Iterative Development an The Unified Process

Ratna Wardani

Semester Genap, 2012

About This Course

- Define an iterative and adaptive process
- Define fundamental concept in the Unified Process

Outline

- Iterative Process
- Unified Process: best practice and concept
- Unified Process Phase

Iterative Development

- Development is organized into a series of short, fixed-length mini projects (4-6 weeks) called iterations
- The outcome of each iterations is
  - Tested system
  - Integrated system
  - Executable system (incomplete systems)
- Each iterations includes : analysis, design, implementation and testing activities

Iterative Development

- A development cycle is divided into a sequence of four phases that partition the sequence of iterations. The phases are:
  - Inception : approximate vision, business case, scope, vague estimates
  - Elaboration : refined vision, iterative implementation of the core architecture, resolution of high risk, identification of most requirements and scope more realistic estimates
  - Construction : iterative implementation of remaining lower risk and easier elements, and preparation for deployment
 - Transition : beta test, deployment

From Sequential to Iterative cycle

One Iteration

Time

R: Requirements Analysis
D: Design
C: Coding, Unit Testing
T: Integration, Test
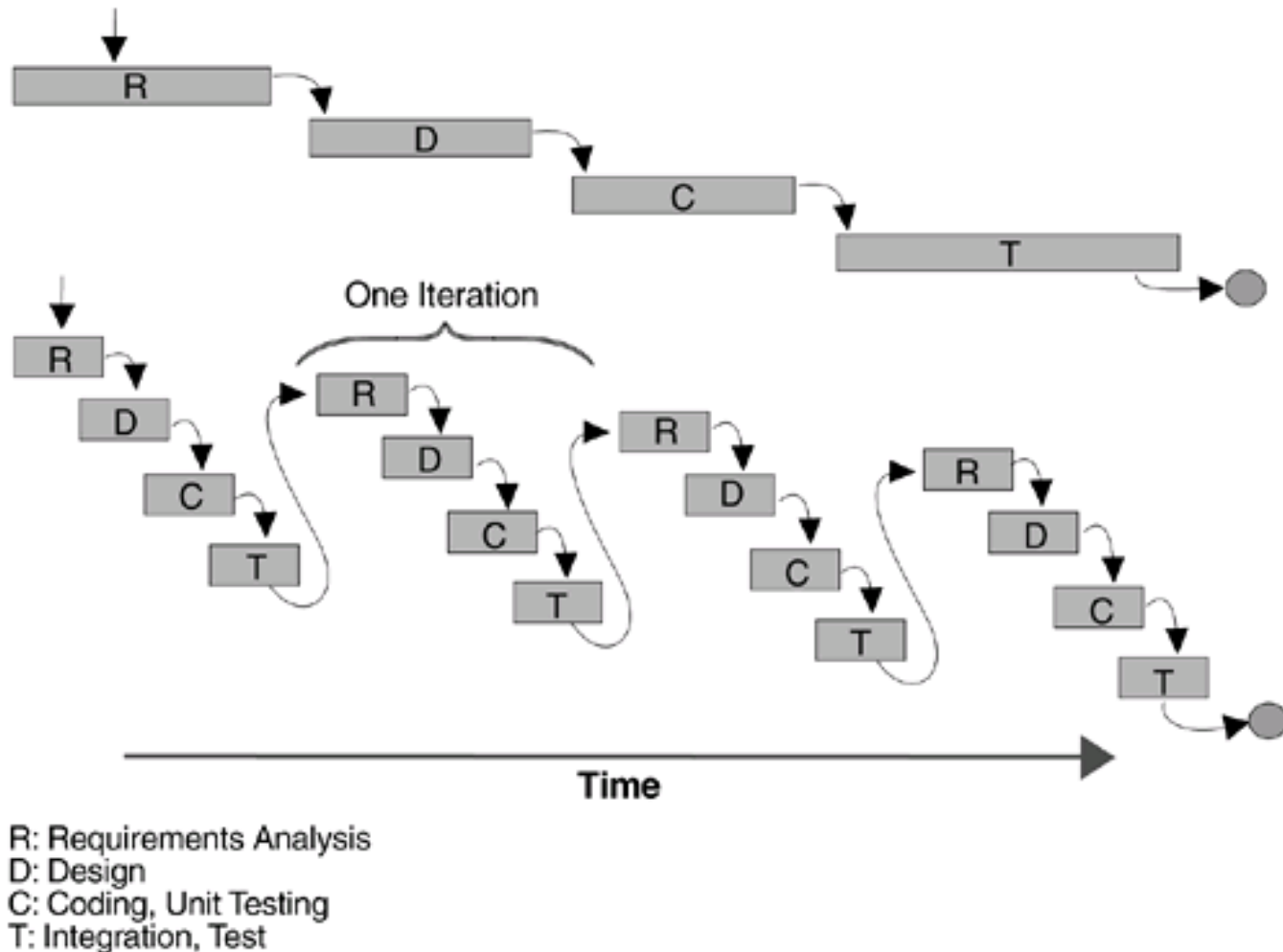
Benefits of Iterative Development

