**Warehouse Data Warehouse - Dimensions Documentation**

**🔸 Dimension: Warehouse Transaction**

This dimension tracks all movements in and out of the warehouse — including receipts, sales, adjustments, and transfers.

🔹 **Warehouse Transaction Dim ID**  
What it is: A technical identifier used in the data warehouse to uniquely identify each transaction.  
Why it’s important: Required for linking to fact tables.

🔹 **WWI Stock Item Transaction ID**  
What it is: Original transaction ID from the source system.  
Why it’s important: Helps trace data back to the operational database.

🔹 **Stock Item ID**  
What it is: The item involved in the transaction.  
Why it’s important: Links to the StockItem dimension to identify the product. 🔎 “What items were received last week?”

🔹 **Transaction Type Name**  
What it is: Describes what type of transaction happened (e.g., Stock In, Stock Out).  
Why it’s important: Helps filter or group movements by category.  
📦 “How many stock-in transactions happened this month?”

🔹 **Transaction Occurred When**  
What it is: The date and time the transaction happened.  
Why it’s important: Enables analysis by date, season, or time range.  
📆 “What time of year do we have the most outbound movements?”

🔹 **Quantity**  
What it is: The number of units moved in the transaction.  
Why it’s important: It’s the core measure of stock movement.  
📊 “Which items moved the most last month?”

🔹 **Customer ID**  
What it is: The customer involved in the transaction (only for outbound).  
Why it’s important: Helps link to sales or shipping data.  
🧍 “Which customers are responsible for most inventory outflows?”

🔹 **Supplier ID**  
What it is: The supplier involved (only for inbound).  
Why it’s important: Allows analysis of supplier performance.  
📈 “Which suppliers contribute the most stock?”

🔹 **🧠 Example Analysis Query**:

“Show the top 10 slow-moving stock items by quantity that were stocked in but not moved out within the last 90 days.”

**🔸 Dimension: Stock Item**

This dimension holds descriptive information about each stock item, its packaging, and its supplier.

🔹 **1. StockItemKey**  
What it is: A unique number (like an ID) for each stock item.  
Why it’s important: Connects your dimension table (DimStockItem) to your fact tables (like sales or inventory).

🔹 **2. StockItemName**  
What it is: The name of the product, like "Apple Juice 500ml".  
Why it’s important: Helps users recognize products in reports.  
🔎 “How many units of Apple Juice 500ml were sold last month?”

🔹 **3. Brand**  
What it is: The brand of the product (e.g., Coca-Cola, Nestlé).  
Why it’s important: Helps group and compare sales or performance by brand.  
📊 “Which brand is making the most revenue?”

🔹 **4. Size**  
What it is: The size of the item, like “500ml” or “2L”.  
Why it’s important: Helps track which sizes sell better.  
🛒 “Do customers prefer small or large packages?”

🔹 **5. Color Name**  
What it is: The color of the product.  
Why it’s important: Useful in retail for analyzing trends.  
🎨 “Which color shirts sell best in summer?”

🔹 **6. Unit Package Name**  
What it is: How the item is sold, like “Bottle” or “Can”.  
Why it’s important: Helps analyze packaging preferences.  
📦 “Do customers prefer bottles or cans?”

🔹 **7. Outer Package Name**  
What it is: How the item is delivered in bulk, like “Box of 6” or “Carton of 24”.  
Why it’s important: Useful in warehouse/logistics analysis.  
🚚 “How many cartons do we ship each week?”

🔹 **8. Quantity Per Outer**  
What it is: Number of items per outer package.  
Why it’s important: Helps calculate total units and packaging.  
🧮 “If we ship 10 boxes, how many total items did we ship?”

🔹 **9. Typical Weight Per Unit**  
What it is: Average weight of one item.  
Why it’s important: Needed for shipping cost and storage space.  
⚖️ “How much does our stock weigh in total?”

🔹 **10. Unit Price**  
What it is: Price of one item before tax.  
Why it’s important: Used in financial and margin analysis.  
💰 “What is our revenue per item?”

“Do low-priced items tend to stay longer in storage?”

🔹 **12. Supplier ID**  
What it is: The ID of the supplier who provides the item.  
Why it’s important: Links item to its supplier.  
🧾 “Which supplier gave us this product?”  
🧠 “Which supplier gives us the best prices?”

