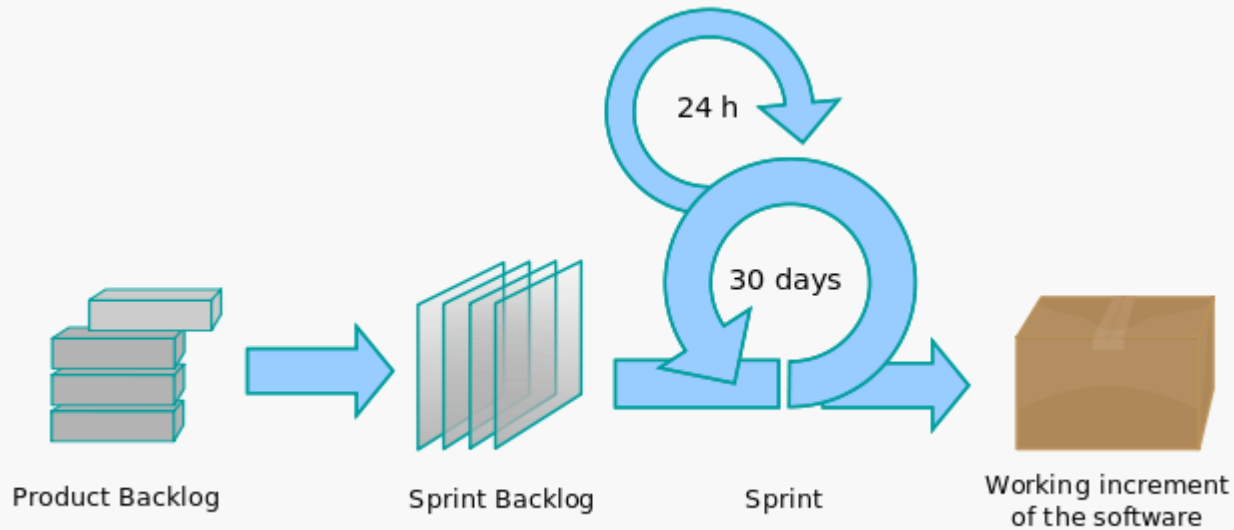


Appreciation for: Software Development Process



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SWEN-261 Introduction to Software Engineering

Department of Software Engineering
Rochester Institute of Technology

What do you want in a Software Development Process?

A few questions to consider:

- How does a software development process provide value to the customer?
- How does a software development process support a team to be predictable and dependable?
- How does a software development process improve software quality?

These are the principles software engineers follow.

- Customer-focused
 - *A customer representative must be on "the team"*
 - *The customer validates each increment*
 - *The customer defines and prioritizes the requirements*
- Use an iterative process
 - *Build a working increment frequently*
 - *Demo the increment to the customer and get feedback*
- Manage risk
 - *Involve the customer to validate and elaborate requirements*
 - *Work on architecturally-significant features early*
- Use an empirical process
 - *Process is transparent to all stakeholders*
 - *The team inspects their own process each iteration*
 - *The team adjusts their process from lessons learned in the previous iteration*



These are the core activities software engineers practice.

- Communicate
 - *Gather requirements to understand the customers needs and goals.*
 - *Demonstrate each project increment for the customer.*
- Plan
 - *Plan each iteration (sprint) of work so the stakeholders know what is expected.*
 - *Conduct retrospectives to improve the process.*
- Model
 - *Analyze the domain of the application for a deeper understanding of the requirements.*
 - *Design the system to meet the requirements.*
- Construct
 - *Implement a working increment within each iteration.*
 - *Test the system to validate that it meets the requirements.*
 - *Maintain the system by fixing bugs and creating new features.*
- Deploy
 - *Deploy software to the production environment.*
 - *Train users so they will succeed with the system.*



