " " & FORMAT([Date], "Mmm")

20 , "Year Week", YEAR([Date]) & " " & "Week" & WEEKNUM([Date])

21 , "Month Week", FORMAT([Date], "Mmm") & " " & "Week" & WEEKNUM([Date]) - WEEKNUM(EPONTH([Date],-1)+1) + 1

22

23 // Sort Helper Column

24 , "Year Quarter Sort", YEAR([Date]) & QUARTER([Date])

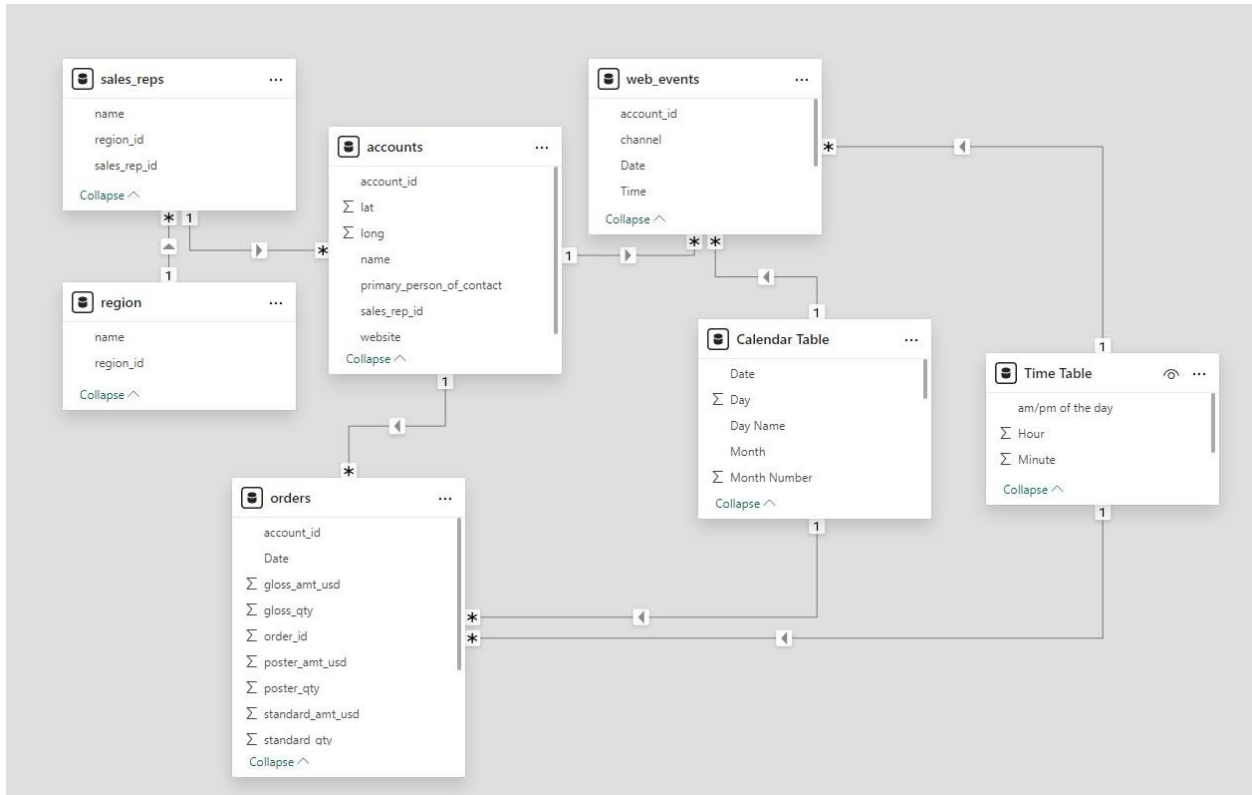
25 , "Year Month Sort", YEAR([Date]) & MONTH([Date])

26 , "Year Week Sort", YEAR([Date]) & WEEKNUM([Date]))

