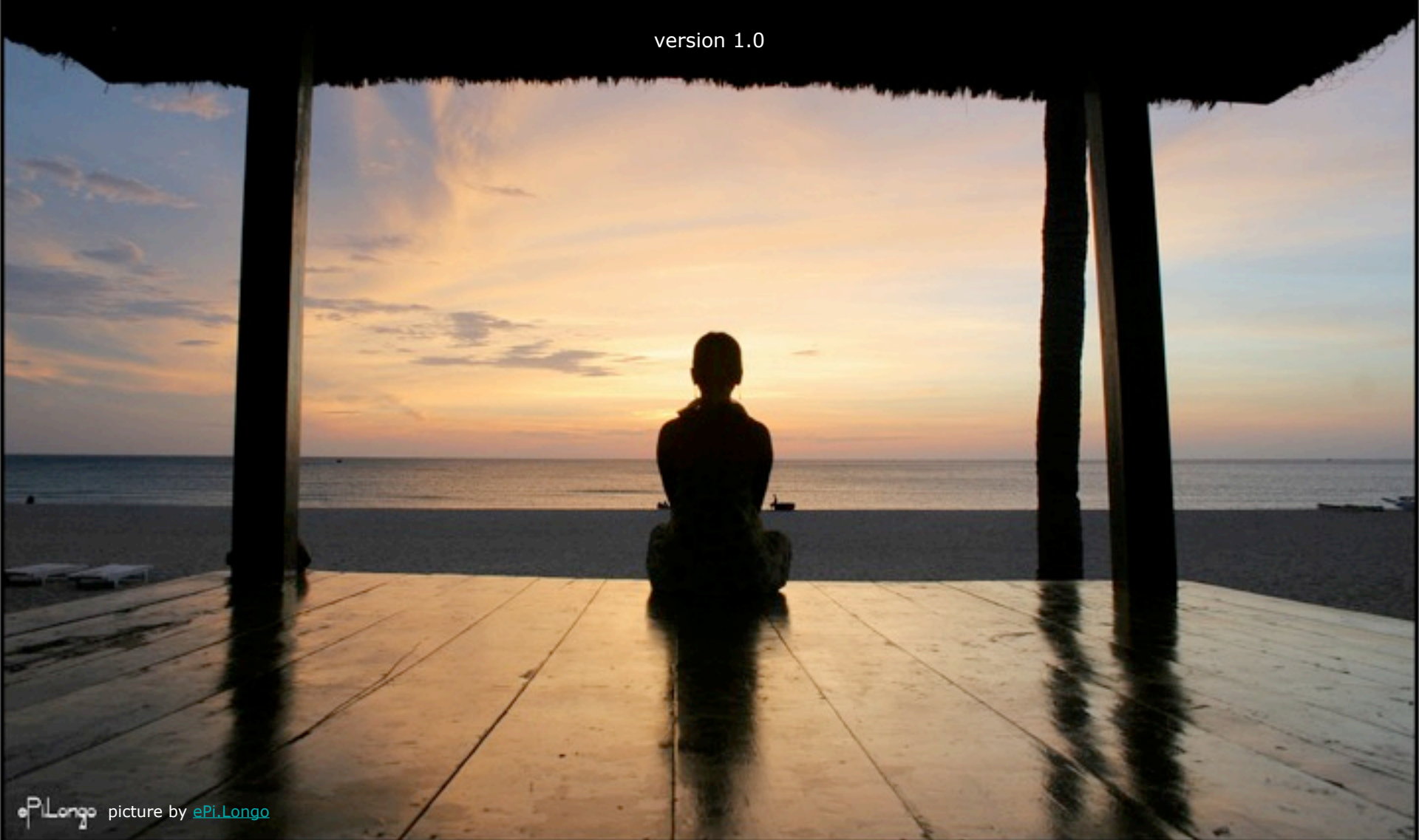



The Zen of Scrum

Jurgen Appelo – jurgen@noop.nl

version 1.0



 picture by ePi.Longo

Tuesday 10 March 2009

Agenda

Problems

Agile

Scrum Roles

Scrum Process

Hot Issues

Results



4



5



6



7



8



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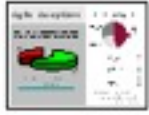
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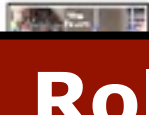
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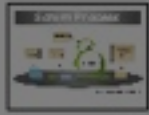
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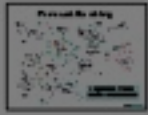
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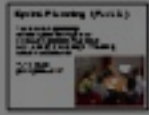
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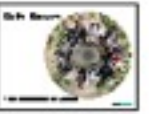
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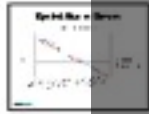
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52



53



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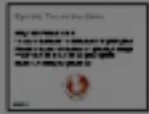
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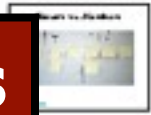
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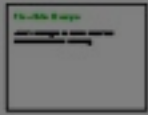
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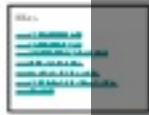
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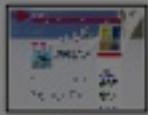
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79



80

Problems

with traditional software development



A photograph of a waterfall cascading over dark, layered rock formations in a lush green forest. The water is captured in a long-exposure shot, creating a soft, white, misty effect as it falls. The surrounding trees are vibrant green, and the overall scene is serene and natural.

Traditional

Phased development

Anticipated results

Up-front design

Requirements Not Clear

Fear to go to the next phase

Analysis paralysis

Requirements Change

Change gets more and more expensive
Customers don't get what they want

Project Takes Too Long

34% of projects delivered successfully
Long duration defers revenue

(Source: Standish Report 2003)

No Time for Testing

Quality assurance gets crunched

Late integration means late failures

Time Wasted on Junk

52% of requirements implemented

64% of functionality rarely used

(Source: Standish Report 1994)

Poor Progress Visibility

% Task complete not sufficient
Average overrun 43%

(Source: Standish Report 1994)

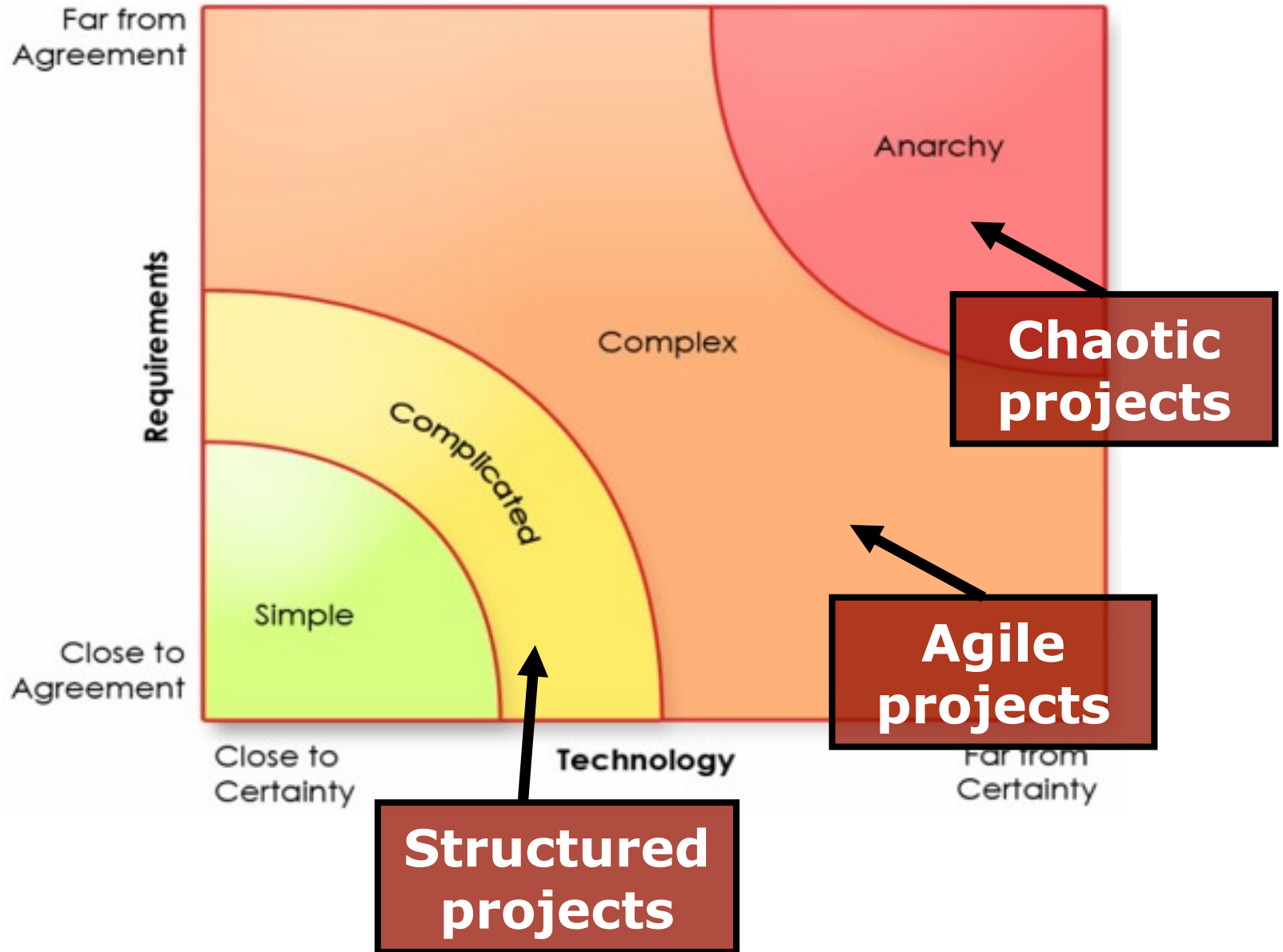
Agile

software
development



Tuesday 10 March 2009

The Spectrum of Process Complexity



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
Arie van Bennekum
Alistair Cockburn
Ward Cunningham
Martin Fowler

