**Inventory Management Using Power BI**

**Business Problem / Project Objective -** The company wanted to analyze data-driven inventory & sales management system to track real-time stock levels, avoid stockouts, reduce carrying costs & optimize reorder process

**Business needs solution -**

1. Real- time inventory tracking
2. Optimization of reorder points
3. Alerts for stock falling below reorder points
4. Sales & Performance Analysis

**Data Source -**  Data was pulled from SQL SERVER DATABASE

(date, year, city, state, region, customer, flavor, transaction, quantity, unit price, sales, profits, stock change, reorder point, stock balance, reorder alert)

**Data Cleaning & Transformation** -

* Remove duplicates
* Corrected data types
* Created Calculated columns

**DAX & Advanced features** -

* I Created Custom DAX Measure to Calculate KPIs Like (total orders/profit/sales, Inventory turnover, Stock on hand, Current inventory level, reorder alert count) using calculated column

**Visualizations & Dashboard -**

* The dashboard includes KPIs like Inventory Turnover, Reorder Alert Count, Total Sales, Profits, & Stock on Hand
* Line chart for stock trends over time
* Donut chart chart for regionwise sales, profits
* Bar chart for stock level by category
* Table visual for Detailed Inventory Ledger & Reorder alert table

**Insights & Business Impact** –

* The Company reduced manual reporting time by 80% & improved reorder accuracy
* Enhanced decision making speed by 40% Via Automated KPI Tracking & Power BI service alerts
* Reduced Potential stockouts incidents by 30% through Real-time reorder alert monitoring & proactive restocking
* Boosts Sales visibility by 30% through region-wise & product-wise performance analysis

**Deployment & Sharing**-

* I Publish the Report to the Power BI service & add triggered alert when inventory levels for critical items fall below predefined thresholds
* The alerts were integrated with Microsoft teams & Outlook for real-time notifications

**Business benefit** –

* Enhanced visibility into real-time inventory status
* Improved decision-making for inventory replenishment
* Reduced carrying costs and minimized stockouts
* Improved customer satisfaction through better product availability
* Streamlined inventory control processes

**Conclusion** –

By leveraging Power BI, the company achieved greater control over its inventory management processes. Real-time monitoring, proactive alerts, and data-driven insights empowered teams to make informed decisions, leading to increased efficiency and cost savings.