Global Information Systems:

Development Frameworks

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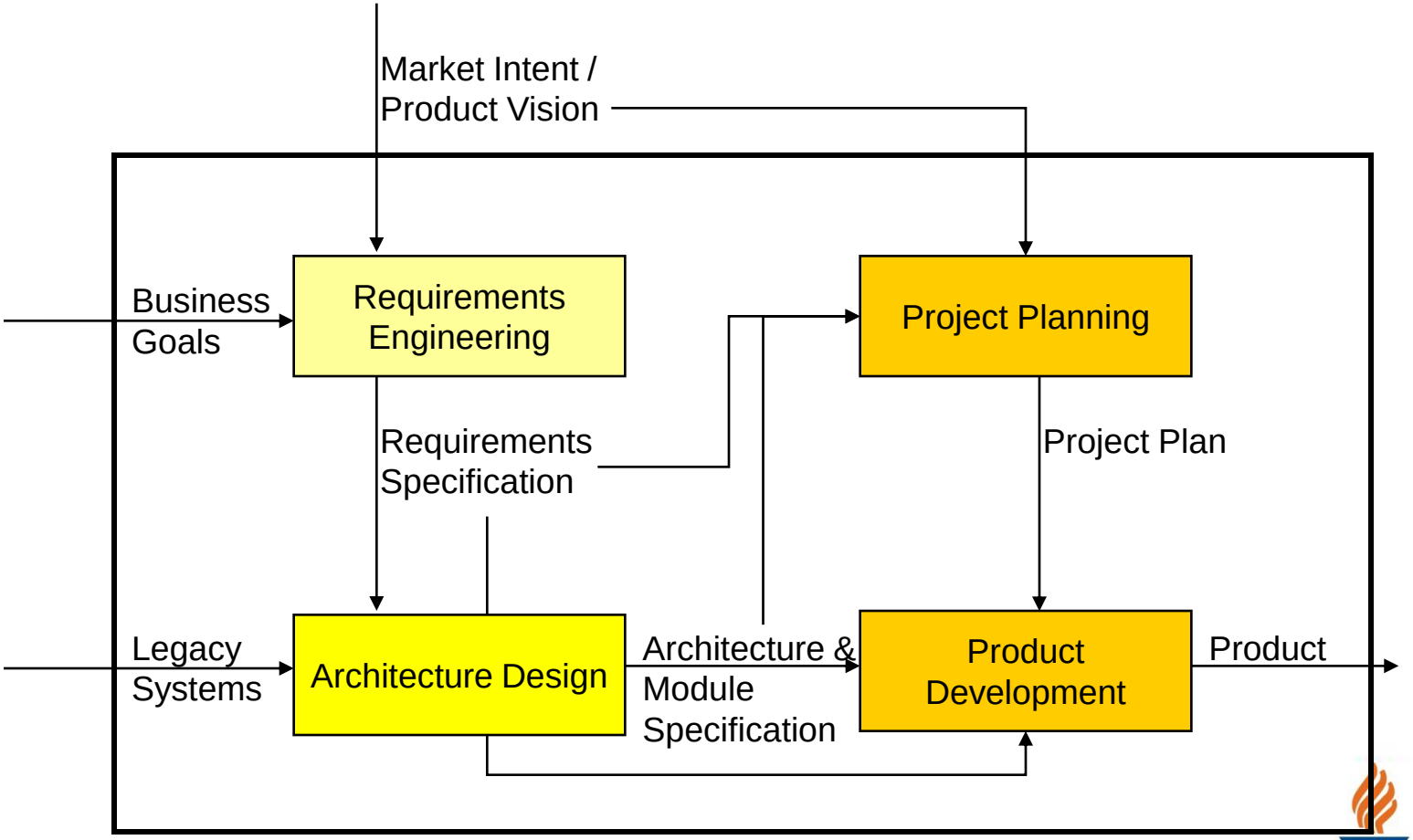
Assumptions

- Scenario: Global Software Development
  - Multiple developers in different locations
  - Developing software for various markets
  - Distributed development, distributed distribution
- Process Framework
  - Detailed discussion of process parts
- Assumption: Usage of development models

Potential views

- Internationalization (Management, strategy)
- Outsourcing / offshoring (Management, strategy)
- System development methods / process view (Information Systems)
- Network view (multiple perspectives)
- Specific views
  - Culture
  - Coordination
  - …

Process Framework (Sangwan et al., 2006)



Decision points (Sangwan et al.,2006)

