BUSINESS DATA MANAGEMENT PROJECT

The Data-Driven Insights to Improve Operational Performance:
A Case Study on **C R Pharma Wholesalers**

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ORGANIZATION BACKGROUND

C R Pharma Wholesalers is a B2B pharmaceutical distribution company based in Vijayawada, Andhra Pradesh. Established as a proprietorship on May 10, 2023, and owned by Mr. C Avinash, the firm operates from the 2nd floor of Lavanya Book Centre, NRP Road, Vijayawada. With a team size of 3, the company is strategically positioned to supply a diverse range of pharmaceutical products, medical supplies to local pharmacies, clinics, and hospitals.

C R Pharma Wholesalers is guided by a vision to become a reliable name in pharmaceutical wholesale, emphasizing customer satisfaction, operational dependability, and efficiency.

PROBLEM STATEMENTS

Overstocking or Stock outs at different times

The company observed recurring patterns of overstocking and stockouts across different product categories and time periods, indicating inefficiencies in demand forecasting and inventory management.

Profit Variations Due to Seasonal Demand and Inventory Imbalance

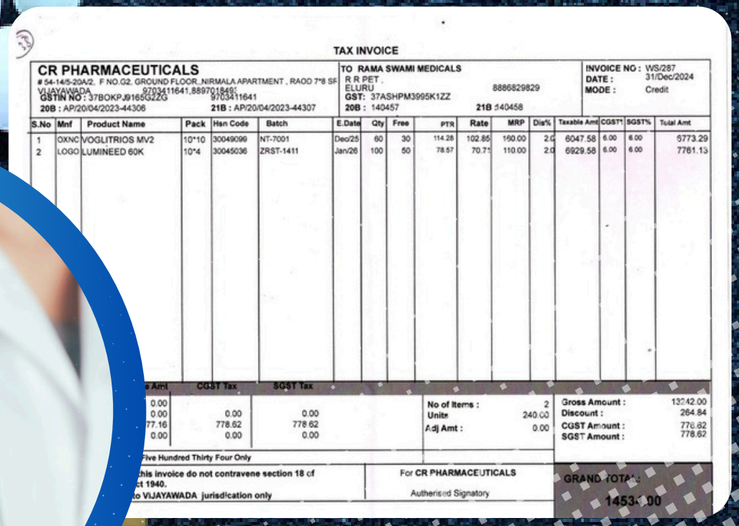
Seasonal fluctuations and inconsistent inventory management led to noticeable profit imbalances. Additionally, aligning procurement schedules with actual sales velocity proved difficult due to variations in supplier delivery..

DATA COLLECTION & CLEANING

- Data of 3 months was collected from November 2024 to January 2025 across all products handled by C R Pharma Wholesalers, covering sales, inventory, procurement, and financial metrics to capture trends and pharma performance.

- Rigorous cleaning addressed missing values, duplicate entries, inconsistent naming, and format normalization to ensure accuracy and consistency in the dataset.

- Data was organized into well-defined worksheets for product info, mothly sales, stock levels, and financials, enabling streamlined analysis and visualization.



TAX INVOICE

CR PHARMACEUTICALS
54-145-20A/2, F NO.02, GROUND FLOOR, NIRMALA APARTMENT , RAOD 7^8 SS
VIJAYAWADA
9703411641,8897018467
GSTIN NO : 37BOKPJ9165Q2ZO 9703411641
20B : AP/20/04/2023-44306 21B : AP/20/04/2023-44307

TO RAMA SWAMI MEDICALS
R R PET ,
ELURU 8886829829
GST: 37ASHPM3995K1ZZ
20B : 140457 21B :40458

INVOICE NO : WS/287
DATE : 31/Dec/2024
MODE : Credit

S.No	Mnf	Product Name	Pack	Hsn Code	Batch	E.Date	Qty	Free	PTR	Rate	MRP	Dis%	Taxable Amt	CGST	SGST%	Total Amt
1	OXNC	VOGLITRIOS MV2	10*10	30049099	NT-7001	Dec/25	60	30	114.28	102.85	150.00	2.0	6047.58	6.00	6.00	6773.29
2	LOGO	LUMINEED 60K	10*4	30045036	ZRST-1411	Jan/26	100	50	78.57	70.71	110.00	2.0	6929.58	6.00	6.00	7761.13