James Grenning
Jim Highsmith
Andrew Hunt
Ron Jeffries
Jon Kern
Brian Marick

Robert C. Martin
Steve Mellor
Ken Schwaber
Jeff Sutherland
Dave Thomas

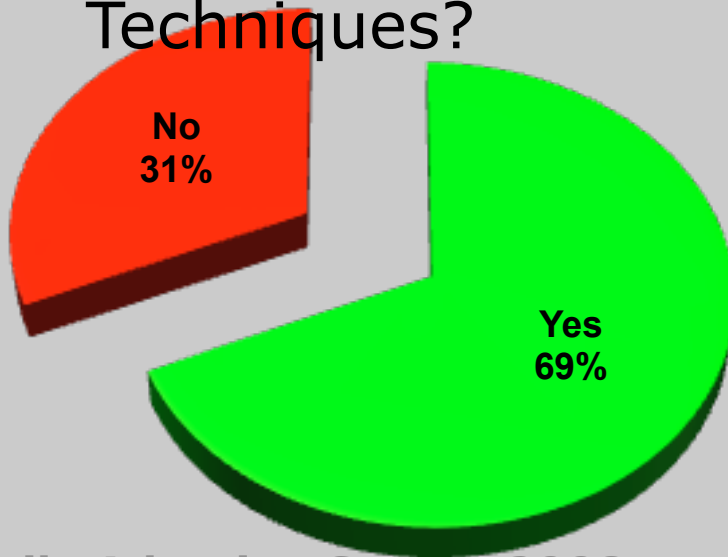
Agile Principles

1. Satisfy the Customer
2. Welcome Change
3. Deliver Frequently
4. Work as a Team
5. Motivate People
6. Communicate Face-to-Face
7. Measure Working Software
8. Maintain Constant Pace
9. Excel at Quality
10. Keep it Simple
11. Evolve Designs
12. Reflect Regularly



Agile Adoption

Has Your Organization Adopted One or More Agile Techniques?

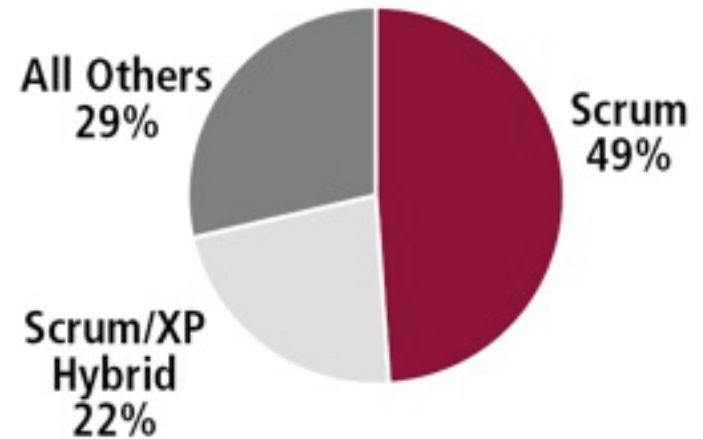


Agile Adoption Survey 2008

Scott W. Ambler

[www.ambysoft.com/
scottAmbler.html](http://www.ambysoft.com/scottAmbler.html)

Which Agile methodology do you follow most closely?



| | |
|---|-------|
| Scrum | 49.1% |
| Scrum/XP Hybrid | 22.3% |
| Extreme Programming (XP) | 8.0% |
| Custom/Hybrid | 5.3% |
| Don't Know | 3.7% |
| Agile Unified Process (AgileUP) | 2.2% |
| Other | 2.2% |
| Feature-Driven Development (FDD) | 2.1% |
| Lean Development | 1.9% |
| Dynamic Systems Development Method (DSDM) | 1.4% |
| OpenUP | 0.6% |
| Agile Modeling | 0.6% |
| Crystal | 0.5% |

3rd Annual Survey: 2008

"The State of Agile Development"

Conducted: June-July, 2008

Scrum



picture by [Kiwi Flickr](#)

Tuesday 10 March 2009

The Gurus

Ken Schwaber



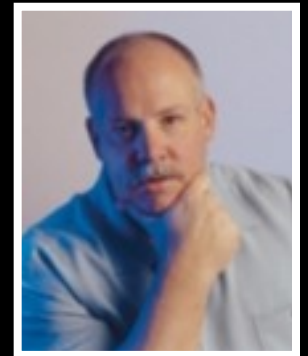
Jeff Sutherland



Mike Beedle



Mike Cohn



Scrum Usage

Commercial software - In-house development

Contract development - Fixed-price projects

Financial applications - ISO 9001-certified applications

Embedded systems - 24x7 systems with 99.999% uptime

Joint Strike Fighter - Video game development

FDA-approved, life-critical systems - Web sites

Satellite-control software - Handheld software

Mobile phones - Network switching applications

ISV applications - Some of the largest applications in use

The Goal of Scrum



Manage Complexity, Unpredictability and Change through Visibility, Inspection and Adaptation

Scrum Roles



Product Owner



**Owner of project vision
Represents the customer**

picture by [Official Star Wars Blog](#)

Tuesday 10 March 2009

Product Owner

Define features (according to vision)

Prioritize features (according to ROI)

Pick release dates


Give feedback

Manage stakeholders

Accept or reject results



The Team



Small (5–9 people)
Colocated - Cross-functional
Self-organized - Full-time

The Team

Define tasks

Estimate effort

Develop product

Ensure quality

Evolve processes



Scrum Master

Servant leader
Team protector
Scrum guide



picture by [Orange_Beard](#)

Scrum Master

Remove impediments
Prevent interruptions
Facilitate the team
Support the process
Manage management



