



1. What is Agile Software Development?
 2. Where did it come from?
 3. What are the roles and responsibilities of each team member in Agile?
 4. What processes are followed?

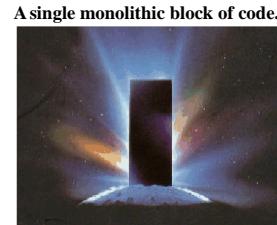
What is Agile?

- 1. Agile is iterative.**
- 2. Agile is flexible.**
- 3. Agile does not describe a specific approach to software development.**
- 4. Agile provides guidelines to help groups focus on:**
 - a. Efficiency**
 - b. Collaboration of all persons with a stake in the software**
 - c. Quality software.**
 - d. High product value for the customer.**

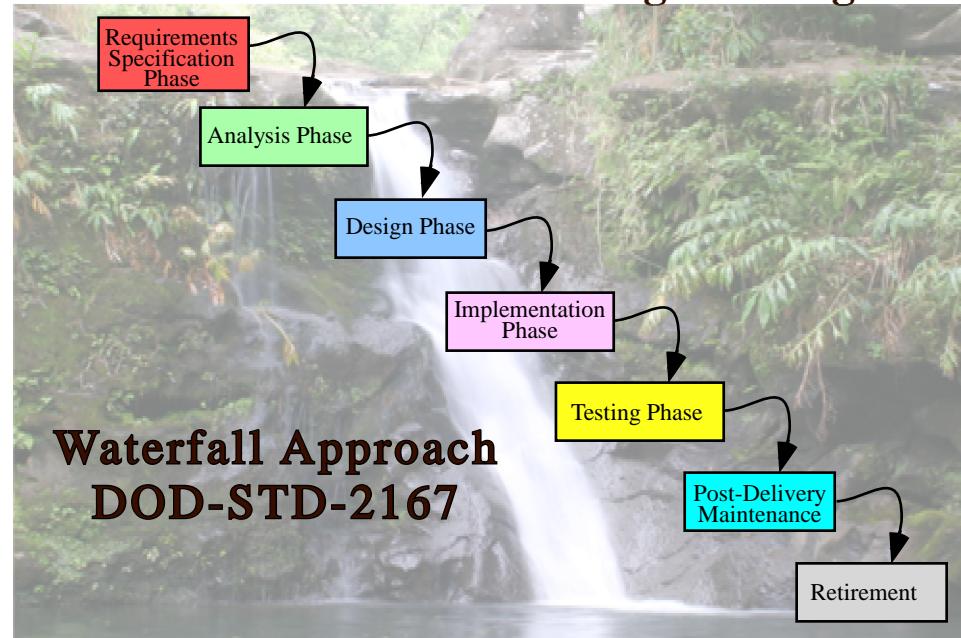


The Origin of Agile

Pre-1975

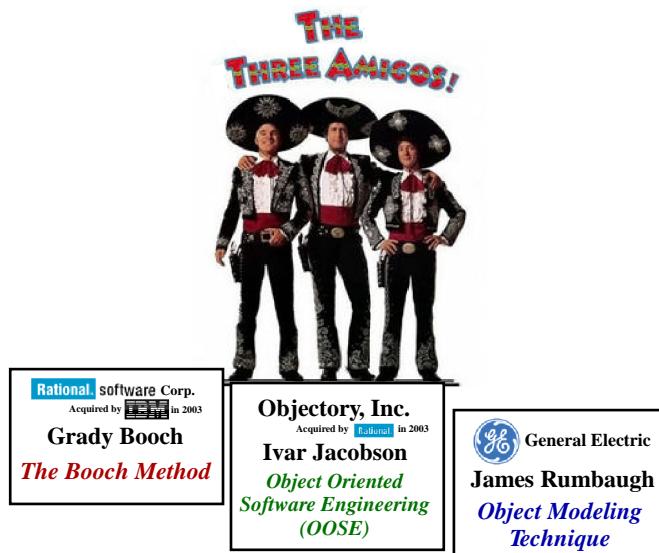


1975-1985
Classical/Structured Programming

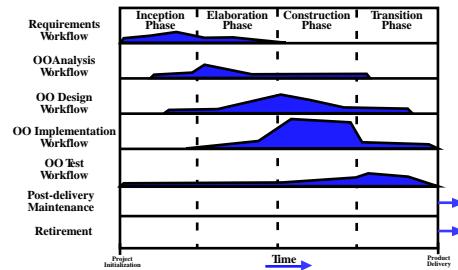


The Origin of Agile

1985-Late 1990s



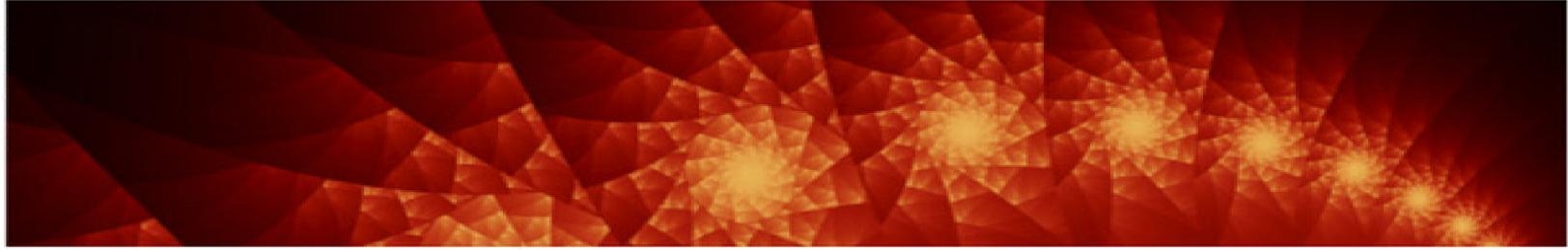
Unified Method



2001



Agile Alliance Group



Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.

Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Kent Beck
Mike Beedle

A
REYAN B
ENKUM
Alistair Cockburn
Ward Cunningham
Martin Fowler

James Grenning
Jim Highsmith

ANDREW H
UNT
Ron Jeffries
John Brin
Brian Marick

