

Agile & Lean Software Development in Industrial Practice

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Agenda

- ✦ 13:30-13:40 Intro by Robert: Transitioning to Agile and Lean Software Development
- ✦ 13:40-14:20 Kai: Implementing Agile and Lean Software Development in Industry
- ✦ 14:20-15:00 Discussions and short presentation(s) from "agile" SW companies in Gothenburg
- ✦ 15:00-15:30 Coffee and further discussions - how can we collaborate, research needed etc.

Agile is Lean ?

**Defer
commitment**



Lean



Optimize the whole

Agile



**Eliminate waste
Respect people**

Scrum



**Focus on
learning**

XP



**Deliver fast /
Limit work
to capacity /
Pull scheduling**

**Build quality in
(jidoka / auto-
mation / TDD)**



[Kniberg2008]

Transitioning to Agile - Previous results

- ✦ Not many studies on the transition, here to SCRUM:
 - ✦ Advantages
 - ✦ SW dev is a continuous learning process!
 - ✦ Quality increase! (but other studies disagree)
 - ✦ Obstacles
 - ✦ Too focused on showing progress => Quality suffered
 - ✦ Short-term deliverables => long-term arch & maintainability problems
 - ✦ Lack of metrics on remaining work

[Schatz2005]

Agile Practices - Pro / Con

Face2Face communication & User stories

Saves time

Requires trust

Customer on site

Customer drives

Not all user groups represented

Iterative req engineering

Clearer reqs

Minimal docs when problems

Customer relation

Cost & schedule estimation

Non-functional requirements

[Cao2008]

Agile Practices - Pro / Con

“Extreme” Prioritization

Clearer reasons

“Business Value” too narrow

Re-prio is easier

Unstable with re-prio

Managing Change through Constant replanning

Fewer changes

Architecture suffers

Smaller changes

“Refactoring” not enough

[Cao2008]

Agile Practices - Pro / Con

Prototypes

Quicker feedback

Unrealistic dev speed expectations

Test-driven Development

Tests capture reqs

Requires close customer collab

Freedom to experiment

Developers resist

Reviews & Acceptance tests

[Cao2008]

Status report to
customers

Hard to create acc.tests

Goals

- ✦ Listen: New results on Agile & Lean in SW Industry
- ✦ Discuss: Your Challenges, Solutions, Thoughts

References

- Schatz, B. and Abdelshafi, I., “Primavera gets agile: a successful transition to agile development”, IEEE Software, vol 22, num 3, pp. 36-42, 2005.
- Kniberg, H., Slides on “Agile and Lean Software Development”, Crisp AB, 2008.
- Lan Cao, Balasubramaniam Ramesh, "Agile Requirements Engineering Practices: An Empirical Study," IEEE Software, vol. 25, no. 1, pp. 60-67, Jan./Feb. 2008, doi:10.1109/MS.2008.1.