	CGST Tax	SGST Tax
0.00	0.00	0.00
0.00	778.62	778.62
77.16	0.00	0.00
0.00		

No of Items : 2
Units 240.00
Adj Amt : 0.00

Gross Amount : 13742.00
Discount : 264.84
CGST Amount : 778.62
SGST Amount : 778.62

Five Hundred Thirty Four Only

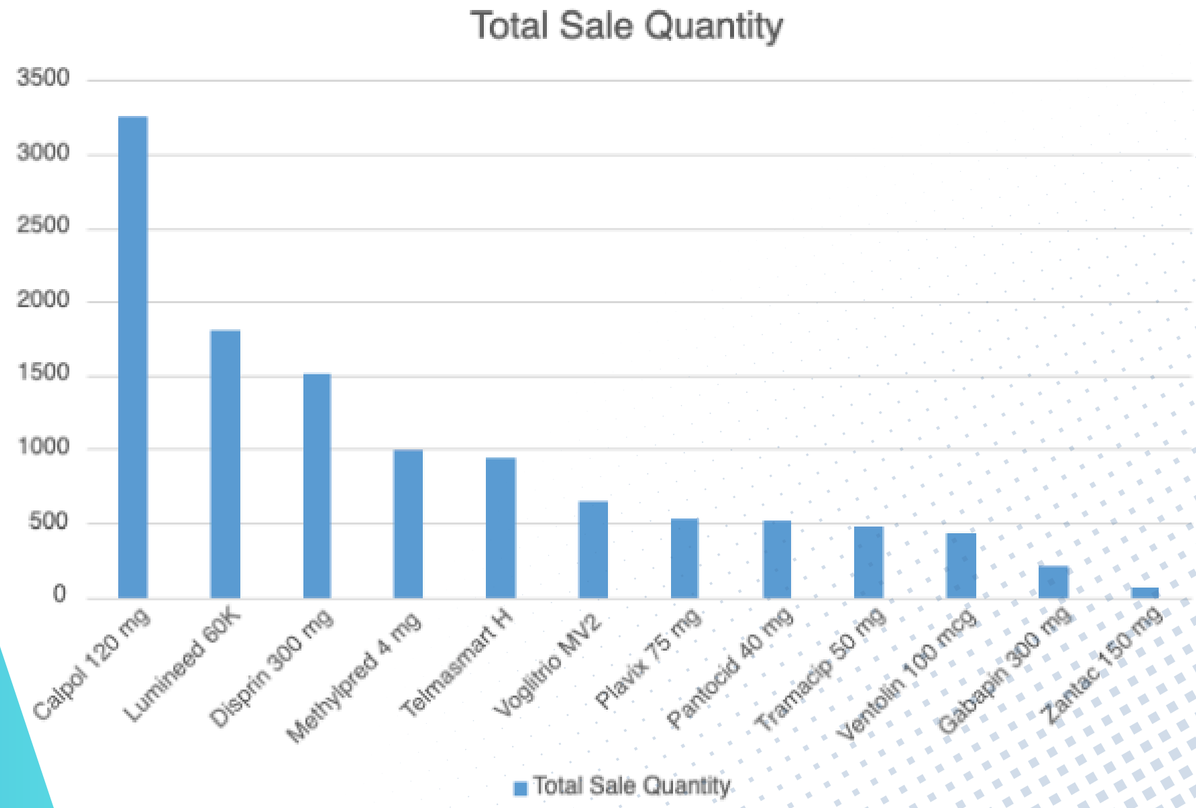
This invoice do not contravene section 18 of ct 1940.
to VIJAYAWADA Jurisdication only