Robert C. Martin
STEVE M
ILLER

Ken Schwaber
Jeff Sutherland
DAETHOAS

A Warning!

**Care must be taken that you understand the Agile approach
and don't try to say you are following an Agile approach
when all you are doing is just hacking code together!**

Wise words from “Uncle Bob”...



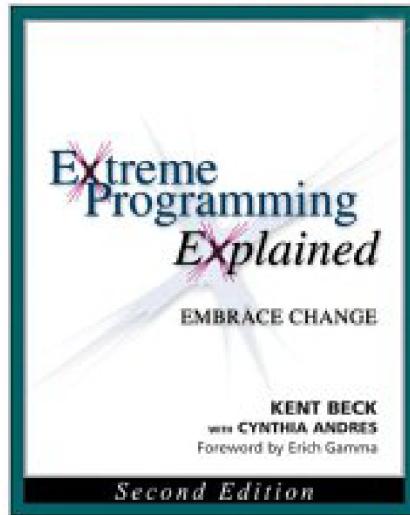
Robert C. Martin

Types of Agile*

- Extreme Programming (XP)
- Scrum
- Feature-Driven Development
- Dynamic Systems Development Method (DSDM)
- Lean Software Development
- Kanban Method
- Crystal Family

** There are many others. These are just the most popular.*

Extreme Programming (XP)



Key Themes:

- 1. Frequent releases, short development cycles**
- 2. Pair programming**
- 3. Regular builds, Integration Tests, and Rapid Feedback**

Scrum



- 1. Time boxes**
- 2. Sprints**
- 3. Product Backlog**
- 4. User stories**
- 5. Epics**
- 6. Daily stand-up or
Daily scrum meeting**

Feature-Driven Development



Uses a two-week development cycle with each following two steps:

- 1. Create the model**
- 2. Develop the feature list**

Feature format:

<verb> the <something> for/of/to a(n) <something else>
<verb> the “<results>” by/for/of/to a(n) <object>

