Truck-Crane Configurator

Overview

Manitowoc builds cranes, which are put on a heavy duty truck chassis supplied by the customer. The truck-crane configuration must be checked by a team of engineers. There are multiple Microsoft Excel files used in this analysis. This analysis takes anywhere from three to five days. The analysis is extremely time consuming and should be reduced to one friendly graphical user interface.

Objective

Create a user friendly laptop based truck-crane configurator that can be used by anyone.

Approach

- A factory visit was organized to view/investigate the current truck-crane configuration process
- Manitowoc provided the team with the current spreadsheets used in the analysis
- A few ideas were considered, but using Visual Basic for Applications (VBA) in Microsoft Excel was selected
- Lots of communication was necessary to understand all the terms and calculations done in the sheets
- Truck and crane compatibility were verified by using sample data given by sponsor

Outcomes

- Three Microsoft Excel workbooks have been combined into one workbook
- The interface is user friendly, with one input sheet
- The analysis takes less than a few minutes
- There is a smaller chance for error, since only one user inputs the data in clearly labelled areas
- Marketing can now use the tool and allow engineers to work on other projects
- Less manpower required for configuration
- Shorter truck-crane configuration turnaround time