1. Initiate research
   - Developing new products / services
2. Initiate requirements definition and architecture design
3. Developing a product / service
   - Scope
   - Schedule
   - Investments
4. Releasing a product / service
5. Removing a product / service

Process Framework: The Open Unified Process

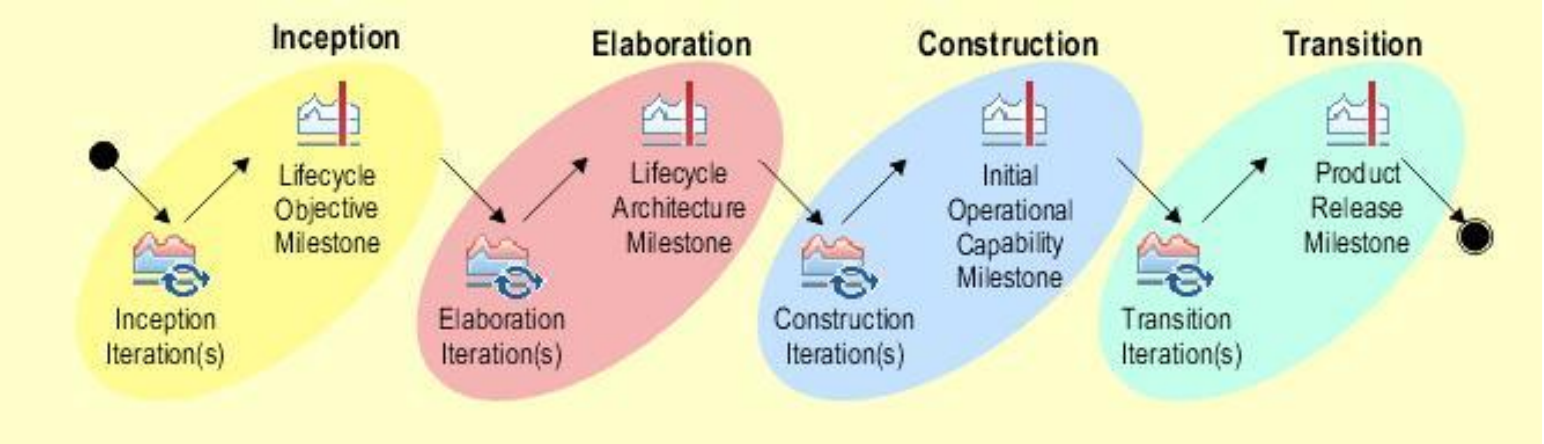
- Basis to structure the development of global information systems
- Framework for software engineering
- Adaptable framework
  - E.g., agile unified process, configured methods, plugins
- Goals (Eclipse, 2007)
  - Collaborate to align interests and share understanding
  - Balance competing priorities to maximize stakeholder value
  - Focus on the architecture early to minimize risks and organize development.
  - Evolve to continuously obtain feedback and improve
- http://www.eclipse.org/epf

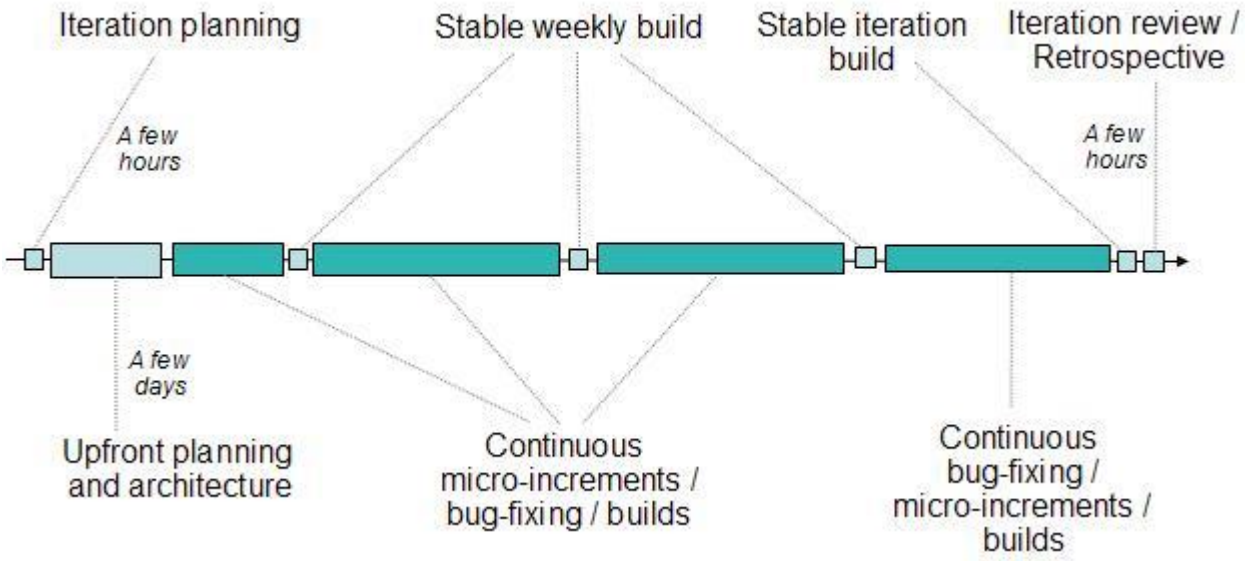
The Open Unified Process – Project Lifecycle

