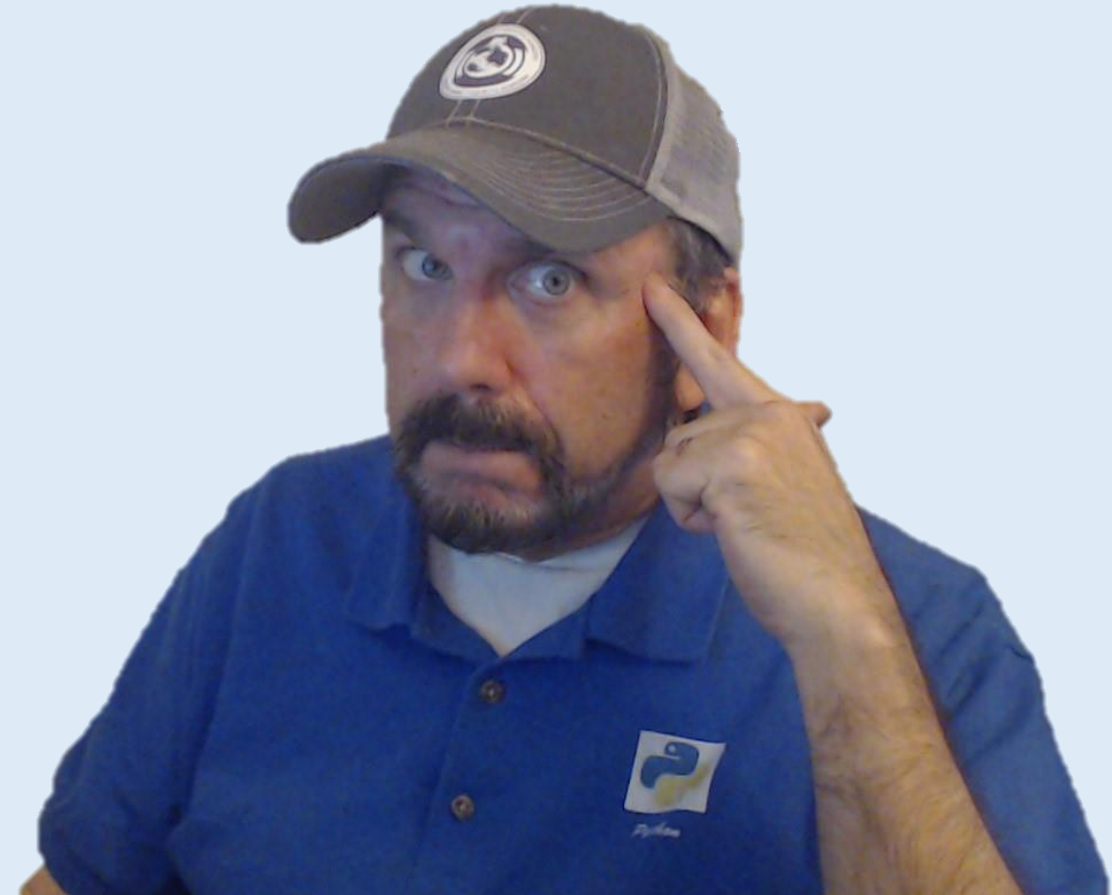