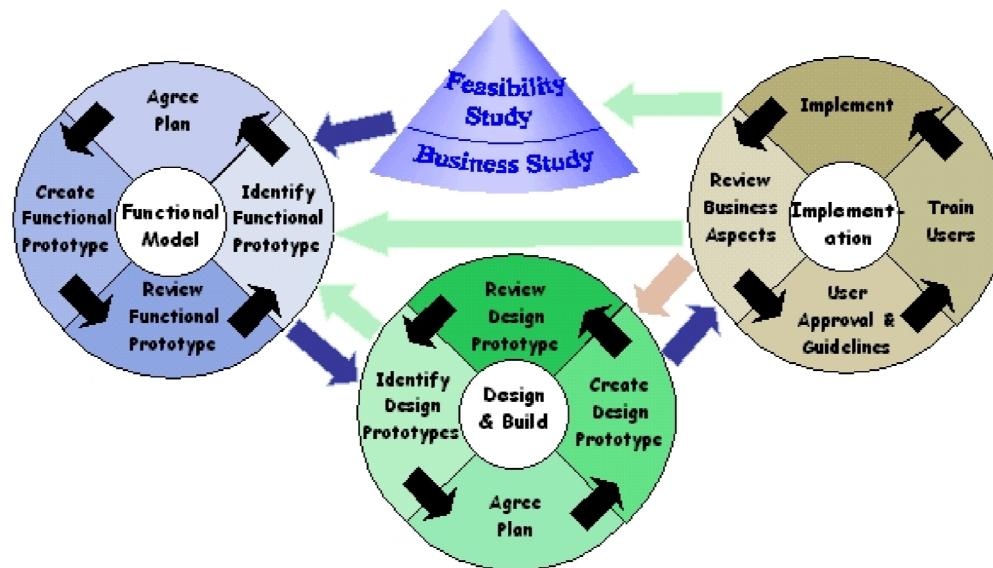
Examples:

<Calculate> the <average star rating> for a <movie>.
<Calculate> the <“go” or “don’t go” recommendations> for a <movie>.
<List> the <local movie theaters> to <show the current movie locations>.

Dynamic Systems Development Method (DSDM)

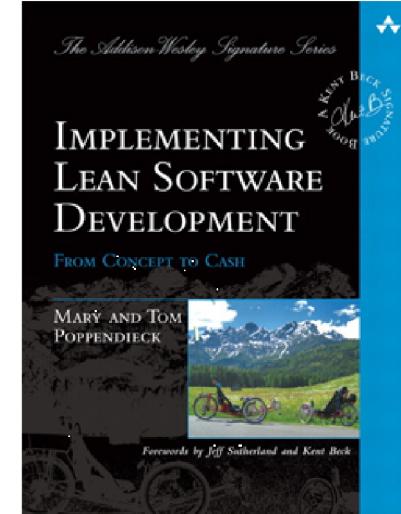
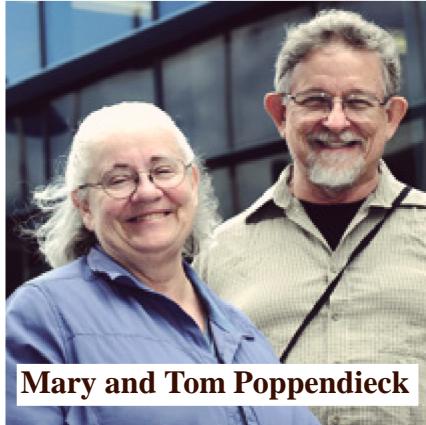