- Inception. Do we agree on project scope and objectives, and whether or not the project should proceed?
- Elaboration. Do we agree on the executable architecture to be used for developing the application and do we find that the value delivered so far and the remaining risk is acceptable?
- Construction. Do we find that we have an application that is sufficiently close to being released that we should switch the primary focus of the team to tuning, polishing and ensuring successful deployment?
- Transition. Is the application ready to release?

[Source: http://www.epfwiki.net/wikis/openup/]

Open Unified Process – Project Lifecycle





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The Open Unified Process – Disciplines

- Architecture
- Configuration and Change Management
- Development
- Project Management
- Requirements
- Test

[Source: http://www.epfwiki.net/wikis/openup/]

The Open Unified Process – Disciplines

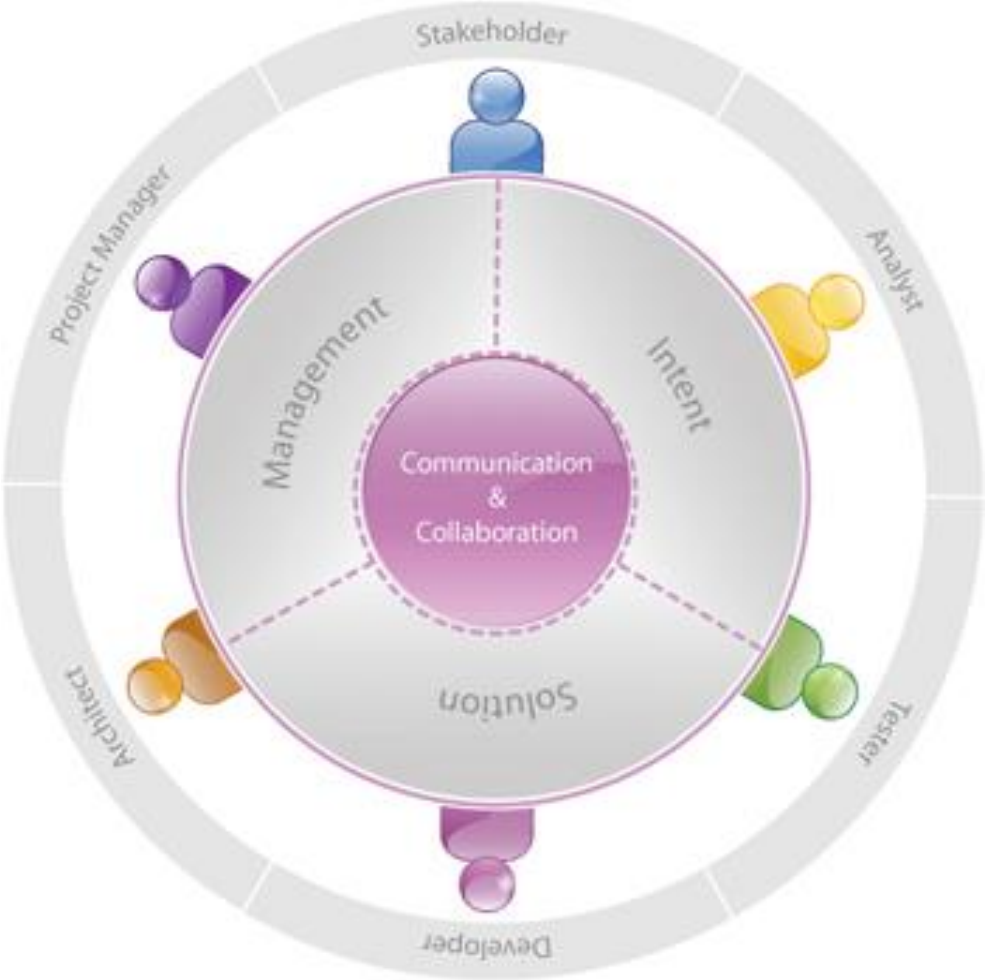
- Structured as *tasks*
- Leading to *work products*