Pigs and Chickens

Product Owner
Scrum Master
Team Members

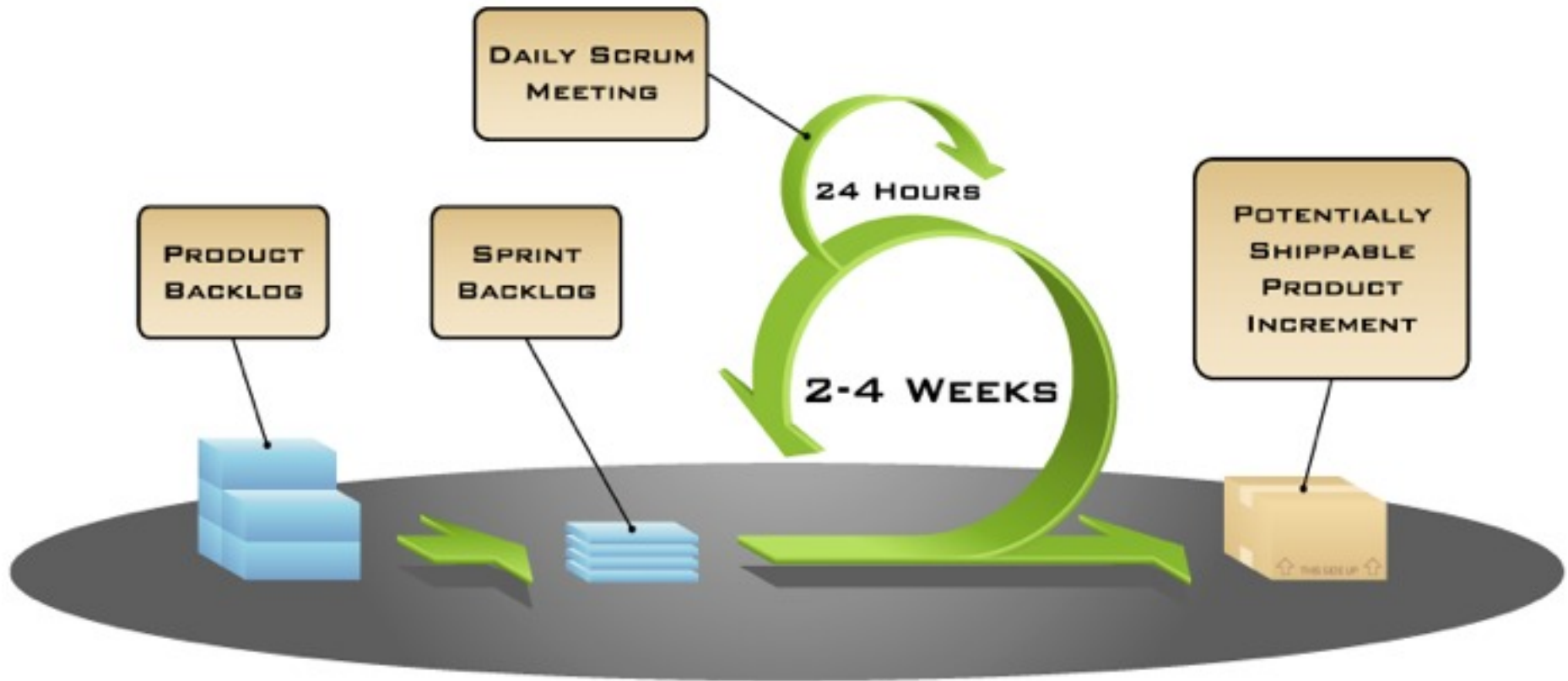
Users
Managers
Marketing



By Clark & Vizdos

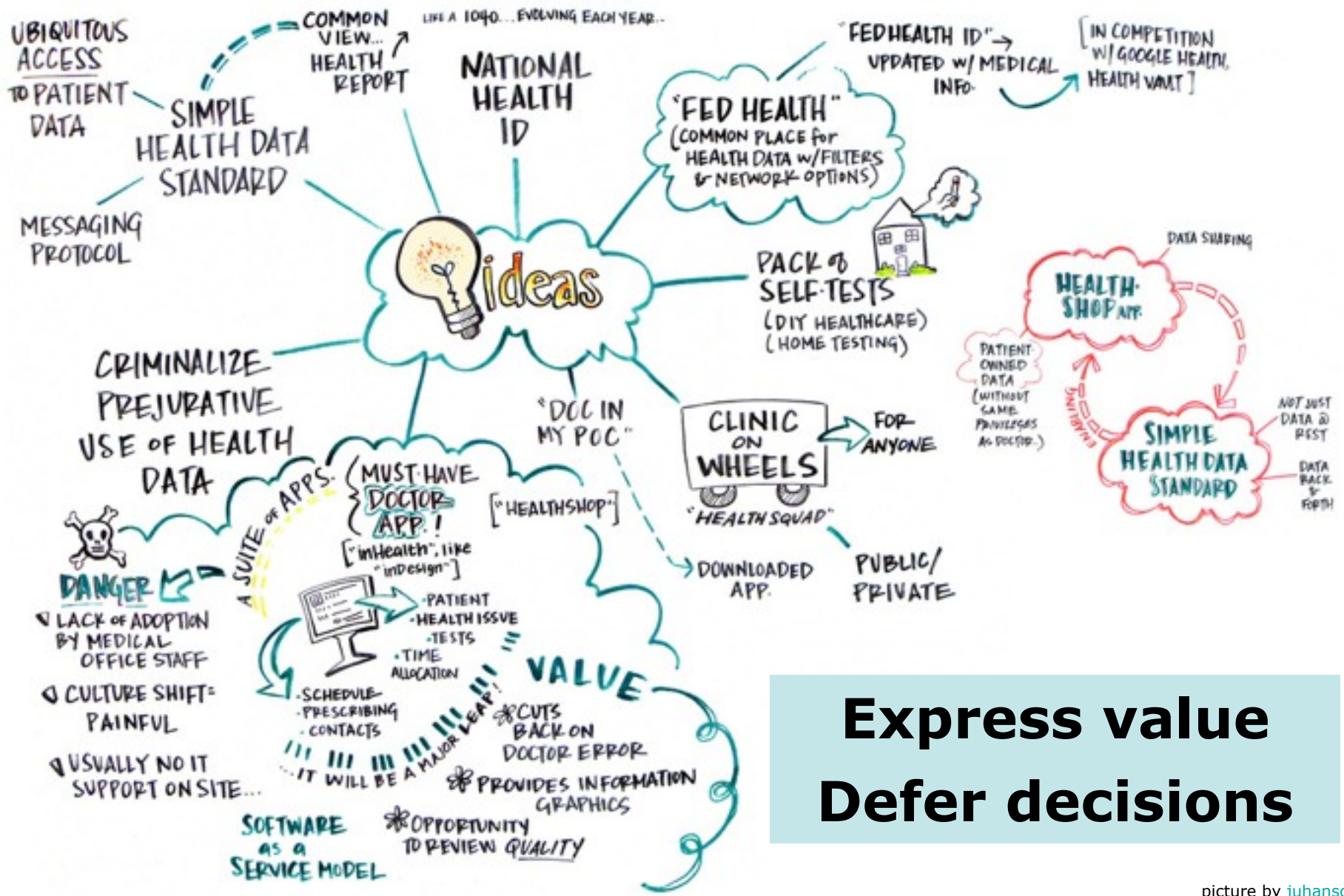
© 2006 implementingscrum.com

Scrum Process



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Product Backlog



**Express value
Defer decisions**

picture by [juhansonin](#)

Product Backlog

| | Item # | Description | Est | By |
|------------------|--------|--|-----|-----|
| Very High | | | | |
| | 1 | Finish database versioning | 16 | KH |
| | 2 | Get rid of unneeded shared Java in database | 8 | KH |
| | | - Add licensing | - | - |
| | 3 | Concurrent user licensing | 16 | TG |
| | 4 | Demo / Eval licensing | 16 | TG |
| | | Analysis Manager | | |
| | 5 | File formats we support are out of date | 160 | TG |
| | 6 | Round-trip Analyses | 250 | MC |
| High | | | | |
| | | - Enforce unique names | - | - |
| | 7 | In main application | 24 | KH |
| | 8 | In import | 24 | AM |
| | | - Admin Program | - | - |
| | 9 | Delete users | 4 | JM |
| | | - Analysis Manager | - | - |
| | 10 | When items are removed from an analysis, they should show up again in the pick list in lower 1/2 of the analysis tab | 8 | TG |
| | | - Query | - | - |
| | 11 | Support for wildcards when searching | 16 | T&A |
| | 12 | Sorting of number attributes to handle negative numbers | 16 | T&A |
| | 13 | Horizontal scrolling | 12 | T&A |
| | | - Population Genetics | - | - |
| | 14 | Frequency Manager | 400 | T&M |
| | 15 | Query Tool | 400 | T&M |
| | | Additional Editors (which ones) | 240 | T&M |
| | 17 | Ready Variable Manager | 240 | T&M |
| | 18 | Prototypes | 320 | T&M |

sam

Product Backlog

Owned by Product Owner
High-level requirements
Expressed as business value
Not complete, nor perfect
Expected to change & evolve
Limited view into the future

| | Est | By |
|--------|-----|-----|
| | 16 | KH |
| | 8 | KH |
| | - | - |
| | 16 | TG |
| | 16 | TG |
| | | |
| | 160 | TG |
| | 250 | MC |
| | | |
| | - | - |
| | 24 | KH |
| | 24 | AM |
| | - | - |
| | 4 | JM |
| | - | - |
| d show | 8 | TG |
| | - | - |
| | 16 | T&A |
| ers | 16 | T&A |
| | 12 | T&A |
| | - | - |
| | 400 | T&M |
| | 400 | T&M |
| | 240 | T&M |
| | 240 | T&M |
| | 320 | T&M |

Product Backlog

| | Item # | Description | Est | By |
|------------------|--------|--|-----|-----|
| Very High | | | | |
| | 1 | Finish database versioning | 16 | KH |
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| | | - Add licensing | - | - |
| | 3 | Concurrent user licensing | 16 | TG |
| | 4 | Demo / Eval licensing | 16 | TG |
| | | Analysis Manager | | |
| | 5 | File formats we support are out of date | | |
| | 6 | Round-trip Analyses | | |
| High | | | | |
| | | - Enforce unique names | | |
| | 7 | In main application | 24 | KH |
| | 8 | In import | 24 | AM |
| | | - Admin Program | - | - |
| | 9 | Delete users | 4 | JM |
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| | 11 | Support for wildcards when searching | 16 | T&A |
| | 12 | Sorting of number attributes to handle negative numbers | 16 | T&A |
| | 13 | Horizontal scrolling | 12 | T&A |
| | | Population Genetics | | |
| | 14 | Frequency Manager | 400 | T&M |
| | 15 | Query Tool | 400 | T&M |
| | 16 | Additional Editors (which ones) | 240 | T&M |
| | 17 | Study Variable Manager | 240 | T&M |
| | 18 | Genes | | |

Includes rough estimates

Prioritized by value & risk

Better to describe as user stories

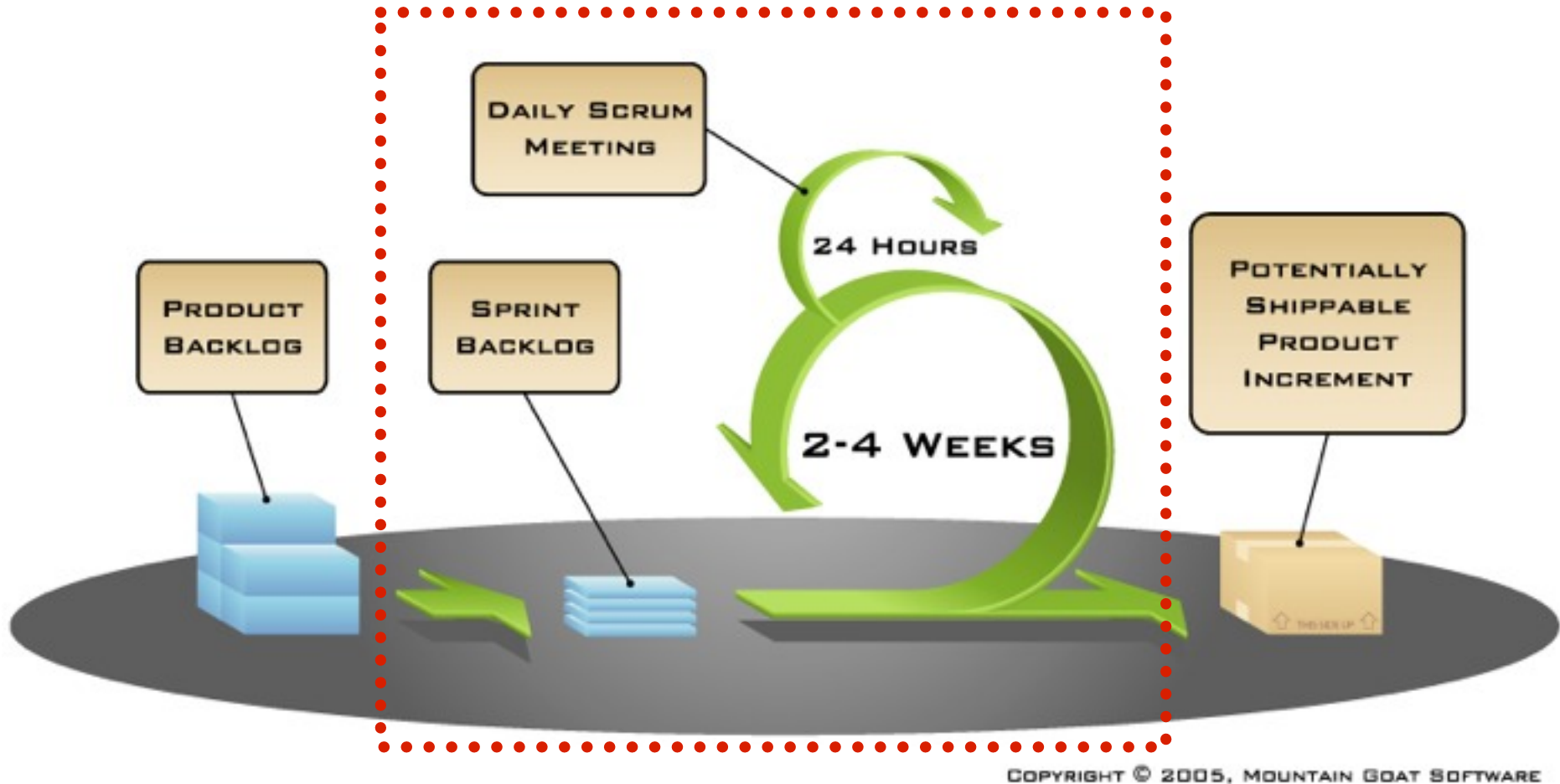
Publicly visible

User Stories

As a <user> I want <functionality>
(so that <benefit>)

