# Data Warehousing Basics

Ben Sullins

@bensullins | bensullins.com

pluralsight

# Module Goals

- What is Data Warehousing?
- Why use Data Warehousing?
- How Data Warehousing Works
- Key Concepts
- Where to Find More

pluralsight

# What Is Data Warehousing?

pluralsight

Data Warehousing is the process of collecting and organizing disparate sources of information for analysis.

pluralsight

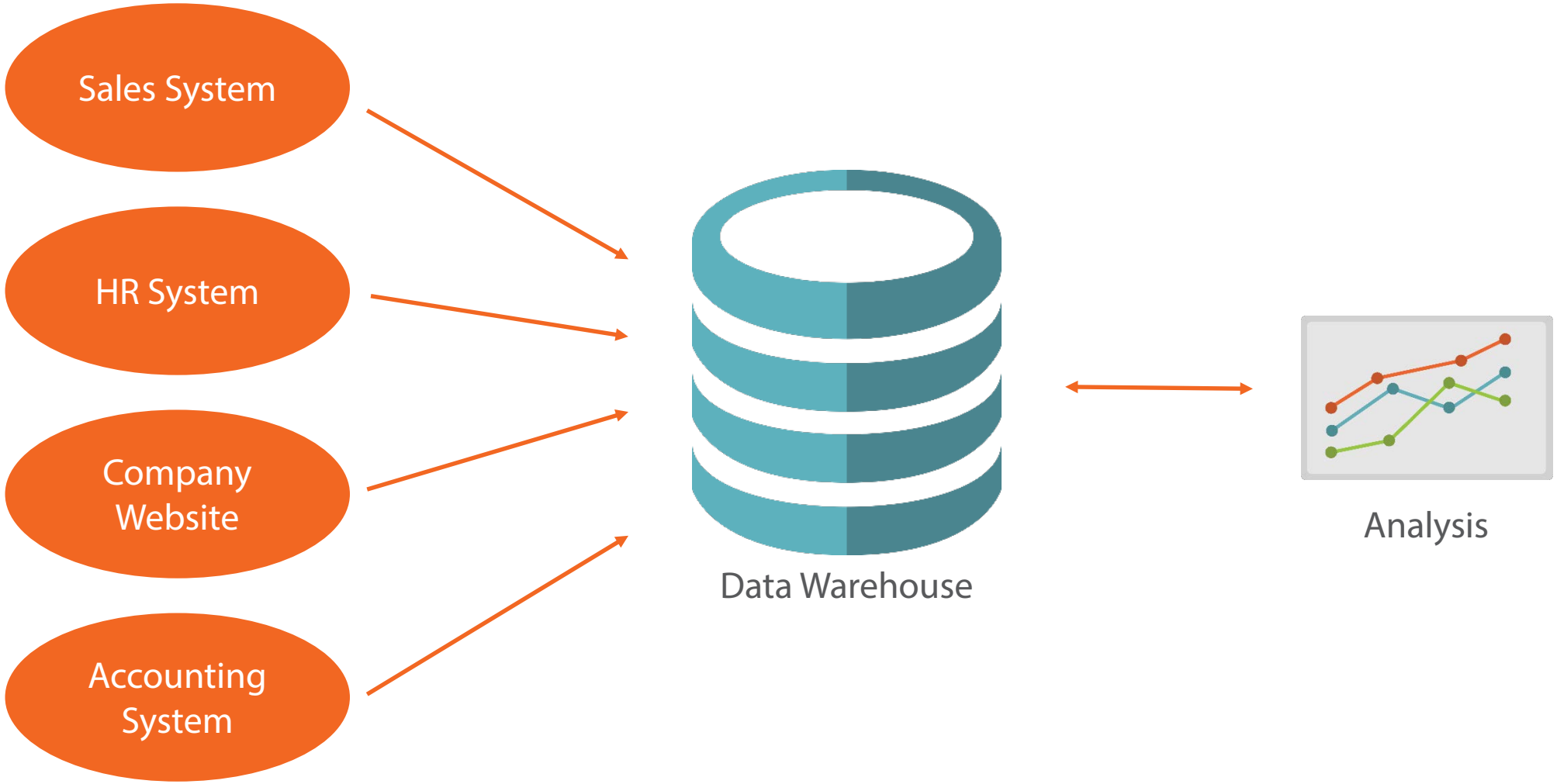
# Cogsley Services Inc.

