# Documentation of Supply Chain Metrics

**1. Cost of Goods Sold (COGS)**

**Description:** This metric calculates the total cost associated with producing and delivering goods. It includes manufacturing costs, supply chain costs, and shipping costs.

**Code:**

cost\_of\_goods\_sold = SUM(supply\_chain\_data[manufacturing costs]) + SUM(supply\_chain\_data[costs]) + SUM(supply\_chain\_data[shipping costs])

**2. Manufacturing Efficiency**

**Description:** Measures the efficiency of the manufacturing process by comparing production volumes to the manufacturing lead time. Higher values indicate better efficiency.

**Code:**

manufacturing\_efficiency = DIVIDE(SUM(supply\_chain\_data[production volumes]), SUM(supply\_chain\_data[manufacturing lead time]))

**3. Order Cycle Time**

**Description:** Average time it takes from order placement to delivery, calculated using shipping times and lead times.

**Code:**

order\_cycle\_time = AVERAGE(supply\_chain\_data[shipping times]) + AVERAGE(supply\_chain\_data[lead times])

**4. Revenue Per Unit**

**Description:** Determines the average revenue generated per unit sold. Useful for understanding profitability per unit.

**Code:**

revenue\_per\_unit = DIVIDE(SUM(supply\_chain\_data[revenue generated]), SUM(supply\_chain\_data[number of products sold]))

**5. Shipping Cost Per Unit**

**Description:** Calculates the average shipping cost associated with each unit sold.

**Code:**

shipping\_cost\_per\_unit = DIVIDE(SUM(supply\_chain\_data[shipping costs]), SUM(supply\_chain\_data[number of products sold]))

**6. Supply Chain Cost as % of Sales**

**Description:** Indicates the proportion of total supply chain costs relative to revenue generated. Expressed as a percentage.

**Code:**

supply\_chain\_cost\_as\_%\_sales = DIVIDE([cost\_of\_goods\_sold], SUM(supply\_chain\_data[revenue generated])) \* 100

**7. Total Shipping Costs**

**Description:** Calculates the total shipping cost for all units sold by multiplying the number of products sold by their respective shipping costs.

**Code:**

Total\_shipping\_costs = SUMX(

supply\_chain\_data,

supply\_chain\_data[number of products sold] \* supply\_chain\_data[shipping costs]

)

**8. Transportation Cost as % of Sales**

**Description:** Shows the percentage of revenue spent on transportation costs.

**Code:**

transportation\_cost\_as\_%\_sales = DIVIDE(SUM(supply\_chain\_data[shipping costs]), SUM(supply\_chain\_data[revenue generated])) \* 100