# Analysis Framework

For this IT Session you will spend time working with the Analysis Framework to come to a clearer understanding of the business problem assigned to you at the beginning of the course. Below are a series of steps that you need to take to begin developing the Project Plan assignment due at the end of this Module.

**Copy/paste the questions you were assigned at the beginning of the course below:**

1. Give an overall assessment of Stores number 5 and 8’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 separate 2013 and 2014 bonus amounts for each store if the total bonus pool for 2013 is $500,000 and the total  
      bonus pool for 2014 is $400,000. Base your recommendation on how well the stores are selling Product Types of Men’s Casual  
      and Women’s Casual.

  3. Assess product sales by day of the week at Stores 5 and 8. What can we learn about sales trends?

  4. Compare the performance of all stores located in states that have more than one store to all stores that are the only store in the  
      state. What can we learn about having more than one store in a state?

**Collect and check the data**

* Channel.csv
* ChannelCategory.csv
* Customer.csv
* Product.csv
* ProductCategory.csv
* ProductType.csv
* Reseller.csv
* SalesDetail.csv
* SalesHeader\_New.csv
* Segment.csv
* Store.csv
* Target Data - Channel Reseller and Store.csv
* Target Data - Product.csv

**Analysis Methods**

Now that you have your data, or enough data to proceed, document the plan of which analysis methods will be used to answer the business questions. Sometimes there are multiple approaches to answering the same question. For this course, it’s not necessary to deepen your knowledge of the data using additional analysis methods. The necessary data to answer your questions has been done for you.

**Conduct the analysis and interpret the information**

Spend some time with the data looking at it and determining what you are going to need from which .CSV files to answer the questions assigned to you. Then using the Data Profile Template.xlsx you will demonstrate the data sets necessary for your BI system will work with. This information will inform how you create your dimensional models in the next module. Below is an example.

The example below only demonstrates a small portion of the data you will need to answer your questions.

Graphical user interface, table

Description automatically generated

Activity: Using the Data Profile Template, you will enter the metrics that your BI System will need to measure. Additionally, you will need to combine data from the .CSV files to visualize the data you will need to answer the questions assigned to you.

* Do not make the data more than 5 rows
* No duplicate columns
* More than one data set is required to answer your questions thoroughly
  + Copy and paste the template to create new metrics and data sets

**Telling the Story**

The Business Intelligence world is divided on whether to use the term “Tell the Story” Or not. Whether you agree with this nuance is irrelevant because it means tailoring your communications to fit your audience. A CDO (Chief Data Officer) is looking for different information than a front-line manager on a car manufacturing line at Honda. However, the same data may be used to answer their questions. It’s all a matter of how you position it.

What are the stories that your data will tell? Look to your project questions to consider this.

You will need to provide brief stories that your data will tell to answer the questions assigned to you. They should be paragraph length and be between 3 – 5 sentences.

**Stories**

* It has been reported that Honda line 1 and 3 are suspected to fall below the expected quantity of all Honda lines. Line 1 appears to produce slightly less cars than Honda’s quantity requirement. Line 3 appears to be way below expectation but appears to struggle due to a few employees requiring a leave of absence which has stunted production. Perhaps transferring some employees from line 1 to 3 momentarily can help balance production.
* Line 1 appears to produce more sedans than Line 3 but Line 3 produces more SUVs than Line 1 in 2013. This shows that certain lines have a stronger production efficiency over certain vehicles. Maybe tying bonus allocations to certain models can foster production efficiency and quantity.
* It appears that production seems to spike the highest for lines 1 and 3 during Monday-Wednesday. However, line 3 appears to have a steadier performance compared to line 1 throughout the week. Line 3 does have a more organized warehouse which allows for easy access to materials. Line 1 appears to have a smaller warehouse with a lack of material organization. Perhaps offering line 1 some guidelines to organize their warehouse can help improve efficiency throughout the week.
* Line 5 has integrated with line 6 which has combined their production line together due to a new trial of combining lines who use similar materials together to maximize production quantity. Lines 1 and 3 are single production lines and have limited materials. The data shows that lines 5 and 6 appear to have more efficient production compared to lines 1 and 3. Maybe Honda can invest in combining production lines to maximize production quantity.