**As a librarian I want to be able to
search for books by publication year**

Sprints



Timeboxed – Frozen features
Variable scope – Shippable result

Sprint Planning

Team capacity, Product backlog,

Current product, Business, Technologies

Goal

+

+

=



picture by [Darcy McCarty](#)

Tuesday 10 March 2009

Sprint Planning

Face-to-face communication
Small reversible steps
User's perspective



Sprint Planning (Part 1)

Strategical level planning

Prioritize/select features

Discuss acceptance criteria

Verify understanding

1/2 - 1 hour
per sprint/week



Sprint Planning (Part 2)

Tactical level planning

Define sprint backlog items

Estimate sprint backlog items

Use velocity (Yesterday's Weather)

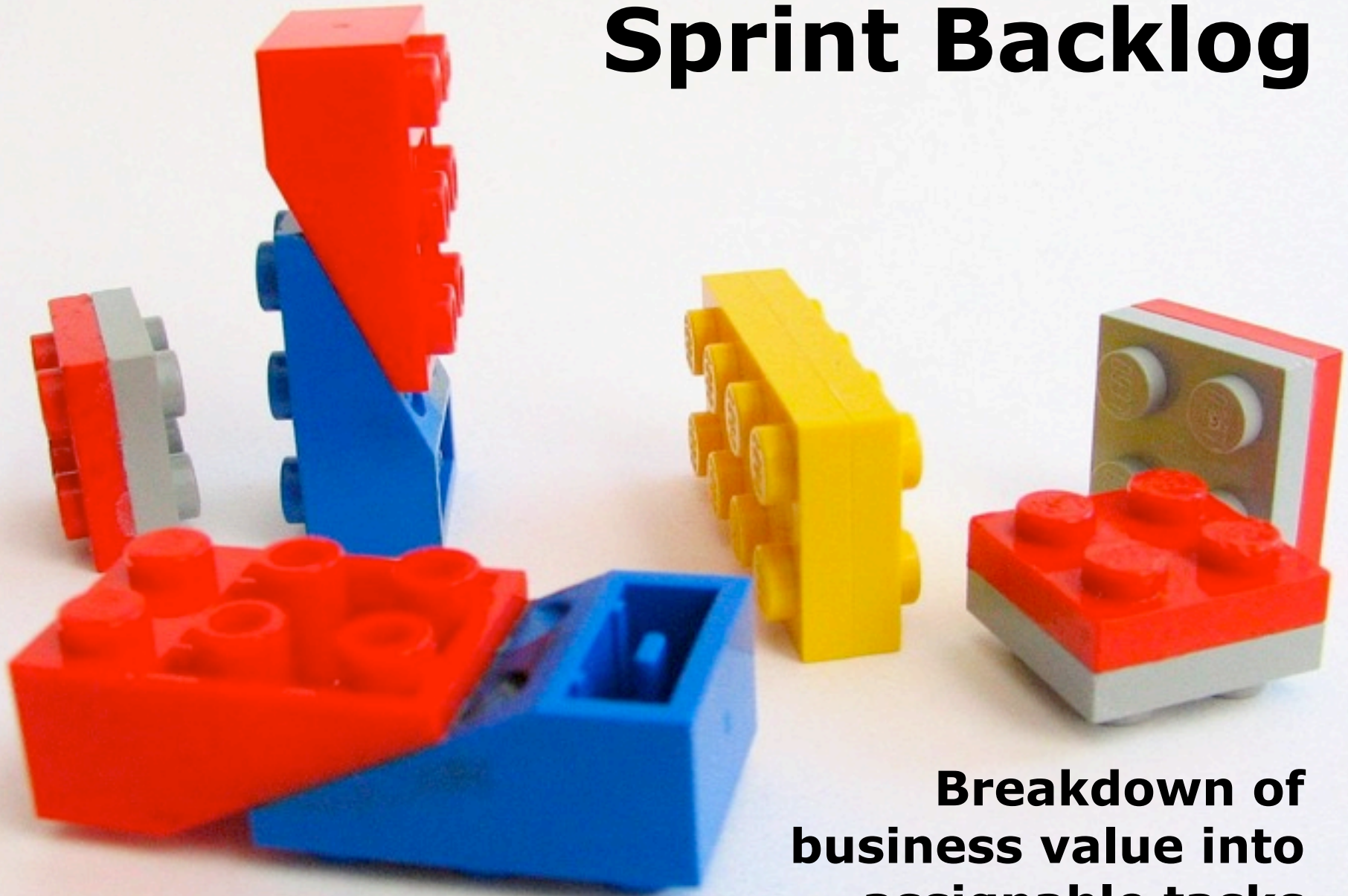
Share commitment

1/2 - 1 hour

per sprint/week



Sprint Backlog



**Breakdown of
business value into
assignable tasks**

Sprint Backlog

| Requirement | Task | Who's working | Status | Work Left [Hours] | | | | |
|-----------------|----------------------|---------------|---------|-------------------|-------|-------|-------|-------|
| | | | | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
| Member Sign In | Database Coding | Anjali | Done | 1 | 0 | 0 | | |
| | Unit Testing Scripts | Anjali | Done | 2 | 0 | 0 | | |
| | Business Logic | Anjali | Done | 1 | 0 | 0 | | |
| | UI Test Scripts | Anu | Done | 2 | 2 | 0 | | |
| | Front End Screens | Anjali | Done | 2 | 2 | 0 | | |
| | Load Testing | Anu/ Anjali | Done | 2 | 2 | 1 | | |
| Reset Password | Unit Testing Scripts | Thomas | Done | 1 | 0 | 0 | | |
| | Business Logic | Thomas | Done | 1 | 0 | 0 | | |
| | UI Test Scripts | Anu | Done | 1 | 1 | 0 | | |
| | Front End Screens | Thomas | Done | 1 | 1 | 1 | | |
| | Integration Testing | Anu | Pending | 1 | 1 | 1 | | |
| Change Password | Unit Testing Scripts | Thomas | Done | 0.5 | 0 | 0 | | |
| | Business Logic | Thomas | Done | 0.5 | 0 | 0 | | |
| | UI Test Scripts | Anu | Done | 0.5 | 0 | 0 | | |
| | Front End Screens | Thomas | Done | 0.5 | 0 | 0 | | |
| | Integration Testing | Anu | Pending | 0.5 | 0.5 | 1 | | |
| Change Email | Unit Testing Scripts | Anjali | Done | 0.5 | 0 | 0 | | |
| | Business Logic | Anjali | Done | 0.5 | 0 | 0 | | |
| | UI Test Scripts | Anu | Done | 0.5 | 0 | 0 | | |
| | Front End Screens | Anjali | Done | 0.5 | 0 | 0 | | |
| | Integration Testing | Anu | Pending | 0.5 | 0.5 | 0.5 | | |
| Help | Front End Screens | Anjali | Pending | 0.5 | 0.5 | 0.5 | | |
| | Integration Testing | Anu | Pending | 0.5 | 0.5 | 0.5 | | |
| | Integration Testing | Anu | Pending | | | 0.5 | | |
| Work Remain | | | | 21 | 11 | 6 | | |

sam

Sprint Backlog

- Owned by the team
- Team allocates work
- No additions by others

| | Work Left [Hours] | | | |
|-----------------------|-------------------|-----------|----------|-------|
| | Day 2 | Day 3 | Day 4 | Day 5 |
| | 0 | 0 | | |
| | 0 | 0 | | |
| | 1 | 0 | 0 | |
| | 2 | 2 | 0 | |
| | 2 | 2 | 0 | |
| | 2 | 2 | 1 | |
| | 1 | 0 | 0 | |
| | 1 | 0 | 0 | |
| | 1 | 1 | 0 | |
| | 1 | 1 | 1 | |
| | 1 | 1 | 1 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0.5 | 1 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0 | 0 | |
| | 0.5 | 0.5 | 0.5 | |
| | 0.5 | 0.5 | 0.5 | |
| | 0.5 | 0.5 | 0.5 | |
| | 0.5 | | 0.5 | |
| Work Remaining | 21 | 11 | 6 | |

Daily Scrum



The heartbeat of Scrum

picture by [Hamed Saber](#)

Tuesday 10 March 2009

Daily Scrum

Commitment and accountability

Say what you do, do what you say

Whole world is invited



picture by [Hamed Saber](#)