**Sales** by **industry/sector**

Avg. **days to complete** by **manager**

Hourly **wage** to **bill rate** ratio

pluralsight




pluralsight

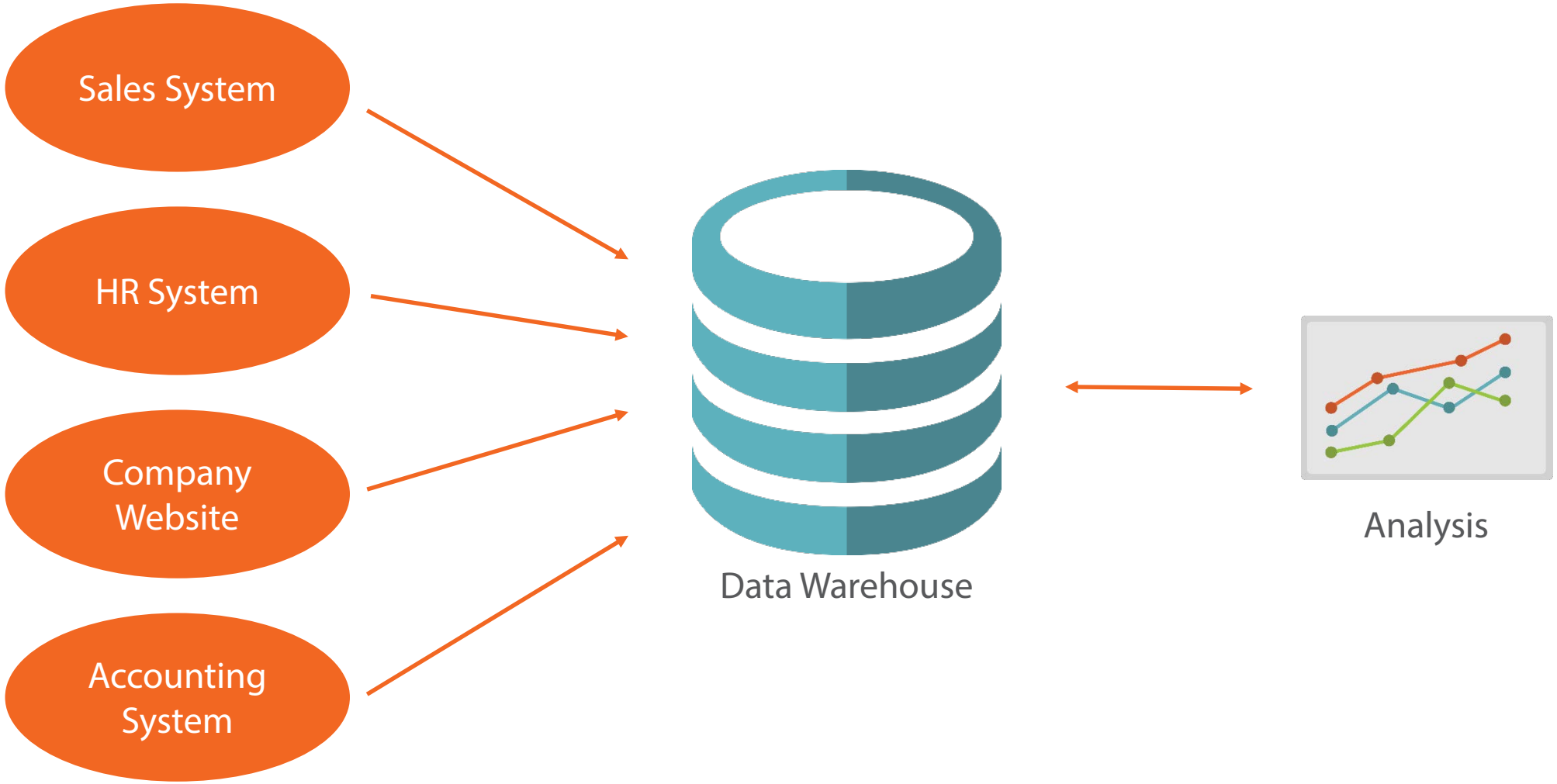
# Why Use Data Warehousing?

pluralsight

Data Warehousing opens up opportunities to gain value from your raw data through the process of analysis.

