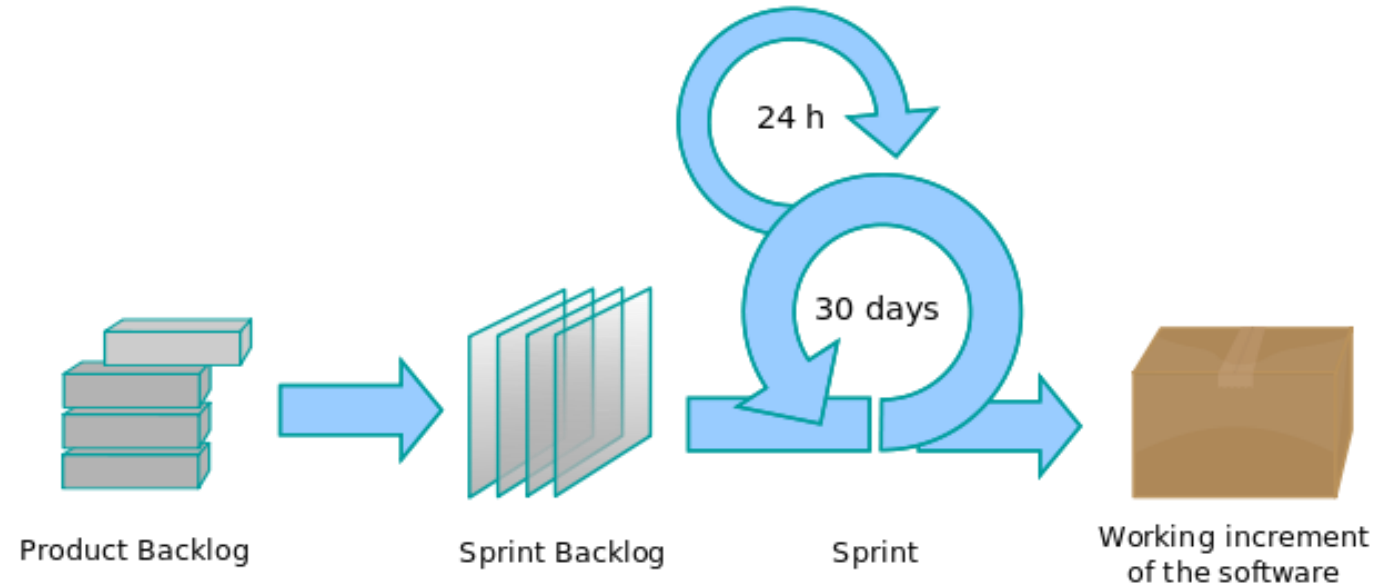


Appreciation for Software Development Process



By Lakeworks - Own work, GFDL, <https://commons.wikimedia.org/w/index.php?curid=3526338>

SWEN-261

**Introduction to Software
Engineering**

Department of Software Engineering

1 Rochester Institute of Technology



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

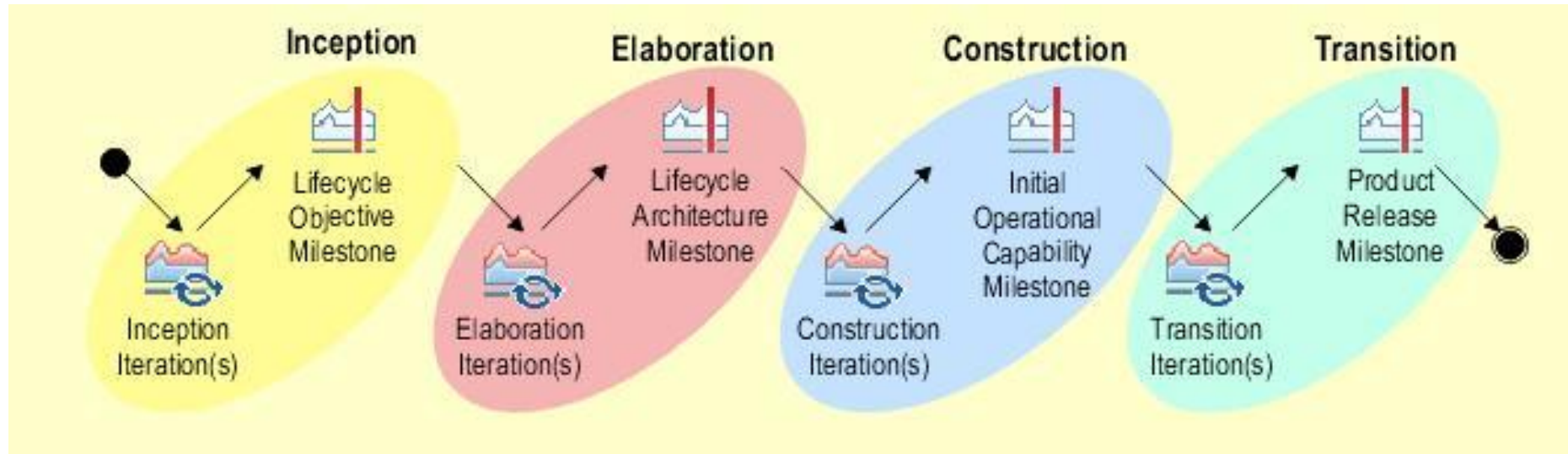
- *Deploy software to the production environment.*
- *Train users so they will succeed with the system.*

