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Data Modeling Dashboard

Sales Performance & Competitor Analysis

https://github.com/Albertofranco123/Data-Modeling-Dashboard-Sales-Performance-Competitor-Analysis

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1. Overview

This project develops an executive sales and competitor analysis dashboard built in Power BI, following a complete Business Intelligence workflow: data integration, data cleaning, data modeling, DAX calculations, and visual storytelling.
The primary objective is to enable executives to evaluate company performance, identify growth opportunities by region and category, and compare sales results against key competitors in international markets.

2. SOAR Framework

S — Specify (Business Problem)

The executive team needed to answer critical business questions such as:

- What is our market share by country and category?
- Which competitors dominate each region?
- How has revenue evolved over the past years?
- Which segments, products, and markets show the highest growth?
- Where do short-term risks or opportunities exist?

These questions required different analytical perspectives:

- **Descriptive:** historical and current performance
- **Diagnostic:** reasons behind sales variations by product, country, and segment
- **Predictive:** future revenue trends
- **Prescriptive:** recommended actions based on insights

O — Obtain (Data Integration & Preparation)

Data came from multiple internal sales sources (domestic and international). Power Query was used to ensure data quality and consistency through:

- Standardizing data types (dates, text, currency)
- Cleaning null values using Fill Down and Replace Values
- Correcting data entry inconsistencies across tables (names, categories)
- Splitting columns using Column From Examples
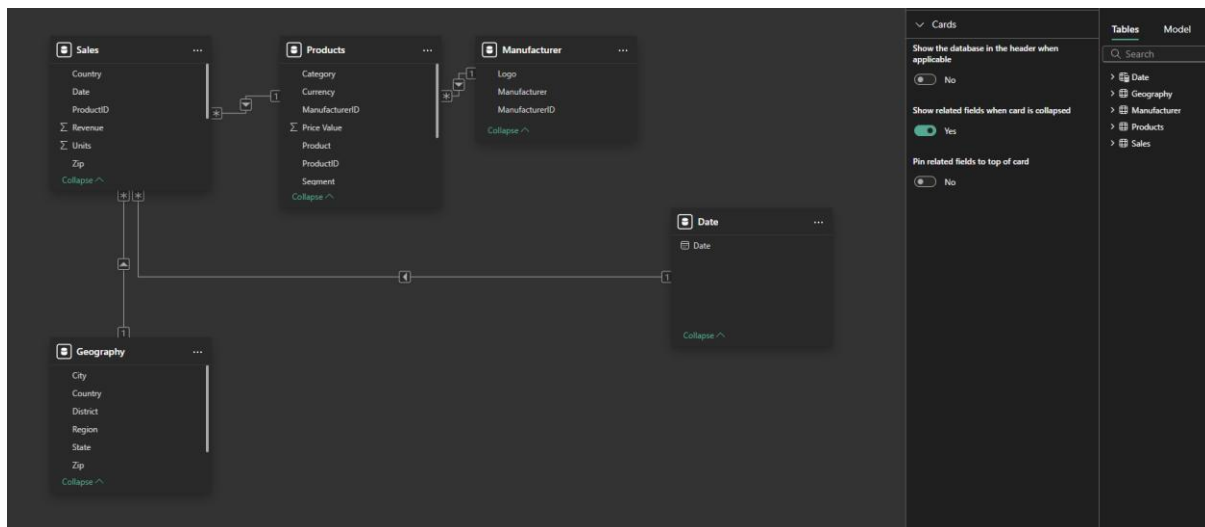- Creating a Date table using:

These transformations ensured a clean, reliable dataset ready for modeling and analysis.

A — Analyze (Data Modeling, DAX & Insights)

Data Model

A star-schema model was developed with multiple dimension tables and a consolidated fact table.
Relationships were created using ProductID, ZipCountry, and Date keys.

