Analyzing Stock Movement

# Goal of the OLAP Cube

The goal of this OLAP cube is to analyze the movement of stock from purchase to storage across time, product,   
supplier, and transaction behavior. By leveraging multidimensional analysis, the cube provides insights into key business processes, such as:  
  
1.Tracking stock orders over time, helping identify seasonal trends and growth patterns.

2. Evaluating supplier performance by comparing quantities ordered and received, as well as lead times.

3. Understanding product-specific demand and stock levels, enabling inventory management and identifying slow-moving products.

4. Analyzing stock movement types (e.g., stock-in, stock-out) to improve transaction management and warehouse operations.

5. Identifying overstocking or understocking issues by comparing quantities ordered with quantities stored.

6.Identifying bottlenecks in the supply chain by spotting delays or inefficiencies, allowing quicker decision-making and smoother operations  
  
This cube supports decision-making by offering clear insights into the dynamics of supply chain management, product demand, and supplier efficiency.

# All Queries

## SELECT {[Measures].[Quantity Ordered]} ON COLUMNS, [P Order Date].[Calendar Month Number].MEMBERS ON ROWS FROM [WWI DW2]

This query analyzes the quantity ordered by each calendar month. It helps track stock trends over time and identify seasonal patterns.

## SELECT {[Measures].[Quantity Ordered]} ON COLUMNS, [P Order Date].[Calendar year].MEMBERS ON ROWS FROM [WWI DW2]

This query analyzes the quantity ordered by year, providing insights into yearly trends and performance comparisons.

## SELECT {[Measures].[Quantity Ordered]} ON COLUMNS, [Dim Stock Item].[Stock Item Name].MEMBERS ON ROWS FROM [WWI DW2]

This query shows the quantity ordered for each stock item, useful for tracking individual product performance.

## SELECT {[Measures].[Quantity Ordered]} ON COLUMNS, [Dim Supplier].[Supplier Name].MEMBERS ON ROWS FROM [WWI DW2]

This query shows the quantity ordered for each supplier, helping assess supplier performance.

## SELECT {[Measures].[Lead Time Days]} ON COLUMNS, [Dim Stock Item].[Stock Item Name].MEMBERS ON ROWS FROM [WWI DW2]

This query shows the lead time (time between ordering and receiving) for each stock item, helping identify supply chain efficiency.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Received]} ON COLUMNS, [Dim Stock Item].[Stock Item Name].MEMBERS ON ROWS FROM [WWI DW2]

This query compares the quantity ordered and the quantity received for each stock item. It helps assess fulfillment performance.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Received]} ON COLUMNS, [Warehouse Transaction Dim].[Transaction Type Name].MEMBERS ON ROWS FROM [WWI DW2]

This query compares the quantity ordered and received for each transaction type (e.g., stock-in, stock-out). It helps analyze inventory movement.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Stored]} ON COLUMNS, [Dim Stock Item].[Stock Item Name].MEMBERS ON ROWS FROM [WWI DW2]

This query compares quantity ordered with quantity stored for each stock item. It is useful for tracking overstocking or slow-moving inventory.

## SELECT {[Measures].[Lead Time Days]} ON COLUMNS, [Dim Supplier].[Supplier Name].MEMBERS ON ROWS FROM [WWI DW2]

This query shows the lead time for each supplier. It helps evaluate the speed of different suppliers in delivering goods.

## SELECT {[Measures].[Lead Time Days], [Measures].[Quantity Ordered]} ON COLUMNS, [Dim Stock Item].[Stock Item Name].MEMBERS ON ROWS FROM [WWI DW2]

This query compares lead time days and quantity ordered by each stock item. It helps identify the products that are ordered but have longer lead times.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Received]} ON COLUMNS, [Dim Supplier].[Supplier Name].MEMBERS ON ROWS FROM [WWI DW2] WHERE ([P Order Date].[Calendar Year].&[2014])

This query analyzes quantity ordered and received by supplier for the year 2014. It helps evaluate supplier performance during that year.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Received]} ON COLUMNS, [Dim Stock Item].[Stock Item Name].MEMBERS ON ROWS FROM [WWI DW2]

This query compares the quantity ordered and received for each stock item. It helps identify any gaps in fulfillment across products.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Stored]} ON COLUMNS, [Dim Supplier].[Supplier Name].MEMBERS ON ROWS FROM [WWI DW2]

This query compares quantity ordered with quantity stored for each supplier, helping identify overstocking or storage inefficiencies.

## SELECT {[Measures].[Quantity Ordered], [Measures].[Quantity Received], [Measures].[Lead Time Days]} ON COLUMNS, FILTER([Dim Supplier].[Supplier Name].MEMBERS, ([Measures].[Lead Time Days] > 30)) ON ROWS FROM [WWI DW2]

This query identifies suppliers with long lead times (greater than 30 days) and evaluates their order fulfillment performance.