🔹 **13. Lead Time Days**  
What it is: The time between ordering and receiving the item.  
Why it’s important: Helps manage stock availability.  
⏱️ “Which suppliers take too long to deliver?”

🔹 **🧠 Example Analysis Query**:

“Which low-cost items have stayed in stock for more than 60 days without any movement?”

**🔸 Dimension: Supplier**

This dimension contains information about the vendors or providers from whom inventory is sourced. It's useful for analyzing procurement, delivery methods, and supplier reliability.

🔹 **Supplier Key**  
What it is: A surrogate key that uniquely identifies each supplier in the data warehouse.  
Why it’s important: Required to join the Supplier dimension with fact tables.

🔹 **Supplier Name**  
What it is: The name of the supplier company.  
Why it’s important: Used in reports to easily identify and group suppliers.  
🏷️ “Which suppliers provided stock this quarter?”

🔹 **Supplier Category Name**  
What it is: Classification of the supplier (e.g., Local, International, Preferred Vendor).  
Why it’s important: Helps segment suppliers for performance analysis and strategy.  
📊 “Are local suppliers more reliable than international ones?”

🔹 **Payment Days**  
What it is: The number of days allowed for payment.  
Why it’s important: Useful for financial analysis and cash flow planning.  
💳 “Which suppliers offer the longest payment terms?”

🔹 **Delivery Method Name**  
What it is: The method used for delivery (e.g., Truck, Air, Courier).  
Why it’s important: Enables analysis of logistics and delivery preferences.  
🚛 “Which delivery methods are used by our suppliers most often?”

🔹 **City Name**  
What it is: The city where the supplier is located.  
Why it’s important: Allows regional analysis of suppliers and lead times.  
🌍 “Where are most of our suppliers based?”

🔹 **🧠 Example Analysis Query**:

“Which supplier categories deliver the most inventory, and from which cities?”

**🔸 Dimension: Purchasing Order**

This dimension provides detailed information about each purchase order, such as when it was placed, what items were ordered, who supplied them, and how they were delivered. It supports the analysis of supplier performance, delivery efficiency, and purchasing costs.

🔹 **Purchasing Order Dim ID**  
What it is: A surrogate key for identifying each purchasing order in the data warehouse.  
Why it’s important: Used to join to fact tables.

🔹 **Supplier ID**  
What it is: The supplier from whom the goods were ordered.  
Why it’s important: Enables analysis of orders by supplier.  
📊 “Which suppliers do we place the most orders with?”

🔹 **Order Date**  
What it is: The date the order was placed.  
Why it’s important: Allows tracking of order volume over time.  
📆 “How many orders were made last month?”

🔹 **Expected Delivery Date**  
What it is: The expected arrival date of the goods.  
Why it’s important: Helps calculate delivery lead times.  
⏱️ “How long do our suppliers usually take to deliver?”

🔹 **Delivery Method Name**  
What it is: The method used for delivery (e.g., Truck, Courier).  
Why it’s important: Useful for logistics and transport cost analysis.  
🚚 “What delivery methods are used most often?”

🔹 **Stock Item ID**  
What it is: The item being purchased.  
Why it’s important: Links to the Stock Item dimension.  
📦 “Which items are purchased most frequently?”

🔹 **Package Type Name**  
What it is: How the items are packaged (e.g., Box, Carton).  
Why it’s important: Useful for shipping and handling analysis.  
📦 “Do we mostly order items in cartons or boxes?”

🔹 **Order Outers**  
What it is: Quantity ordered in outer units (e.g., boxes).  
Why it’s important: Essential for volume and demand tracking.  
📊 “How many outer units were ordered per item?”

🔹 **Received Outers**  
What it is: Quantity actually received.  
Why it’s important: Enables tracking of delivery completeness.  
📉 “Are suppliers underdelivering?”

🔹 **Expected Unit Price**  
What it is: Price per unit expected at time of order.  
Why it’s important: Used for procurement cost analysis.  
💰 “Which items have increasing purchase costs?”

🔹 **Last Receipt Date**  
What it is: The date the last delivery for the order was received.  
Why it’s important: Helps measure order fulfillment time.  
📆 “How long after ordering do we receive all items?”

🔹 **🧠 Example Analysis Query**:

“Which suppliers consistently deliver less than what was ordered, and how late are they on average?”

More dimensions will be added to this document as they are built. Each section includes real-world use cases to support powerful warehouse inventory and supply chain analytics.