pluralsight

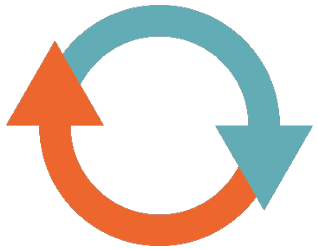
pluralsight




pluralsight

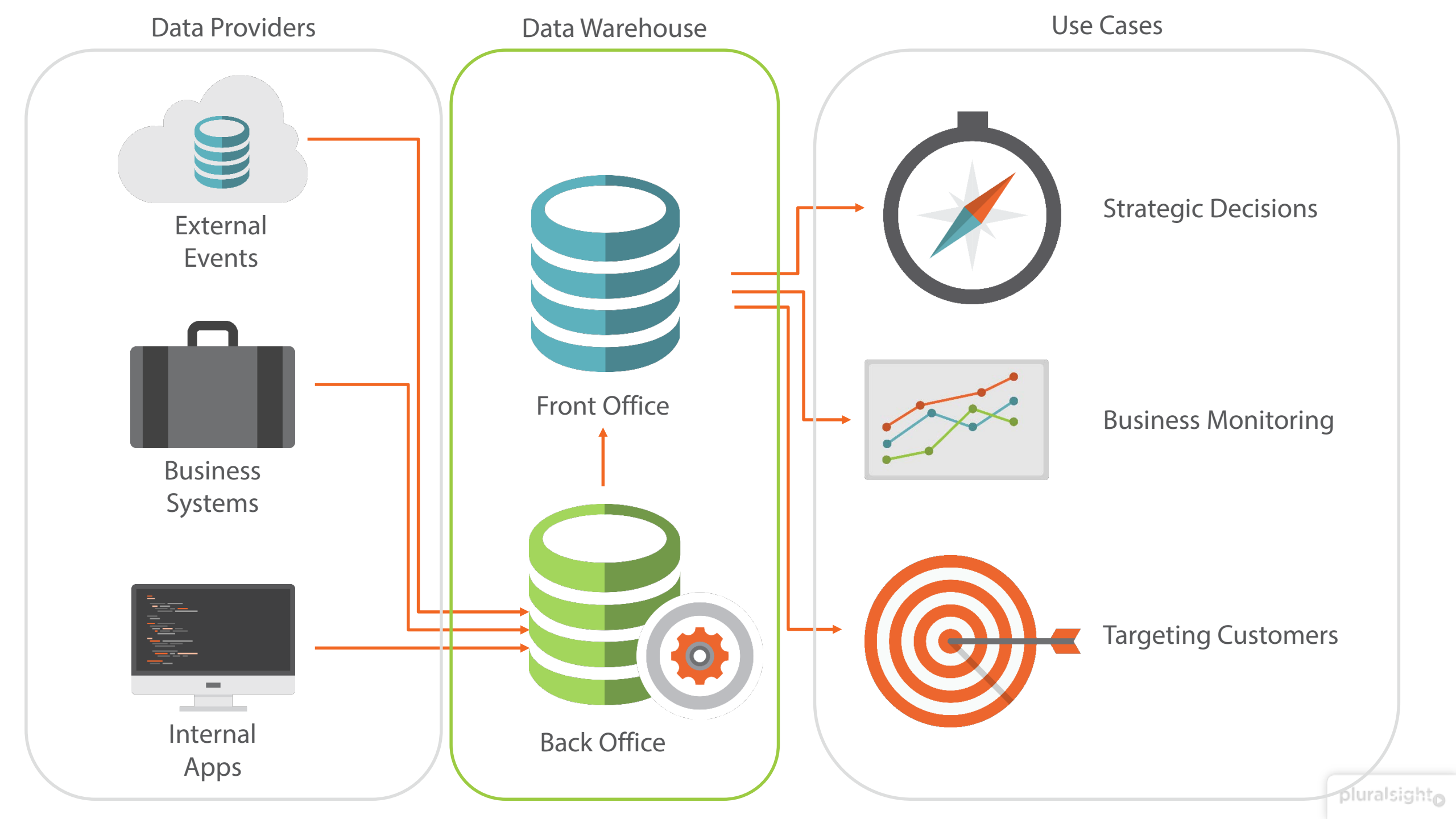
# How Data Warehousing Works

pluralsight



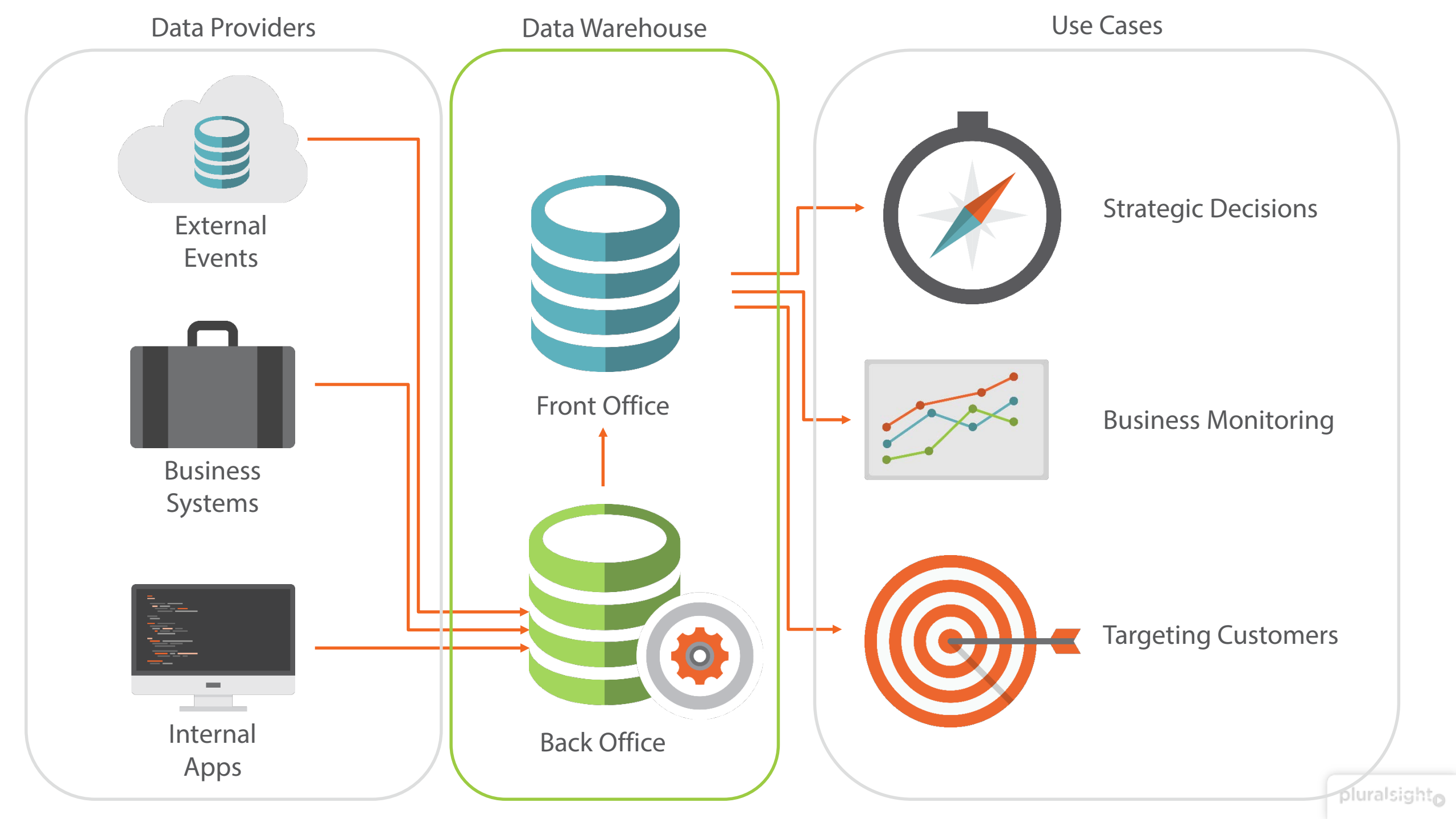
By collecting data from multiple sources, organizing it into simple structures, analysts and programs can leverage it for better decision making.

pluralsight

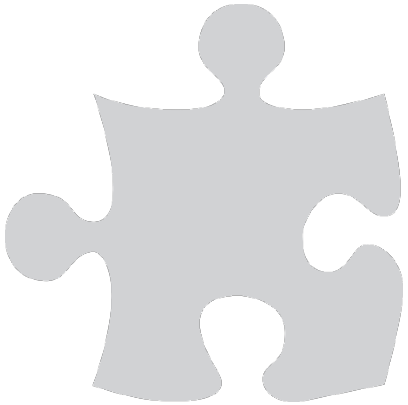

Data Providers
Data Warehouse
Use Cases
External Events
Business Systems
Internal Apps
Front Office
Back Office
Strategic Decisions
Business Monitoring
Targeting Customers

# Key Concept: ETL

pluralsight


Data Providers
Data Warehouse
Use Cases
External Events
Business Systems
Internal Apps
Front Office
Back Office
Strategic Decisions
Business Monitoring
Targeting Customers

Stage



Cleanse

Deliver

pluralsight

# Key Concept: Dimensional Modeling

pluralsight

# Dimensional Modeling

- Reduces complexity
- Provides historical view
- Enables analysts
- Is re-usable

pluralsight

# Dimensional Modeling

**What**: A data modeling technique focused on analysis or Business Intelligence

**Why**: It’s a great way to enable analysts to be effective.

**How**: Using facts and dimension tables to create data marts

pluralsight

# Facts and Dimensions

**Facts/Measures**

The subject of our analysis (eg. Sales Amount)

