

Orientation Challenge: SCM Memo

By: Johnson Domacasse (#4471709)

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1. Introduction:

This document serves as an overview and as a reflection of how we (BNT1) managed the supply chain for the company: Jacobs industries. We will go into detail about supply chain management topics that have come up when running the simulation. These include:

- Supply and demand of different cities.
- The costs of managing the supply chain
- Analysing and improving on the data

Finally at the end a reflection will be given of how things can be improved and go differently if there were another simulation.

2. First days:

The terminology used for this game was a bit difficult for me because I could not be present for the first game. The first days were used to study how the game works. From my understanding, we have different areas that have a demand for a product that only we produce and that we only have one factory running at the moment. This factory is where headquarters is as well. From this information alone we realized that we need to make more factories and warehouses to supply the demand of the different cities. So we built 2 additional factories, one in the city "Entworpe" and one in the city "Tyran". From there we assumed that this would automatically be satisfying the demands in those cities. We were wrong because the main city was supplying this demand.

3. Understanding the situation:

It took us more than 200 days to realize that we were not making as much money as we thought we would. From there we noticed that in the main headquarters, there is an option to see the demand of the cities and the demand that we lost because we were not able to supply. From there we realized that we were missing out on a lot of demand. We began by playing around with the order point, quantity and the priority level of the warehouses. Sure enough, when we did this and waited a few hours, we noticed that the demand was slowly being satisfied. So our main focus was to get the big orders of 250 units to one city while also supplying the smaller orders of the surrounding cities. Once we finally supplied the 250 order, we started focusing on the other cities' orders. We built warehouses in the two cities that did not have any so we can supply to those as well.

4. Final days:

We were supplying a majority of the demand with some of them not being met. We concluded that our factory was not producing enough. However we waited too long with changing the production rate of the factories. This caused that some more demand was being missed later on. One other key factor is supply chain management that we completely overlooked is the costs. When we open the cash tab of the game, we could see where all the money is going. The production costs can potentially be lower if we plan ahead of how much products we need by a certain period of time using the data available to us. One cost that we didn't consider too much about was the shipping costs. There were two different types of shipping. One via truck and one via mail. The latter offered a cheaper and faster alternative for small orders. While the other offered a significantly cheaper option to ship larger orders by sacrificing the time taken to deliver the products but in doing so. While we were satisfying the large 250 unit orders, we were spending a large amount of money on shipping. When we realized that, we changed the shipping to this city's warehouse by truck so that they are cheaper. The others remained with mail shipping.

5. Reflection:

If I had to this all over again, there would be quite a few things I would do differently. I would begin a bit earlier with understanding how the game works. Instead of 100 days after the game started. I would pay closer attention to how the demand is and in which city and how much of that demand I am supplying. Based on this information make changes on the production rate of the factories or the maximum capacity of the warehouses. I would also pay more attention to the how much product I am shipping and how much it costs to do so. I would weigh the two options to see which is the best option for that matter. Finally I think I would produce more one factory in each area, to reduce both how much product they need to produce (lower costs) and the shipping costs because of inbound shipping.

My key takeaway is to take a better look at the data that is available and make decisions based on this data.