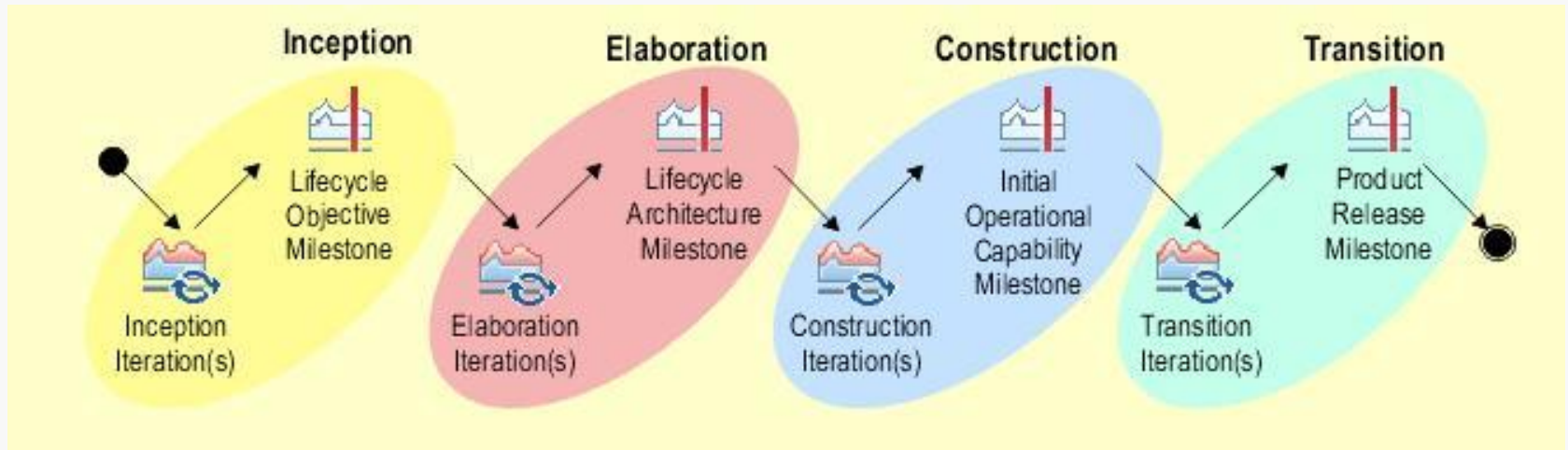
A defined process codifies the way in which a team will adhere to those principles and practices.

- Traditional waterfall
- Spiral methodology
- Feature-driven development
- Rapid Application Development
- Extreme programming
- Rational Unified Process

• OpenUP ← *your project will use this*



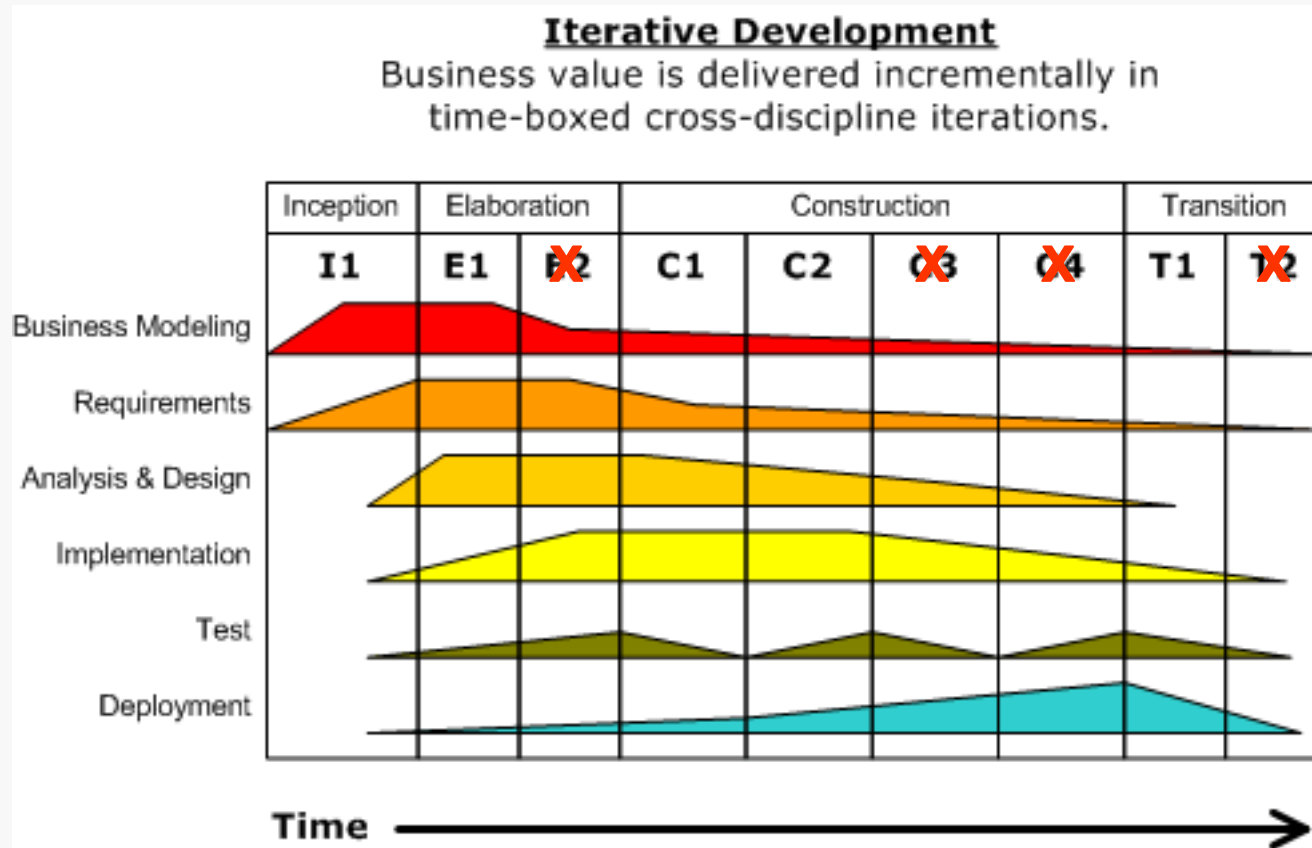
OpenUP describes project phases at the strategic level.



