Long-term Perspective of Agile Methods

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Short-term Benefits of Agile Methods

- More accurate visibility into and control of projects,
- Better management of constantly changing requirements,
- Early detection of all kinds of problems,
- Better adherence to customer requirements,
- More efficient and cost-effective acceptance testing,
- Substantial reduction of the overall risks associated with software development.
“Agile” Methods

- Hermann Kaindl
  Vienna Univ. of Technology, ICT, Austria
If so-called agile methods are the answer, what has been the question?

‘Heavy-weight’ methods

ISO 9000, CMM or CMMI
Less Documentation?

- “Lose weight” by reducing documentation
- User stories instead of a requirements specification (including models)?
Future

- It is hard to predict, especially the future!
- Will all software be developed in the future according to agile methods?
- I don’t think so.
- Better to apply such a method than none at all
- Iterative and incremental development has been and will be applied before and after the rise and fall of agile methods.
- There will be new hypes!
Thank you for your attention!
Agile
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Ken Boness
An Agile Approach - Scrum

1. Product Backlog
   Prioritised features desired by the customer

2. Sprint Backlog
   Features assigned to sprint

3. Backlog items expanded by team

4. Scrum 15 minute daily meeting

5. New functionality is demonstrated at end of sprint.

Add to Inventory
Criticality
Loss due to impact of defects

Dynamism
% requirements change/month

Personnel
%Level 1B %Level 2 and 3

Size
Number of personnel

Culture
% Thriving on Chaos vs order

Based on Boehm and Turner, “Balancing Agility and Discipline”, Addison Wesley, 2004
Perspectives

- **Vincenti**
  - Radical and Normative Engineering
    - Good enough to improve
    - Follow best practice recipe

- **Action Research**
  - Learning cycle
    - Try – learn - improve
Psychological Issues in Agile

■ The deal
  ◆ Stability during each sprint/timebox to complete work.
  ◆ Fidelity to change specifications at each sprint boundary.

■ Happy syndrome
  ◆ Testers can provide evidence on whether the work is complete and correct; and
  ◆ Realistic (feasible) estimates of what can be completed.

■ Inducing
  ◆ Product Management get predictability in return for reasonable patience; positively encouraged to play the game.
  ◆ Confidence and success reinforcing the deal.

Ctd...
Psychological Issues (Ctd.)

- **Unhappy syndrome**
  - Testers cannot provide evidence whether the work is complete and correct; or
  - Overoptimistic (infeasible) estimates of what can be completed.

- **Inducing**
  - Developers do not complete work; this degenerates to iteration.
  - Bad surprises when commitment milestones arrive.
  - Loss of confidence and corruption of the deal; e.g. change requests abound.
Confidence

- We must have confidence in the value chain.
- Confidence is predicated on evidence.
  - Key evidence comes from well conducted and reported verification and validation tests.
- If we are not confident about the completed stock of code:
  - We have lost control of our navigation.
  - We cannot show increased company value.
  - We cannot deliver product without large cost risks.
Summary

- There is a "home ground"
- Relates to lessons learned by Vincenti
- It resembles action research
- High degree of discipline
  - Rules can be simple
    - But must be obeyed!
- Psychology matters
- Puts great demands on the testing team
Agile
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Robert Pooley
Agile methods are good in providing tight communications within a team working on a software project.

Experience from the games industry

- supports the popularity of agile methods in that sector, but
- highlights some problems.
The games industry runs projects where:
- all contributors need to stay “on message”
- at all stages.

Preference is for Scrum, which emphasizes:
- cross technology team working
- self defining planning, based on “sprints”

This allows some of the weaknesses of more software focused agile methods to be reduced.
These weaknesses include:
- a need to involve users continuously,
- maintain a clear distinction between users and developers.

In a development environment like games,
- it is impossible to separate these roles
  agility becomes rigidity if you are not careful.
Andreas Tael
Mejsla AB
Sweden
“It’s better to be roughly right than precisely wrong”

John Maynard Keynes

Ordered Product

Desired Product

Traditional project models
LONG-TERM PERSPECTIVE OF AGILE METHODS
ICSEA 2009, SEPTEMBER 20-25, 2009, PORTO, PORTUGAL

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“Things” Change Over Time...
“Live things” change more...
“Software things” change even more…
Types of software changes

- Requirements and Priorities
- Technology and Tools
- People and teams
- Interactions and behavior
- Software complexity and unpredictability
- ...
Agility is important to be able to respond with quick easy grace.
“Software engineering is the application of a systematic, disciplined, quantifiable approach to the development, operation and maintenance of software, i.e. the application of engineering to software.“ [IEEE]

Goals: high quality, high productivity, high predictability
The simplest process that ensures the optimal level of team's capabilities, discipline, communication and knowledge.
Controversial Agile Practices?

- Pair programming
- Test Driven Development
- Refactoring
- Collective Ownership
- Continuous Integration
- The Planning Game
- Small Releases
- On-site Customer
Short term perspective

Agile practices are apparently a waste of time and resources... but are cool! 😊
Software development is a knowledge intensive activity that requires a lot of social interaction.
Long term perspective

As human factors are highly-valued by agile practices…

Agile practices are definitely worthy to consider! Try it!
Thank you