Key DAX Measures Developed

- Revenue
- Total Sales
- Previous Year Sales (PY Sales)

```
1 PY Sales = CALCULATE(SUM (Sales[Revenue]), SAMEPERIODLASTYEAR('Date'[Date]))
```

- Sintec Market Share

```
1 Sintec Market Share =
2 DIVIDE(
3 Sales[Sintec Revenue],SUM(Sales[Revenue]),0
4 )
```

- Year-to-Date Revenue (YTD)

```
1 % Growth =
2 DIVIDE(
3 SUM(Sales[Revenue])-[PY Sales],[PY Sales]
4 )
```

Key Business Insights

1. **Market Share by Region**
   The company leads the U.S. market with 38.22% market share, outperforming four major competitors.
2. **International Competitive Pressure**
   In Germany, a competitor (Artisans) holds more than 50% market share, signaling strong competitive pressure.
   However, the company maintains a global market share of 21.15% with solid year-over-year growth.
3. **Segments and Categories**
   Premium segments and high-margin categories showed the strongest annual performance.
4. **Revenue Trends**
   Q1 2021 recorded the highest YoY growth at 18.8%, driven by high-value product lines.
5. **Hierarchical Drill-Down (Decomposition Tree)**
   Enabled identification of the categories and products that most influence revenue by market.

R — Report (Storytelling & Executive Dashboard)

The final dashboard includes:

- Executive KPIs: Revenue, % Growth, Market Share, YoY Sales
- Optimized slicers and page navigation
- Competitor Sales Analysis with segment → category → product hierarchies
- Decomposition Tree for causal analysis
- Key Influencers visual for revenue drivers
- Smart Narrative for automated insight generation
- Conditional formatting based on revenue thresholds (3M, 20M, 50M)

Suggested Actions for Executives

- Invest in regions where competitors control more than 40% market share
- Strengthen commercial strategy within fast-growing categories
- Prioritize high-margin products highlighted in the Decomposition Tree
- Expand logistics and commercial operations in high-growth YoY markets
- Review underperforming segments and investigate root causes via Key Influencers
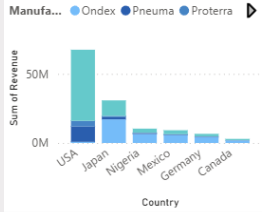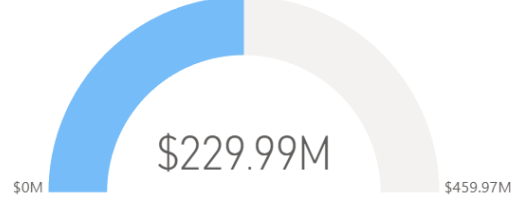
Competitor Analysis
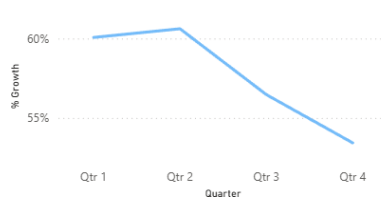
Date

1/1/2017	12/31/2021

Competitors

Affinity

aquatail

Artisans

Manufacturer Revenue by Country

Manufa... ● Ondex ● Pneuma ● Proterra ▶

Sum of Revenue: 50M, 0M

Countries: USA, Japan, Nigeria, Mexico, Germany, Canada

Country

Top 5 Manufactuers

$229.99M

$0M $459.97M

Revenue by Date

% Growth: 60%, 55%

Qtr 1   Qtr 2   Qtr 3   Qtr 4

Quarter

Category	Sum of Revenue	PY Sales	% Growth
⊞ Mix	8,395,722.52	$5,151,566.122500043	62.97%
⊞ Youth	10,730,209.64	$6,523,283.655000075	64.49%
⊞ Rural	63,735,004.68	$41,817,656.64249506	52.41%
⊞ Urban	280,029,932.93	$176,494,870.5974715	58.66%
Total	**362,890,869.78**	**$229,987,377.0174667**	**57.79%**

Advanced Analysis

Logo

https://raw.githubusercontent.com/deepeshx/CompanyLogo/main/Sintec.jpg

Total Rev...	PY Sales	Units	% Growth
71.23M	$43.12M	200K	65.20%

Category — Urban
Segment

Sum of Revenue
71,234,293.65

Urban
56,489,224.05

Rural
8,415,668.98

Mix
4,084,188.04

Youth
2,245,212.58

Extreme
35,863,359.43

Convenience
15,507,772.36

Moderation
2,693,236.27

Regular
1,607,683.14

Key influencers   **Top segments**

What influences Revenue to [Increase] ?

When...   ...the average of Revenue increases by

Product is Sintec UC-19 → 286.1

Product is Sintec UM-01 → 236

Product is Sintec UE-15 → 230.4