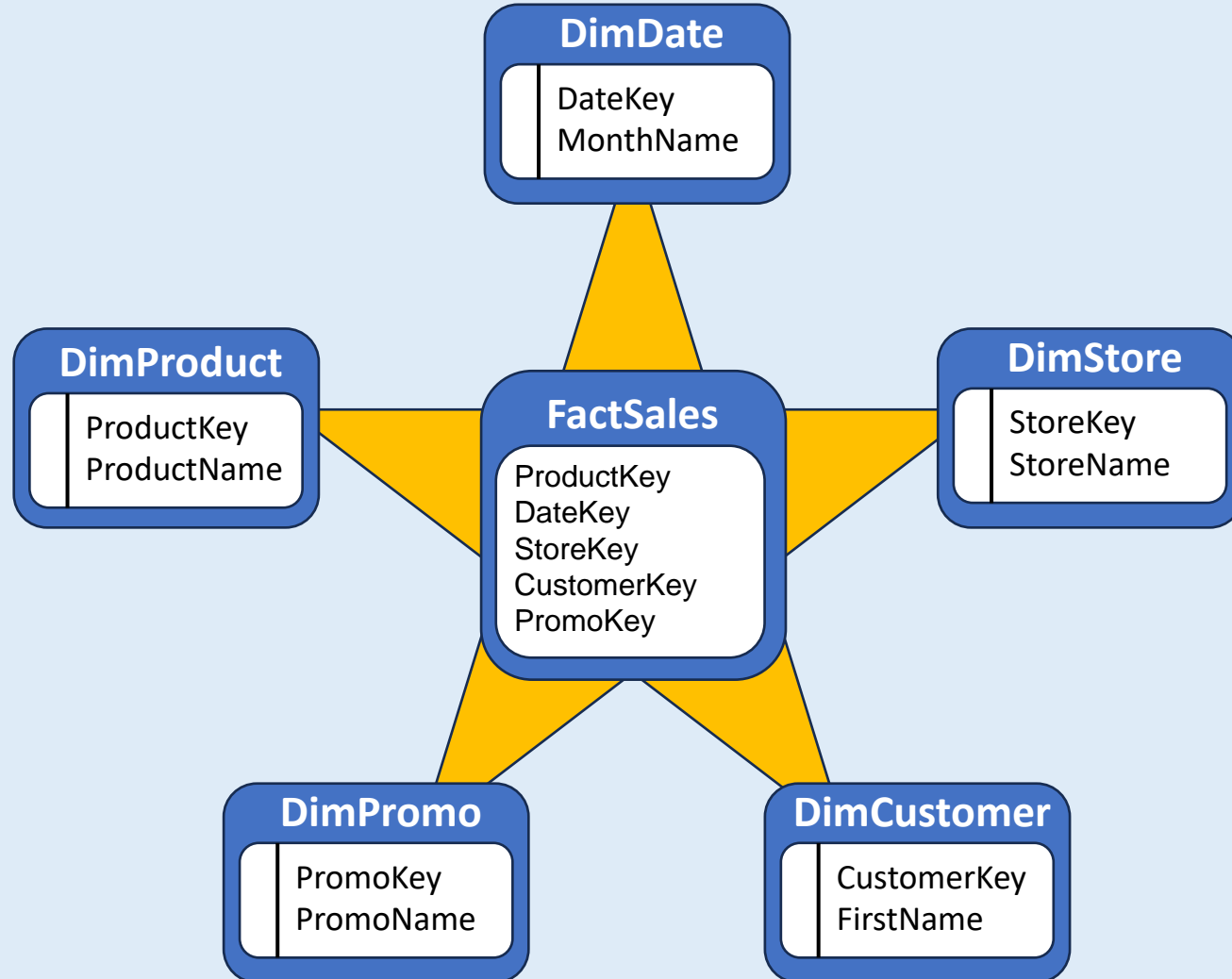


