INTRODUCTION TO ZEANAH COMPLEX

The Zeanah Engineering Complex will provide educational facilities and a learning environment of 228,000 square-feet for young engineering students at the University of Tennessee. The $129 million dollar building is expected to open in the fall of 2021. Part of the educational facilities is going to be the Innovation and Collaboration Studio Store. The store will provide engineers with various items for check-out as well as equipment to buy. While the shop will be open to all students and faculty, it will be especially important to first-year freshman.

BACKGROUND

In order to provide the best experience for the department, we focused on these four categories: inventory, POS (point-of-sales), check-in/check-out system, and databasing. The main constraints faced were technical, legal, time, and economic.

MAIN CONTENT

We developed an ABC inventory model, which places items in three different categories based on the demand and the value of the item. A-items are high in value and low in demand, and C-items are small in value and high in demand. This helps to find the reorder point and find the most beneficial amount of inventory. We developed an Excel sheet with integrated formulas that are flexible with lead times and safety stock to be adjusted to best fit the customer's needs when the store opens. Additionally, we developed a smart part numbering system to ensure inventory efficiency.

We had planned to build interface options through a data repository in a PowerBI dashboard tied to a commercial POS system, but stakeholder feedback led us to change this to an Excel dashboard so that staff could easily update and utilize it. Instead of using a commercial POS system, the store will utilize the VolCard POS system.

CONCLUSION

Overall, it was challenging to design the plan for the store virtually without much data. However, we are proud to be a part of the development of the Zeanah Engineering Complex and the fact that it will make an impact on the learning environment of future UT engineering students.