CMMI: Project Monitoring and Control

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Outline

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The WHAT: Project Monitoring and Control, by Tobias Stoll
- SG 1: Monitor the Project Against the Plan
- SG 2: Manage Corrective Action to Closure

The HOW (part 1): industrial practices, by Dominik Schreiber

The HOW (part 2): real-life examples, by Dominik Schreiber

Project Monitoring and Control

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[Dev10]

Project Monitoring and Control

SG 1: Monitor the Project Against the Plan

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SG 1: Monitor the Project Against the Plan
SP 1.1: Monitor Project Planning Parameters

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SG 1: Monitor the Project Against the Plan
SP 1.2: Monitor Commitments

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SG 1: Monitor the Project Against the Plan
SP 1.3: Monitor Project Risks

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SG 1: Monitor the Project Against the Plan
SP 1.4: Monitor Data Management

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SG 1: Monitor the Project Against the Plan

SP 1.5: Monitor Stakeholder Involvement

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SG 1: Monitor the Project Against the Plan

SP 1.6: Conduct Progress Reviews

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SG 1: Monitor the Project Against the Plan
SP 1.7: Conduct Milestone Reviews

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Project Monitoring and Control

SG 2: Manage Corrective Action to Closure

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SG 2: Manage Corrective Action to Closure

SP 2.1: Analyze Issues

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SG 2: Manage Corrective Action to Closure

SP 2.2: Take Corrective Action

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SG 2: Manage Corrective Action to Closure

SP 2.3: Manage Corrective Actions

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Outline

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The WHAT: Project Monitoring and Control, by Tobias Stoll

The HOW (part 1): industrial practices, by Dominik Schreiber

- Scrum
- Extreme Programming
- Rational Unified Process

The HOW (part 2): real-life examples, by Dominik Schreiber

industrial practices

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[AB06]

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Overview

- **agile** software-engineering process
- **iterative**: thinking in *sprints*
- **slim**: 3 *roles*, 4 *artifacts*, small set of *rules*
- **communicative**: daily meetings, planning, reviews (but less paperwork)

Regular meetings

- **Sprint planning meeting** (part 1: whole team):
  - clean product backlog, prioritize entries
  - choose entries for next sprint
- **Sprint planning meeting** (part 2: developers):
  - convert entries to 1-day tasks ($\Rightarrow$ sprint backlog)
  - extract sprint-goal from entries
- **Sprint Review**:
  - present product to product owner, check sprint-goal
  - give feedback for last sprint, update product backlog
- **Sprint Retrospective**:
  - concrete improvements based on
  - feedback for the last sprint

industrial practices
Scrum

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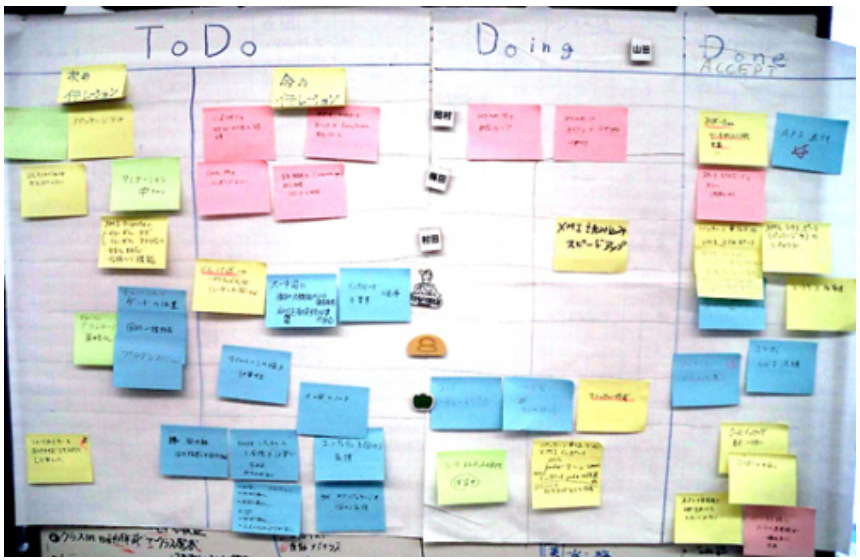

