POWER BI CASE STUDY REPORT

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Contents

PROJECT 1: SALES PERFORMANCE DASHBOARD: QUANTITY, PROFIT AND REGIONAL INSIGHTS

1. Dataset & Objective

- Dataset Overview: WideWorldImportersDW contains over 3 million rows in total.

- This project uses Power BI connected to the WideWorldImportersDW data warehouse, analyzing 2012–2016 sales data.

- The objective is to identify top-performing products, regions, customers, and staff based on sales quantity, revenue, and profit, supporting WWI's channel targeting and expansion strategy.
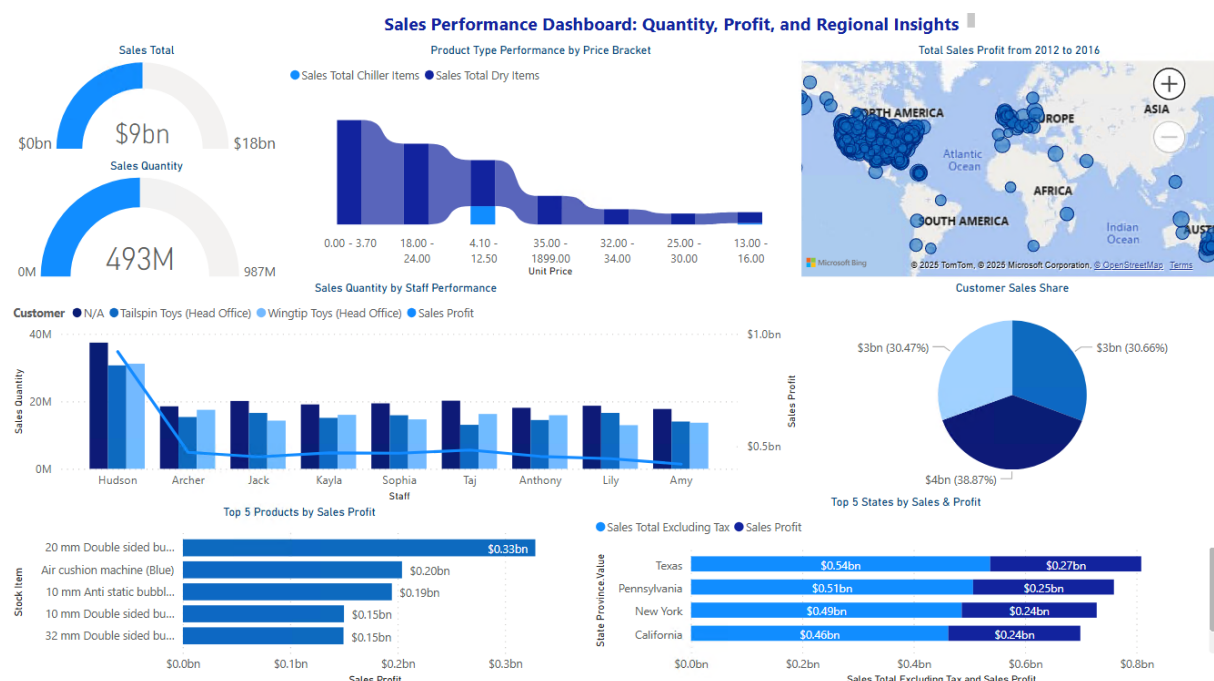
2. Dashboard Overview

Figure 1 Interactive dashboard built in Power BI
to explore key performance indicators by location, product, customer, and staff.

3. Strategic Insights & Recommendations

This dashboard reveals that low- to mid-priced dry items are the strongest sales drivers, while regions like Texas and Pennsylvania lead in profitability. Key clients such as Tailspin Toys and Wingtip Toys are major contributors, while a large share of sales from unknown customers suggests engagement opportunities.

The analysis also uncovers Asia as an untapped growth market and flags inventory risk for high-performing SKUs like the Air Cushion Machine (Blue). These findings support decisions across sales, marketing, and supply chain planning.

