Northwind Database MECE Analysis

# 1. Customer Analysis:

This analysis focuses on insights related to customers of Northwind Traders.

## A. Demographic Insights

- Location-based Analysis: Understand where customers are located by region, country, or city.  
- Customer Segmentation: Group customers by country, region, or city to analyze trends or patterns in customer behavior.  
- Contact Details: Analyze customer titles or industries for potential business sectors.

## B. Contact Analysis

- Contact Titles: Analyze the distribution of different contact titles (e.g., CEO, Purchasing Manager) and how they relate to order volume.  
- Communication Channels: Understand the most common means of communication (phone, fax) based on the customer data.

## C. Customer Relationship Analysis

- Order Frequency: How often customers place orders. Analyze repeat customers vs. one-time buyers.  
- Customer Lifetime Value (CLV): Assess the long-term value of customers based on the total value of their orders.

# 2. Employee Analysis:

This focuses on understanding employee performance and contributions.

## A. Demographic Insights

- Employee Age and Experience: Analyze employee data, such as age and hire date, to assess experience levels and work history.  
- Employee Roles: Understand the distribution of different job titles (e.g., Sales Representative, Manager).

## B. Performance Analysis

- Orders Handled: Assess employee performance by the number of orders processed, sales closed, or customer interactions.  
- Employee Effectiveness: Examine feedback or notes to analyze employees' strengths and weaknesses.

## C. Employee Collaboration

- Internal Networks: Identify how employees collaborate by analyzing who reports to whom or working with which teams.  
- Cross-Department Collaboration: Identify the employees handling orders from different departments (e.g., Sales, Support).

# 3. Order Analysis:

This focuses on the analysis of orders placed by customers.

## A. General Order Insights

- Order Volume: Analyze the total number of orders placed over a specific time period (monthly, quarterly, annually).  
- Order Timing: Analyze the timing of orders (e.g., peak order periods, seasonal fluctuations).

## B. Sales Performance

- Order Size: Average order size, total order value, and comparison of orders by region or customer.  
- Revenue Trends: Track how revenue from orders changes over time or by customer type.

## C. Order Fulfillment

- Shipping Performance: Analyze shipping time (from order date to shipped date) to determine delivery efficiency.  
- Freight Charges: Analyze shipping costs and freight charges in relation to order value to identify shipping cost trends.

# 4. Product Analysis:

This focuses on understanding the products offered by Northwind Traders.

## A. Product Performance

- Sales by Product: Assess the total sales for each product based on order details.  
- Product Categories: Analyze which product categories (e.g., beverages, dairy) generate the most revenue.

## B. Pricing and Profit Margins

- Price Trends: Analyze the unit prices of products over time.  
- Discount Impact: Investigate how discounts affect the sales and revenue of products.

## C. Product Availability

- Stock Levels: Analyze the availability of products in stock vs. units ordered to ensure supply chain efficiency.  
- Reorder Levels: Identify products with low stock levels and anticipate restocking needs.

# 5. Supplier Analysis:

This focuses on evaluating suppliers providing products to Northwind Traders.

## A. Supplier Market Presence

- Supplier Location: Assess the geographic location of suppliers and how it affects product availability.  
- Supplier Diversity: Analyze the number of suppliers Northwind works with to ensure a diverse supply chain.

## B. Supplier Success

- Supplier Reliability: Track the performance of suppliers based on the availability of products, pricing, and lead times.  
- Product Quality: Analyze the quality of products provided by each supplier in terms of return rates or customer complaints.

## C. Supplier-Product Relationship

- Product-Supplier Performance: Assess how each supplier performs with specific products (e.g., which supplier provides the most popular products).  
- Supply Chain Efficiency: Evaluate how well suppliers are supporting the company's demand for specific products.

# 6. Shipper Analysis:

This focuses on analyzing the shipping companies that deliver orders.

## A. Market Presence

- Shipping Company Reach: Assess the geographic presence of different shipping companies and their ability to deliver to multiple regions.  
- Shipping Performance: Track the shipping companies' performance in delivering products on time.

## B. Shipping Success

- Shipping Efficiency: Analyze how efficiently each shipper handles freight, including average time taken from order to shipment.  
- Shipping Costs: Evaluate the shipping charges by each shipper and its impact on overall order costs.

## C. Shipper-Order Relationships

- Shipper-Order Volume: Identify which shipper is handling the most orders.  
- Shipper-Delivery Performance: Compare the delivery times across different shipping companies.

# 7. Category Analysis:

This focuses on analyzing product categories for a better understanding of Northwind's product mix.

## A. General Category Insights

- Category Distribution: Assess the distribution of products across different categories.  
- Category Growth: Identify which product categories are growing or shrinking based on sales volume.

## B. Sales Performance by Category

- Revenue by Category: Determine which product categories are generating the highest revenue.  
- Category Profit Margins: Analyze which categories offer the best margins.

## C. Price and Discount Trends

- Price vs. Category: Track pricing trends within different categories over time.  
- Discount Impact by Category: Analyze how discounts affect sales within each category.