



WHITESTEIN
Technologies

Object-Oriented Software Engineering

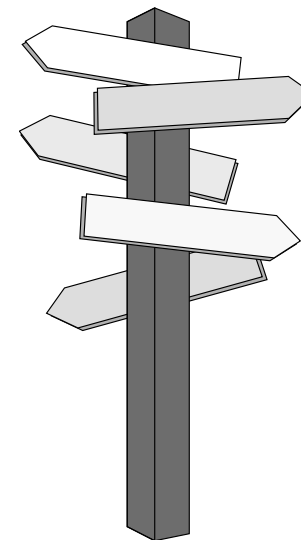
Introduction

February 12, 2000

Content



- ❑ Introduction
- ❑ Requirements Management
- ❑ Business Modeling
- ❑ Analysis & Design
- ❑ Implementation
- ❑ Testing
- ❑ Deployment
- ❑ Project Management
- ❑ Problem/Change Management
- ❑ Document Management



Sources

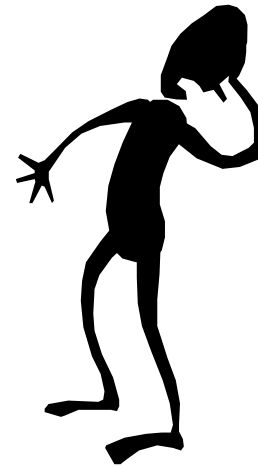


- ❑ Rational Unified Process
- ❑ Extreme Programming
- ❑ ICONIX Unified Object Modeling approach
- ❑ Whitestein Technologies Project Process Model
- ❑ “Old-fashioned” O-O development methodologies (OMT, OOSE, Booch, etc.)
- ❑ The best SW engineering practices

Risk: The Basic Problem



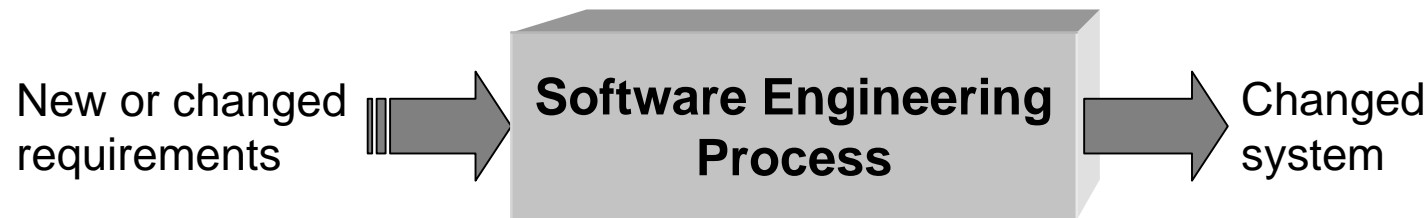
- ❑ Schedule slips
- ❑ Project canceled
- ❑ System goes sour
- ❑ High defect rate
- ❑ Business misunderstood
- ❑ Business changed
- ❑ False feature rich
- ❑ Staff turnover



Software Engineering Process



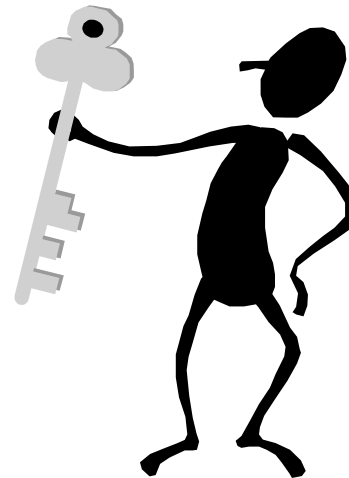
- ❑ a set of partially ordered steps intended to build a software product, or to enhance an existing one
- ❑ the process of developing a system from requirements, either new (initial development cycle) or changed (evolution cycle)



Process Characteristics



- Project-oriented
- Iterative-incremental
- Object-oriented
- Use case driven
- Visual modeling techniques
- Architecture centric
- Managed and controlled
- Component based
- Automated
- Generic and configurable



