

Europe Week 2013: 11 - 15 March

Agile Software Development – Extreme Programming Techniques in Action –

Prof. Dr. Dagmar Monett Díaz

Computer Science Dept.

Faculty of Cooperative Studies

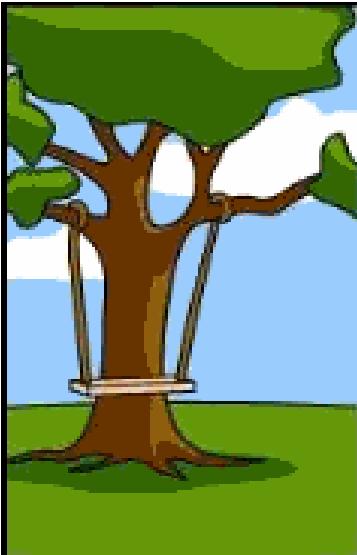
Berlin School of Economics and Law



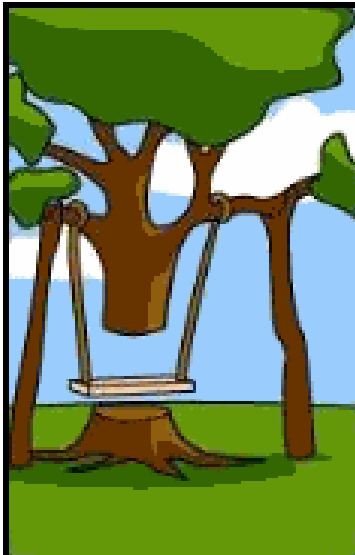
The traditional software development process: Perceptions, communication patterns and interests...



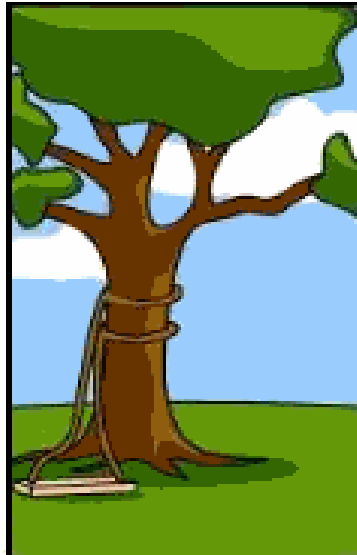
How the customer explained it



How the Project Leader understood it



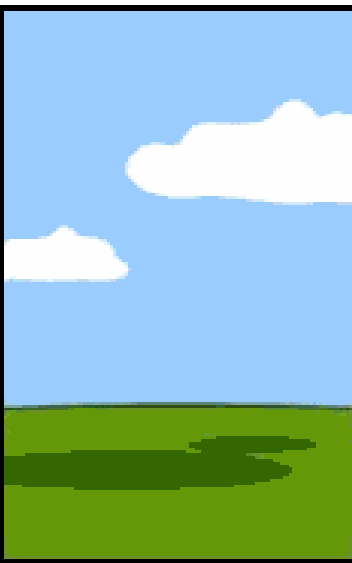
How the Analyst designed it



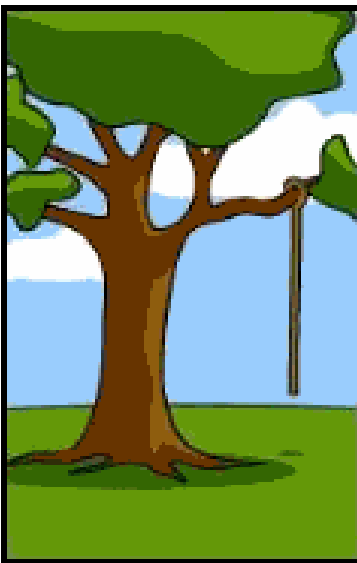
How the Programmer wrote it



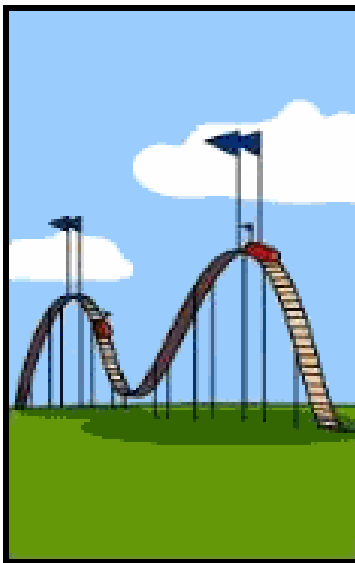
How the Business Consultant described it



