Automated Parts Books

Overview
At Rockland Manufacturing, their specialization in custom manufacturing causes them to constantly modify engineering drawings which then must be reflected in the parts books that are given to their customers. However, analysis of the order processing procedure in their engineering department continued to reveal an issue with how changes in engineering drawings are reflected in the final product’s parts books that are delivered to the customer. Therefore, it is necessary that we determine a procedure to automate this process and subsequently improve the process time and quality of the parts books.

Objectives
The team’s overall objective for this project was to reduce the overall lead time necessary to create parts books for Rockland’s customers in addition to improving the overall accuracy and quality of the parts books. This was to be completed by automating the process as much as possible to reduce the lead time and reduce human error.

Approach
- The team first downloaded the Autodesk Inventor Suite for use in conjunction with Rockland’s CAD files which were in Autodesk Inventor
- We then familiarized with the Autodesk Inventor Suite including Inventor, Publisher, and Vault to gain a better understanding of how they are used at Rockland.
- Next, we determined how Autodesk Publisher could be used to create views of the products that would be used in the parts books.
- Then, a template was created to mimic the current parts books at Rockland, so that resulting images created in Publisher could be output into the template.
- Parts and products were then modified through the use of Autodesk Inventor to verify that the resulting changes were automatically updated in the Autodesk Publisher file.
- Once the automatic updating was verified, we were able to utilize Autodesk Vault to store the files included in these products.

Outcomes
- The process time of creating a parts book for the sponsor was decreased from nearly one day for some products down to approximately 30 minutes.
- The quality of the part numbers referenced in the parts books was also improved and resulted in zero inaccuracies.