**Dimensions**

The context by which we analyze our facts

pluralsight

# Key Concept: Star Schema

pluralsight

# Star Schema / Data Mart

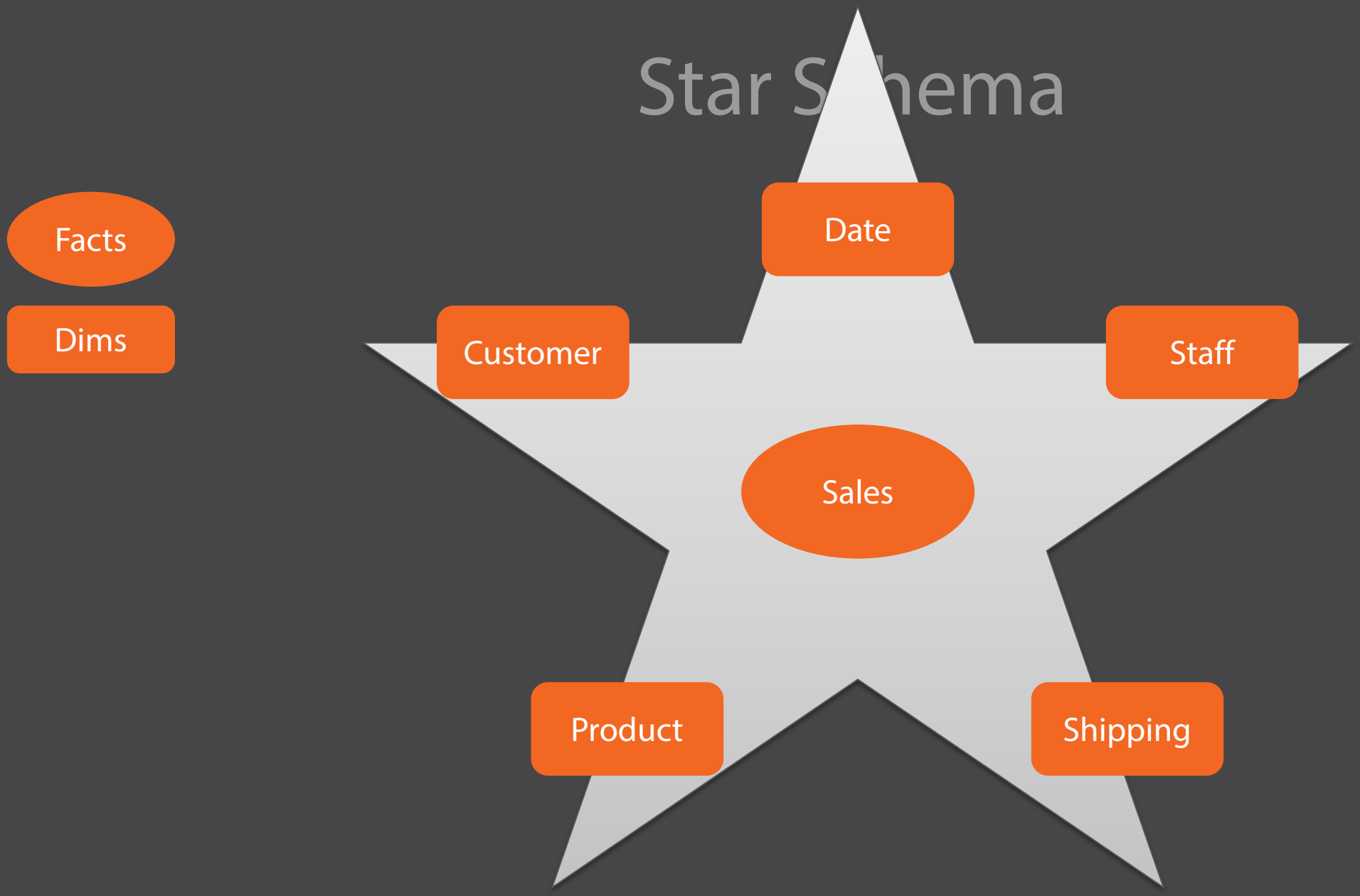
Business Intelligence

Simple yet sustainable

Flexible

pluralsight

# Star Schema




pluralsight

# Demo: Building a Star Schema in SQL Server

pluralsight

# Where to Find More

pluralsight

# Additional Resources

## Pluralsight Courses:

- **Logical and Physical Modeling for Analytical Applications**
- **Introduction to Data Warehousing and Business Intelligence**
- **Optimizing OLTP and Data Warehousing with SQL Server 2014**

pluralsight