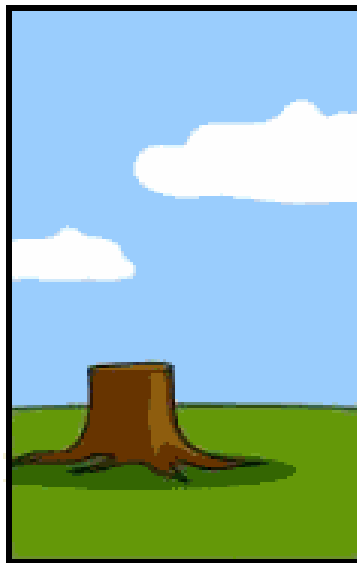
How the project was documented



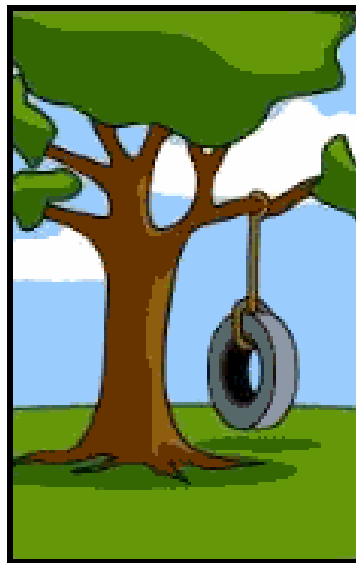
What operations installed



How the customer was billed



How it was supported



What the customer really needed

- Teaching and learning goals
- Lecture contents
- The Agile Manifesto; Principles behind it
- What is eXtreme Programming (XP)
- XP values
- XP cycle
- XP practices and rules
- How established is Agile?
- Sources of inspiration, References and more...



Teaching/Learning goals

At the end of the lecture, students should be able to...



- ...explain basic principles related to the Agile software development.
- ...understand the lifecycle of XP.
- ...understand XP values, rules and techniques.
- ...apply XP techniques to software projects.
- ...demonstrate both teamwork and technical skills.



**The Sandwich Principle
will be applied...**



Lecture contents



- Software development: Introduction to the Agile approach
- The Agile Manifesto and the principles behind it
- The eXtreme Programming (XP) lifecycle
- XP values, rules and techniques
- XP and other Agile methods
- Working in self-organized teams: The human factor is king
- Going Agile or not? Advantages and effectiveness of Agile
- Recommendations: Tools, reading list, conferences, and social media for Agile



The Agile Manifesto

"Manifesto for Agile Software Development"
At <http://agilemanifesto.org/>

**Kent Beck
Alistair Cockburn
James Grenning
Ron Jeffries
Robert C. Martin
Jeff Sutherland**

**Mike Beedle
Ward Cunningham
Jim Highsmith
Jon Kern
Steve Mellor
Dave Thomas**

**Arie van Bennekum
Martin Fowler
Andrew Hunt
Brian Marick
Ken Schwaber**

(Utah, February 2001)

The Agile Manifesto



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

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.***



" Yes, you are a developer and yes, you're agile but that doesn't necessarily make you an agile developer. "



Principles behind the Agile Manifesto

"Manifesto for Agile Software Development"
At <http://agilemanifesto.org/principles.html>

- **Customer satisfaction** by rapid, continuous delivery of useful software
- Working software is **delivered frequently** (weeks rather than months)
- **Working software is** the principal measure of **progress**
- Even late **changes** in requirements **are welcomed** (Remove an existing feature or move a deadline forward to accommodate late/unplanned feature requests)
- **Close, daily cooperation** between business people, developers, and users



- Face-to-face conversation is the best form of communication (**Co-location**)
- Projects are built around **motivated individuals**, who should be trusted
- **Continuous attention** to technical excellence and good design
- **Simplicity** –the art of maximizing the amount of work not done– is essential
- **Self-organizing teams**, the best architectures, requirements, and designs emerge from them
- Regular **adaptation** to changing circumstances



What is XP? (eXtreme Programming)

We're going to try something called Extreme Programming

WE'RE GOING TO TRY
SOMETHING CALLED
EXTREME PROGRAM-
MING.

www.dilbert.com
scottadams@aol.com

FIRST, PICK A
PARTNER. THE TWO
OF YOU WILL WORK
AT ONE COMPUTER
FOR FORTY HOURS
A WEEK.

1/9/03 © 2002 United Feature Syndicate, Inc.

THE NEW SYSTEM IS
A MINUTE OLD AND
I ALREADY HATE
EVERYONE.