- The iterative approach accommodates changes in requirements and in implementation strategy.
- It confronts and mitigates risks as early as possible
- It allows the development organization to grow, to learn, and to improve.
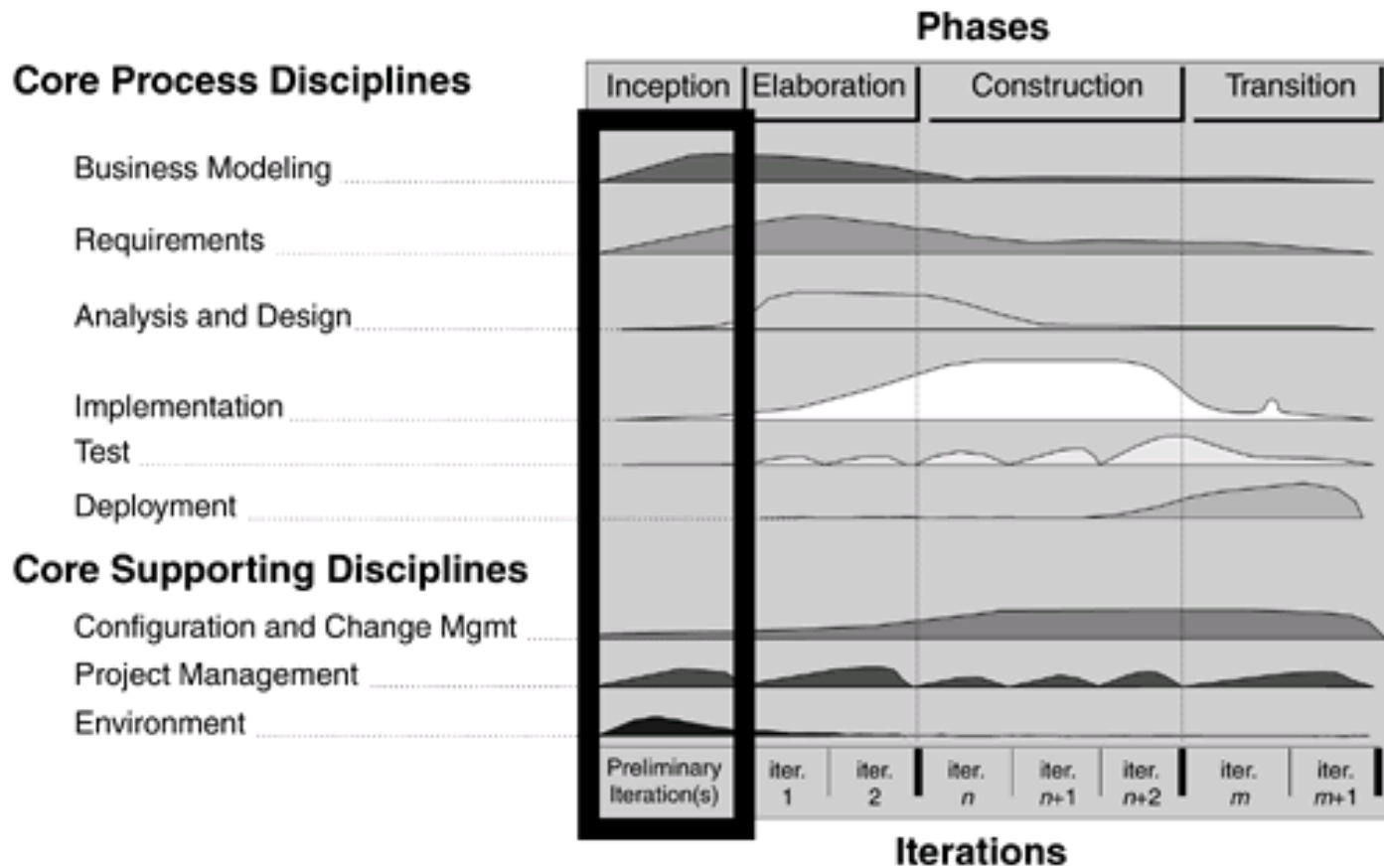- It focuses on real, tangible objectives.

