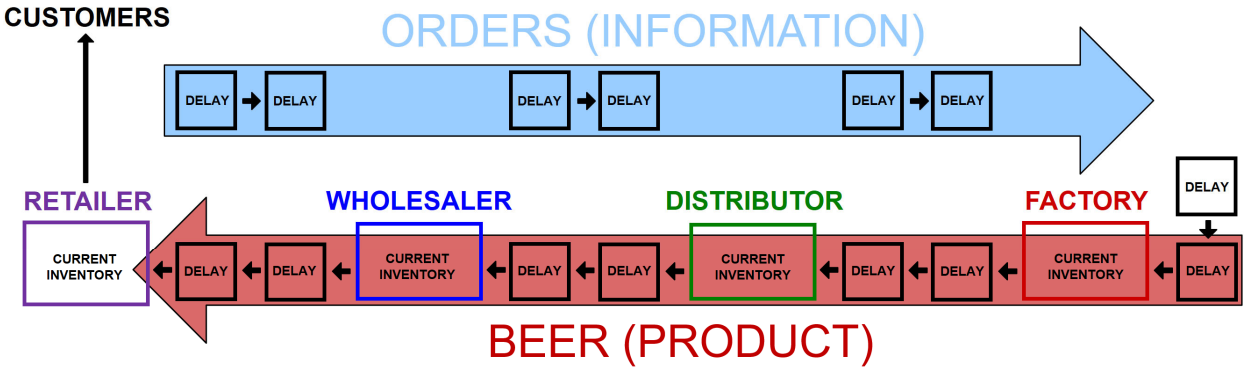
BerkeleyHaas

Preparing for the Experiential Supply Chain Exercise

Read this document to prepare for the Experiential Supply Chain Exercise (also known as the Beer Game), which we will play in class in Session 7.

Overview of the production-distribution system

The game is played in teams of eight, and each team member is permanently assigned to play one of four roles or "positions": retailer, distributor, wholesaler, or factory. Each position has two team members dedicated to it. Teams of eight compete against other teams of eight. Each position has an inventory of beer. Each position receives orders from and ships beer to its downstream customer (e.g., the retailer is the wholesaler's customer). Beer is received after a shipping delay. (In the case of the factory, beer is received after a production delay.) Orders are received from the downstream customer after a communication delay.



Basic rules

The object of the game is to minimize total costs for your team. The team with the lowest total costs wins. Costs are computed in the following way: the carrying cost of inventory is $1 per week per case of beer and the backorder costs (out-of-stock costs) are $2 per week per case of beer. The costs of each position – retailer, distributor, wholesaler, and factory – for each week, added up for the total length of the game, determine the total team cost.

Each position places orders via a web interface and the simulation communicates that information to the upstream supplier. No other communication about orders (either already placed or planned for the future) or shipments is allowed between positions. Retailers should not talk to anyone else on their team, nor should distributors, wholesalers, or factories. The reason for this is that in real life there may be five factories, several dozen wholesalers, and thousands of distributors and retailers, and one cannot possibly find out what all those parties are up to.

Playing the game

Each period, you make two decisions:
How many cases do you want to ship to your customer? ("current shipment")

- The number of cases you "owe" to your customer is their order you are receiving in this period ("current demand"), plus the orders you received in previous periods, but were unable to deliver ("backorders"), if any. You cannot ship more cases than you owe.
- You cannot ship more cases than you have in inventory.

How many cases do you want to order from your supplier? ("current order release")

- You are free to choose any number you like.

After you enter your decisions, click the "decision" box. You will then see a confirmation of these decisions in your upper left screen. Click on the "Return to Decision Form." Now you can click on "status*"* and this will update your upper right screen, indicating what your current shipment and order release values are, and the on hand inventory after shipments have been sent**.** *If you want to change any orders or shipments, you may do so at any point up until the instructor has updated the system and moved on to the next period.* If you do not enter any values, the simulation will assume you are ordering and shipping 0 cases.

Your cost performance information

At the beginning of each period, total costs for your *individual position* appear at the bottom of the upper right screen, broken down into inventory and backorder costs. For each case in inventory at the end of a week there is a $1 charge. For each backordered case at the end of a week there is a $2 charge. Your objective is to minimize the total cost for your team.

Shipment and information delays

For retailers, wholesalers and distributors, there is a *four-period delay* between placing an order and receiving the shipment. For factories, there is a *three-period delay* between choosing a production quantity and completing brewing beer.

The amount shipped to you from your supplier may be less than what you ordered if the supplier's inventory level is less than your order quantity.