Dilbert

by Scott Adams

At <http://dilbert.com/strips/comic/2003-01-09/>

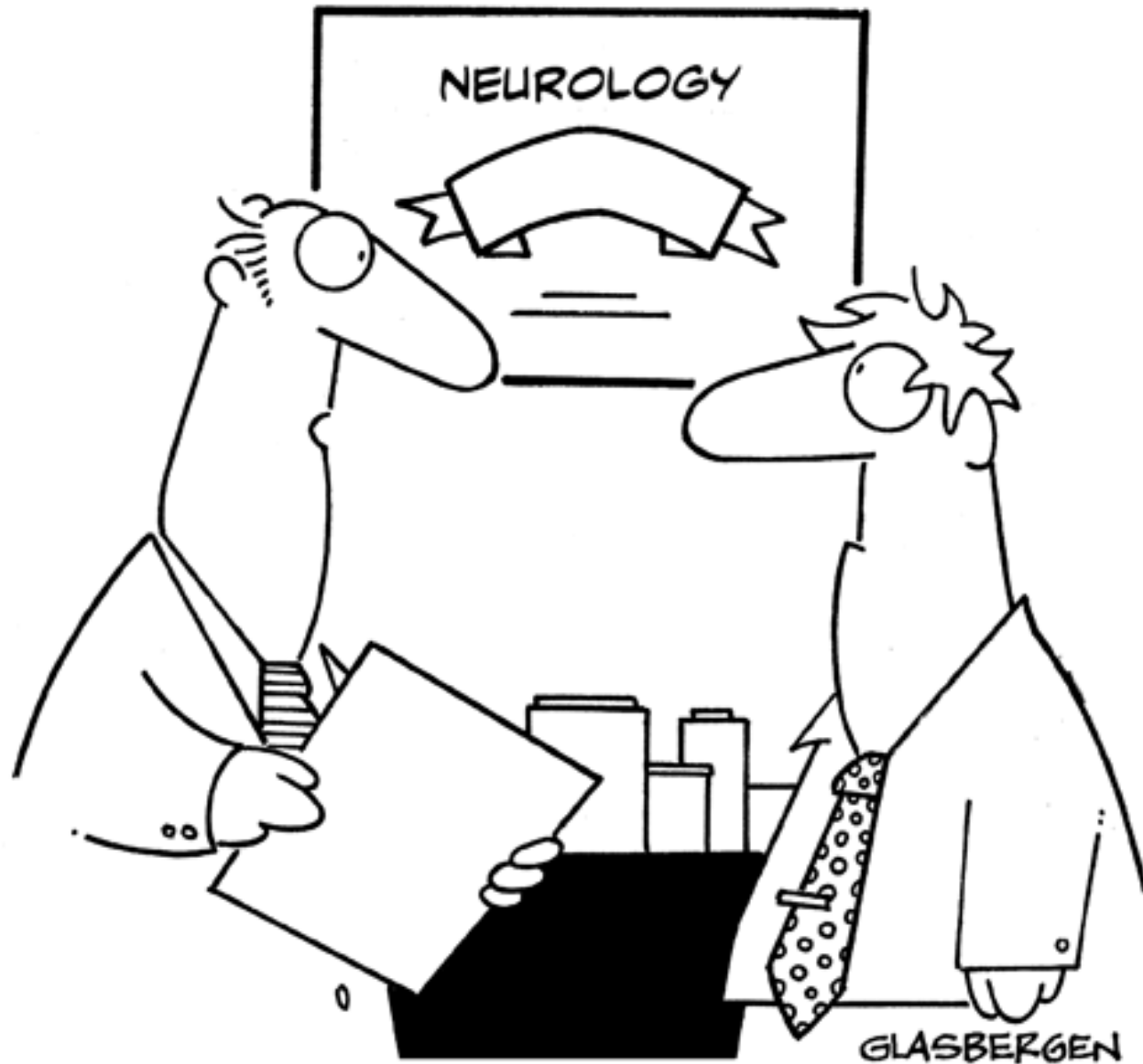
(Educational/Classroom usage permission is granted by Universal Uclick. All Rights Reserved)

Extreme Programming Explained, Kent Beck with Cynthia Andres
Chapter 2 (in [Wordle](#)), Addison-Wesley, 2nd Edition, 2004





XP values



"I have the results of your brain scan. We found evidence of extensive PowerPoint damage."