# Master Dimensional Modeling Step By Step

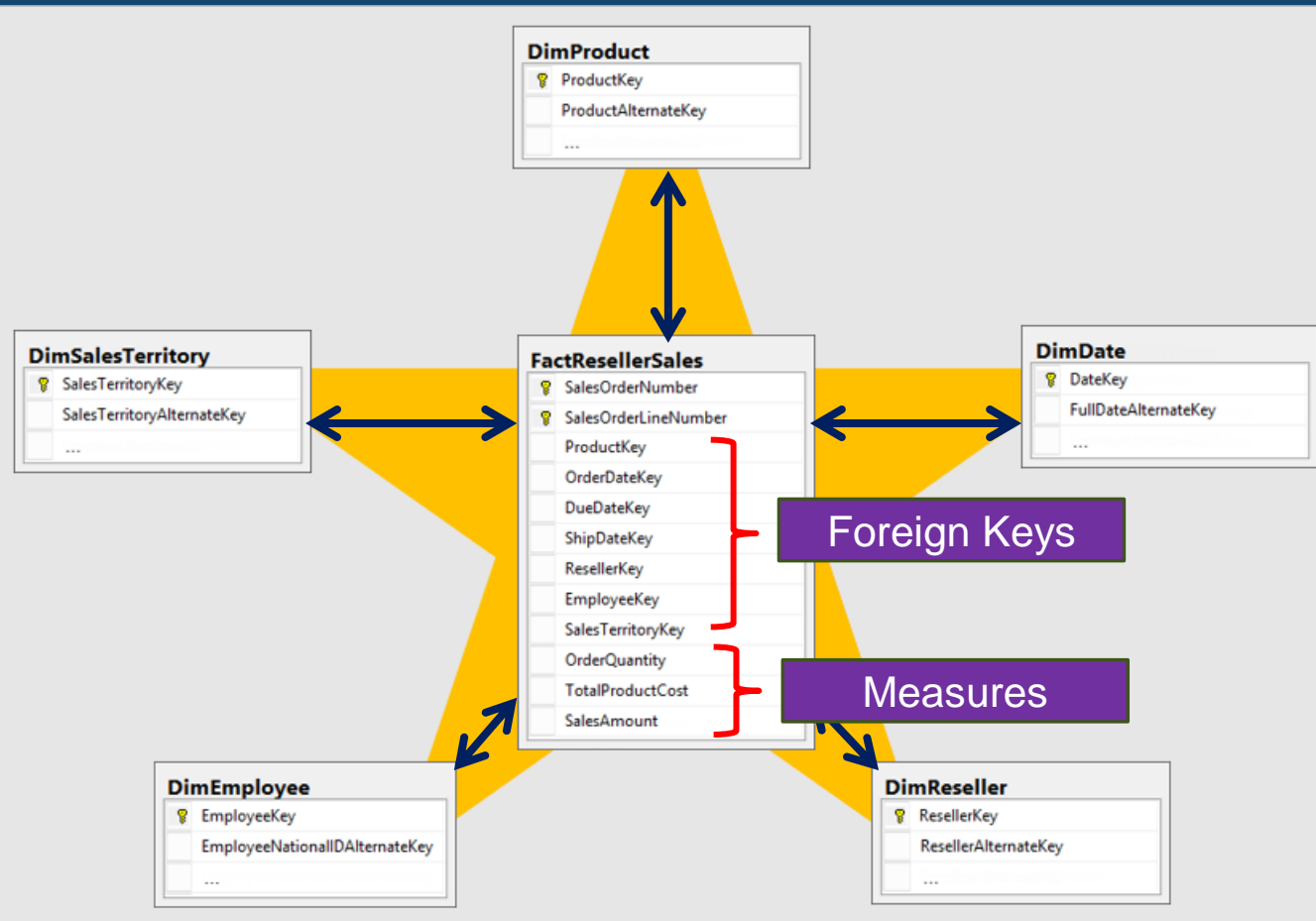
## Lesson 01: Why You Need Dimensional Modeling



# Where Are We Going?

- **What is the Star Schema?**
- **Why Do You Need the Star Schema?**
- **What Dimensional Modeling is Not**
- **Wrapping Up**

# What is the Star Schema?



- aka Dimensional Model
- Provide an Efficient Way to Query Data
- Trades Data Redundancy for Speed!
- Numeric Measures aka Facts at the Center
- Descriptive Data to the Sides aka Dimensions
- The Fact table has a Foreign Key to Each Dimension Table
- Single Join to Get any Dimension Data
- Minimizes Table Joins
- Easy for End Users to Use

Get Value From the Data!!!