Abbildung : Scrum Taskboard

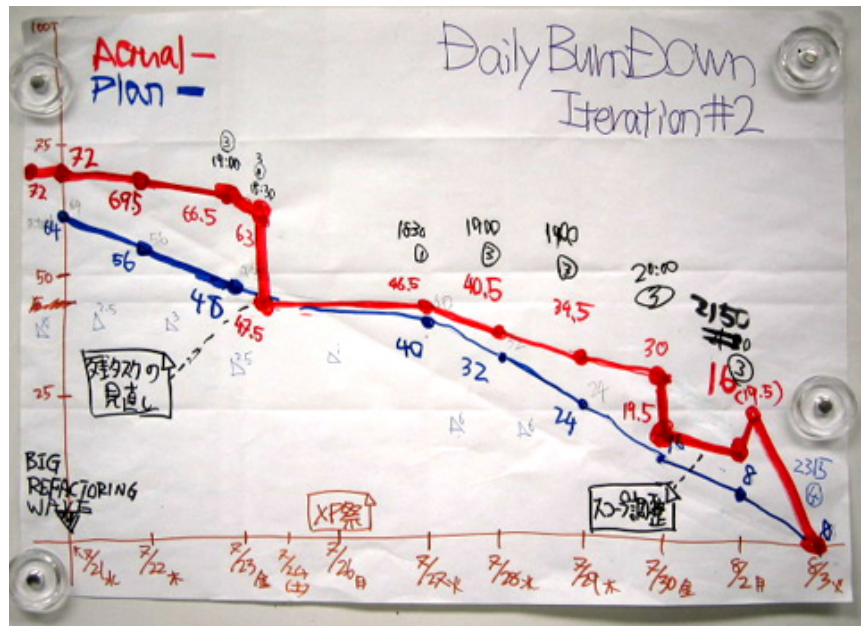

Abbildung : Scrum Burndown Chart

Extreme Programming - what it is

Overview

- **agile** software-engineering process
- strong **principles**: Pair Programming, Test-driven Development, Continuous Integration, ...

Extreme Programming - what it is

Overview

- **agile** software-engineering process
- strong **principles**: Pair Programming, Test-driven Development, Continuous Integration, ...

Differences to Scrum

- **iteration length**: week (XP) $\leftrightarrow$ month (Scrum)
- **change adaption**: always (XP) $\leftrightarrow$ not in current sprint (Scrum)
- **work order**: customer chooses (XP) $\leftrightarrow$ team chooses (Scrum)
- **engineering practices**: given (XP) $\leftrightarrow$ not given (Scrum)

industrial practices
Rational Unified Process

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- at openLearnWare
- at dimetis GmbH
- at BASF IT-Services

real-life examples
at openLearnWare - project overview

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Project: material portal for students

- webservice for lecture material
- development started in spring 2010
- team of 2 full-time employees, 5 HiWis
- scrum-like project structure

Abbildung : tu-darmstadt.de/olw, 7.1.13

real-life examples
at openLearnWare - project structure

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team members

- “Intellectual head” – like Scrum’s **product owner**, responsible for all “non-technical stuff”
- “Technical head” – like Scrum’s **scrum master**, responsible for all “technical stuff”
- 5 HiWis, working 8-20 hours a week – the **scrum team**

Abbildung : taskboard, december-sprint

real-life examples
at openLearnWare - project monitoring/control

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process items

- weekly **scrum meeting** – about an hour, with all team members
- weekly **planning meeting** – about 2 hours, intellectual+technical head
- **taskboard** as a mirror of the redmine *ticket system*
- **tickets** as a *sprint backlog*
- current **QSL-Request** as *product backlog*
- **Jenkins** as *Continuous-Integration Server*

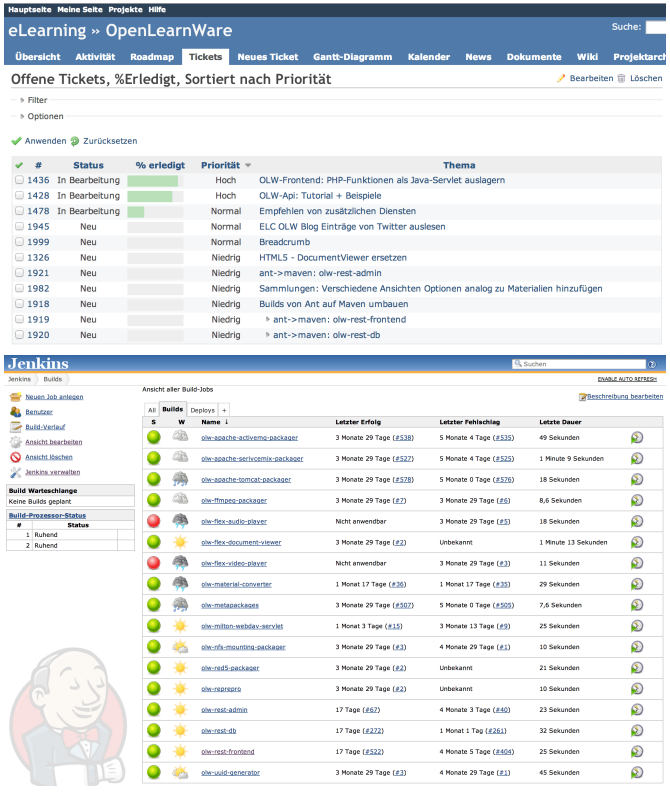

Abbildung : ticket system, ci-server

real-life examples
at openLearnWare - how the process evolved

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Abbildung : taskboard-mindmap

change as the only constant

- no current team member from the **founder team**
- began with **giant mind-maps** as product/sprint backlogs
- had 2-3 nearly **complete restarts**
- in the beginning: **no documentation** at all (except backlogs)

real-life examples
at dimetis GmbH

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real-life examples
at BASF IT-Services

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