Case #5—Creating Data Visualizations

# Case Abstract

Truss Right is a fictional company that has recently hired a new employee (the student) as Plant Coordinator. Management has asked this position to handle the lumber inventory for the company. This case provides students with a data set to evaluate and produce visuals for a presentation.

**Keywords:** Data Visualization, Excel Spreadsheet, PowerPoint, and Presentation.

# Teaching Goals

The goal of this case is to teach students how to manipulate data in an Excel spreadsheet and translate data into professional slides with visualizations that can be incorporated into a presentation.

# Learning Objectives

Students will learn to:

* Create data visualizations
* Use Excel to manipulate data
* Produce professionally designed PowerPoint slides
* Give a brief presentation to a professional audience

# Possible Deliverables

* Data Visualizations
* PowerPoint Slides
* Short Report

# Outcomes

By working through this case, students will gain an understanding of workplace software programs like Excel and PowerPoint. Additionally, students will understand the value of audience awareness when creating data visualizations by responding to a particular problem delineated in the case.

# Case Overview

Truss Right is a roof truss manufacturer in the Midwest that has been leading the industry since 1999. A small operation in Middletown, Iowa, this company has seen significant changes since the economic downturn in 2008 but has rebounded in recent years. You’ve been hired recently as the Plant Coordinator, a position that puts you as the mediator between employees and management.

In your new position you have taken control of the lumber inventory for the company. Lumber is the most important material for Truss Right’s wood trusses and so must be managed carefully. You are not responsible for ordering lumber, but you have noticed that certain lumber sizes often run out while others sit unused for months. The lumber is kept outside and can take significant punishment from Midwestern weather that causes materials to be unsuited for truss building.

## Assignment

Evaluate the data provided for lumber inventory. Analyze the data and do some research in the lumber market to determine current prices. Also take into consideration comments made by the Lumber Yard supervisor during your walkthrough of the plant (this would have students go to the video accompanying the case). Design a set of data visualizations to submit to management that shows the current state of Truss Right’s lumber inventory.

## Audience

You have two different audiences for your data displays, so you must adjust your designs to fit each audience given below:

1. The visuals you design will be included in a shareholders report to be written at the end of the year. This report is very technical and presented to the majority stakeholders in the company. Lumber is an expensive material to invest in, but it is the main material used by the company, so investors in Truss Right want to see how their investment is being used.
2. The Plant Manager has asked that you present your results to the Purchasing Department. This set of visuals should be presented as a slideshow that will persuade Purchasing to either continue with the current purchasing strategy or make changes in suppliers or the type of lumber ordered. These graphics should be visually appealing to draw the audience in to examine the data.

## Design Considerations

* Adaptation—are your displays tailored to two different audiences?
* Clarity—do your displays offer minimal perceptual problems?
* Concise—do you display all the information necessary without crowding?
* Labeling—can readers read text labels to interpret the displays?
* Credibility—are you projecting professional, accurate, ethical displays?
* Aesthetics—are readers drawn to the displays visuals; do they hook viewers?