Daily Scrum

What I did since last meeting

What I will do until next meeting

What things are in my way

Only the team talks

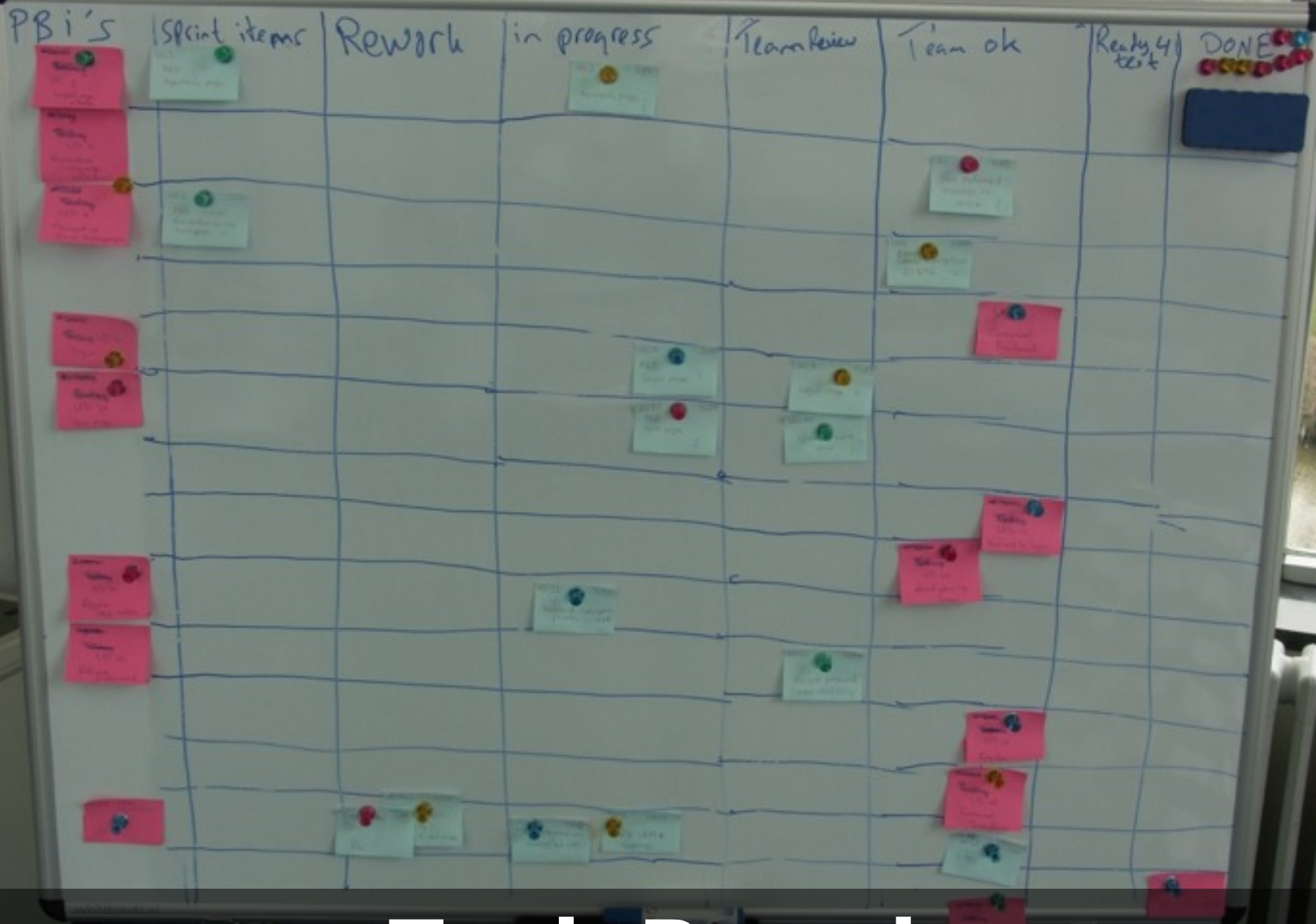
Not to Scrum Master

No problem solving

Max 15 minutes

Standing up





Task Board

Definition of Done

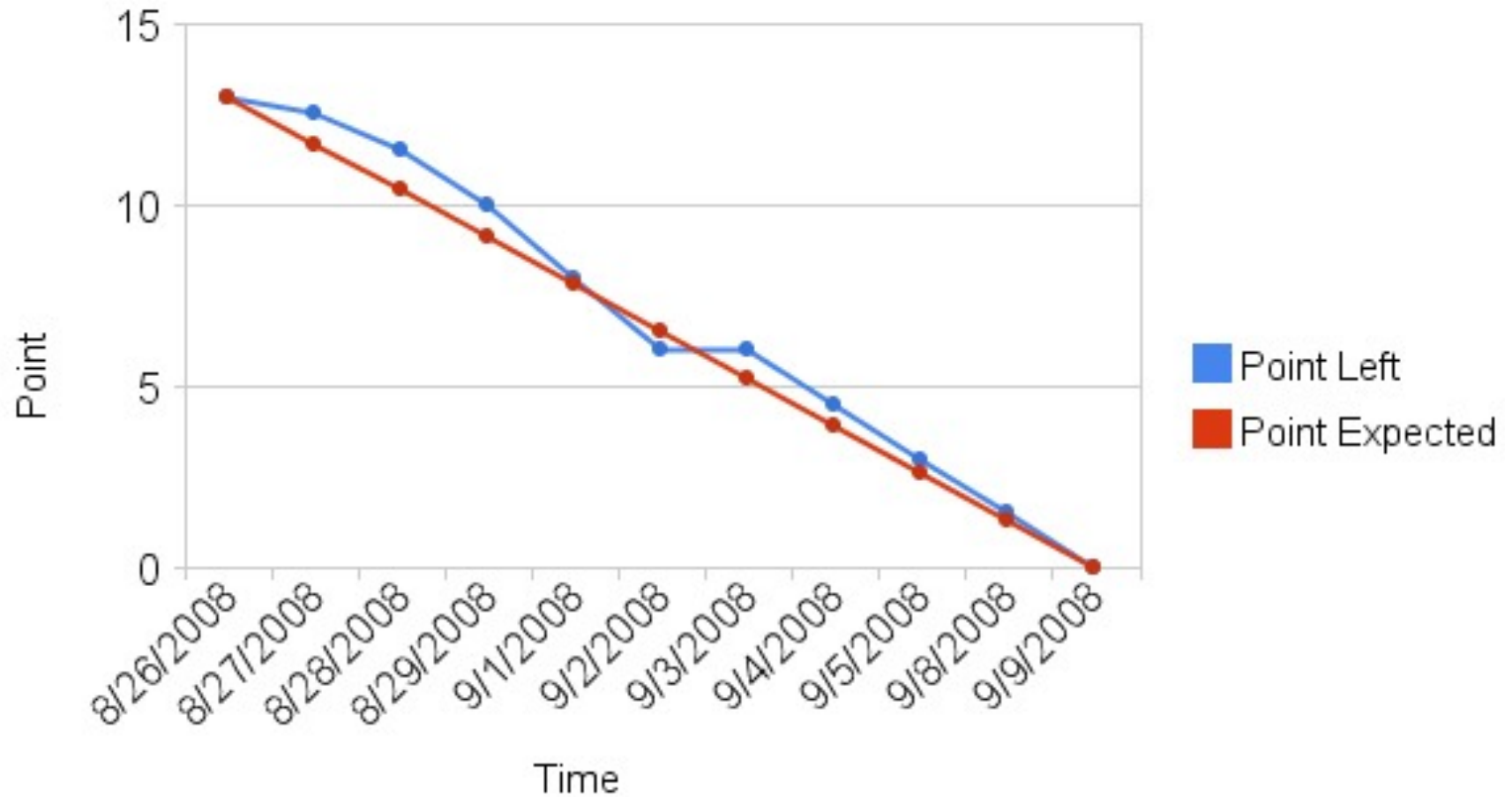
Avoid the 90% syndrome

Coded, commented, checked in, integrated, reviewed, unit tested, deployed to test environment, passed user acceptance test & documented...

= DONE DONE

Sprint Burn Down

Burn Down Chart for Sprint 1



Sprint Review



**Satisfy Product Owner
Get feedback on product**

picture by [askay](#)

Tuesday 10 March 2009

A close-up photograph of a person's hand, showing the wrist and forearm. The skin is light-toned and appears to be holding a pen or pencil, though the object is not fully visible. The background is a plain, light-colored surface.

Sprint Review

Informal, no slides

Whole team participates

The world is invited

Sprint Review

Preparation needed

Show complete features

Accept or reject results

1-2 hours

per sprint/week



Sprint Retrospective

Evolve the process

The image features two black silhouettes against a white background. On the left is a silhouette of an ape-like creature in a crouching, walking posture. On the right is a silhouette of a modern human in a full, upright running posture. The text 'Evolve the process' is centered between the two figures.

picture by [kevindooley](#)