Active learning exercise „Learning duet“

Agile Value Card



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

Communication:

Simplicity:

Courage:

Feedback:

Respect:

By Agile UX

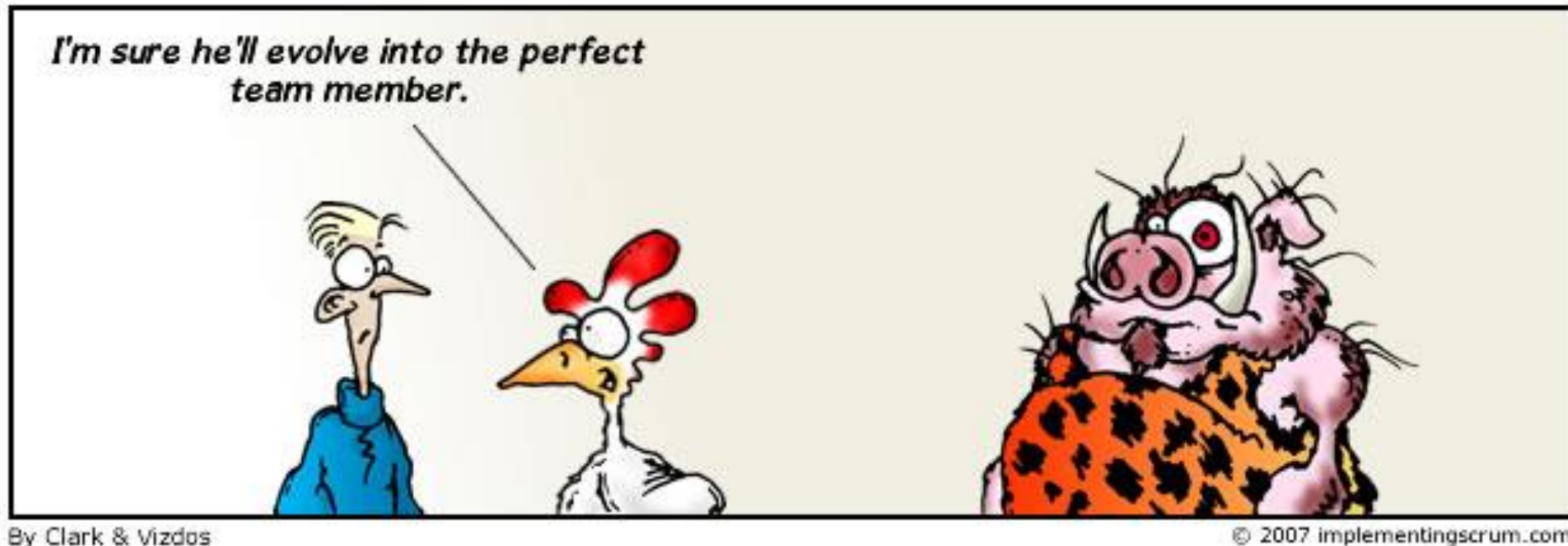
at <http://www.agile-ux.com/2010/10/19/agile-coaching-tips-reinforce-your-agility-with-the-agile-team-radar/>



Active learning exercise

“Rules for successful teamwork”

Evolution. Or a Revolution?



Implementing Scrum

by Michael Vizdos

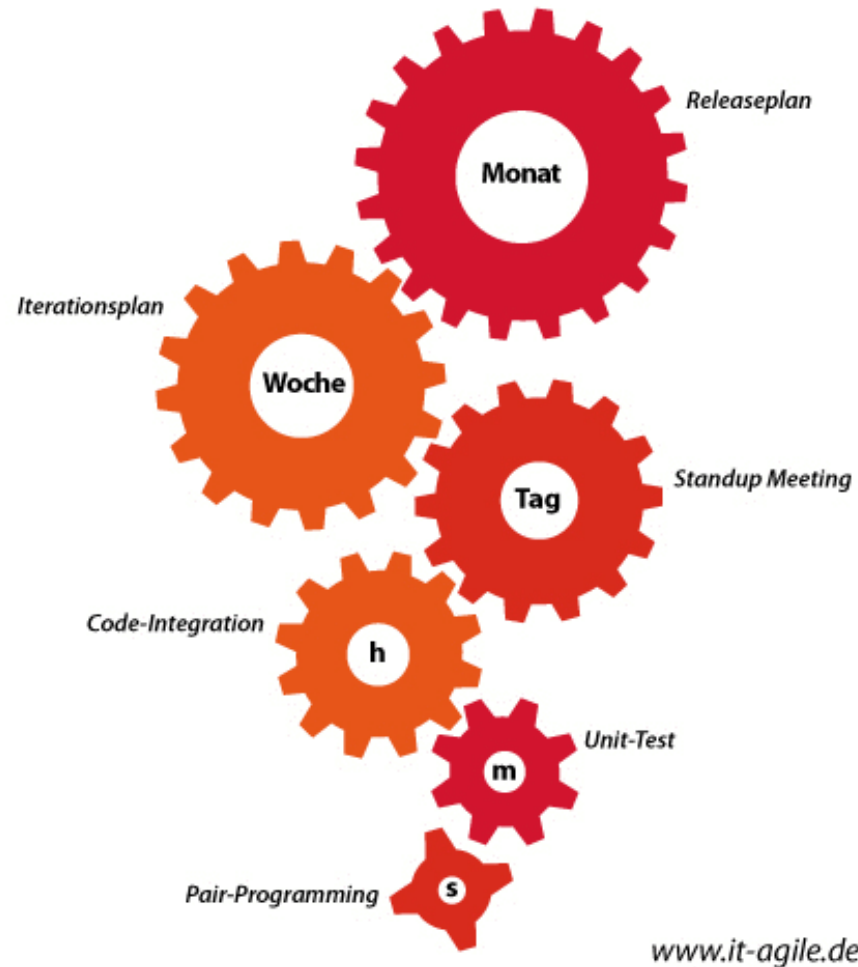
At <http://www.implementingscrum.com/2007/02/26/evolution-or-a-revolution/>