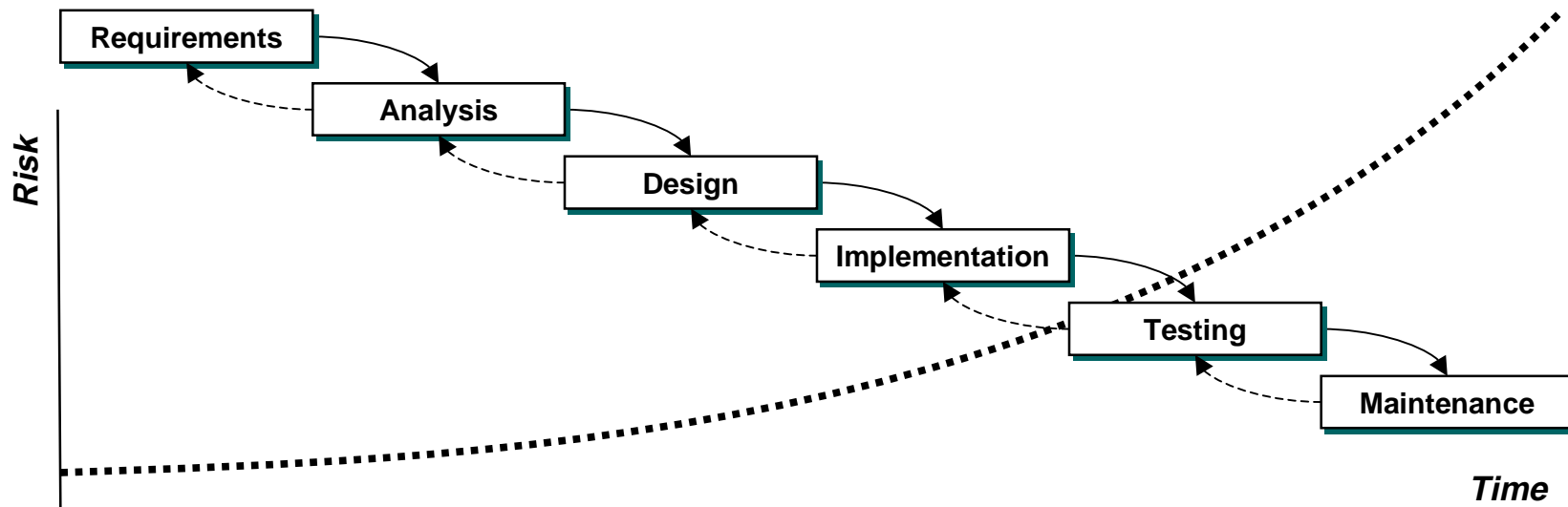
“Classical” Waterfall Lifecycle



- ❑ Disciplined development
- ❑ Complete end-phase documentation
- ❑ Clear and easy manageable
- ❑ Good structured programs



- ❑ Expensive requirements change
- ❑ Difficult to meet real user's needs
- ❑ Product is delivered only at the end
- ❑ Difficult to deploy product at once