Tuesday 10 March 2009

Sprint Retrospective

Reflect on process and product
Whole team participates



Sprint Retrospective

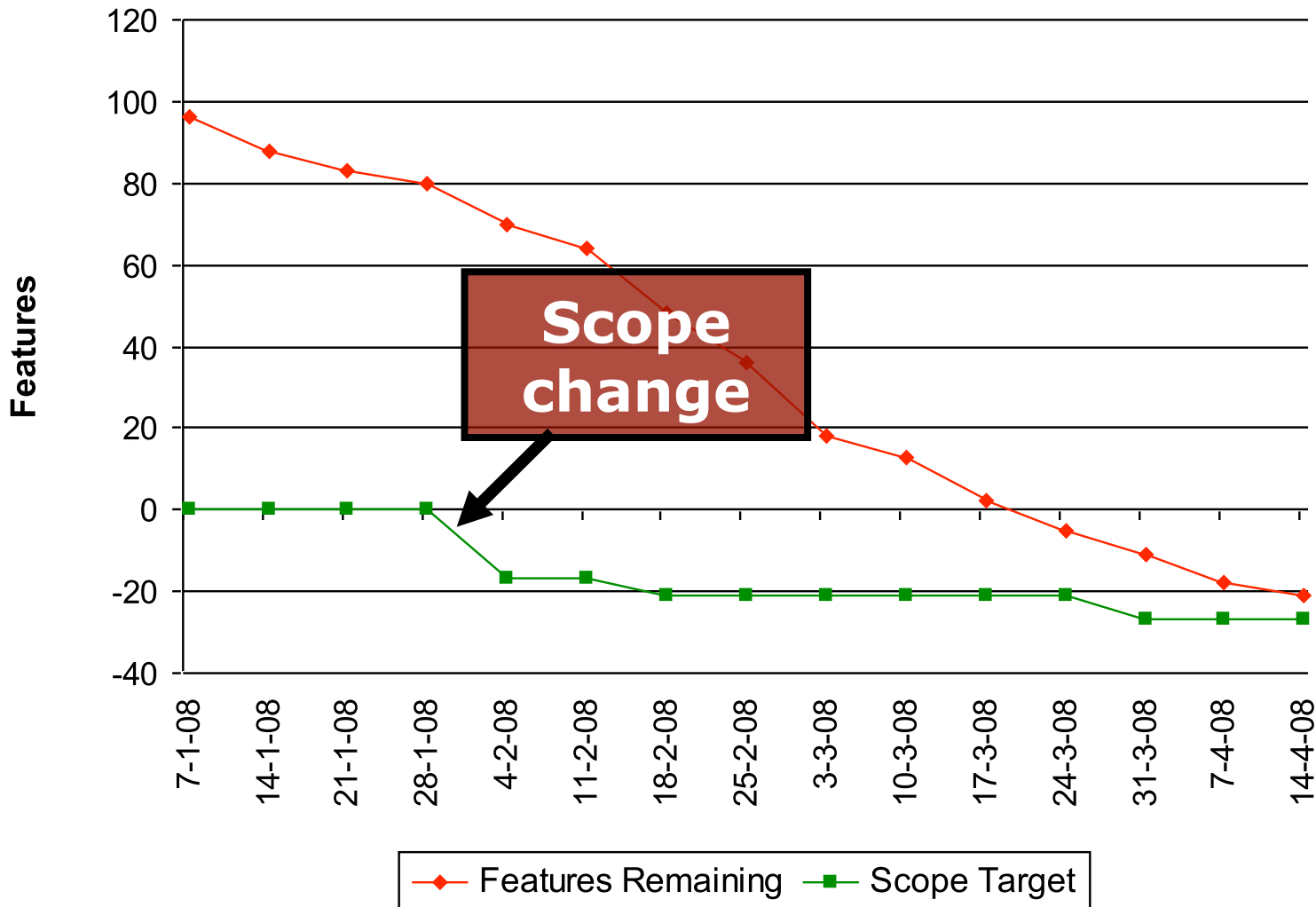
What to start doing

What to stop doing

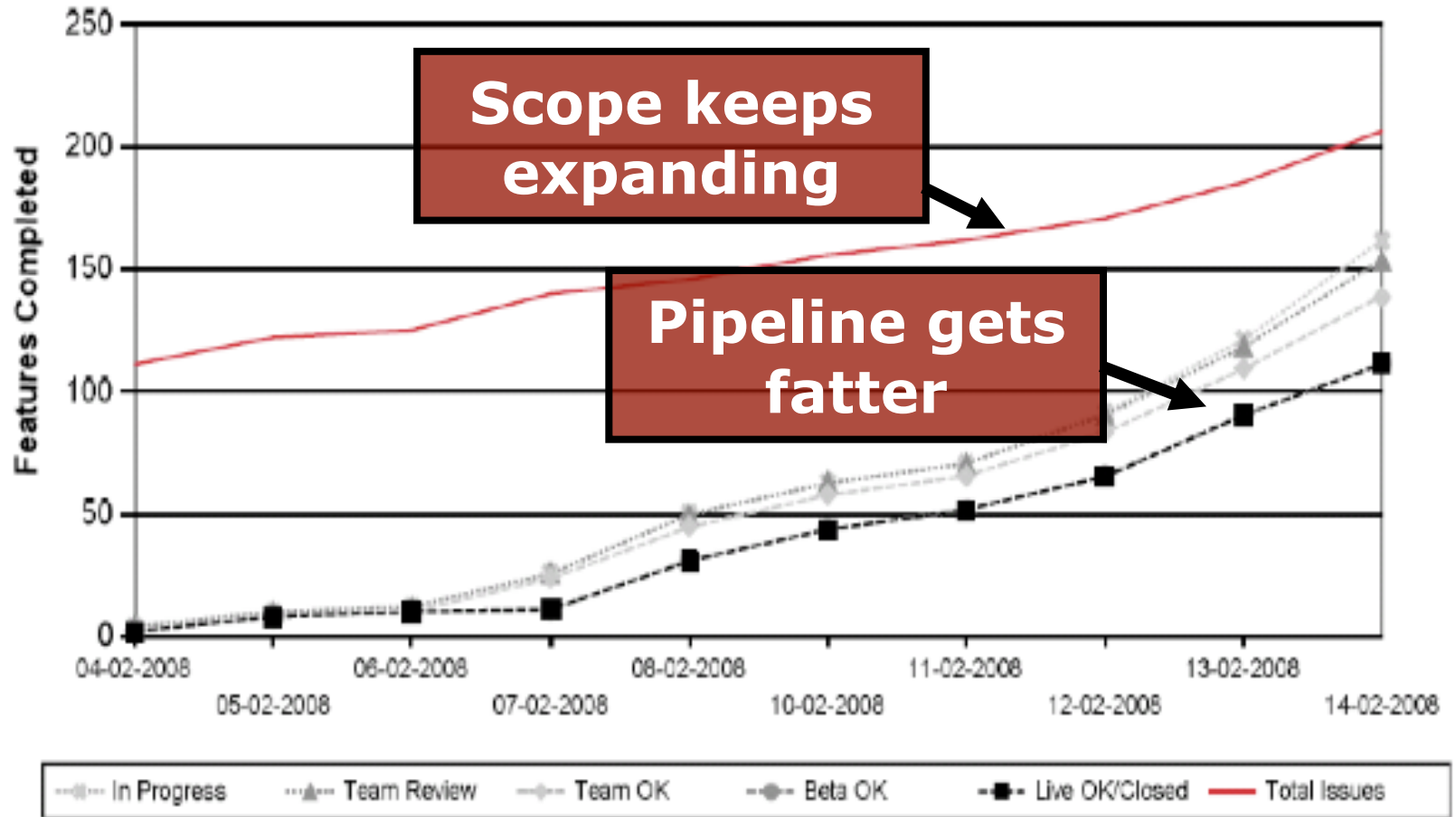
What to continue doing

(Product Owner not required)

Burn Down Chart



Burn Up Chart



Release Planning

Plan features in sprints and releases
Releases depend on accepted sprints



Release Sprints

Usability testing

Documentation

Help files

Packaging



Sprint Termination

Only in extreme cases

Team terminates: cannot meet sprint goal

Product Owner terminates: priority change

Work reverted to end of prior sprint

Raises visibility of problems



Sprints



Steady pull of business value
Inspect and Adapt

picture by [kelsey.e.](#)

Tuesday 10 March 2009

Sprints

Driven by Product Owner

Small reversible steps

Welcome change

Cross-functional team

Include design and testing

Maintain constant pace

Share commitment

High quality, DONE

Get feedback

“Fail fast”



picture by [kelsey.e.](#)

