

1. Delivery Performance

- On-Time Delivery Rate

- Formula:

$$\text{On-Time Delivery Rate} = \frac{\text{Number of Orders Delivered On-Time}}{\text{Total Number of Orders}} \times 100$$

- Description:** Measures the percentage of orders delivered on time.

- Average Shipping Time

- Formula:

$$\text{Average Shipping Time} = \frac{\sum(\text{Days for shipping (real)})}{\text{Total Number of Orders}}$$

- Columns:** Days for shipping (real)
- Description:** Indicates the average shipping duration for orders.

- Shipping Accuracy

- Formula:

$$\text{Shipping Accuracy} = \frac{\text{Number of Orders Shipped as Scheduled}}{\text{Total Number of Orders}} \times 100$$

- Columns:** Days for shipping (real), Days for shipment (scheduled)
- Description:** Measures the percentage of orders shipped on or before the scheduled date.

2. Order Fulfillment

- Order Fulfillment Rate

- Formula:

$$\text{Order Fulfillment Rate} = \frac{\text{Number of Orders Fulfilled}}{\text{Total Number of Orders}} \times 100$$

- Columns:** Order Status (e.g., "COMPLETE")
- Description:** Indicates the percentage of orders successfully completed.

- **Order Cycle Time**

- **Formula:**

$$\text{Order Cycle Time} = \text{Order Fulfillment Date} - \text{Order Date}$$

- **Columns:** `order date (DateOrders)`, `Shipping date (DateOrders)`
 - **Description:** Measures the time it takes to fulfill an order, including processing and shipping.

- **Backorder Rate**

- **Formula:**

$$\text{Backorder Rate} = \frac{\text{Number of Backordered Items}}{\text{Total Number of Ordered Items}} \times 100$$

- **Columns:** `Product Status` (1 indicates not available)
 - **Description:** Indicates the percentage of orders delayed due to stockouts.

- **Return Rate**

- **Formula:**

$$\text{Return Rate} = \frac{\text{Number of Returned Orders}}{\text{Total Number of Orders}} \times 100$$

- **Columns:** `Order Status` (status indicating returns)
 - **Description:** Shows the percentage of orders returned, indicating customer satisfaction and product quality.

3. Financial Performance

- **Profit Margin Per Order**

- **Formula:**

$$\text{Profit Margin Per Order} = \frac{\text{Order Profit Per Order}}{\text{Sales}} \times 100$$

- **Columns:** `Order Profit Per Order`, `Sales`
 - **Description:** Shows the profitability of each order.

- **Customer Lifetime Value (CLV)**

- **Formula:**

$$CLV = \sum(\text{Sales per customer})$$

- **Columns:** Sales per customer
 - **Description:** Represents the total value a customer contributes over their relationship with the company.

- **Average Order Value (AOV)**

- **Formula:**

$$AOV = \frac{\sum(\text{Order Item Total})}{\text{Total Number of Orders}}$$

- **Columns:** Order Item Total
 - **Description:** Indicates the average revenue generated per order.

- **Benefit Per Order**

- **Formula:**

$$\text{Benefit Per Order} = \frac{\sum(\text{Benefit per order})}{\text{Total Number of Orders}}$$

- **Columns:** Benefit per order
 - **Description:** Represents the average profit earned per order, indicating financial efficiency.

4. Inventory Management

- **Product Stock Availability Rate**

- **Formula:**

$$\text{Product Stock Availability Rate} = \frac{\text{Number of Available Products}}{\text{Total Number of Products}} \times 100$$

- **Columns:** Product Status
 - **Description:** Measures how often products are available in stock.