

Week-7L1 Inventory Mgmt. in a Complex Network

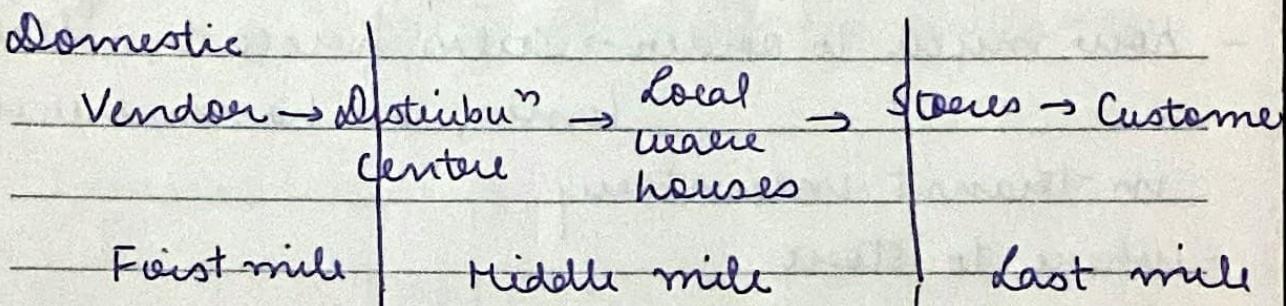
- concept of fake showing that there is no inventory → leads to more demand.

L2 Material Flow in a complex network

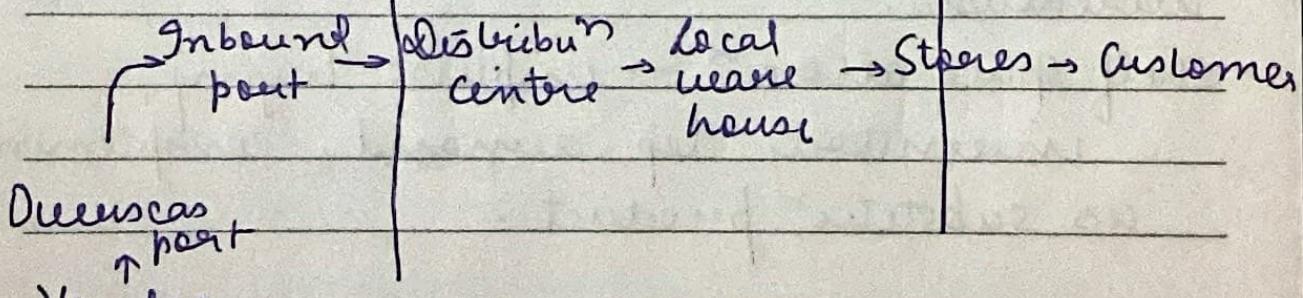
- 1000s of warehouses across continents & chains of distribuⁿ lines.
- Amazon has over 100 active warehouses & dozens of planned locaⁿs in US itself.

L3 Inventory Mgmt. at various steps

- Domestic



- Import



- Vendor → vendor managed inventory
- Overseas port → cargo loading
- Inbound port → unloading, gear. clearance
- Distribution center → space forecasting, searching, sorting, splitting large shipments
- Local warehouses → forecasting, searching, handling, order fulfillment
- Stores → shelf spacing, display, selecting, packaging, order fulfillment.

4 Inventory Mgmt. Decisions

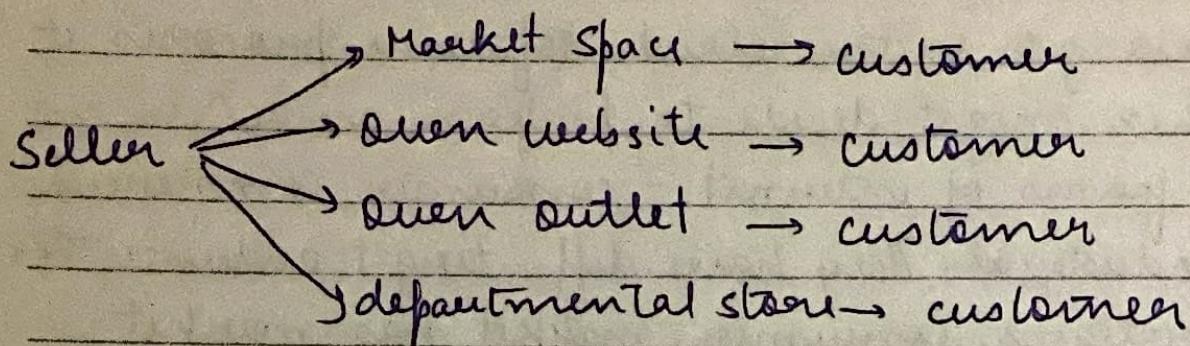
- When to order → reorder pt., review freq.
- how much to order → sales forecast, lead times, on hand inventory, in-transit inventory
- where to store
- locate SKUs
- allocation of items to the stores from diff. warehouses.
- Shelf space allocation → impulse buying, inventory dep. demand, complementary, vs substitut. product.

L5 Case on Inventory Allocation

→ Plant | SKU | Demand y_{u1} | y_{u2} | y_{u3} | y_{u4} | y_{u5}

- we might want to which SKU in which plant has increasing demand or vice versa
- → + Supply y_{u1} | y_{u2} -- -
- we might want to there are such SKUs in plants where every yr. $D < S$ or vice versa.

L6 Multi & Omni Channelling



Omni