The DSDM Development Process



<http://www.dsdm.org/>

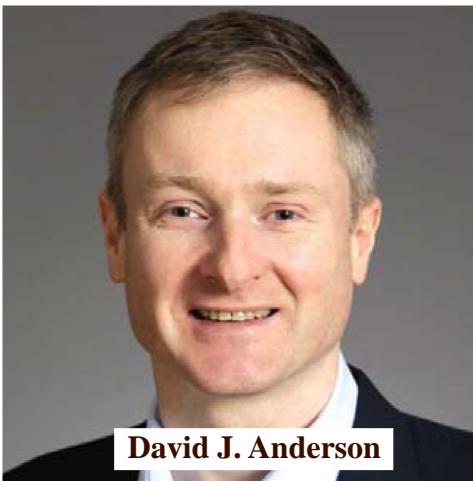
Lean Software Development



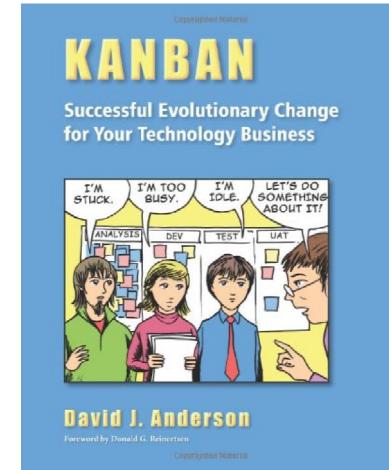
Seven principles

- 1. Eliminate waste**
- 2. Amplify learning**
- 3. Decide as late as possible**
- 4. Deliver as fast as possible**
- 5. Empower the team**
- 6. Build integrity in**
- 7. See the whole**

Kanban Method*



David J. Anderson



The Kanban Bulletin Board

Work in Progress			
In Progress - 5 (limit 9)	Coded - 1 (limit 6)	Testing - 4 (limit 6)	Tested - 13
<p>38107 · mashup · ... Mashups Management </p> <p>39392 · sup dead link to dev portal from what's new </p> <p>37170 · marketing · ... Generate sample project </p> <p>37779 · sup Burn Down calculation via Effort ToDo if Time Tracking is Off </p> <p>38809 · git · ... Basic Git Integration </p>	<p>38739 · plugin · ... Change Save Profile behavior </p>	<p>35174 · plugin Bugzilla Mashup in Views </p> <p>37989 · workflow As an admin I want to order states in Workflow setup </p> <p>38408 · plugins Add concurrency per account support </p> <p>34261 · svn Auto-mapping SVN to TP Users </p>	<p>36557 · rest Sorting </p> <p>38047 · sup Change Rich Edit custom field validation behavior and preserve entered data </p> <p>37186 · sup Import of tags </p> <p>39288 · rest · ... REST CRUD Error during deserializing resource for setting null value custom fields </p> <p>36858 · rest · ... [REST] TestPlanRun: TestCasesRun collection, TestCasesRun-count, TestPlan, Build reference fields are absent </p>

*Loosly translated from Japanese as “Sign board”

Agile_Development_13

Crystal Family



Color



Life (L)

L6 L20 L40 L80 L200

Essential Money (E)

E6 E20 E40 E80 E200

Discretionary Money (D)

D6 D20 D40 D80 D200

Comfort (C)

