Inventory control

- When to order?
- How much to order?
- Demand
  - external or internal
  - deterministic or stochastic
  - constant or variable
Why to hold inventories?

- Economies of scale
- Uncertainties
- Speculation
- Transportation
- Smoothing
- Logistics
- Control costs

Types of inventories: raw materials, components, work-in-process, finished goods
Relevant issues

- Demand / Excess demand
- Lead time
- Review time
- Changing inventory
- Costs
  - Holding cost
  - Order cost
  - Penalty cost
The EOQ model

Assumptions:

- Demand is known and constant, \( d \) units per unit time
- Shortages are not allowed
- Lead time is zero
- Costs
  - Order cost is \( K + cx \) for \( x \) units
  - Holding cost is \( h \) per unit per unit time
- Initial inventory is zero