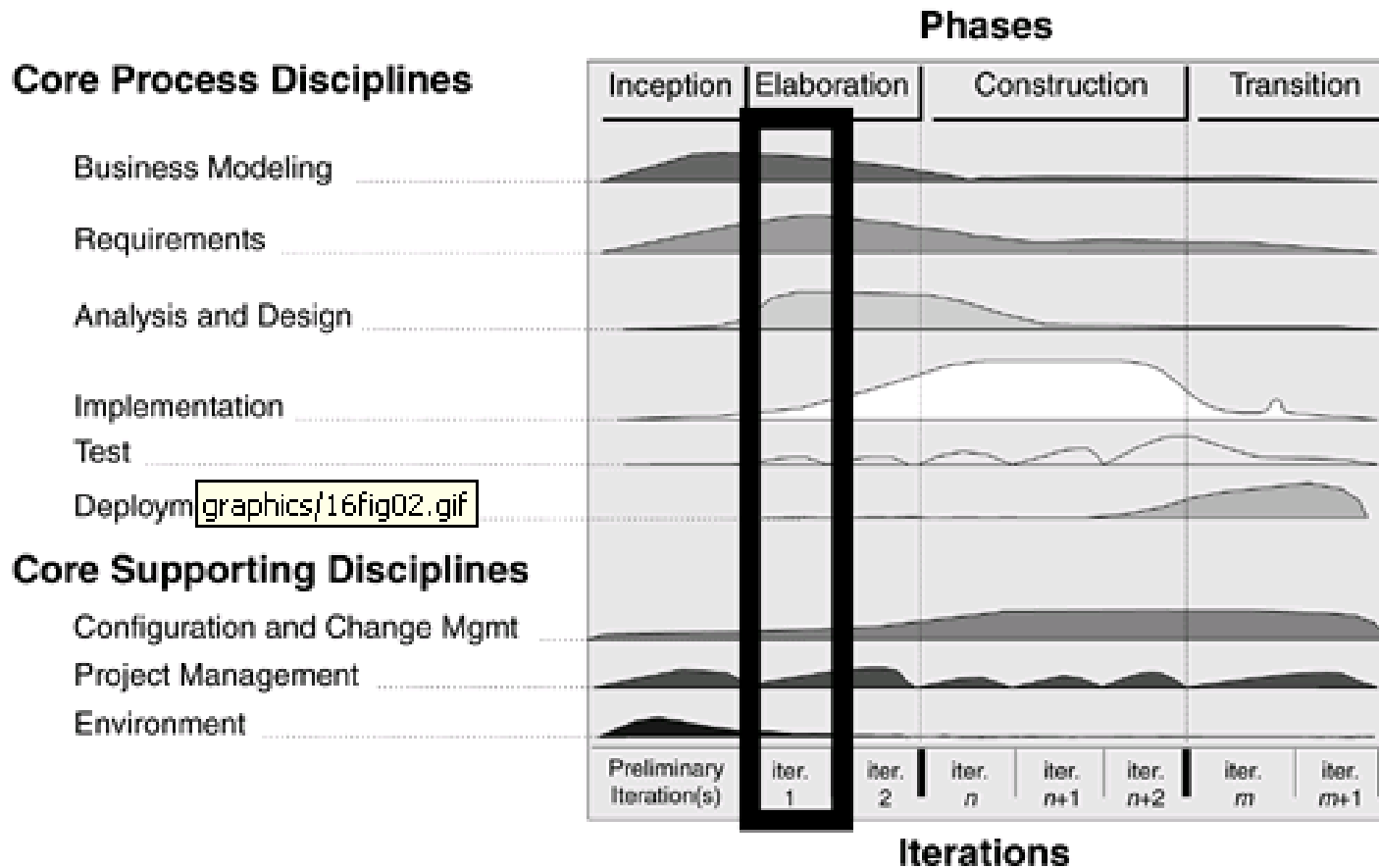# Activities across one development cycle
