**Project Description**

Humana 2020

## SCENARIO

Congratulations! Your consulting company just landed an elite bid for an upcoming data analysis project. You’re about to gather your team members and kick off the project. Here is some background information:

* Your client is a global food distribution company with about $20MM in sales annually to US, Europe, and Japan.
* You’ll be using our firm’s internal Power BI tools to analyze sales data from   
  2012 - 2014.
* Your goal is to derive insights related to the client’s products, sales, and marketing in order to answer prompts generated by our client engagement team based on the original proposal.

Work as diligently as you can through the following prompts, answering as many as you have time to!

## SETUP

If you have not already done so, please form groups!

Work with your instructor to:

* Download the data for the lab.
* Form groups / teams
* Allocate a presentation slot for your group / team
* Determine which groups will tackle which prompts
* Agree on presentation method
  + Whose laptop
  + Can you connect to the projector?

## PRE-WORK

Although the exercise is stated as prompts, we recommend groups create 4 main sheets to cover specific aspects of the data. This will help you create stories from the data more easily and help standardize your work.

*Note: Each prompt is designed to reference one of the below sheets. This allows the instructor to break up the lab into parts, giving one or two sheets to a specific group or team.*

1. **Dashboard** - this will contain critical metrics for the company.
   1. Filters:
      1. Year, quarter, month, and week
      2. Region
   2. Charts:
      1. Bar chart of sales by product group
      2. ‘Top 5’ sales by customer bar chart
      3. Stacked bar chart, quarterly sales by region
      4. Stacked line chart, monthly sales YOY (year over year)
2. **Product Details** - this will look at sales and margins for specific product categories.
   1. Filters:
      1. Year, quarter, month, and week
      2. Region
   2. Charts:
      1. Stacked line chart, monthly sales YOY
      2. Combo chart, sales by product group with gross margin percentage in tick marks
         1. Note: Gross margin (%) = (sales - cost of goods sold) / (sales)
      3. Tree map of product group
3. **Customer Details** - this will look at product sales by customer.
   1. Filters:
      1. Year, quarter, month, and week
      2. Manager
   2. Charts:
      1. Qty of product sold vs sales scatterplot, with customer name in series
      2. Aggregated text table with the following:
         1. Rows:
            1. Customer
            2. Product Group
            3. Product Type
         2. Measures:
            1. Sales
            2. Quantity
            3. Margin
            4. Avg Sales per Invoice
4. **Customer Location** - this will look at product sales by location, charted using the mapping functionality of Power BI.
   1. Filters:
      1. Product Group
      2. Region
      3. Year
   2. Charts:
      1. Map
         1. City as a layer
         2. Size and color of point by Sales amount

## PROMPTS

*Questions are divided into four categories, which can be tackled individually, as a class, or broken up by groups.*

1. **Dashboard**
   1. Between the US and Europe, in 2014 YTD (year to date), what is the top-selling product group for each region?
   2. What are the sales trends for this top product group for the US and Europe from 2012 through 2014?
   3. Are there any trends in sales between the two groups? Is there any seasonality?
2. **Product Details**
   1. Compare the sales and margins of each product group between the US and European regions from the 2012 and 2013 years, versus 2014 YTD.
   2. What changes, if any, were made between the two time periods?
   3. Based on these changes, is there a unified strategy we might recommend to maximize portfolio profitability to US and Europe?
3. **Customer Details**
   1. Compare the global canned products group and the produce group.
   2. Are there customers who are disproportionately purchasing any of the categories within the groups? If so, who are they?
   3. What is our margin position of these customers compared to other accounts?
   4. What product types are these customers buying?
4. **Customer Location**
   1. Are there European customers who appear to be dominating sales of the canned goods and snacks product groups? If so, where to they reside?
   2. What countries could we focus on to help increase our presence in Europe?

## 

## PRESENTATION

50 mins

* Work with your instructor to present and defend your conclusions on your prompt(s).
  + Laptops closed!
  + Take notes of other team’s presentations for feedback!

## CONCLUSION

10 mins

* Work with your instructor to review your lessons learned from the exercise.

## ADDITIONALRESOURCES

## EVALUATION

* Complete all necessary prompts for your group.
* Present your findings to the class in a timely manner (to be completed in-class).
* Your presentation will be reviewed by peers and graded by instructors as a pass/fail.

## RUBRIC

* For all requirements, project deliverables will be evaluated using a simple 3 point scale.
* Instructors will provide feedback on any required milestones.

|  |  |
| --- | --- |
| **Score** | **Expectations** |
| **0** | *Incomplete* |
| **1** | *Partial credit but does not meet expectations* |
| **2** | *Meets expectations* |
| **3** | *Surpasses expectations* |

**Description:**

* A “1” means you have met some but not all of the project requirements.
* A “2” means you have satisfied the minimum requirements.
* A “3” indicates performance above and beyond these requirements (and may not apply to all items)