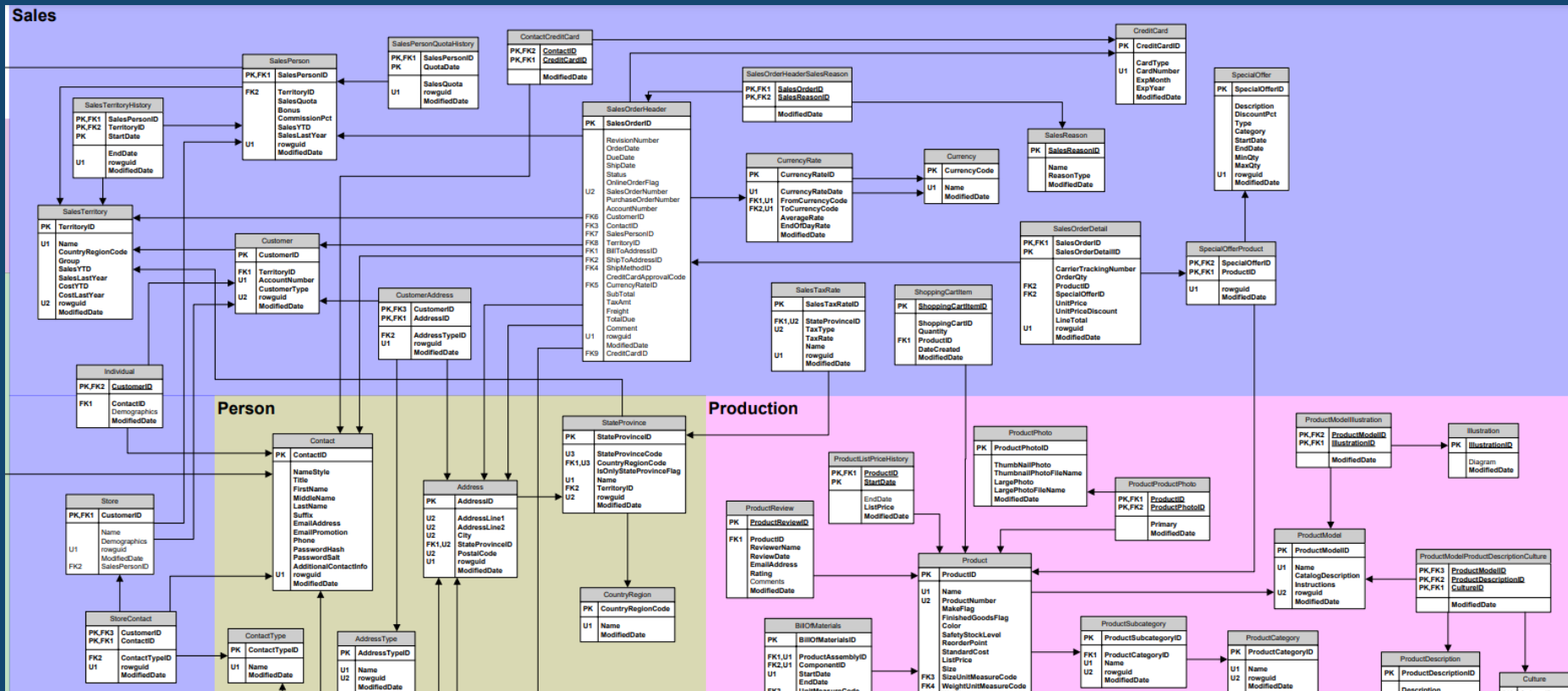
Dimensional Modeling

*The Heart of the Data Warehouse*



<https://www.youtube.com/watch?v=IWPIsZf7-uQ&t=1476s>

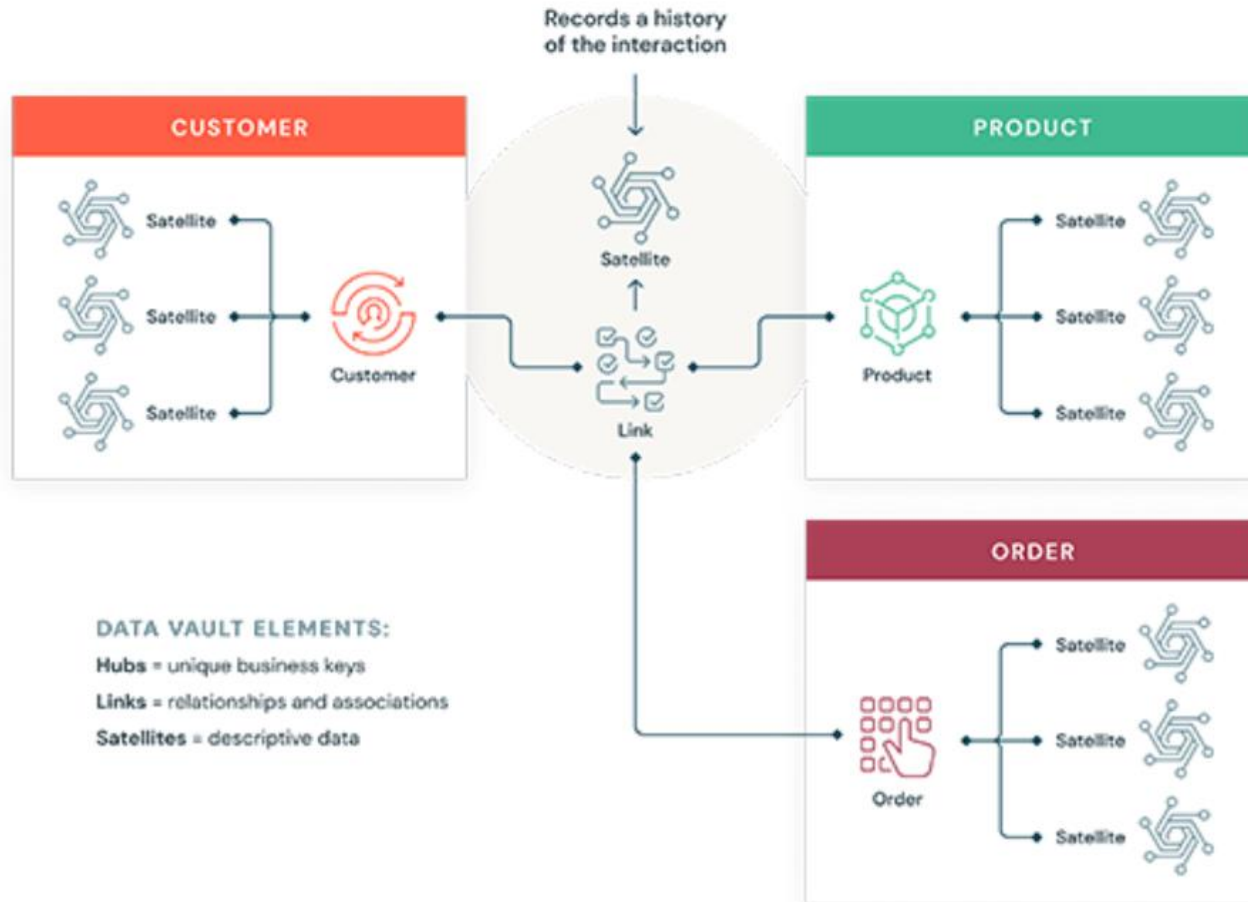
# vs Entity Relationship Model (ERM)



<https://cursos.virtual.uniandes.edu.co/isis3301/wp-content/uploads/sites/208/2019/08/adventureworks.pdf>

# vs Data Vault

## Data vault modeling



Data Vault in a Data Lake?

<https://www.youtube.com/watch?v=RNMoWnSWcTo>

<https://www.databricks.com/glossary/data-vault>

# Why Do You Need the Star Schema?

## ➤ Efficiently Supports Many Types of Uses:

- Reporting (Power BI Recommends Star Schema)
- Data Analysis
- Source for Machine Learning/AI

