

Exercise #3:

SUPPLY CHAIN *BEER GAME*



Beer game concerns the scope of the business dynamics and the study of supply chain performance, in dependent demand systems.

This game allows you to analyze how the lack of integration, communication, holistic and systemic thinking cause many distortions in the information exchanged between the various stages of the supply chain, creating excessive generating inefficiencies logistics costs.

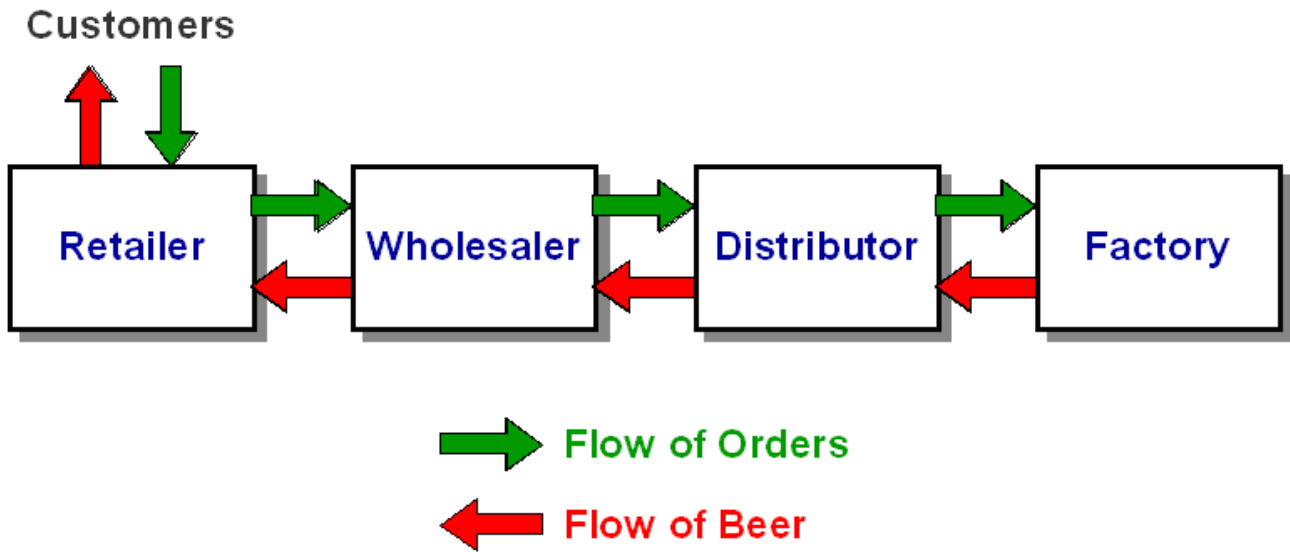
The aim

You should analyze the supply chain and the relationship between its elements, which are the following:

- retailer
- wholesaler
- distributor
- producer

Moreover, you should analyze their cost and income, which they are tied to the decisions you make every week.

The traditional aim of the Beer Game is to minimize the total cost for everyone in the supply chain by maintaining low stocks but nevertheless managing to deliver all orders.



Fundamental rules

For the sake of simplicity, everyone sells only one product: Lover's Beer.

Some data involved in the Beer Game are the following:

- The inventory carrying cost per unit (beer) in stock per week.
- The backlog cost per unit that you fail to deliver per week
- The purchase cost for each unit that is delivered to you
- The sales income for each unit that is delivered

For simplicity, the costs and the income are the same in all supply chain positions.

In order to better reflect the reality, consider the delay times for deliveries equal to 2 weeks.

Powersim MAS Olympic Games

Course of the game

In each round, the following happens:

- You receive goods from the supplier.
- You receive orders from the customer.
- You deliver to the customer as ordered.
- You order new goods.

We recommend to split the configuration inputs, which are fixed for all weeks, from decision weekly inputs. In this way, the only thing you need to do is to decide how much you will order each week.

End the game

The game ends after 52 weeks.