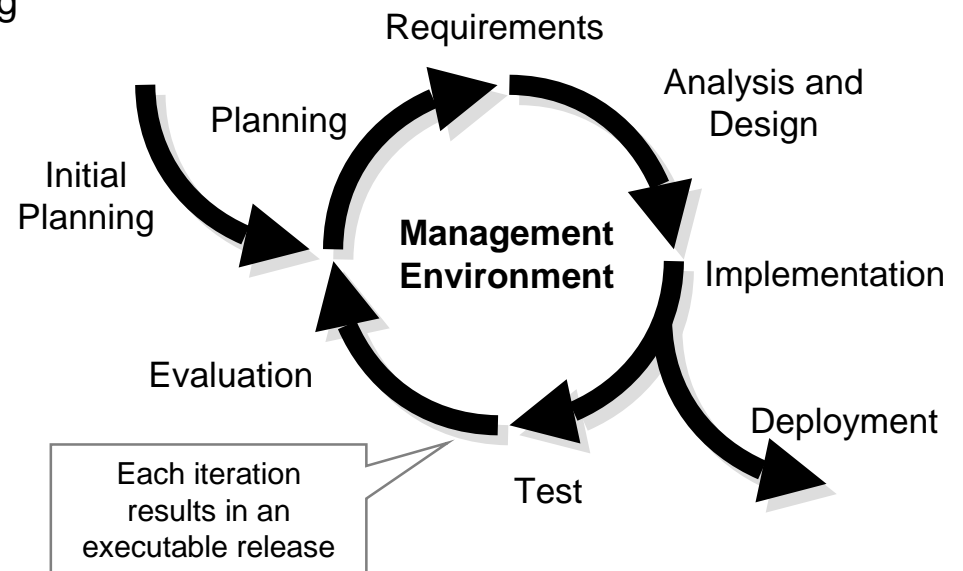
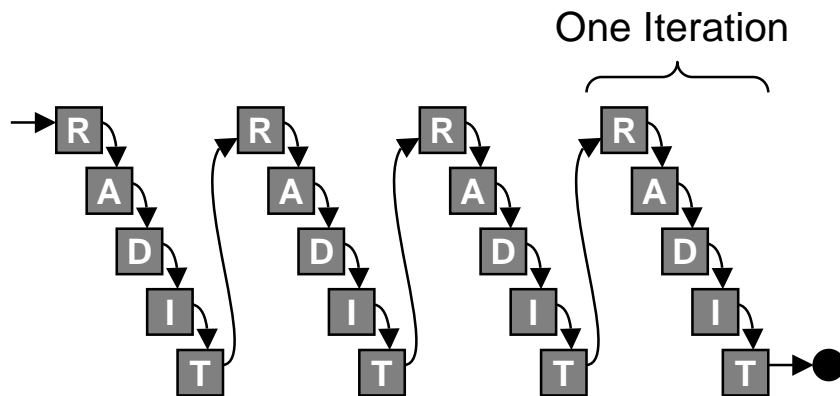
Iterative-incremental Lifecycle



- ❑ Soon deployment of first increments
- ❑ Lower investment for deployment
- ❑ End-user's learning → better requirements
- ❑ Step-by-step deployment
- ❑ After abortion there is something running



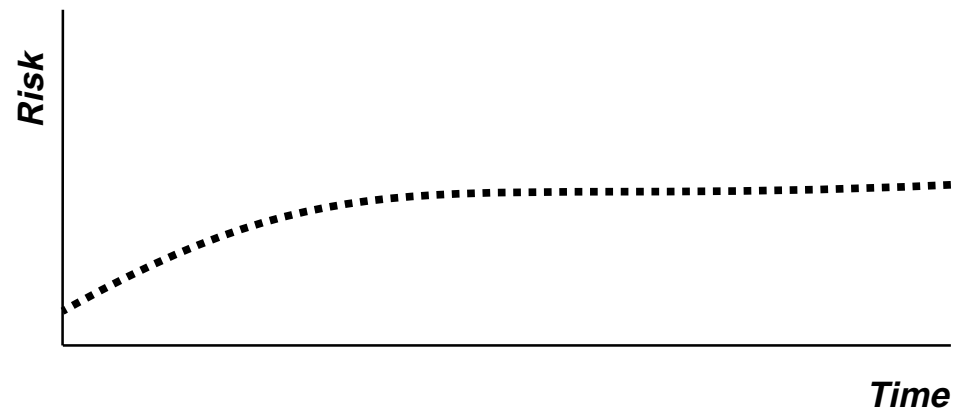
- ❑ Open architecture created first
- ❑ Difficult to manage