C6 C20 C40 C80 C200

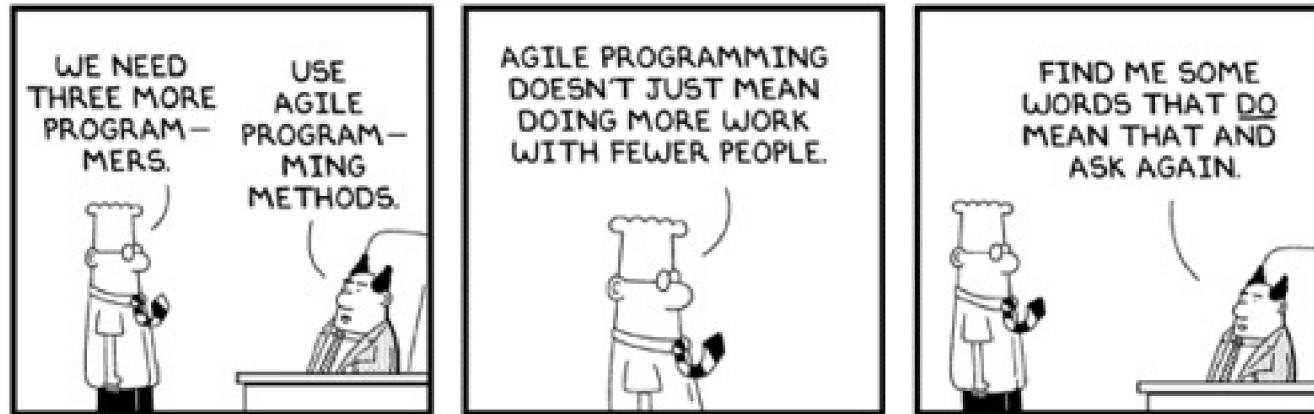
1-6 7-20 21-40 41-80 81-200

Hardness



Agile Culture

- Agile advocates self-organizing teams
- Continuous Improvement
- Frequent Delivery
- Removing the “Us versus Them” Scenarios
- Physical Workspace



Warnings:

- Unhealthy Teams
- Inability to Adapt
- Lacking Commitment

Scrum Roles

● Product Owner

Responsibilities:

1. Creating and maintain backlog.
2. Setting the priorities of user stories.
3. Accept or reject the work at the end of a sprint.
4. Release management.

● Scrum Master

Responsibilities:

1. Leads the development team and works through any issues that arise in a sprint.
2. Tries to remove any roadblocks that arise during a sprint.
3. Serves as communicator and liaison with other groups and managers.
4. Ensures that the principles of Scrum are followed.

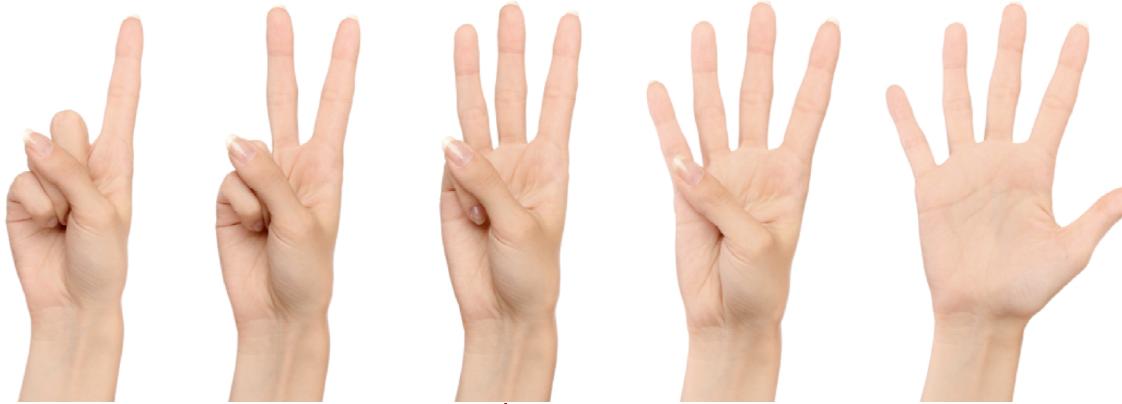
● The Team

Responsibilities:

1. Implement and deliver the final product.
2. Learn to trust one another and be able to work together.
3. Develop a Working Agreement for the team.



Fist of Five decision making



I cannot support this decision.
I completely disagree.

I have reservations and I
cannot support this decision
without further discussion
and clarification.

I have some reservations, but I can
support the decision to move forward.

I'm all in. I completely agree.

I buy into the option and I will support it.

*If everyone shows 3, 4, or 5 fingers you can proceed.
If anyone shows 1 or 2 fingers you must continue
with the discussion and hear their concerns.*

Scrum Documentation: The Backlog

Our Project Backlog

● List of Epics

Stated in format: As a <type of user>, I want <some goal>, so that <some reason>

Listed in priority order. Most critical are listed first.

Epics will be broken down into User Stories at the appropriate time.

● User Stories

Must state: What, Who, Why, When.

Stated in format: As a <type of user>, I want <some goal>, so that <some reason>

Must be some feature or task which can be completed by one member of the team within one sprint.

Must also state acceptance criteria, i.e. the definition of “Done”.

In Summary

- 1. Agile is iterative**
- 2. Agile is incremental**
- 3. Agile is flexible**
- 4. Agile does not describe a specific approach**
- 5. Agile focuses on rapid, incremental product delivery**
- 6. Agile emphasizes customer involvement.**



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