The New Methodology

Review on Agile Methods

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Why the New Methods

- reasons for agile methods
- adaptive nature
- people-first orientation

Paper Contents

1. From Nothing, to Monumental, to Agile
2. Predictive Vs. Adaptive
3. Putting People First
4. The Self-Adaptive Process
5. Flavors of Agile Development
6. Should you go agile?

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From Nothing, to Agile

Engineering methods

plan-driven methodologies

Predictive?
Process oriented
Document oriented

Agile methods

test-driven methodologies

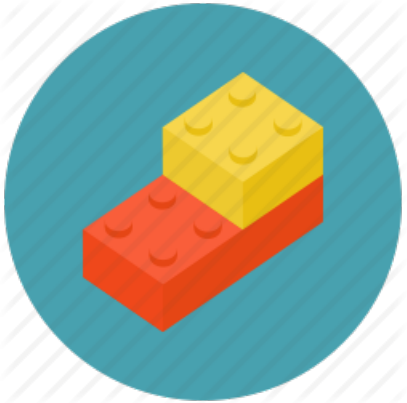
Adaptive!
People-oriented
Code-oriented

Paper Contents

Predictive Vs. Adaptive

Separation of
Design & Construction

Design:
difficult to predict
expensive & creative people



Construction:
easier to predict

Predictive Vs. Adaptive

Crucial QUESTION !

look very good on paper, yet be seriously flawed when you actually have to program the project

Can you get a design:

1 that is capable of turning the coding into a predictable construction activity?

2 If so, is cost of doing this sufficiently small to make this approach worthwhile?

False Conclusion on Engineering

Jack Reeves: “anything that you can treat as construction can and should be automated.”

- In software: construction is so cheap as to be free
- In software: all the effort is design, and thus requires creative and talented people
- Creative processes are not easily planned, and so predictability may well be an impossible target.
- be very wary of the traditional engineering metaphor for building software.

  It's a different kind of activity and requires a different process

Unpredictability of Requirements

Requirements, are always Changing !

- understanding the requirement is though
- software dev is a design activity
- basic materials keep changing rapidly
- difficult to see value of a feature until use for real
- no stable requirements = no predictable plan

Question: what we do about it ?

Misunderstanding Requirements

leads to people using a methodology
in the wrong circumstances, such as:

using a predictable methodology in
an unpredictable situation

What to Do?

a process that

can give you control over an unpredictability.

Adaptivity

Control Unpredictable Process

Adaptivity with iterations

TEST !

Why tests?

1 bugs

2 misunderstood requirements

Control Unpredictable Process

adaptivity with iterations

TEST !

Why tests?

1 bugs

2 misunderstood requirements

Key question:

How long the iteration should be ?

Depending on each agile method

With Adaptive Customer

Agile approach:

fix time, fix money, vary scope

1 constant reworking of plan

2 risk control

3 a late change in requirement: competitive advantage

With Adaptive Customer

Business success?

On-time? on-cost?(predictive methods)
Business Value ! (Agile methods)

The customer get the software
with more value than the cost

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Putting people first

synergy:

adaptivity require a strong team

most good developers prefer an adaptive process

Putting people first

plug-compatible programming units Engineering

- Frederick Taylor's Scientific Management approach.
- "Achilles heel" of measurement based management.
- leads to high levels of measurement dysfunction.

responsible professionals Agile

- accepting the process rather than imposition of a process
- developers make all technical decisions

+ Business Leadership

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Self-Adaptive Process

each iteration:

What did we do well?

What have we learned?

What can we do better?

What puzzles us?

leads to ideas to change for the next iteration

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Flavors of Agile Development

1 Extreme Programming

Communication, Feedback, Simplicity, Courage, Respect

14 principles, 24 practice

2 Scrum

sprints

daily scrum meetings

3 Crystal

family of methods

safety (in project outcome), efficiency, habitability (developers can live with crystal)

4 Context Driven Testing

questioning mainstream testing thinking

5 Lean Development

overlaps & inspirations between lean production and software development

6 Unified Process

a process framework

Use Case Driven

problem: its infinite variability

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Go Agile?

NOT for everyone, BUT could be used by more

To start with:

1 suitable projects to try agile

team & customer want to work with it

project more critical than comfortable with

2 find a mentor experienced in agile

3 follow their advice try methods first

4 hard to tell where the boundary

WHERE NOT to use? never impose on a team who doesn't want it

Thank you !