(Educational/Classroom usage permission is granted by Universal Uclick. All Rights Reserved)



XP cycle

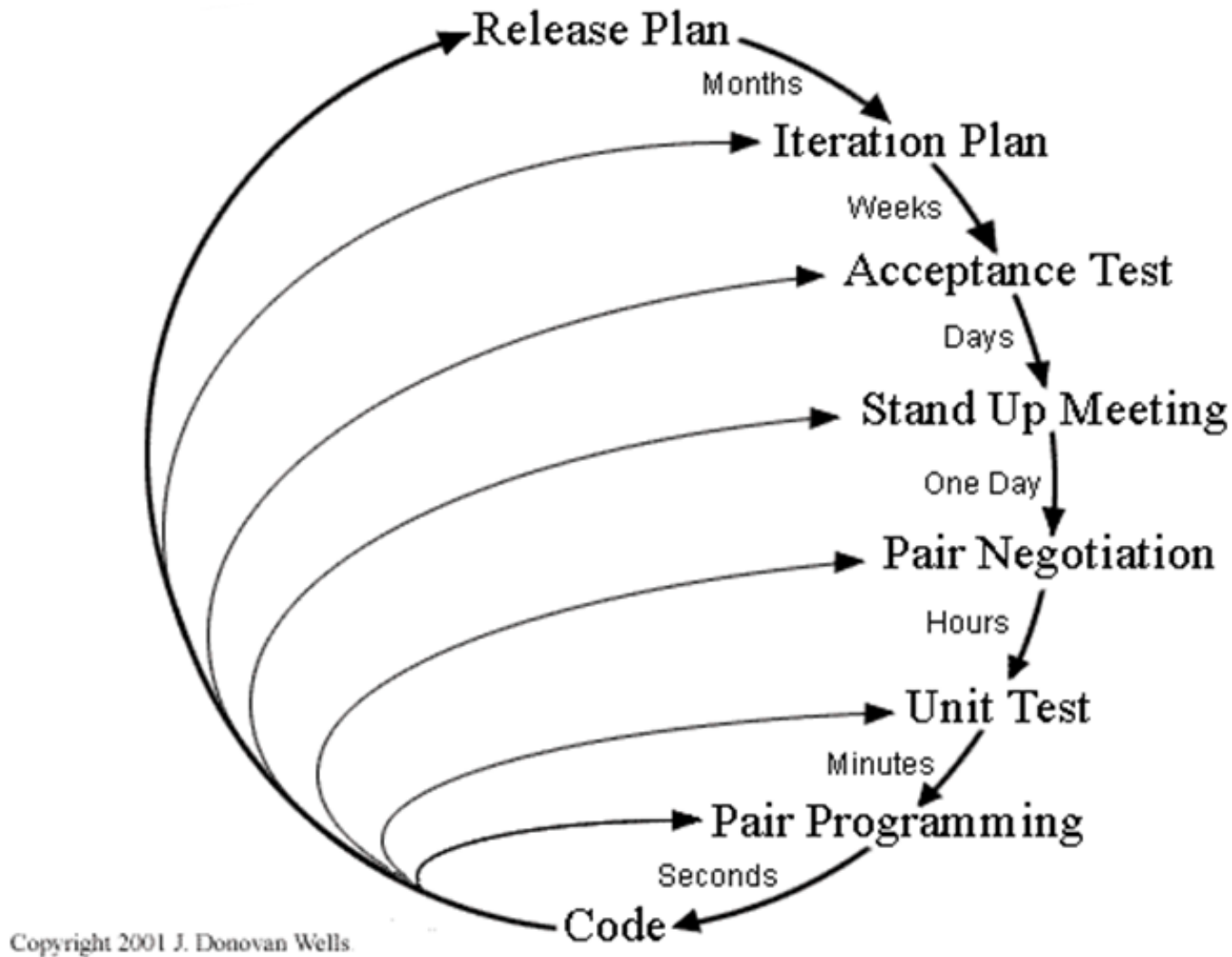
XP's cyclical approach



Planning/Feedback Loops



