



SUPPLY CHAIN NETWORK DESIGN (PART 02)

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LESSON 01

Hey everyone. Welcome to lesson one. So, while trying to make some strategic decisions and to answer several business questions, there are varied aspects contributing to the optimal design of the supply chain network. This could include determining the right inventory policy to be set, the customer service level requirement and whether the same SLA would be applicable to all your customers. All of this would differ based on the inventory terms and the kind of revenue a customer would bring in. Also the transportation mode that needs to be selected and if there would be any focus around carbon emission and carbon footprint, if there are existing facilities or if we need to perform the study with a blank slate and thereby run a gravity study or greenfield analysis if required. Typically, along with the location of the warehouse and intermediary points, the design of the warehouse and the setup inside the four walls of the warehouse and the operations that belong to the implementation phase does not really have much influence when you are looking at a strategic viewpoint and optimizing the network, because all of these comes at the next level. To understand the true necessity of the exercise, let's just first consider a few real work examples and to warm up our brains and understand its impact on the business. So for example, let's consider that there is one of the leading drugstores chains in the country was faced with an opportunity for a leveraged buyout situation due to a decline sales and the best opportunity to reduce and improve their cash flow and reduce the operating expenses were to reevaluating the existing network. Another leading chemical manufacturing and distribution company began seeing a surge in their national sales all over the country. While their operations were set up in a regional manner and served regional customers. That is, each region functioned in a disaggregated fashion as its own and had its own warehouse and plan and were not optimal from a nationwide point. A strategic redistribution was necessary in their business not only to understand the required number of warehouses in the network, but also to optimize their locations along with repositioning their items and product distributions. This involved converting some of the plants to also act as DCs, along with the closures and opening of prospective new DCs. As a last example, one of the leading toys manufacturing company in North America wanted to understand how they can leverage a contract renegotiation negotiation as an opportunity with their largest customer for their benefit. So the customer who had 80% of the volume based on their internal strategic decision, agreed to pick up the load by themselves from the supplier warehouse. Now, the company used this opportunity to optimize their inbound cost and get closer to their suppliers. As now the outbound cost was already assumed to be nil because their customers agreed to pay for their outbound cost, that is, pickup from the warehouses. This not only was a great opportunity to reduce their own cost but also served as an opportunity to optimize their distribution as the right items in the right quantity distribute to the right customer. Now, let's ask a simple question, get a very obvious question why must we even do this exercise? Why look into designing or optimizing your network when everything at a high level seems to be going fine? Typically, what really leads to this analysis and model building is that the stakeholders involved and the people involved in decision making are trying to answer some sort of business question and find leads in

that direction. So one of the most important steps is to address this business question. So all the subsequent steps are designed to answer that or multiple other what if scenario questions. Therefore, naturally the first step is to understand the business question or the purpose of carrying on the study. In order to do so, ensure that adequate time is set up with stakeholders from varied departments in the organization and schedule business discovery meetings and also in person warehouse operation. Observations is mandatory and this is usually performed by our subject matter expertise. Now, there are several advantages of doing so by scheduling isolated individual meetings to understand the current process and expectations of each individual, team and department. This would also reveal gaps, issues and end goal expectations from the teams without bias or influence from other stakeholders thus giving a transparent view of the existing process and clear vision of this to be future state of the network. This is also a great opportunity to understand certain business nuances which may not be brought to light very easily. So, for example, certain business constraints which entail production of certain products or work centers within a specific region or incentives pertaining to regional commitment. Or let's say, a systemic constraint which forces or looks to isolate a certain flow path in the network and possibility of a constraint in the network where it offers no flexibility in terms of relocation of the same. These are some of the business nuances or some constraints, realistic constraints that have to be kept in mind. Data points and summaries can only reveal so far if these business discovery meetings which bring to light more relevant information and are very essential to design the model with informed assumptions to make it as realistic and close to the current supply chain network in order to project not just your current state, but also look into what your future state would look like and also be a true representation. Thank you so much for hanging in with me in the lesson one. I will see you on lesson two.

