Abstract

The world is becoming increasingly connected as technology progresses and globalization reaches more countries. This interconnection creates new challenges and new relationships for both people and businesses. Now, more than ever, businesses have to work together to satisfy the high demands of customers. In a world full of complex organizations that do business together, the supply chain has become the heartbeat of corporations. The interconnectedness of the organizations in the supply chain is critical to the success of all components of the supply chain. In order to gain an advantage in markets today, data needs to be used to determine where these relationships can be improved and how the supply chain can perform more efficiently or responsively. This senior project was dedicated to create an automated methodology to evaluate supply chain performance. Iterative development was utilized to progress the solution to the next stages after testing and data validation ensured accurate results. After thorough testing and ensuring data quality, much attention was paid to the user experience provided by the solution. The layout, interface, and user interaction were all considered and continually improved upon with a similar iterative development. Communication with the advisor and the client facilitated the development of the needs, desires, and improvements required to generate a useful output of data for a variety of users with as little need for training as possible. Once development and testing was complete, the final solution was presented to the client in order to be used in their operations and analyses. With the data and analyses presented by the solution, certain areas within the supply chain can be identified and improved upon to add value to the business. The methodology developed helped the client save time and money on their analyses, and enabled a wider range of users to engage in this type of analysis.