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

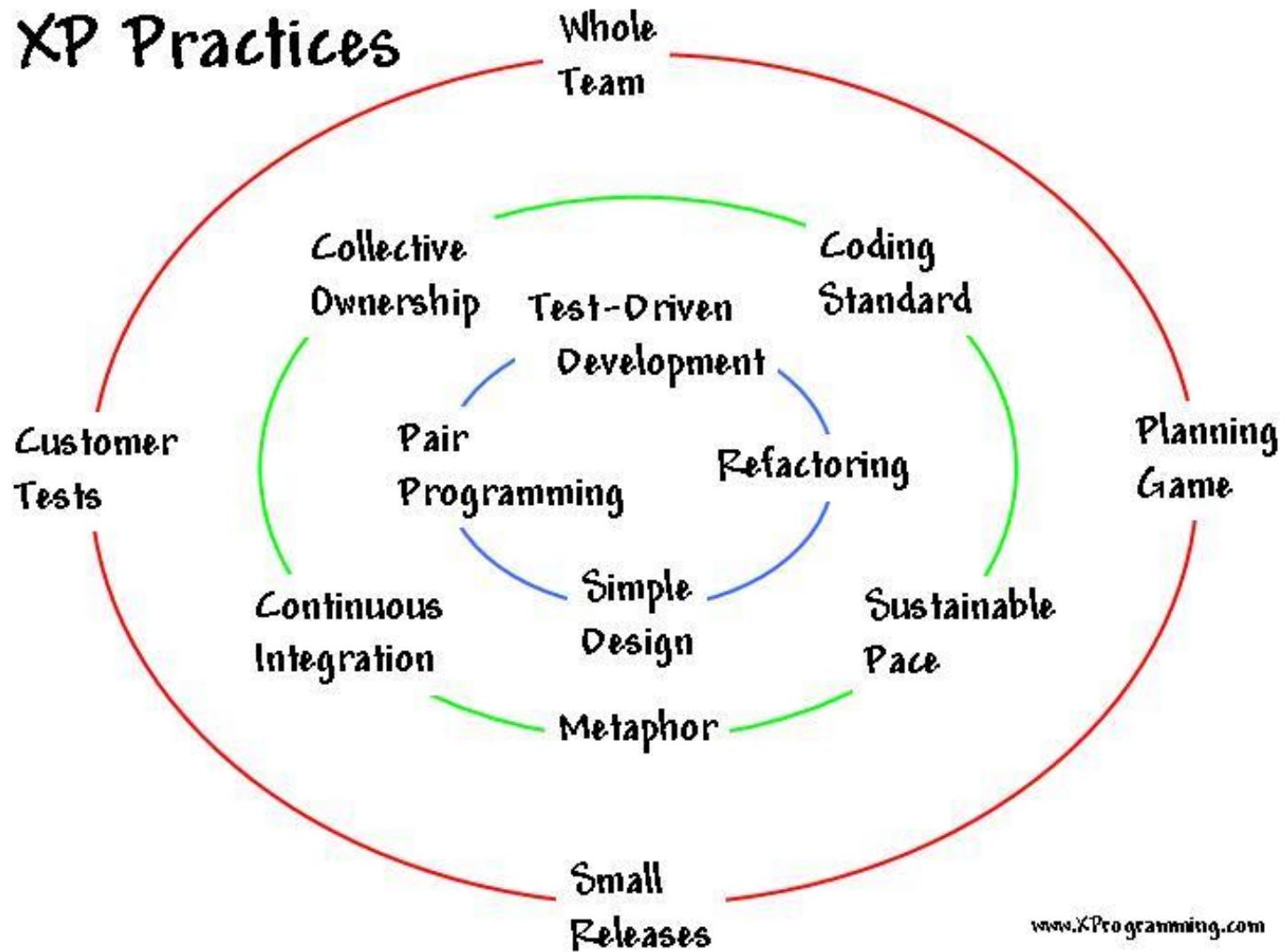


From *Extreme Programming: A gentle introduction* at <http://www.extremeprogramming.org/>



