

# Engineering Design II

## Lecture 10. Concurrent Engineering Design

BME 494

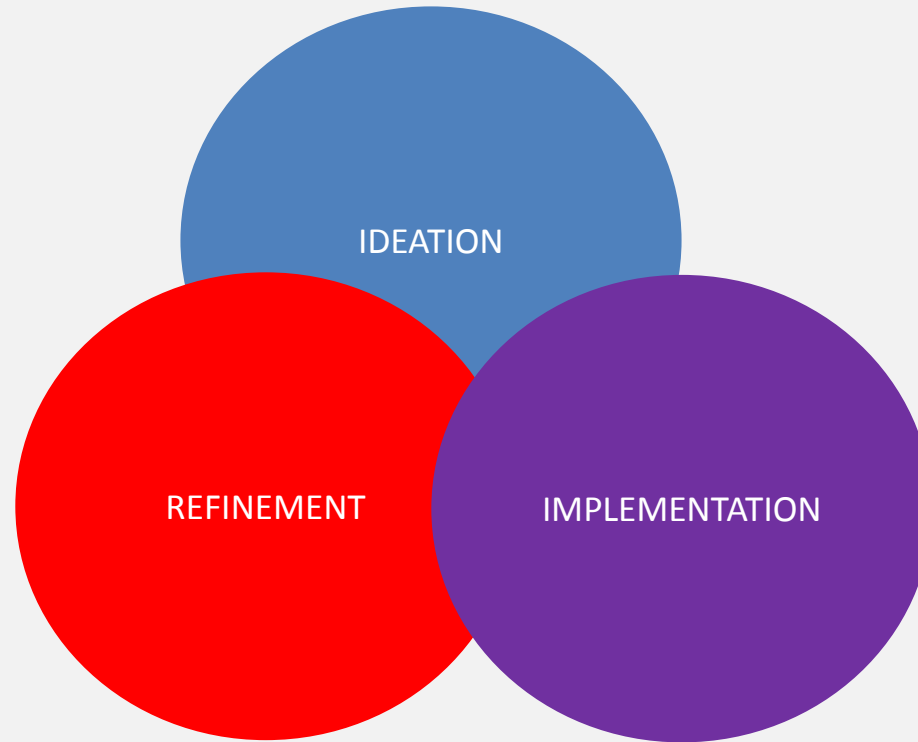
# Concurrent Engineering Design

---

- Engineering process consists of three overlapping areas:
  - Ideation
  - Refinement
  - Implementation