Date	Year	Quarter	Month Number	Week Number	WeekDay Number	Day	Month	Day Name	Quarter Name	Year Quarter	Year Month	Year Week	Month Week	Year Quarter Sort	Year Month Sort	Year
Sunday, July 4, 2010	2010	3	7	28	1	4	July	Sunday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Monday, July 5, 2010	2010	3	7	28	2	5	July	Monday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Tuesday, July 6, 2010	2010	3	7	28	3	6	July	Tuesday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Wednesday, July 7, 2010	2010	3	7	28	4	7	July	Wednesday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Thursday, July 8, 2010	2010	3	7	28	5	8	July	Thursday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Friday, July 9, 2010	2010	3	7	28	6	9	July	Friday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Saturday, July 10, 2010	2010	3	7	28	7	10	July	Saturday	Q3	2010 Q3	2010 July	2010 Week28	July Week2	20103	20107	2010
Sunday, July 11, 2011	2011	3	7	28	1	3	July	Sunday	Q3	2011 Q3	2011 July	2011 Week28	July Week2	20113	20117	2011
Monday, July 4, 2011	2011	3	7	28	2	4	July	Monday	Q3	2011 Q3	2011 July	2011 Week28	July Week2	20113	20117	2011
Tuesday, July 5, 2011	2011	3	7	28	3	5	July	Tuesday	Q3	2011 Q3	2011 July	2011 Week28	July Week2	20113	20117	2011
Wednesday, July 6, 2011	2011	3	7	28	4	6	July	Wednesday	Q3	2011 Q3	2011 July	2011 Week28	July Week2	20113	20117	2011
Thursday, July 7, 2011	2011	3	7	28	5	7	July	Thursday	Q3	2011 Q3	2011 July	2011 Week28	July Week2	20113	20117	2011
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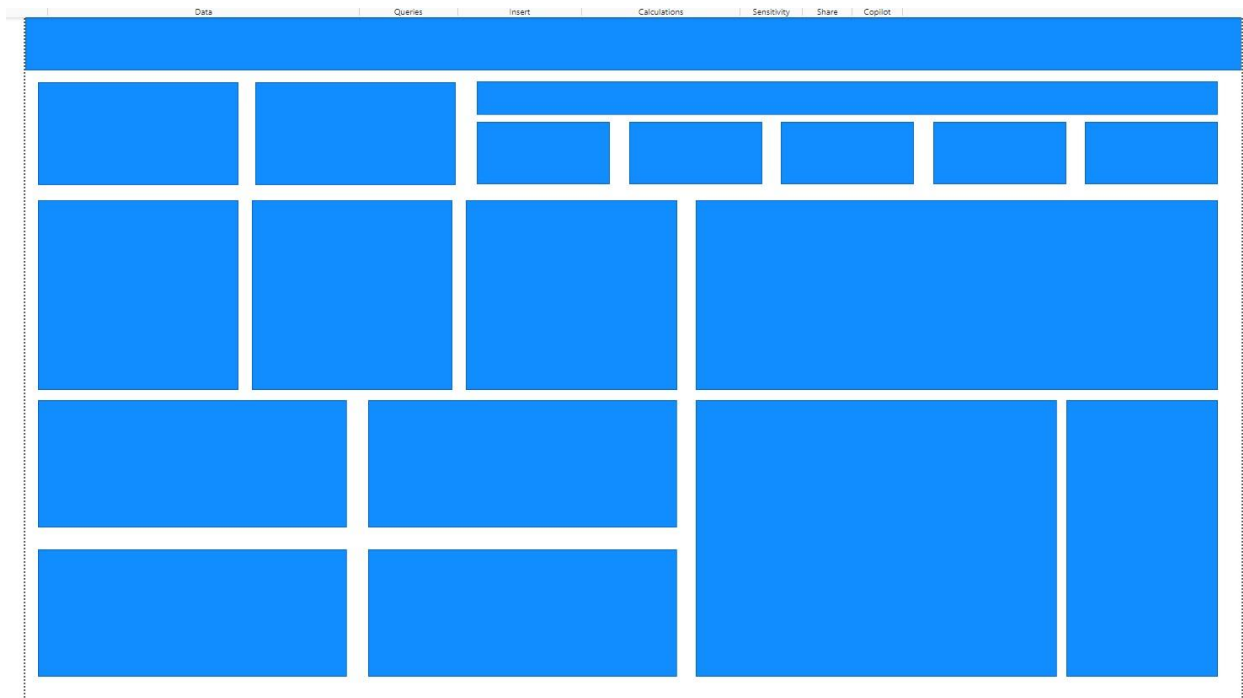
Data Modeling