XP Practices

XP Practices

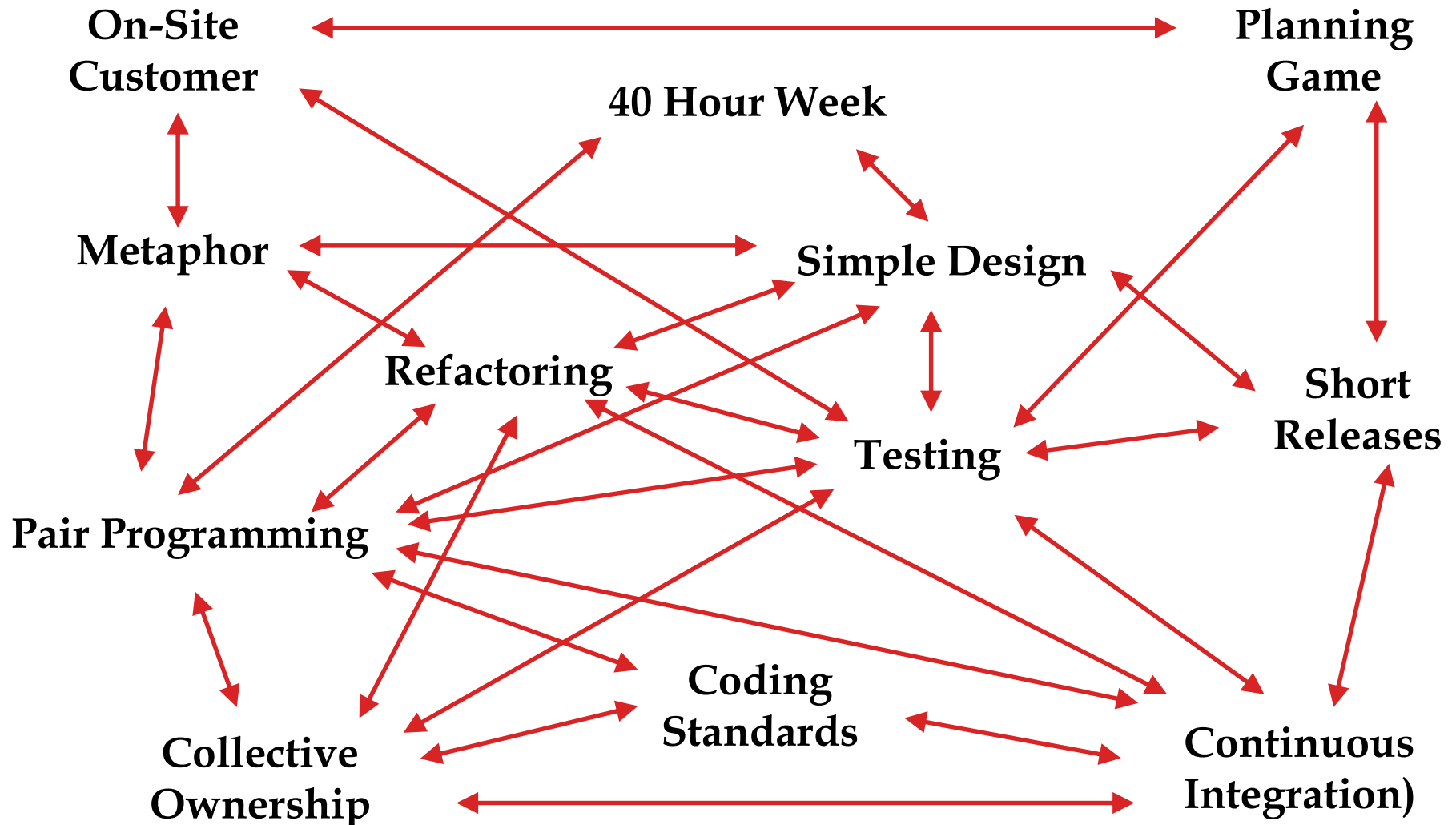


XP Practices

Beck (2003)



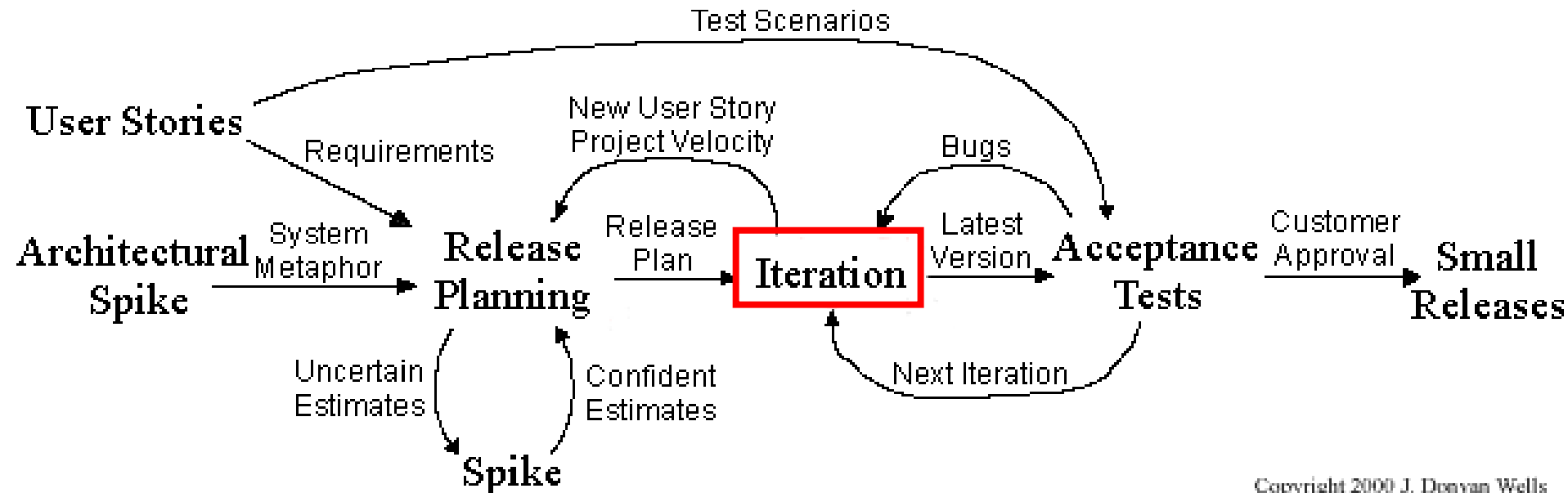
Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law





