

CMMI: Project Monitoring and Control



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The WHAT: Project Monitoring and Control

SG 1: Monitor the Project Against the Plan

SG 2: Manage Corrective Action to Closure

The HOW (part 1): industrial practices

The HOW (part 2): real-life examples

The WHAT: Project Monitoring and Control



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[Dev10]

The WHAT: 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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The WHAT: 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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The WHAT: Project Monitoring and Control

The HOW (part 1): industrial practices

- Scrum

- Extreme Programming

- Rational Unified Process

The HOW (part 2): real-life examples

The HOW (part 1): industrial practices



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[AB06]

The HOW (part 1): industrial practices

Scrum - what it is



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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)

The HOW (part 1): industrial practices

Scrum - how it supports Monitoring/Control



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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

The HOW (part 1): industrial practices

Scrum

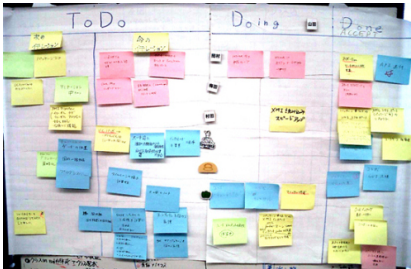


Abbildung : Scrum Taskboard

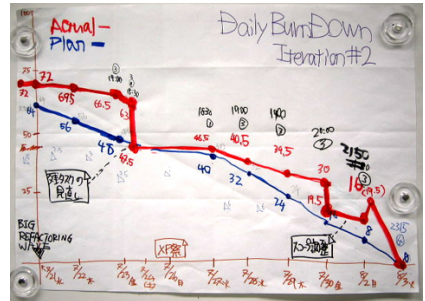


Abbildung : Scrum Burndown Chart

The HOW (part 1): industrial practices

Extreme Programming - what it is



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Overview

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

The HOW (part 1): industrial practices

Extreme Programming - what it is



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Overview

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

Differences to Scrum

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

The HOW (part 1): industrial practices

Rational Unified Process



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The HOW (part 1): industrial practices

The HOW (part 2): real-life examples
at Hochschulrechenzentrum, TU Darmstadt
at dimetis GmbH
at BASF IT-Services

The HOW (part 2): real-life examples

at Hochschulrechenzentrum, TU Darmstadt



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The HOW (part 2): real-life examples

at dimetis GmbH



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The HOW (part 2): real-life examples

at BASF IT-Services



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