PROJECT 2: CUSTOMER DASHBOARD: NEW INDUSTRY SEGMENTS

1. Dataset & Objective

- Dataset Overview: The survey dataset includes 360 customer records, focusing on preferences, spending, and regional behavior patterns.
- This project uses Power BI to visualize customer survey data across Nutricosmetics, Nutraceuticals, and Cosmeceuticals.
- The objective is to uncover product preferences, confidence levels, and communication behaviors by income and region, supporting targeted marketing and product strategies in emerging wellness segments.
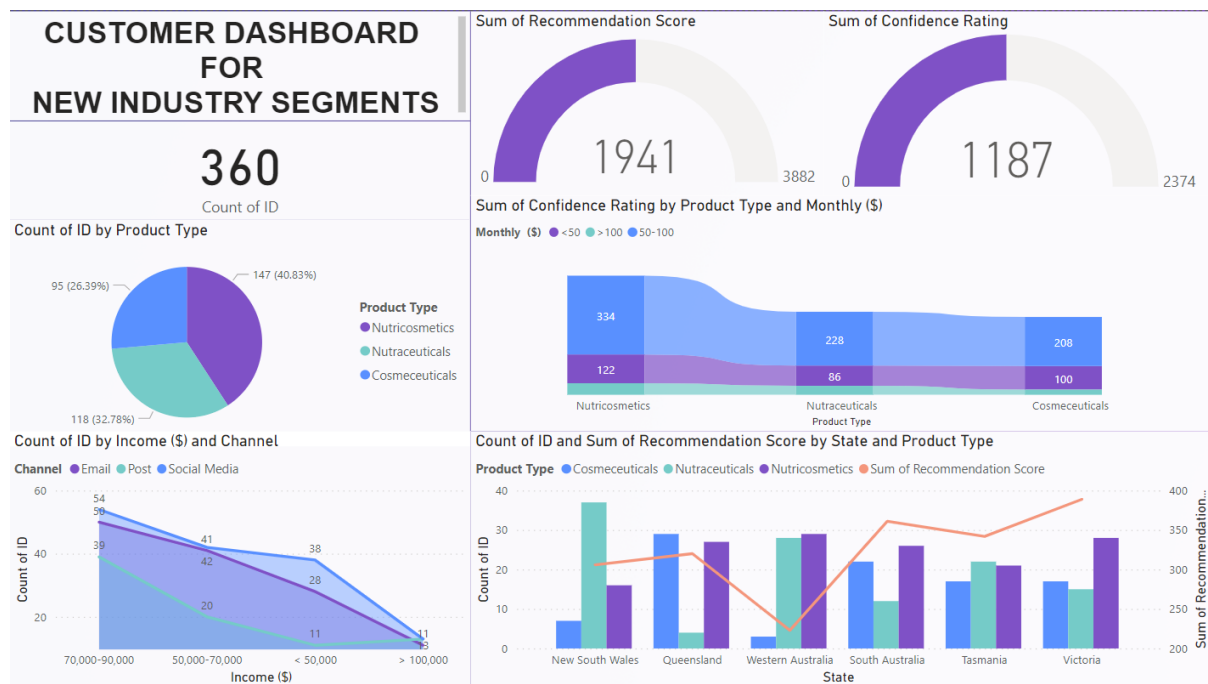
2. Dashboard Overview

Figure 2 Interactive Power BI dashboard analyzing customer sentiment, income behavior, and regional product preferences.

3. Strategic Insights & Recommendations

This dashboard reveals that Nutricosmetics are the most preferred product type, particularly among mid-range spenders with high confidence in product effectiveness. Social media is the dominant communication channel for high-income customers, while lower-income groups lean toward email and post, indicating varied outreach needs.

The analysis also highlights Victoria and South Australia as high-opportunity regions based on strong recommendation scores, while Western Australia shows lower engagement, suggesting a need for awareness campaigns. These findings support decisions across marketing strategy, regional targeting, and customer communication planning.

