

## Analysis Framework

### Assigned Questions:

1. Give an overall assessment of Stores number 10 and 21's sales.
  - How are they performing compared to target?
  - Will they meet their 2014 target?
  - Should either store be closed? Why or why not?
  - What should be done in the next year to maximize store profits?
2. Recommend 2013 bonus amounts for each store if the total bonus pool is \$2,000,000 using a comparison of 2013 actual sales vs. 2013 sales targets as the basis for the recommendation.
3. Assess product sales by day of the week at stores 10 and 21. What can we learn about sales trends?
4. Should any new stores be opened? Include all stores in your analysis if necessary. If so, where? Why or why not?

### Collect and Check the Data

Relevant files for analysis:

- **SalesDetail.csv** – contains ProductID, Quantity, SalesHeaderID, UnitPrice, UnitCost
- **SalesHeader\_New.csv** – contains SalesHeaderID, StoreID, SalesDate, CustomerID
- **Store.csv** – contains StoreID, StoreName, Location
- **Product.csv** – contains ProductID, ProductName, ProductCategoryID
- **Target Data - Channel Reseller and Store.csv** – contains StoreID, TargetYear, TargetSalesAmount
- **Target Data - Product.csv** – contains ProductID, TargetSalesAmount
- **Customer.csv** – contains customer segmentation to identify resellers
- **ProductCategory.csv, ProductType.csv** – for category-level trends

### Analysis Methods

Metric	Table(s) Involved	Fields Required
Total Sales 2013 & 2014	SalesDetail, SalesHeader_New, Store	Quantity, Price, SalesDateKey, StoreKey
Sales Profit	SalesDetail, Product	(Price - Cost) × Quantity
Target Sales 2013 & 2014	Target Data, Store	TargetAmount, TargetYear, StoreNumber
Bonus % Allocation	SalesDetail, Target Data, Store	Actual Sales, Target Sales
Weekday Sales Trends	SalesHeader_New, SalesDetail	Date, Salesamount, StoreID

- Join SalesDetail and SalesHeader\_New on SalesHeaderID to get transactional-level data per store and product.
- Join with Product and Store to classify product categories and locate sales.
- Use Target Data - Channel Reseller and Store to evaluate performance vs. targets.
- Create calculated fields for:

- $\text{Sales Amount} = \text{Quantity} * \text{UnitPrice}$
- $\text{Sales Cost} = \text{Quantity} * \text{UnitCost}$
- $\text{Sales Profit} = \text{Sales Amount} - \text{Sales Cost}$
- $\text{Profit Margin \%} = (\text{UnitPrice} - \text{UnitCost}) / \text{UnitPrice}$
- Filter for StoreID = 10 and 21 for specific store analysis.
- Use WEEKDAY(SalesDate) to group by day of week for trend analysis.
- Use proportions to determine bonus allocations

## Stories

- **Store Performance Story:** Sales data from 2013 and 2014 reveals how Stores 10 and 21 performed against targets. By comparing total sales and profits year-over-year, we identify performance gaps. This helps determine if either store underperformed significantly and informs closure recommendations. High-margin product performance and sales channels will also guide profitability strategies.
- **Bonus Allocation Story:** Using 2013 performance data, we assess how much each store should receive from a \$2M bonus pool. Stores that exceeded targets earn a higher share. This not only rewards strong performance but also motivates underperforming stores to improve.
- **Sales Trends by Weekday Story:** A day-of-week analysis for Stores 10 and 21 helps identify peak and slow days. This trend reveals optimal staffing, promotional planning, and stocking strategies to maximize weekday revenue.
- **Expansion Opportunities Story:** A full-store comparison reveals regions with exceptional performance and those lagging. By overlaying profit, location, and performance metrics, we identify where new store openings may yield high ROI or where consolidation could optimize operations.