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.



By The original uploader was GFLewis at English Wikipedia - Transferred from en.wikipedia to Commons by IngerAlHaosului using CommonsHelper., EPL, <https://commons.wikimedia.org/w/index.php?curid=9030478>

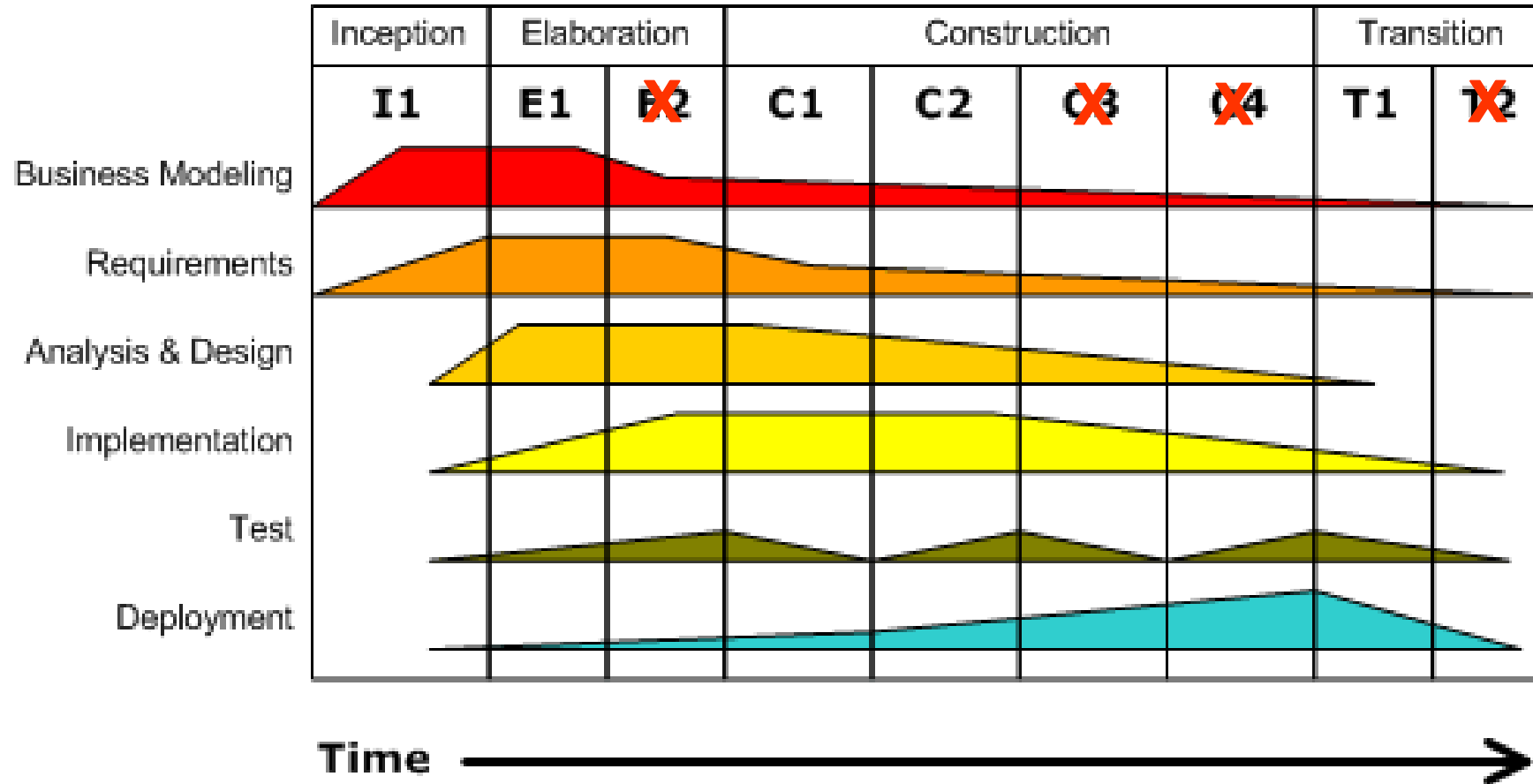
- Inception
 - *Manage requirements risks*
- Elaboration
 - *Manage architectural risks*