Hot Issues

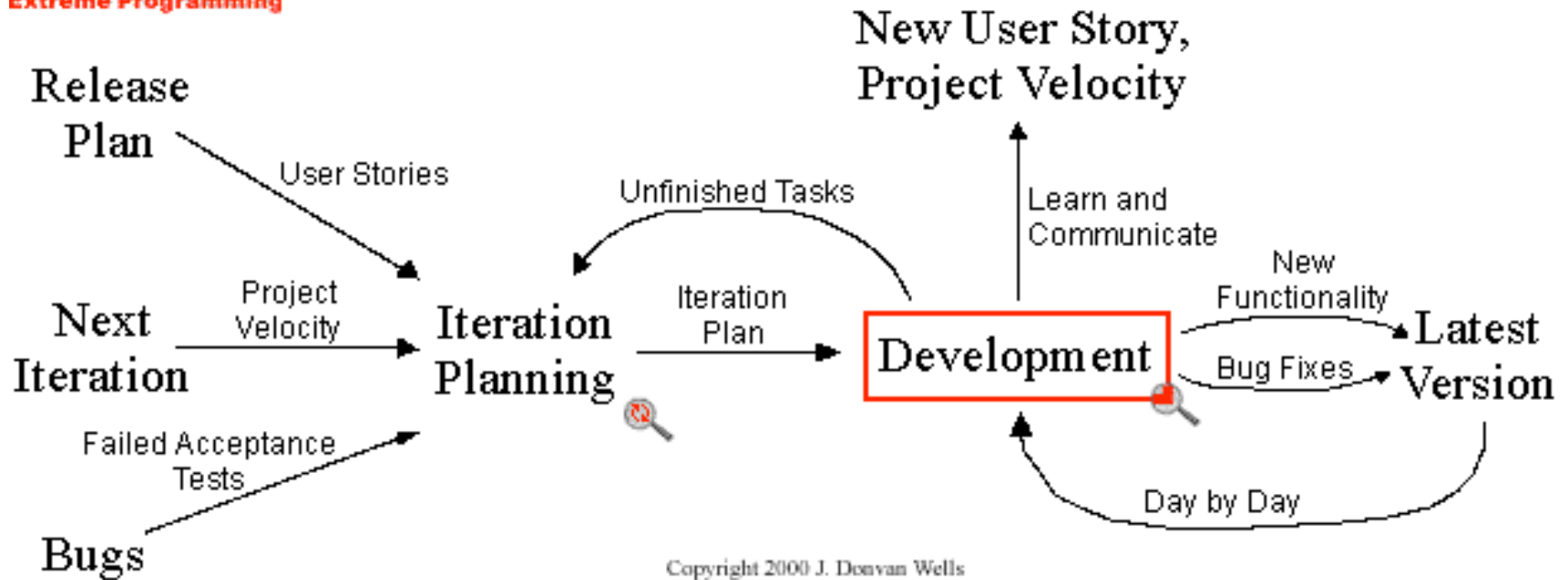


Tuesday 10 March 2009

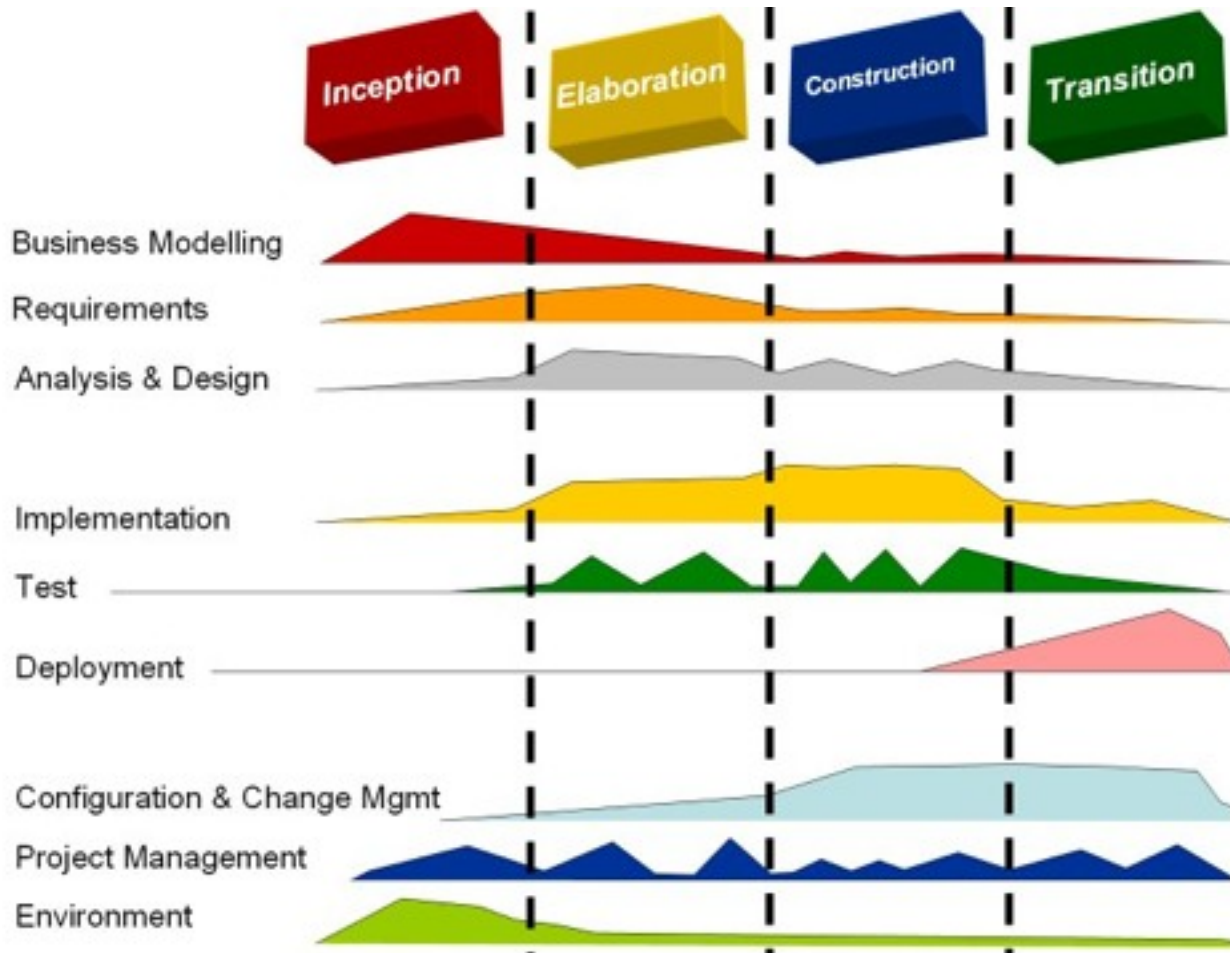
Scrum vs. XP



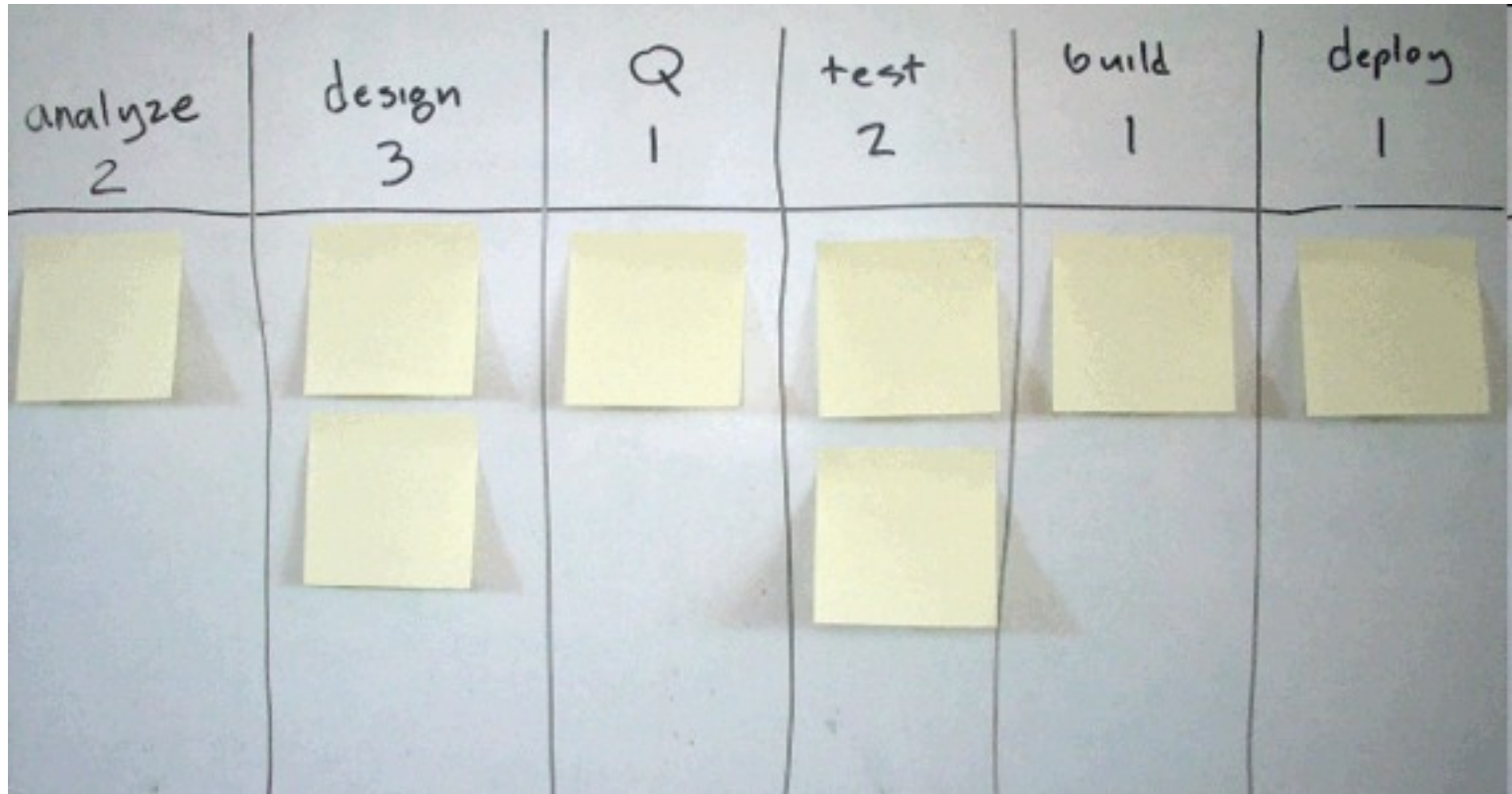
Iteration



Scrum vs. RUP

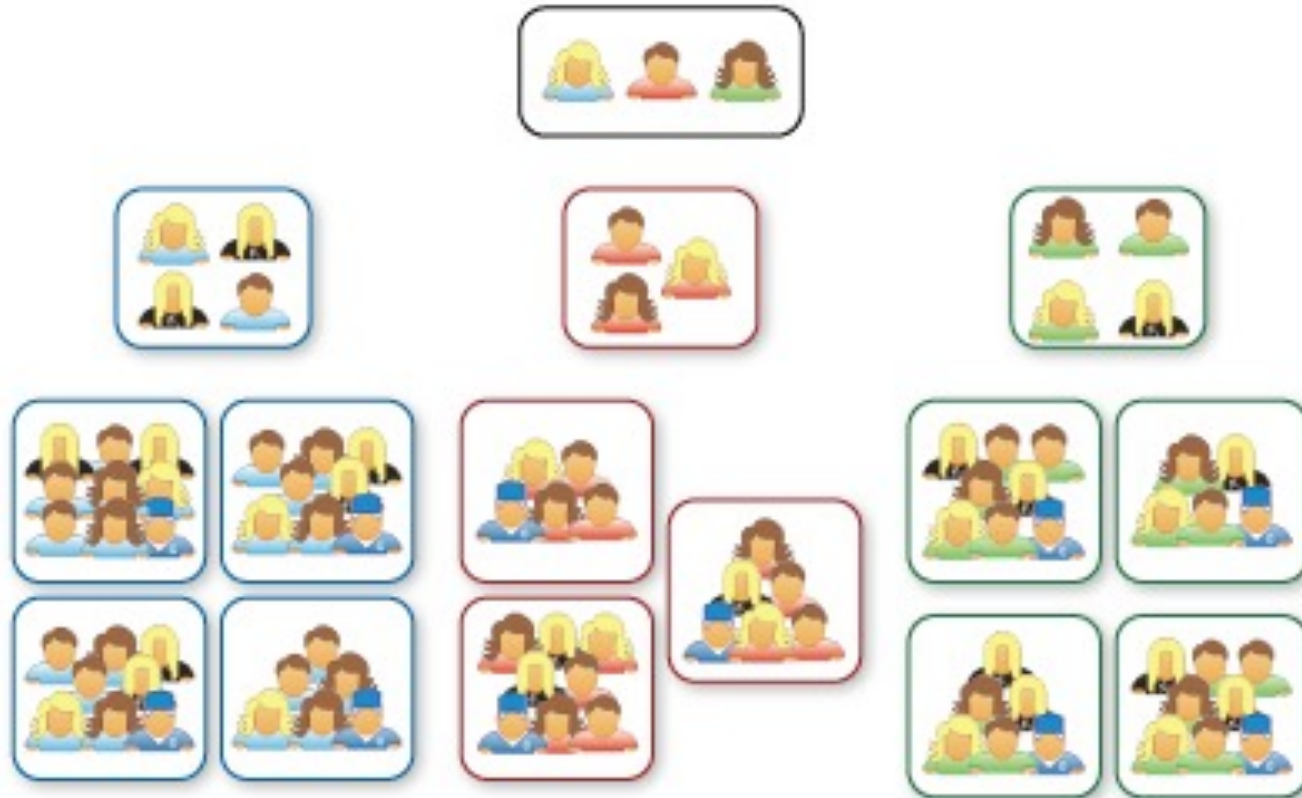


Scrum vs. Kanban

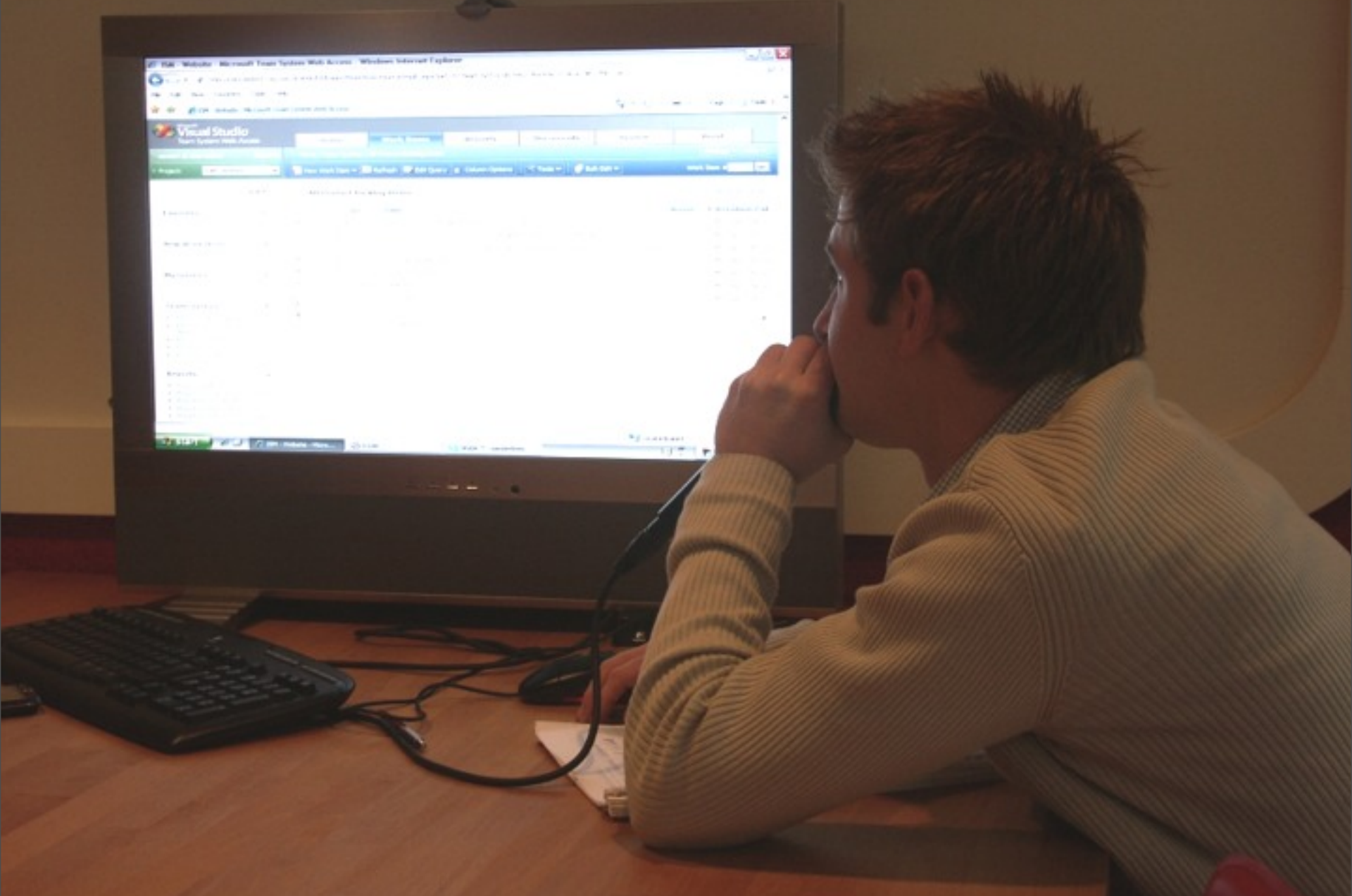


Scaled Scrum

(Scrum of Scrums)



Distributed Scrum



Tuesday 10 March 2009

Results

effects of
applying Scrum



Managed Uncertainty

Rolling wave planning

Simpler mini-projects lowers risk

Flexible Scope

Allow changes at fixed intervals

Releases enable learning

Faster Delivery

Shorter time to market

Value delivered in increments

Higher Quality

Testing happens continuously
Process improvement built-in

Eliminated Waste

Nothing is designed that is not built

Nothing is built that is not used

Increased Visibility

All problems are made visible

Progress is running tested software

Preconditions

Empowerment

Discipline

Courage

Stamina

Passion

Coaching

Stable Teams

Cross-Functional

Available Customer

A close-up photograph of a hand, with the index finger pointing towards the right. A black diagonal overlay covers the right half of the image, containing white text. The background is blurred, showing what appears to be a person's face in the distance.

Disclaimer

No Engineering Practices

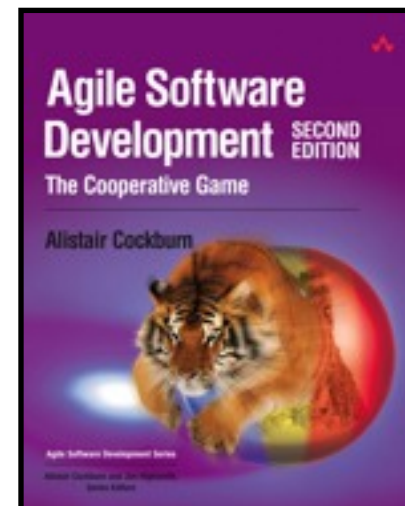
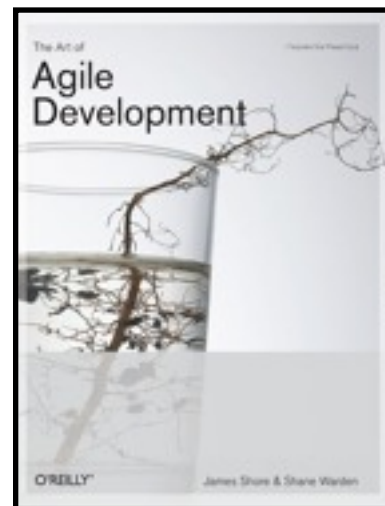
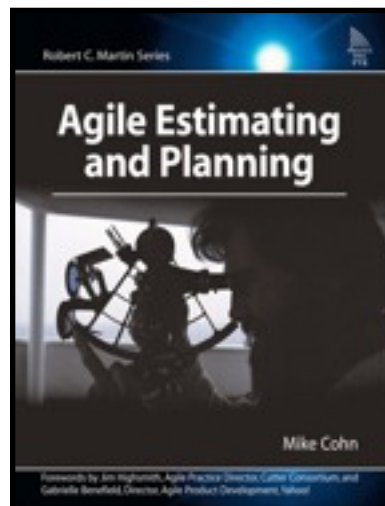
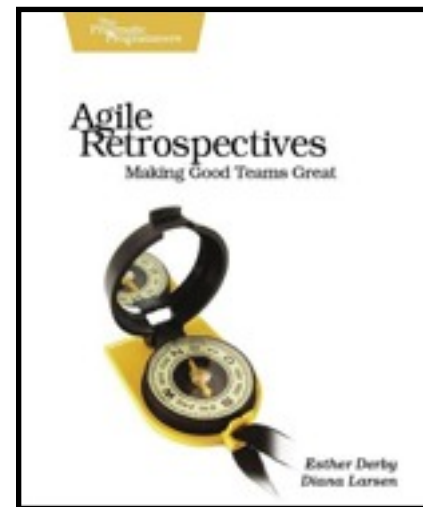
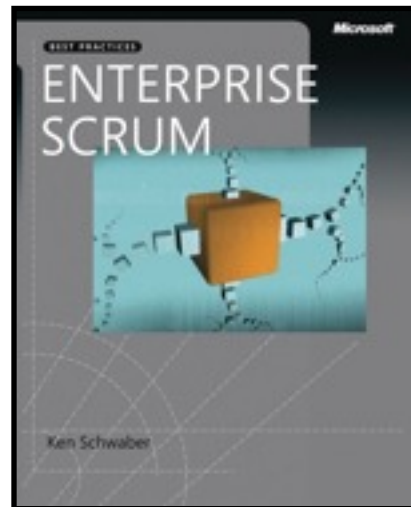
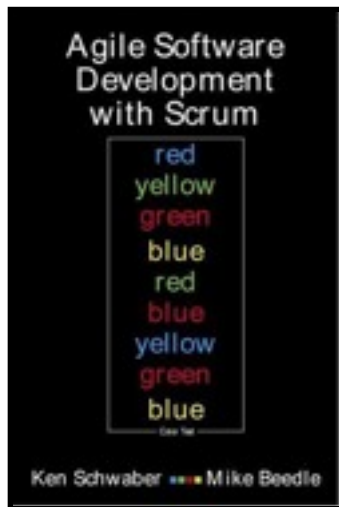
Looks Simple, Is Hard

No Silver Bullet

Not Complete

Takes Time

Books



Sites



www.scrumalliance.org

www.controlchaos.com

www.mountangoatsoftware.com

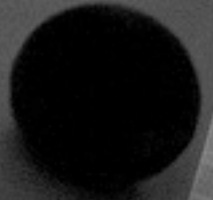
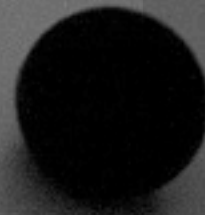