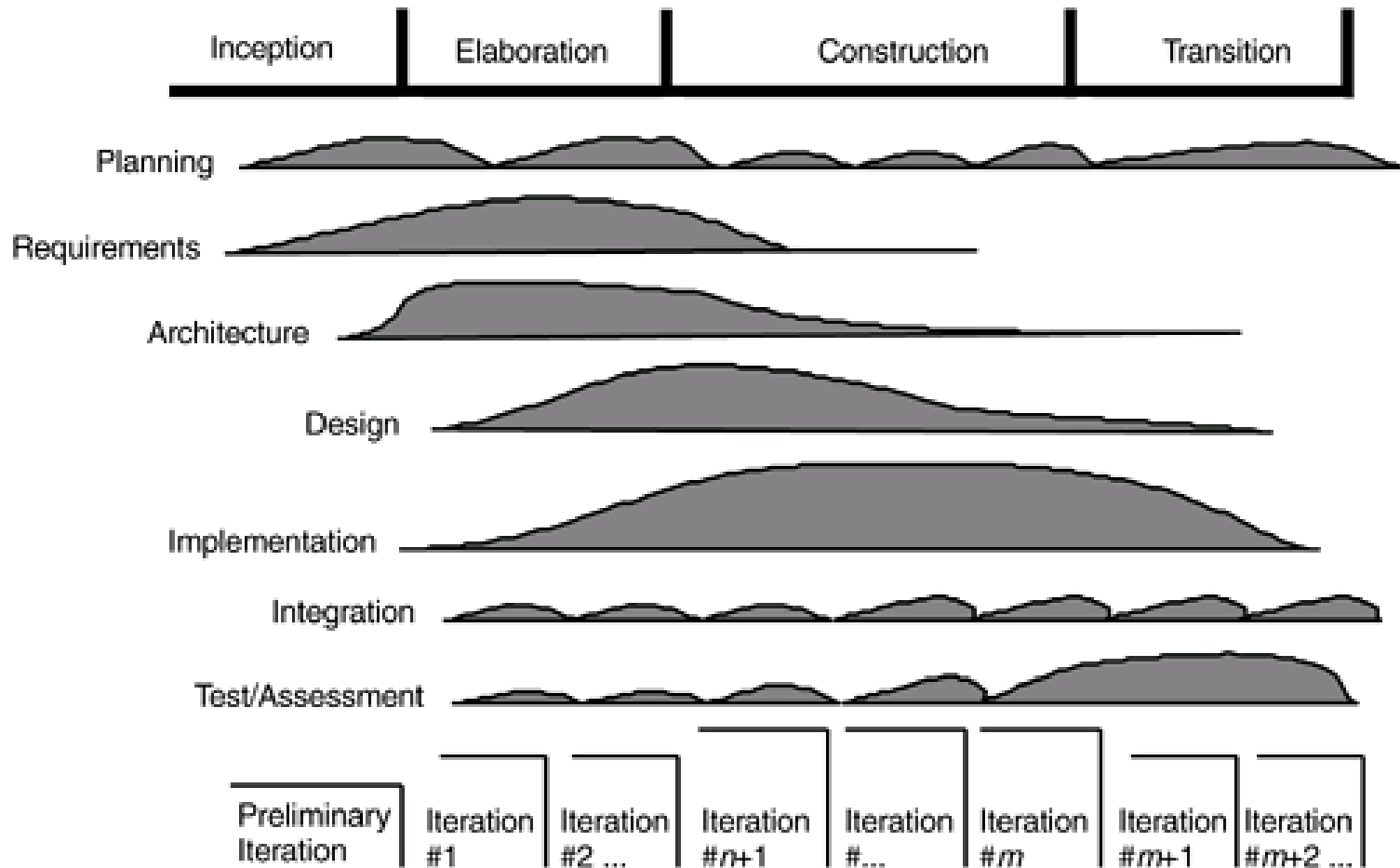
Typical Iteration Plans