- Create Relationship with other tables



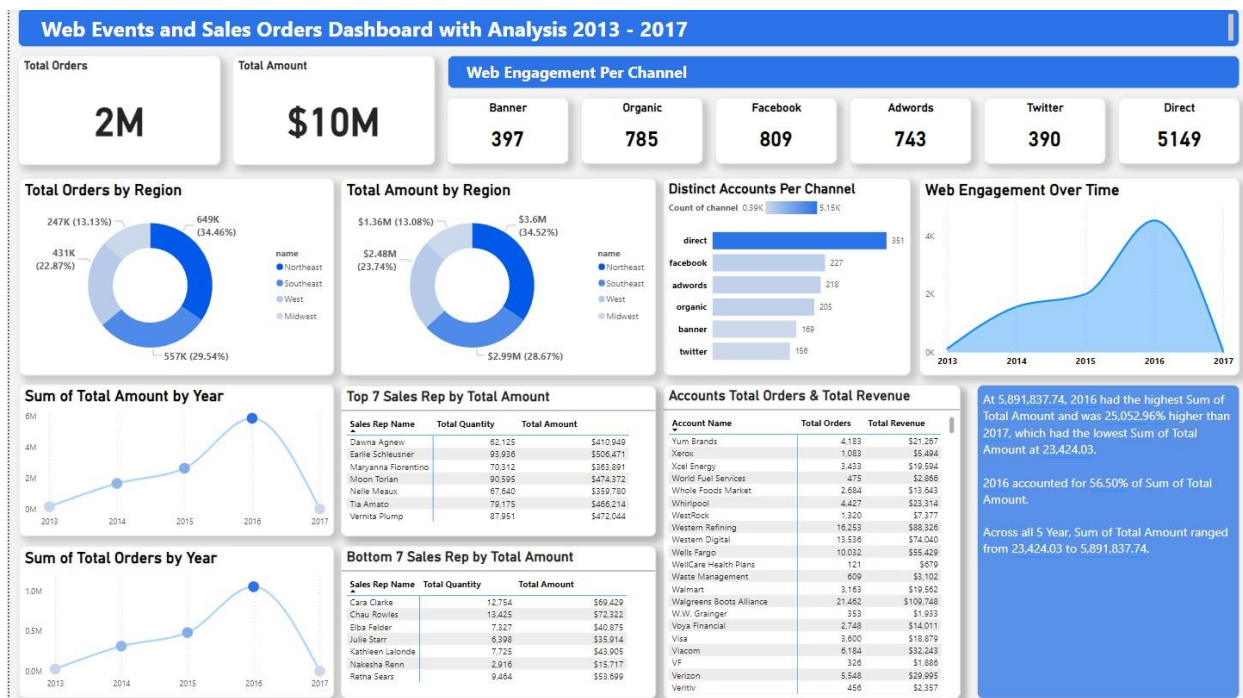
Wire Framing

- Create a **visual blueprint** or **sketch** of how data and insights will be organized and presented



Data Visualization

- Create a Dynamic Dashboard that will show key metrics and provide Insights.



Sales Performance Analysis

Total Quantity

2M

Total Poster Qty
196K

Total Gloss Qty
165K

Total Standard Qty
1.52M

Total Amount

\$10M

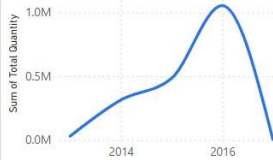
Total Poster Amt.
\$1.6M

Total Gloss Amt.
\$1.24M

Total Standard Amt.
\$7.6M



Sum of Total Quantity by Year



Total Quantity by Region



Total Amount by Region

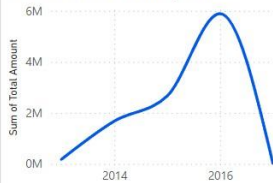


At 1054144, 2016 had the highest Sum of Total Quantity and was 24,352.42% higher than 2017, which had the lowest Sum of Total Quantity at 4311.

2016 accounted for 55.94% of Sum of Total Quantity.

Across all 5 Year, Sum of Total Amount ranged from \$23,424 to \$5,891,838.

Sum of Total Amount by Year



Account with Total Orders and Total Revenue

Account Name	Total Quantity	Total Amount
AIG	154	\$902
Air Products & Chemicals	473	\$2,781
Alcoa	3,609	\$18,599
Allstate	5,155	\$27,780
Ally Financial	558	\$3,350
Alphabet	896	\$5,102
Altria Group	20,808	\$107,943
Amazon.com	1,757	\$9,667
Amazon Logistics Corp	1,655	\$7,655

Sales Rep with Total Orders and Their Total Revenue

Sales Rep Name	Total Quantity	Total Amount
Nakesha Renn	2,916	\$15,717
Julie Starr	6,398	\$35,914
Elba Felder	7,327	\$40,875
Kathleen Lalonde	7,725	\$43,905
Retha Sears	9,464	\$53,699
Cara Clarke	12,754	\$69,429
Chau Rowles	13,425	\$72,322
Babette Soukup	13,114	\$73,043
Carletta Kosinski	14,643	\$78,105