

Power BI Project Report: Plant Co. Performance Dashboard

Project Overview

This project involved developing a Power BI dashboard for Plant Co., aimed at tracking and analyzing key performance metrics across different regions, products, and timeframes. The goal was to provide clear insights into the company's Year-To-Date (YTD) and Prior Year-To-Date (PYTD) performance, helping stakeholders monitor sales, profit, and quantity metrics over time.

Data Preparation & Modeling

1. Data Import & Cleanup:

- Loaded the dataset into Power Query.
- Renamed tables for simplicity and consistency.
- Removed duplicate records to ensure clean and reliable data.

2. Data Modeling:

- Created a Calendar Dimension Table to enable time intelligence.
- Entered a custom table (Values) with Sales, Gross Profit, and Quantity rows to enable dynamic filtering of KPIs.
- Defined table relationships to support interactive visuals and drill-throughs.

DAX Measures & Logic

Created a wide range of DAX measures for key insights and dashboard interactivity:

- Core KPIs: Sum of Sales, Sum of Quantity, Sum of COGS, Gross Profit, GP%
- Time-Based Measures: YTD_Sales, YTD_Quantity, YTD_GrossProfit, PYTD_Sales, PYTD_Quantity
- Dynamic Switch Logic: SWITCH_YTD and SWITCH_PYTD allow users to switch KPIs based on slicer selections.

- Comparative Measures: YTD vs PYTD for performance benchmarking.
- Smart Labeling: Dynamic title measures adjust chart headings based on selected filters or KPIs.

Dashboard Design & Visuals

The final dashboard includes four core visuals, built with interactivity and insight in mind:

1. Tree Map:

- Displays the Bottom 10 countries based on YTD vs PYTD performance, helping highlight areas of concern.

2. Waterfall Chart:

- Visualizes Sales YTD vs PYTD by Month, with drill-throughs enabled for Country and Product analysis.

3. Line & Stacked Column Chart:

- Compares YTD and PYTD values over Month and Product Type, useful for trend analysis.

4. Scatter Chart:

- Analyzes Account Profitability Segmentation, using GP% vs Sales and drill-throughs for further breakdown.

Interactive slicers allow filtering by metric type, timeframe, and product attributes, with responsive charts and dynamic titles.

Key Insights

- Identified underperforming countries and product types.
- Visualized trends in sales and profit over time.
- Enabled segmentation of accounts by profitability.

- Delivered a responsive, user-focused dashboard for leadership at Plant Co.

Tools Used

- Power BI: data modeling, dashboard design
- Power Query: data transformation
- DAX: custom logic, time intelligence, dynamic titles

Outcome

This project provided Plant Co. with a powerful, interactive tool to measure and track business performance. It allowed key stakeholders to make better data-driven decisions while giving me hands-on experience in end-to-end dashboard development using Power BI — from raw data through modeling, DAX logic, and impactful visual storytelling.