**PHARMACEUTICAL SALES ANALYSIS**

**Sales Analysis – Foresight Pharmaceuticals**

Foresight Pharmaceuticals is one of the world’s leading pharmaceutical companies, with a strong presence across multiple global regions. Rather than selling directly to end customers, the company operates through a network of carefully selected regional distributors. Each distributor is bound by agreements to share their sales data with Foresight, enabling the company to gather valuable insights into market performance, customer behavior, and product demand. This sales data serves as a critical foundation for analysing market trends, optimizing product strategies, and supporting data-driven decision-making across the organization.

**Data Sourcing**

This dataset is a simulated datasets from real business data and published by Foresight BI & Analytics Global Solutions (Foresight BI), which is a Business Intelligence and Data Analytics firm. The dataset was downloaded from [Foresight BI website](https://foresightbi.com.ng/practice-data/3-datasets-for-your-portfolio/).

**Problem Statement**

The objective of this project is to extract actionable insights from the sales data of Foresight Pharmaceuticals to support strategic decision-making. The dataset used for this analysis comprises sales information from two key markets: **Germany** and **Poland**.

After conducting an initial review of the dataset, the analysis is structured around the following key questions:

1. **Which market generated the highest sales?**
2. **Which products performed best and which underperformed across both markets?**
3. **Which sales channels and subchannels contributed most significantly to overall sales?**
4. **How did sales change year-over-year by channel?**

By answering these questions, the analysis aims to help Foresight Pharmaceuticals better understand regional market dynamics, product performance, and the effectiveness of its distribution channels.

**Data Transformation**

Data transformation and cleaning were performed using **Power Query Editor** in **Microsoft Excel** to prepare the dataset for analysis. The following steps were taken:

* **Promoted Headers**: The first row of the dataset was promoted to serve as column headers using the “Use First Row as Headers” feature.
* **Validated Data Types**: Each column's data type was carefully reviewed and appropriately set to ensure consistency and accuracy in analysis (e.g., dates, numbers, text).

These transformations ensured that the data was clean, structured, and ready for meaningful exploration and insights.

Pivot tables were created to efficiently **summarize, analyze, and interpret** the sales data. They allow dynamic grouping and aggregation of large datasets, enabling data-driven insights across different dimensions such as product, region, sales representatives, and time.

**Dashboard Development**

Following the completion of the data analysis, a **sales dashboard** was developed to visually represent key insights and performance metrics. The dashboard was designed to be interactive, user-friendly, and focused on the most relevant indicators for Foresight Pharmaceuticals, enabling quick and effective decision-making.

Key features of the dashboard include:

* **Market Comparison**: Visuals comparing total sales between Germany and Poland
* **Product Performance**: Identification of top-performing and underperforming products
* **Channel Analysis**: Sales breakdown by channel and subchannel
* **Year-over-Year Trends**: Visual representation of sales growth or decline by channel
* **Key Insights:**

1. **Sales Distribution Between Countries**:
   * **Poland**: No sales in 2017, 2019, and 2020 significantly impacted the total sales in Poland, which accounted for only 5.77% of overall sales. The absence of sales in certain years suggests potential logistical issues, possibly related to distribution challenges.
   * **Germany**: With 94.23% of total sales, Germany is the dominant market.
2. **Top and Bottom Products**:
   * **Top 10 Products**: All from Germany, indicating that the most successful products are concentrated in the German market. This could point to strong demand in Germany for those specific products, possibly due to local preferences, better marketing, or stronger distribution.
   * **Bottom 10 Products**: All from Poland, which suggests that these products either weren't well-received or had issues in distribution or availability.
3. **Channel of Distribution**:
   * **Pharmacy Channel**: Accounted for the largest share of total sales at 52.70%. This could indicate a strong demand for pharmaceutical products in pharmacies, and perhaps greater consumer access in these outlets.
   * **Retail Subchannel**:  More sales were made via retail subchannel with about **4%** in sales ahead of institution which shows that there is a smaller but still significant share of sales coming from retail channels.

**Recommendations Based on the Findings:**

1. **Focus on Poland**:
   * Given the low sales in Poland, it may be important to investigate and resolve any issues related to distribution. If products weren’t delivered, it’s crucial to identify the root causes—logistical challenges, supply chain disruptions, or lack of distributor engagement.
2. **Strengthen Distribution Channels**:
   * Since pharmacies have the highest sales share, Foresight could consider reinforcing its relationships with pharmacy chains or distributors. Offering incentives or promotional campaigns might help boost sales further in this channel.
   * Consider expanding the retail subchannel, since it's contributing a growing share of sales.
3. **Leverage Germany’s Strong Market**:
   * The high sales in Germany indicate that Foresight has a strong foothold there. Gathering more granular data on the success factors could guide strategies for other markets.
4. **Respond to Hospital Channel Decline**:
   * The dip in hospital sales could be due to COVID-19, but it might also reflect a longer-term trend in healthcare spending or changing purchasing patterns. Investigating this further—through market research, customer feedback, or partnerships with hospitals—could uncover deeper insights.