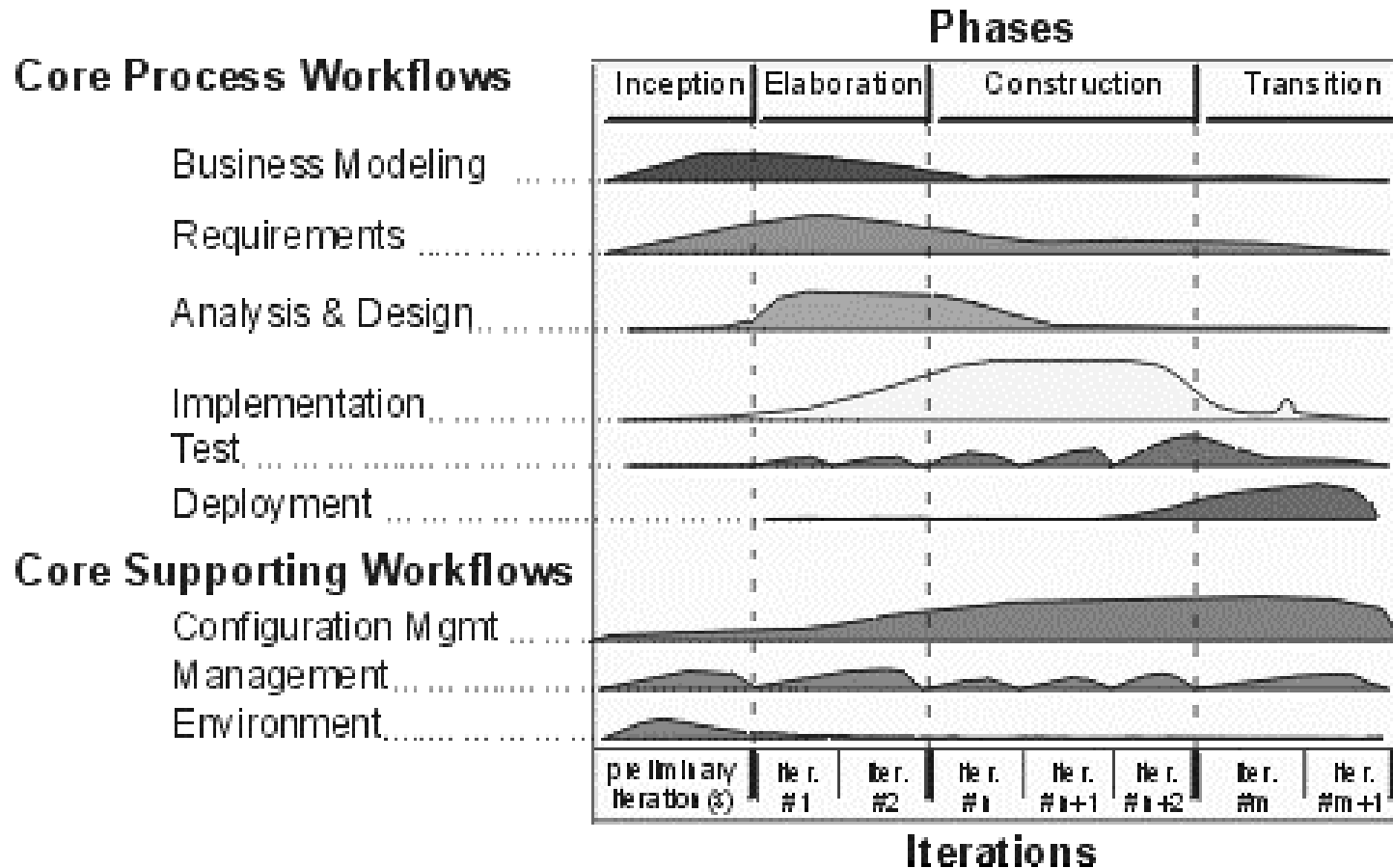
Reducing the Cost of Change



- ❑ Incremental change and iteration of solution
- ❑ Short release cycles and iterations; “driving the car”
- ❑ Small initial investments
- ❑ Lots of practice in modifying the design
- ❑ A simple design
- ❑ Quality work
- ❑ Good communication
- ❑ Rapid feedback
- ❑ Courage
- ...



RUP Schedule Framework



Information Evolution