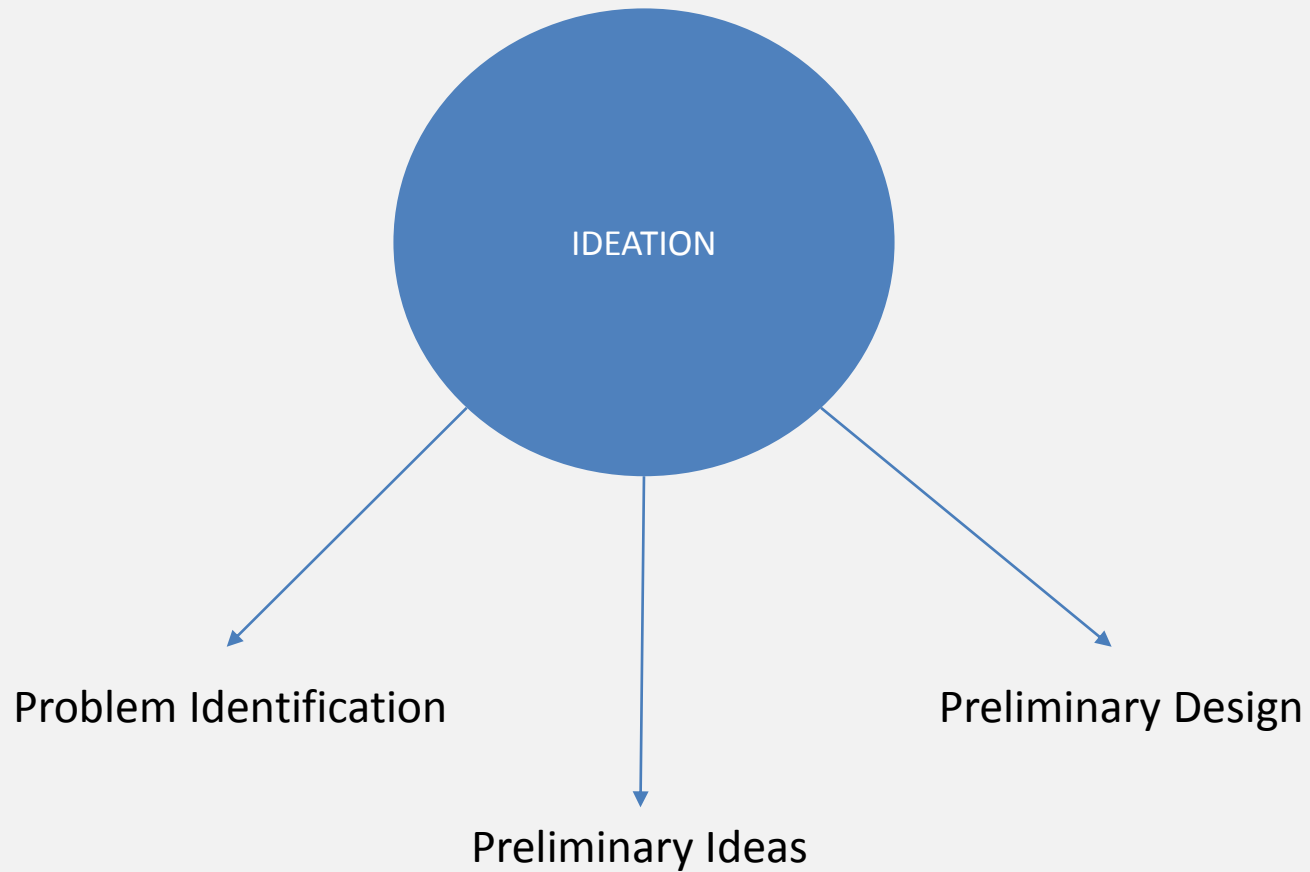
# Concurrent Engineering Design

---



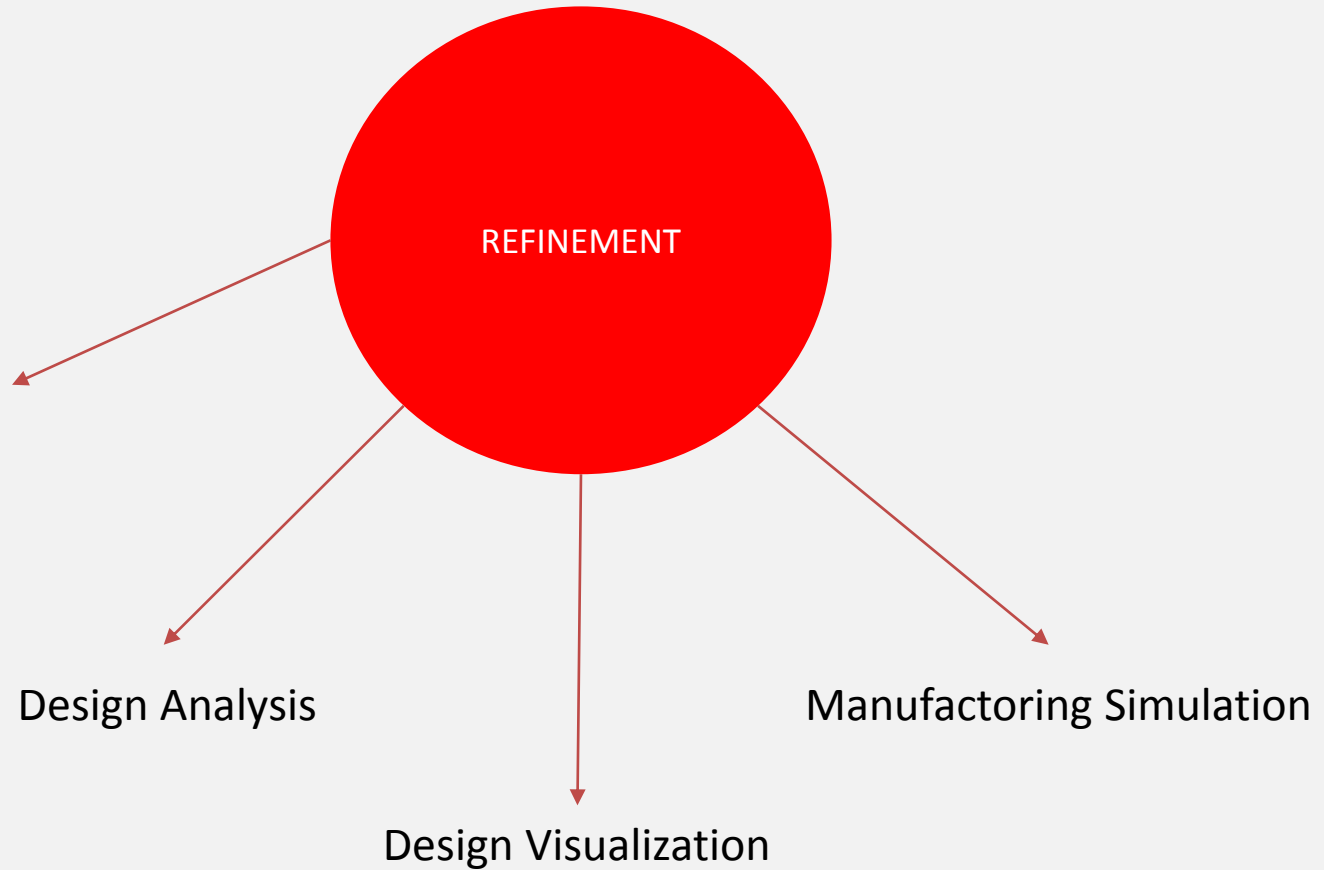
# Ideation

---



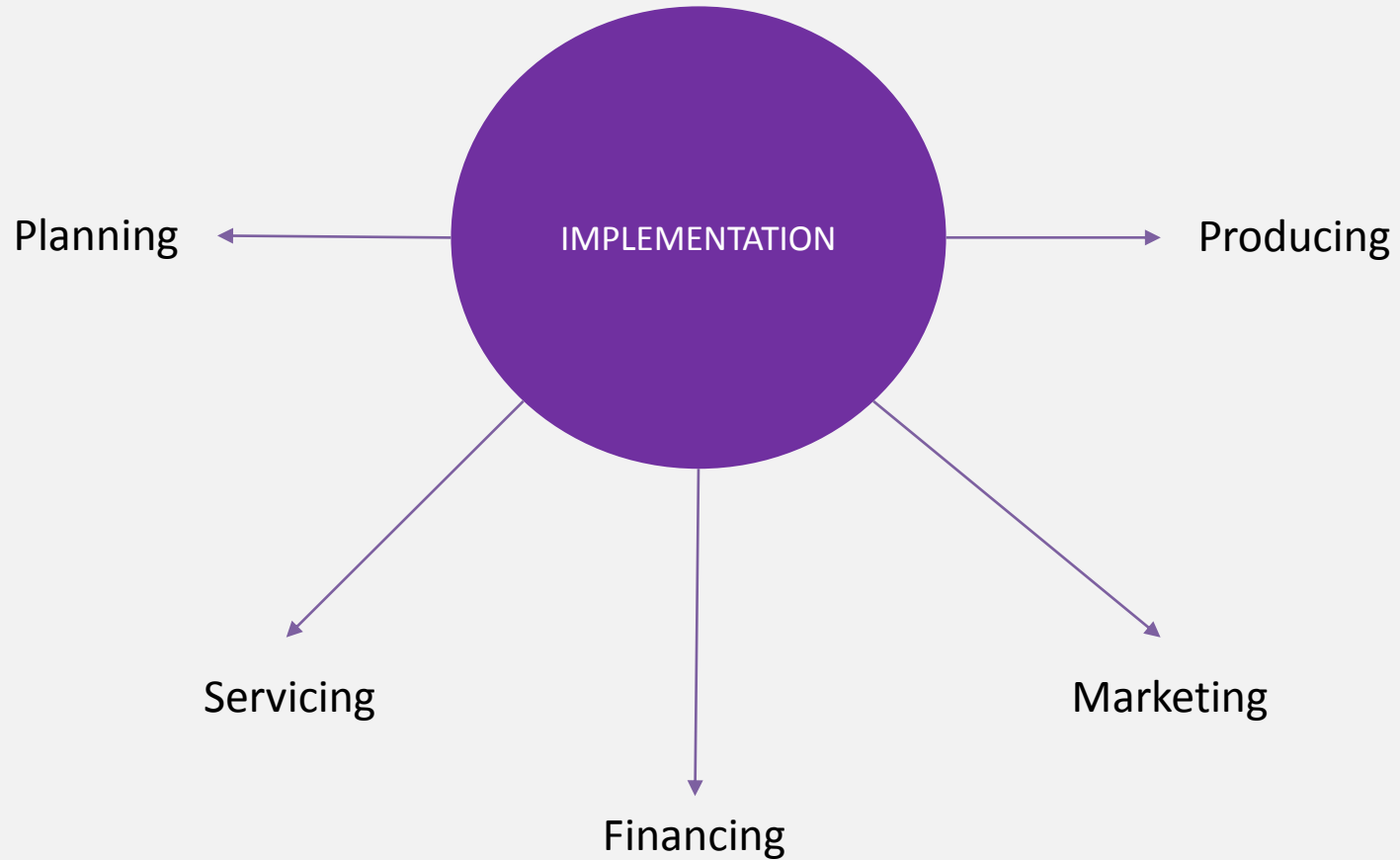
# Refinement

---



# Implementation

---



# Concurrent Engineering

---

- Axiomatic Design
- Design For Manufacturing
- Design For Assembly
- Taguchi Methods
- Group Technology
- Simulation

# Concurrent Engineering

---

- Optimize design satisfaction
- Simplify designs
- Ensure manufacturability
- Optimize production ease
- Optimize production cost



# Design for X

---

Focus on the final product not its manufacture

A design should be continually reviewed from the start to the end to make each step better.

Shorter production times

Fewer production steps

Smaller parts inventory

# Questions

---