For CR PHARMACEUTICALS
Autherised Signatory

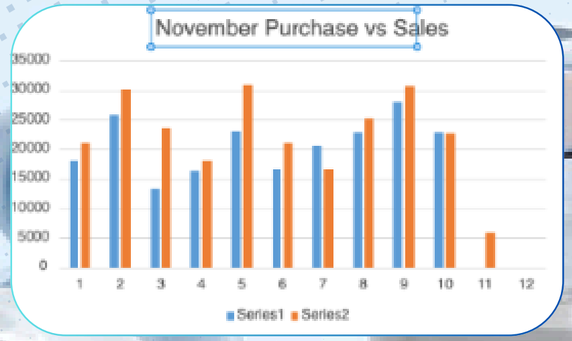
GRAND TOTAL
1453[illegible].00

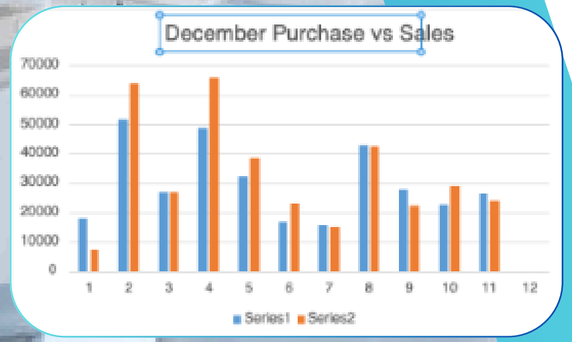
DATA ANALYSIS

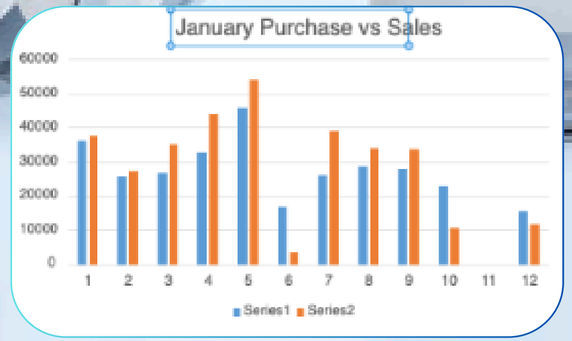
1 TOTAL SALES



DATA ANALYSIS



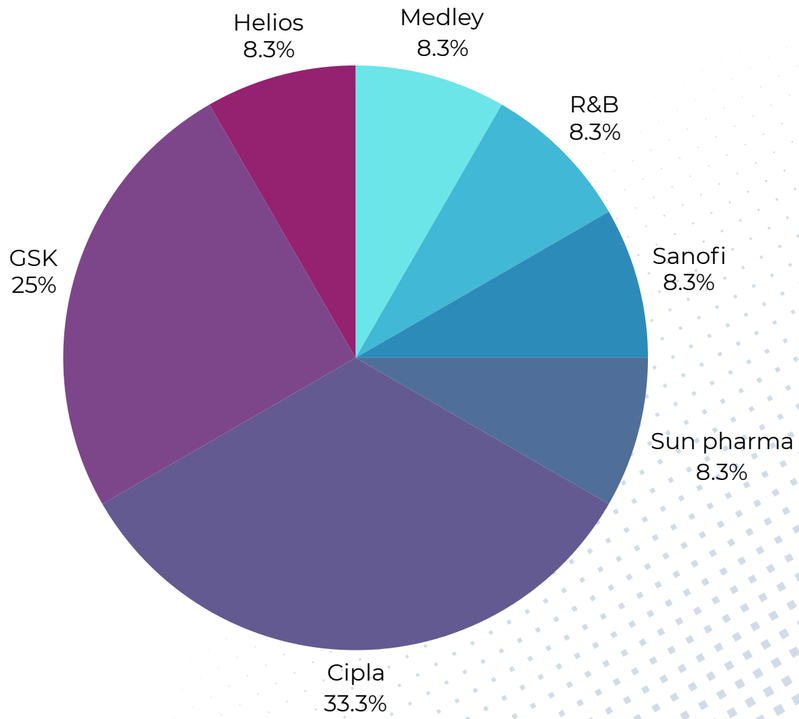


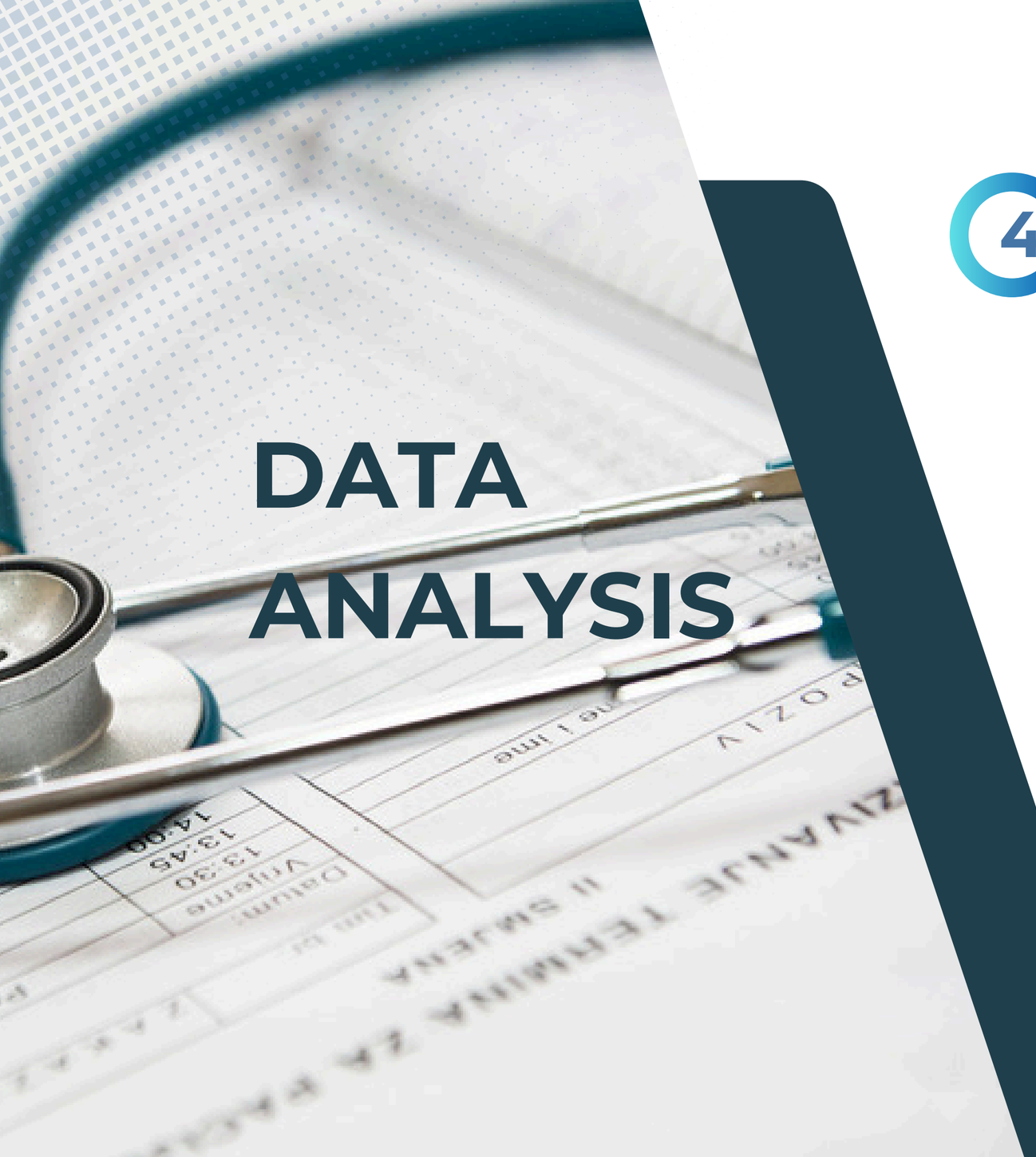


2 Sales price VS Purchase price

DATA ANALYSIS

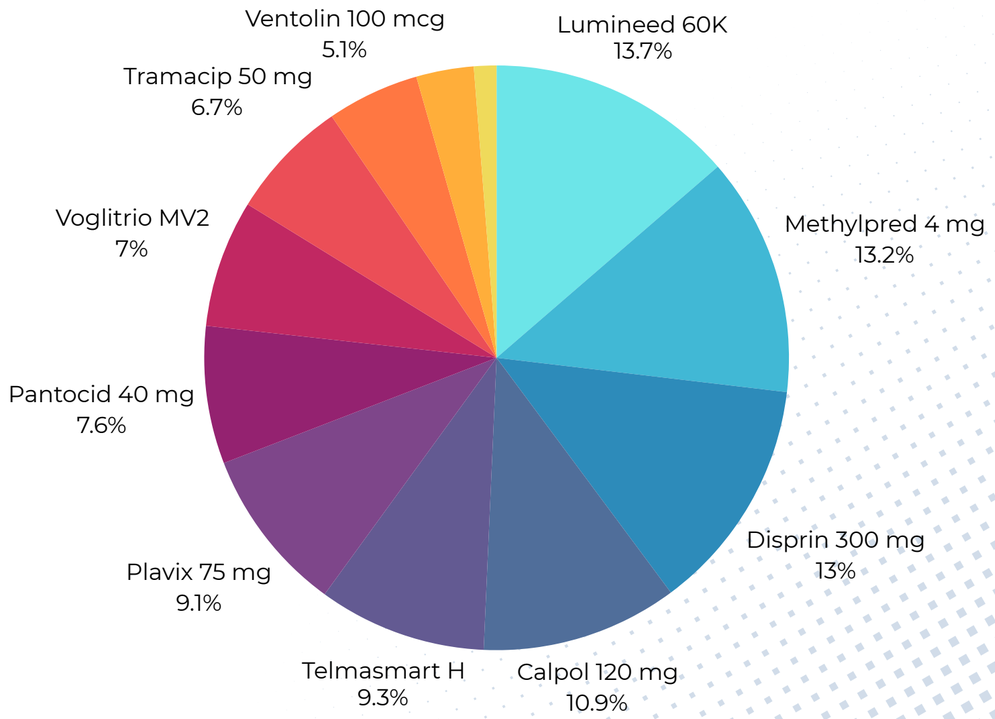
3 MANUFACTURER FREQUENCY





DATA ANALYSIS

4 REVENUE GENERATED



FINDINGS

Here are the clean 5-point summary of the findings:

1 Top-Performing Product

LUMINEED 60K was the best-selling product, contributing 13.7% of total revenue with 1805 strips sold over three months.

2 Poor Sales Performer

Zantac 150 mg had the weakest performance, selling only 65 strips in January and none in November or December