## ➤ Star Schema is Very Flexible and Extensible

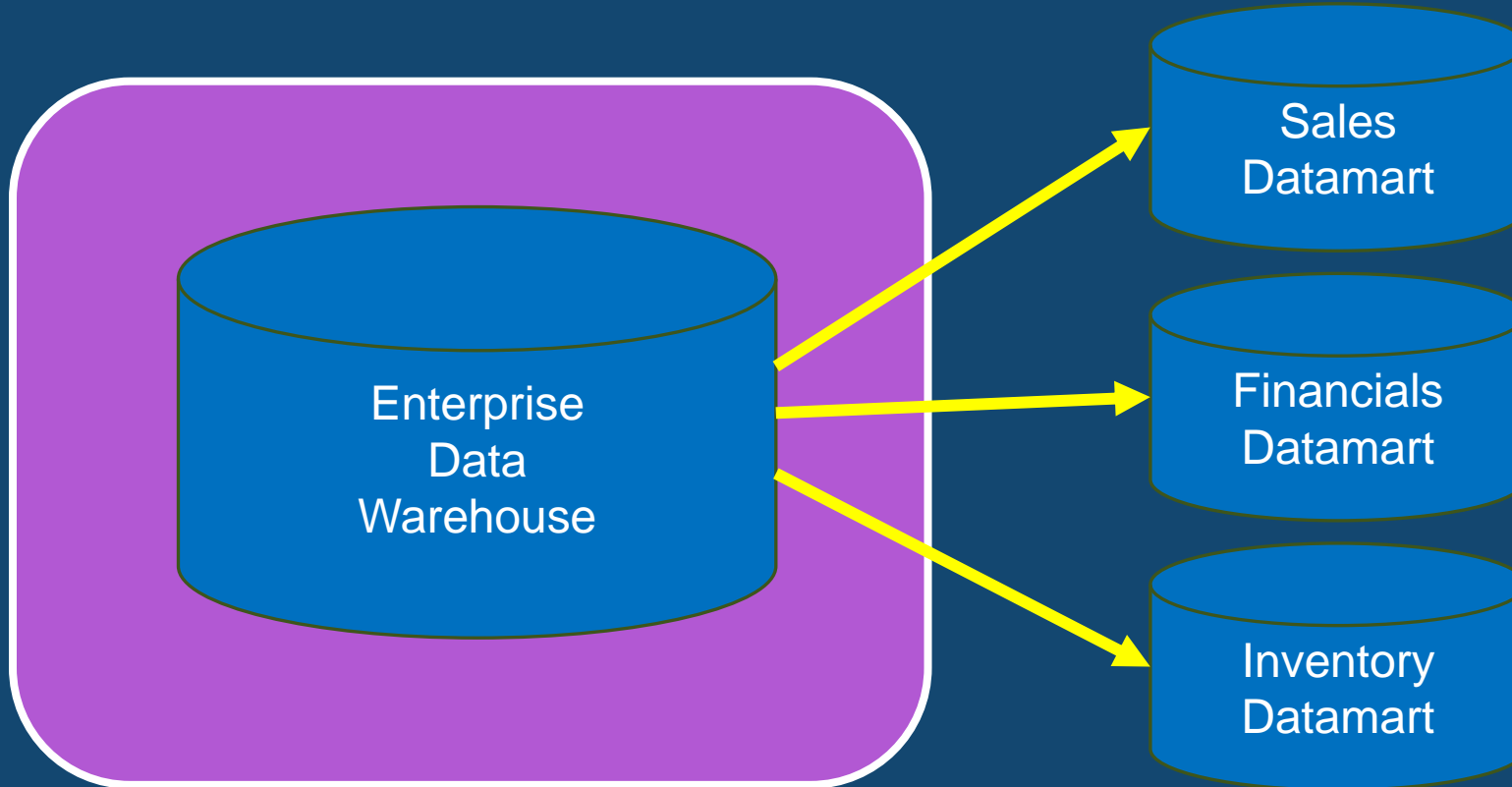
## ➤ Data Platform Independent

- Good for Relational Databases and Big Data Platforms
- Databricks <https://www.databricks.com/glossary/star-schema>
- Snowflake

## ➤ Slowly Changing Dimensions History

# What the Star Schema Is Not

## ➤ It is Not an Enterprise Data Warehouse Approach



# Wrapping Up

- What is the Star Schema?
- Why Do You Need the Star Schema?
- Thank You! Modeling is Not