www.jeffsutherland.com

www.implementingscrum.com

www.agilesoftwaredevelopment.com

www.noop.nl

Q & A



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FEBRUARY 05, 2009

The Decline and Fall of Agilists



There once was a time when being agile was being a visionary. Agile experts wrote books on how adaptive software development is about managing complex systems (Jim Highsmith), why agility is a cooperative game (Alistair Cockburn), and how being agile (or lean) requires a new way of thinking (Mary & Tom Poppendieck). The Agile Manifesto itself was a visionary masterpiece. So simple, so powerful, and so... Well, I wanted to say 'perfect', but nothing is perfect.

Not even me.

Then came the agilists...

Nowadays, agilists are telling me that in order to do Scrum or XP or any form of Agile successfully, you must refactor. Sorry, not optional. Necessary. They tell me that everybody needs unit tests, and that Scrum makes things worse by ignoring important (but hard) agile engineering practices, and that you're not agile if you don't have a build integration at least once a day. According to these agilists, being agile is *not* about being adaptable and doing whatever it takes to make your project a long-lasting success. These days, agilists simply claim that agile is about following practices X, Y and Z. Extreme Programmers often joke that Scrum is just XP without the technical practices that make it work.

And my feelings of inspiration changed into guilt...

We have fully adopted Scrum in our organization, but our adoption of XP practices is still far from completed. Are we now inferior to others? The agilists keep saying that Scrum without XP practices will result in a build-up of technical debt, lower



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