3 Overstocking & Capital Lock-In

Overstocking of low-demand items like Zantac 150 mg tied up over ₹1.5 lakh in idle inventory, indicating inefficient stock planning.

4 Stockouts of High-Demanders

High-selling products such as Calpol 120 mg faced stockouts, leading to missed sales opportunities during peak demand.

5 Profitability Imbalance

While LUMINEED 60K generated the highest profit (₹29891.55), losses on items like Tramacip 50 mg (−₹6,054.50) revealed issues with pricing and cost management.

RECOMMENDATIONS

On the basis of these observations, the following strategies are suggested to enhance operational performance:

1 Inventory Optimization

Prioritize high-margin products: Boost procurement of Methylpred 4 mg and Lumineed 60K while weaning off loss-makers such as Zantac 150 mg.

2 Pricing and Supplier Strategy

Rethink prices for low-margin items: Raise the price of Calpol 120 mg slightly in order to boost profitability without compromising volume.

3 Operational Adjustments

Weekday-centered restocking: Schedule deliveries with high-revenue days (Tuesdays) to address clinic and pharmacy requirements.

4 Data-Driven Forecasting

Use of predictive analytics: Predict demand spurts (e.g., during winter months for Lumineed) based on historical sales patterns.

5 Customer Retention

Bundled selling: Package slow-selling items (e.g., Gabapin 300 mg) with products of high demand during off-peak seasons.

IIT MADRAS

THANK YOU

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