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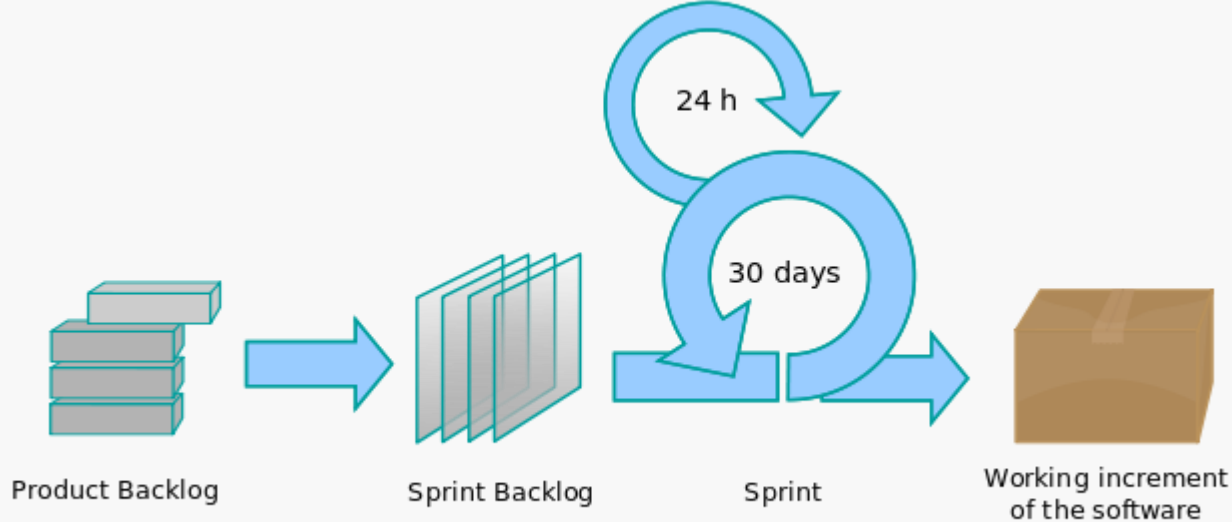
- **Inception**
 - *Manage requirements risks*
- **Elaboration**
 - *Manage architectural risks*
- **Construction**
 - *Build it out*
- **Transition**
 - *Deploy it*
 - *Training users*

A team's effort in different activity areas varies by phase.



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You will use a Scrum process to define tactical activities.



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- A *Sprint* is a single iteration of work that results in a working system that delivers identified value to the customer.
- Each Sprint has its own *Sprint Backlog* of features pulled from the *Product Backlog*.
- Every day the team is working the *Sprint Backlog* to direct their development.

Now you can take the quiz on Appreciation for software development process.