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

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

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

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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
References

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