PROJECT 3: HISTORICAL SALES AND INVENTORY PERFORMANCE DASHBOARD

1. Dataset & Purpose

- Dataset Overview: Original datasets contain ~200,000 rows for the period Jan–Feb 2016.
- This project uses Power BI to analyze sales and inventory data from January to February 2016 across 11 stores and 99 vendors.
- The objective is to monitor brand performance, vendor contribution, holiday sales impact, and tax-related sales behaviour, supporting inventory planning and sales optimization.
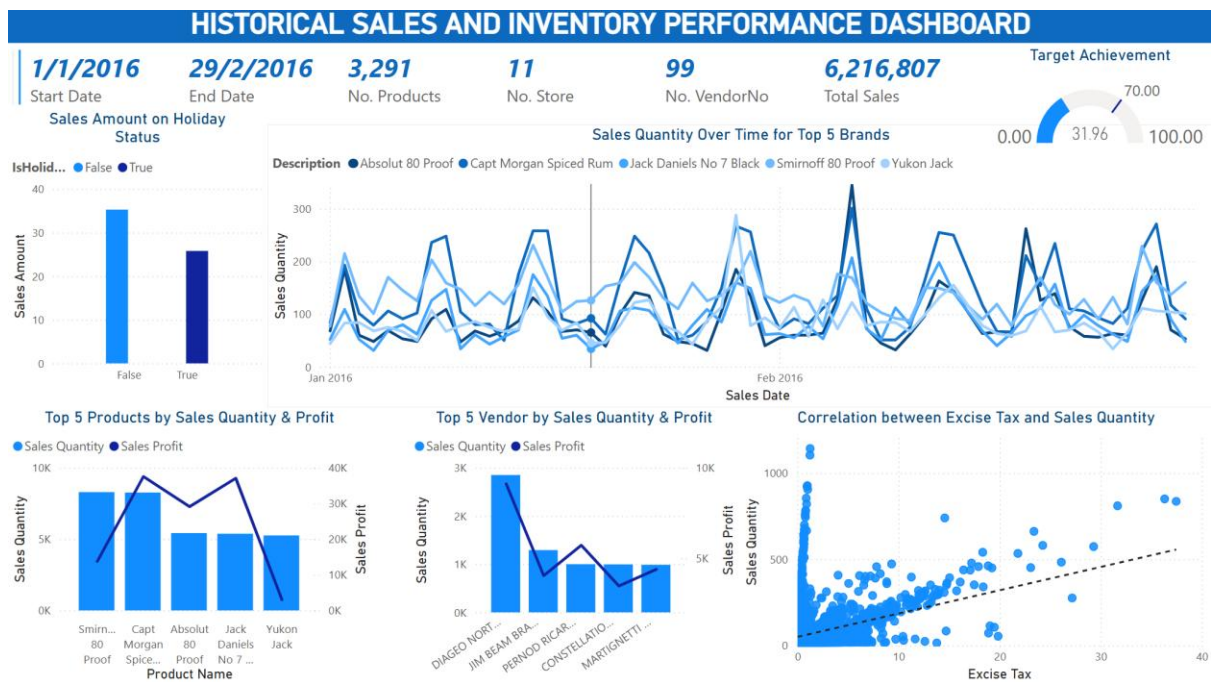
2. Dashboard Overview

Figure 3 Interactive Power BI dashboard tracking product and vendor sales trends, holiday impacts, and tax-sales correlations.

3. Strategic Insights & Recommendations

This dashboard reveals that Smirnoff 80 Proof, Captain Morgan Spiced Rum, and Absolut 80 Proof are the top-selling products, both in quantity and profit. Jim Beam Brands and Diageo North America lead in vendor performance, contributing the highest sales volumes and revenue.

Sales during holidays were slightly lower than non-holiday periods, indicating a potential mismatch between promotions and customer behaviour. Additionally, the correlation analysis shows a positive relationship between excise tax and sales quantity, suggesting that demand remains strong even as tax increases.

These findings support decisions in vendor negotiations, stock prioritization, promotional timing, and tax pricing strategies.