

Home Comfort: Furniture and Appliance Sales Data Analysis

Business Case Study for BI and Data Warehouse Lab

Business Overview:

Home Comfort specializes in furniture and home appliances. The business operates by showcasing products in retail stores and through an e-commerce platform. Customers can browse various furniture and appliance options, customize orders where applicable, and schedule deliveries. The company emphasizes customer satisfaction by offering installation services and flexible return policies.

The company’s objectives are to:

- Monitor sales trends across product categories and regions.
- Optimize inventory management to avoid overstocking or shortages.
- Enhance customer experience by tracking delivery timelines and installation efficiency.
- Analyze the impact of promotions and customer feedback on sales.

Metadata for the Data Warehouse:

Metadata Attribute	Description
Data Warehouse Name	HomeComfortDW
Created By	BI Team
Creation Date	2024-12-20
Data Refresh Frequency	Daily
Source Systems	Inventory Management, Sales System
Primary Users	Sales Analysts, Inventory Managers

Star Schema Design:

Fact Table:

- **Fact_Sales:** Captures details about furniture and appliance sales, including quantity, revenue, and delivery timelines.

Dimension Tables:

1. **Dim_Products:** Contains details of products, including categories and customizations.

2. **Dim_Customers:** Stores information about customers, including demographics and feedback.
3. **Dim_Time:** Tracks the date and time of transactions.
4. **Dim_Location:** Represents delivery locations, including regions and cities.

Dashboard Objectives:

1. **Sales Analysis:**
 - Identify best-selling product categories and customization trends.
 - Track revenue trends across regions and time periods.
2. **Customer Insights:**
 - Visualize purchase behavior and feedback patterns.
 - Analyze demographic data for targeted marketing.
3. **Delivery and Installation Efficiency:**
 - Assess average delivery timelines by region.
 - Track the performance of installation services.
4. **Promotion Effectiveness:**
 - Measure the impact of discounts and campaigns on sales.
 - Highlight seasonal trends and promotional successes.

Dashboard Creation Guidelines:

- Use visualization tools like Power BI or Tableau to design an interactive dashboard.
- Include charts like pie charts for product categories, bar graphs for revenue comparisons, and line charts for trend analysis.
- Ensure the dashboard is user-friendly with clear labels and actionable insights.