



[Session S4]
**MAKING PROCESSES REAL: PRACTICES AND PITFALLS TO
IMPLEMENTING A SD METHODOLOGY**

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Making Process Real

Practices And Pitfalls To Implementing A
Software Development Methodology

Agenda



- Overview
- Setting the Context
- Building the Right Team
- Building the Process Product
- Setting Expectations
- Impediments to Adoption
- Strategies for Adoption



Overview



- We will discuss some of the challenges and pitfalls involved in making a process real
 - Based on experience
 - Different perspective
 - Augmenting published guidance



Setting Context

What does the terrain look like and how does it impact our strategy

Why Change?

- Customers already have defined processes but realize:
 - They need an army of process engineers just to keep it up to date
 - Not being aligned with emerging industry standards affects their ability to recruit and retain
 - They cannot investment enough to provide the necessary tooling support such as tool integrations and web interfaces
- External events trigger change:
 - Audit finds deficiencies
 - Business needs demand a capability maturity improvement
- The reason for process change drives much of the behavior throughout the process lifecycle



Why Tailor?



- Expectations are often artificially high post-sale
- Why does an industry leading process product with 2,000 Web pages need to be tailored?
 - To address gaps
 - Decision Analysis and Resolution
 - Organization Training
 - Not all projects are alike
 - Legacy COBOL vs. J2EE
 - Mission critical vs. support s/w
 - Incorporate existing established best practices
 - To add missing detail
- Failure to deliver this message and correctly set expectations can lead to future problems

Building The Team

The challenge of meeting real needs and finding people who can build consensus

Who are the Real Stakeholders?



- Understanding stakeholders is key to successful process engineering
- Senior management is not a key stakeholder
- Subject matter experts are not key stakeholders
 - High performance individuals,
 - Don't rely on process
 - Little time to give
- Those who need process the most:
 - New hires or those with new responsibilities
 - Inexperienced project managers
 - Inexperienced developers



Involving Stakeholders

- Involve stakeholders throughout the process lifecycle
 - Promote shared ownership
 - Provide mechanisms for stakeholders to contribute to process evolution
- Warning signs that the real stakeholders have been overlooked
 - Over emphasis on big-picture content
 - Lack of feedback from practitioners

Recruiting Process Engineers



- The ideal process engineer:
 - Understand their needs are subordinate to the needs of the stakeholders
 - Does not want to “own” the process
 - Nurtures collaborative process improvement
 - Does not want to dictate the pace of change, just facilitate it



Building the Process Product

Eating your own dog food

Process is a Software Product



- Process is a software product not a book
- Best practices of software development are the best practices of process development:
 - Understand stakeholder real needs
 - Manage change
 - Model visually
 - Use a component based architecture
 - Develop iteratively
 - Continuously verify quality
- Adherence to a defined process meta-model allows us to:
 - Protect the integrity of the process guidance moving forward
 - Present consistently structured guidance
 - Facilitate maintenance

RUP is not the Silver Bullet



- RUP (the product) provides an inert view made real only by the Development Case and the Iteration Plan
- Development Case
 - Developed by process engineers
 - Instantiates process
 - Difficult to construct
 - No tooling support for filtering
 - No integration with “real” project artifacts
- Iteration Plan
 - Developed by project managers
 - Sequences activity
 - Difficult to construct
 - Not integrated with development case
 - No support for integration with process guidance
- RUP can be difficult to tailor and the process model does not accommodate change easily

Delivering Guidance

Infrastructure & Usability Challenges

Process Guidance Delivery

- It does not matter how good the guidance is, if nobody reads it
- People are often overwhelmed by the volume of guidance but paradoxically no matter how much detail there exists there never seems to be enough
- Delivery capabilities need to balance depth but maintain an illusion of simplicity
- From a usability perspective it is vital that:
 - Information is delivered in a browsable format
 - Tools exist to enable users to quickly locate needed information
 - Users are presented with content tailored for their needs
- This is not new, it is just new to process guidance



Past Trends - Hopefully

- Process 10+ years ago
 - A tome that sat on the shelf gathering dust
 - Updated manually every 6 months
- Today's equivalent
 - Sits on a hard drive in Word or PDF format
 - Not well designed for today's demographic
- The basic minimum
 - Targeted towards today's tool of choice the Web browser
 - Supported by a good search engine

Future Trends



- Integration of process guidance into development portals
- Tighter integration of the process into the developer workspace with integration to tools such as:
 - Project management tools
 - Configuration management tools
 - Collaborative tools
 - Development tools

Obstacles to Adoption

You know about the people challenges but, what else is out there

Roles vs. Job Positions

- SPEM based process definitions (e.g. RUP) introduce the concept of a role
- Role is not the same as an individual
 - One individual can shoulder many roles
 - Many individuals can share one role
- Organizations struggle with this:
 - Especially at grass roots level
 - Major impediment to adoption



Roles vs. Job Positions (cont)

- Conventional wisdom is to create table mapping roles to job positions
 - Level of indirection
 - More process to read
- Alternatively allow use of job position:
 - Where there is not an important distinction
 - In non-technical activities where job position may be a better fit
 - To avoid inventing a plethora of abstract roles

Strategies for Adoption

Positioning is Key

Value for the Individual First



- The most effective long-term strategy to achieve process adherence is to provide a process framework that:
 - First adds value for the individual
 - Complete and focused guidance to enable them to be more effective in their current role
 - Training and knowledge transfer to enable them to grow and be more effective in their next role
 - Access to reusable assets to save time
 - Leading to value for the team:
 - Unifies a team by promoting a common vision and culture
 - Provides mechanisms for sharing of information and communication
 - And ultimately the organization through:
 - Reduced costs
 - Better resource capabilities
 - Increased predictability
 - Demonstrated process adherence

Its Not Learning, if its not New



- Institutionalizing the process is like climbing a mountain, it is hard work but the view from the top makes it all worthwhile
- Many techniques already documented to accelerate learning and assimilate new process guidance
- Promoting and reinforcing existing best practices can significantly reduce costs and risks