- An iteration in the inception phase to define the project vision and the business case
- An iteration early in the elaboration phase to build an architectural prototype
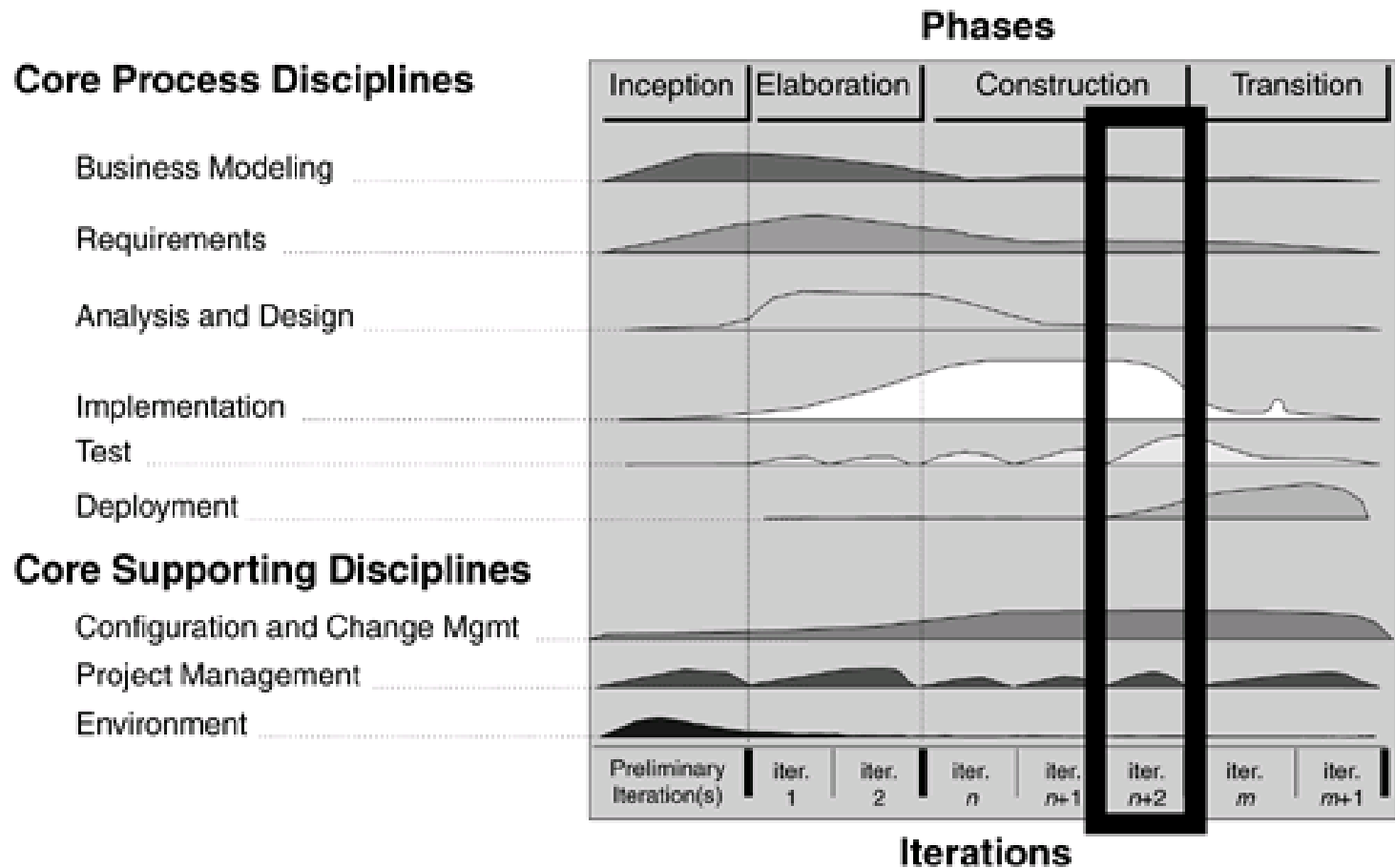- An iteration late in the construction phase to implement the system

Defining the Product Vision and the Business Case

Building an Architectural Prototype

Phases

Core Process Disciplines	Inception	Elaboration	Construction	Transition

Business Modeling

Requirements

Analysis and Design

Implementation

Test

Deploym graphics/16fig02.gif

Core Supporting Disciplines

Configuration and Change Mgmt

Project Management

Environment

Preliminary Iteration(s)	iter. 1	iter. 2	iter. n	iter. n+1	iter. n+2	iter. m	iter. m+1

Iterations

Implementing the system

Discussion

- What is the difference between waterfall and iterative development