- Construction
 - *Build it out*
- Transition
 - *Deploy it*
 - *Training users*

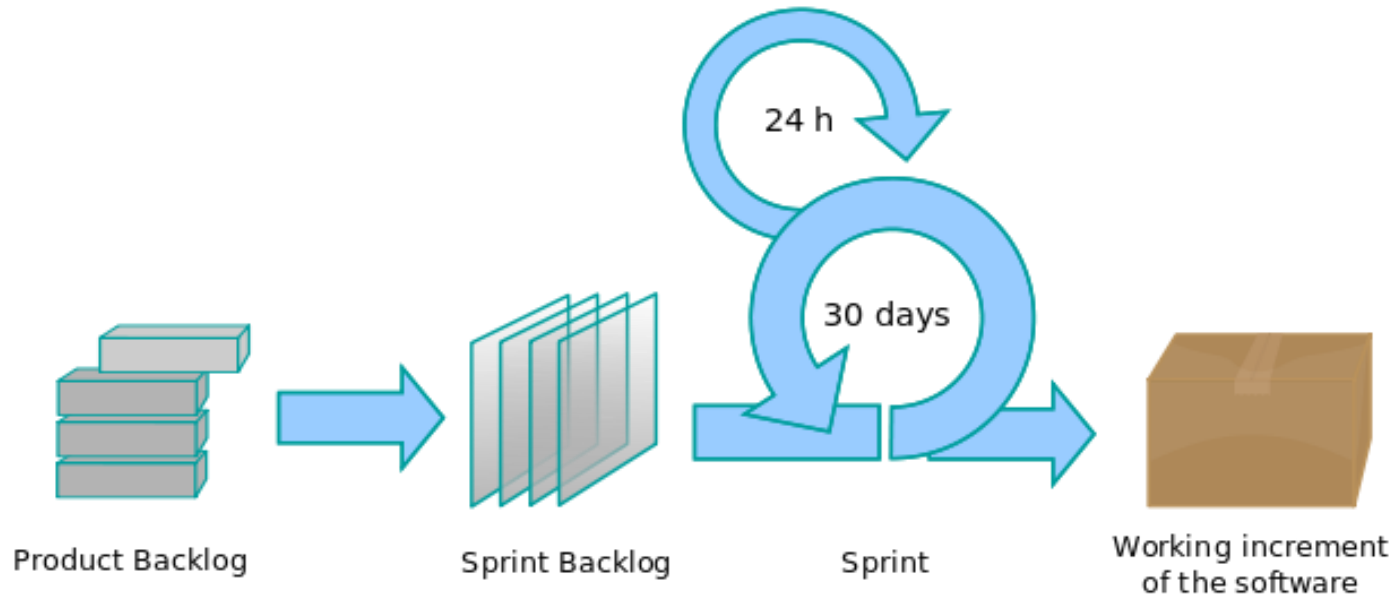
A team's effort in different activity areas varies by phase.

Iterative Development

Business value is delivered incrementally in time-boxed cross-discipline iterations.



You will use a Scrum process to define tactical activities.



By Lakeworks - Own work, GFDL, <https://commons.wikimedia.org/w/index.php?curid=3526338>

- 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.