

# CSE 333 – Software Engineering

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**Lecture 07**

# Outline

- Software process models
- Software process activities
- Coping with change
- The Rational Unified process

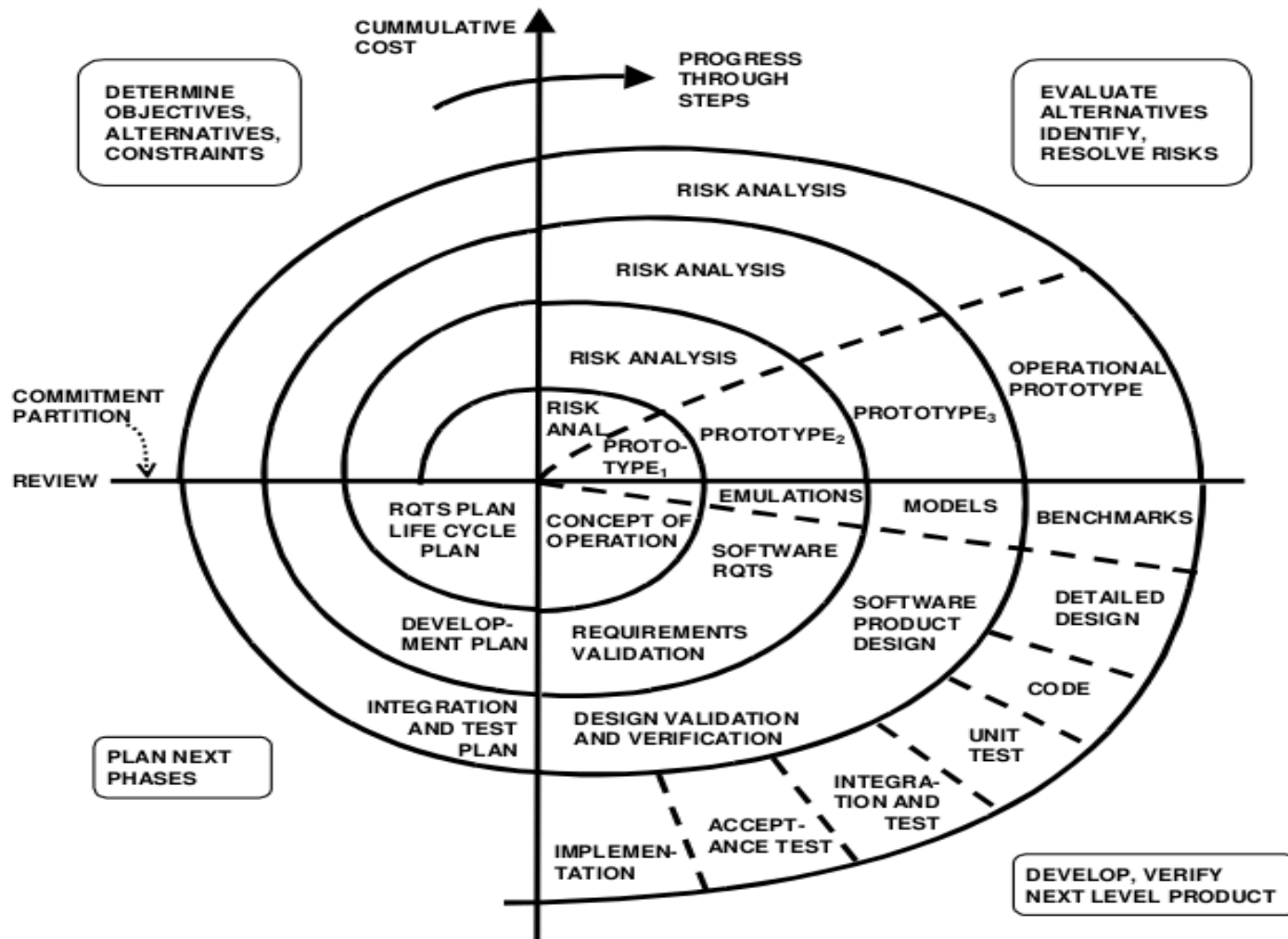
# Risk in a software process

- Risk management is the process of identifying, assessing and controlling threats to an organization's capital and earnings.
- These threats, or risks, could stem from a wide variety of sources, including financial uncertainty, legal liabilities, strategic management errors, accidents and natural disasters.

# Boehm's spiral model

- Process is represented as a spiral rather than as a sequence of activities with backtracking.
- Each loop in the spiral represents a phase in the process.
- No fixed phases such as specification or design - loops in the spiral are chosen depending on what is required.
- Risks are explicitly assessed and resolved throughout the process.

# Boehm's spiral model of the software process



# Spiral model sectors

- **Objective setting**
  - Specific objectives for the phase are identified.
- **Risk assessment and reduction**
  - Risks are assessed and activities put in place to reduce the key risks.
- **Development and validation**
  - A development model for the system is chosen which can be any of the generic models.
- **Planning**
  - The project is reviewed and the next phase of the spiral is planned.

# Spiral model usage

- Spiral model has been very influential in helping people think about iteration in software processes and introducing the risk-driven approach to development.
- In practice, however, the model is rarely used as published for practical software development.

Thank you!!