- Architecture
  - Architecture Notebook
- Configuration and Change Management
- Development
  - Design
  - Build
  - Developer Test
  - Implementation

- Project Management
  - Iteration Plan
  - Project Plan
  - Work Items List
  - Risk List
- Requirements
  - Supporting Requirements Specification
  - Vision
  - Use Case
  - Glossary
  - Use-Case Model
- Test
  - Test Case
  - Test Log
  - Test Script

[Source: http://www.epfwiki.net/wikis/openup/]

The Open Unified Process – Roles



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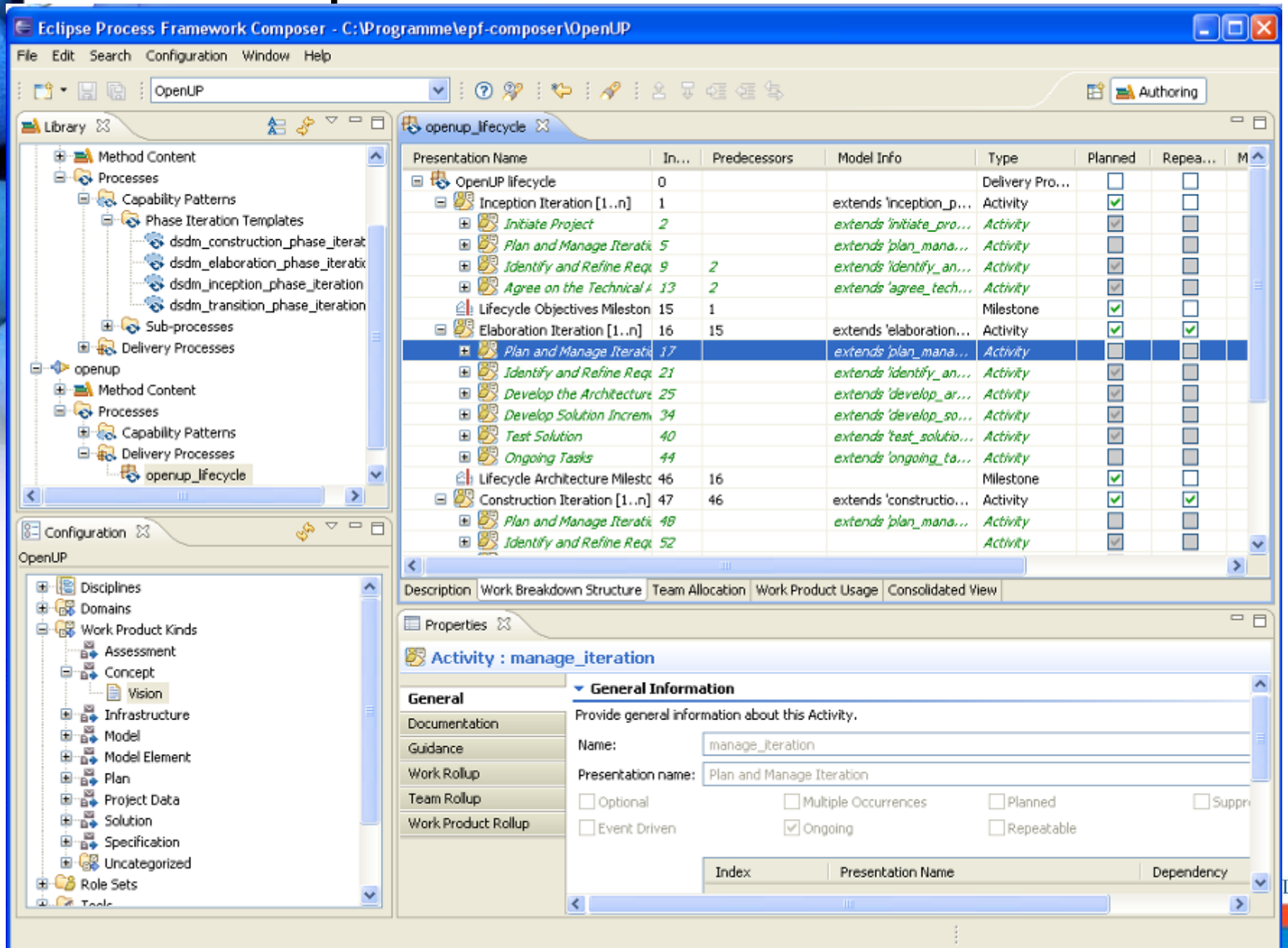
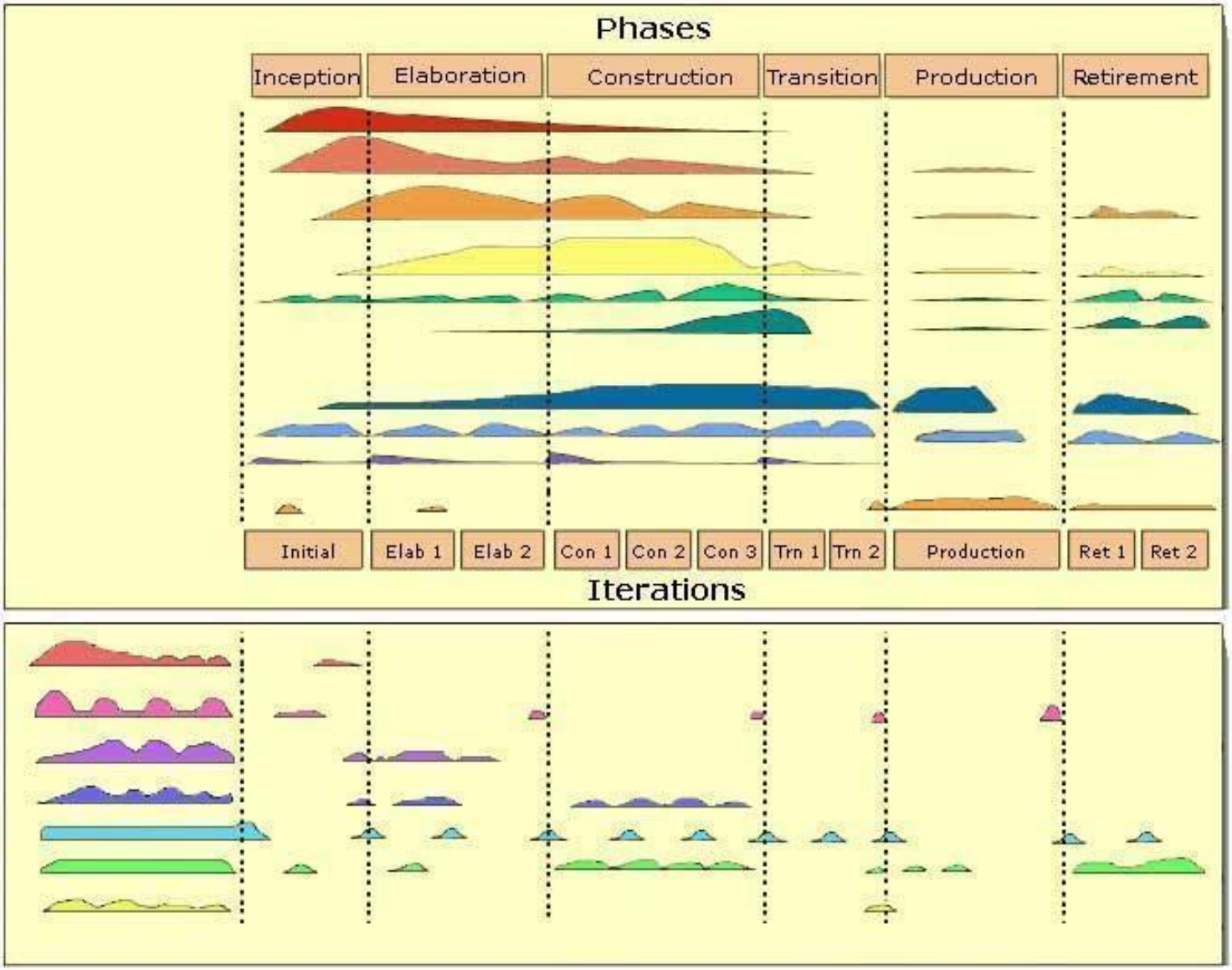
Eclipse Process Framework



Extensions: Enterprise Unified



Development Disciplines

Business Modeling

Requirements

Analysis & Design

Implementation

Test

Deployment

Support Disciplines

Configuration and Change Mgmt.

Project Management

Environment

Operations & Support

Enterprise Disciplines

Enterprise Business Modeling

Portfolio Management

Enterprise Architecture

Strategic Reuse

People Management

Enterprise Administration

Software Process Improvement

Summary

- Unified Process as a basis for software development process
- Focus on different aspects of the lifecycle
  - E.g., risk management, communication
- Extension model for globally distributed processes and stakeholders

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