XP's rules working together

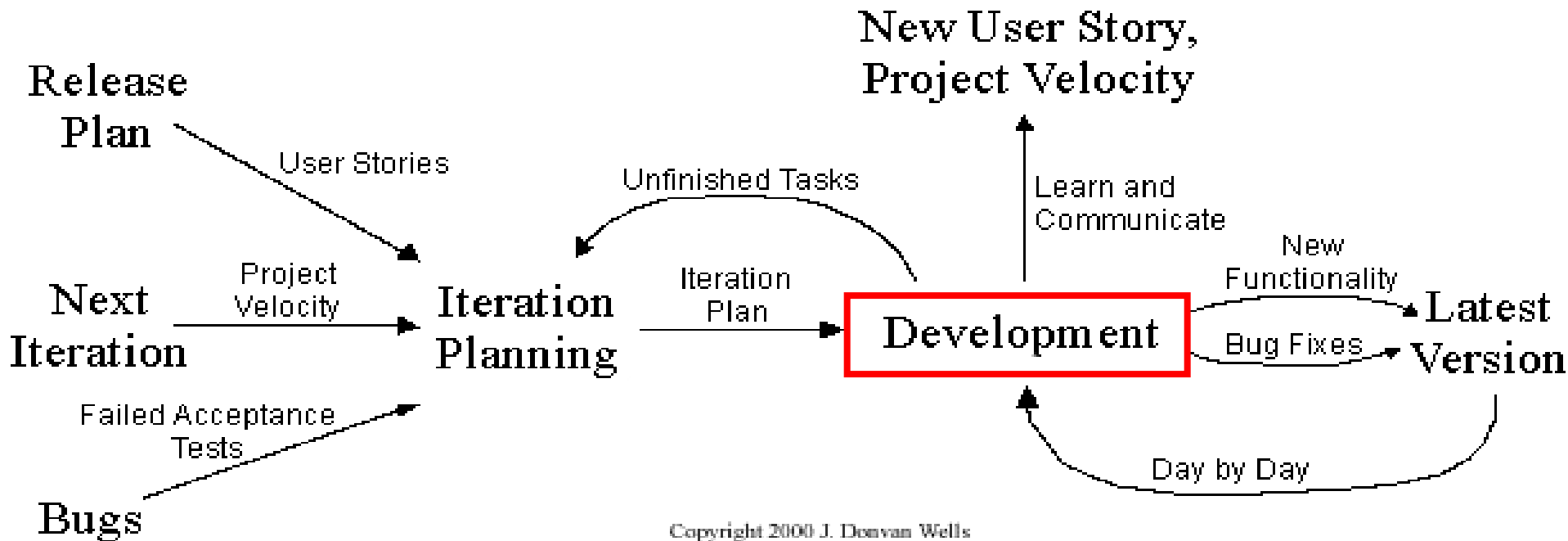
The XP Project



Copyright 2000 J. Donovan Wells

From *Extreme Programming: A gentle introduction* at <http://www.extremeprogramming.org/map/project.html>

XP Iterations



From *Extreme Programming: A gentle introduction* at <http://www.extremeprogramming.org/map/iteration.html>

Extreme Programming: Features and User Stories



Dilbert

by Scott Adams

At <http://dilbert.com/strips/comic/2003-01-10/>

(Educational/Classroom usage permission is granted by Universal Uclick. All Rights Reserved)



Active learning exercise “Planning game – Story cards”

XP gone wrong



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



From <http://nolan.eakins.net/node/304>

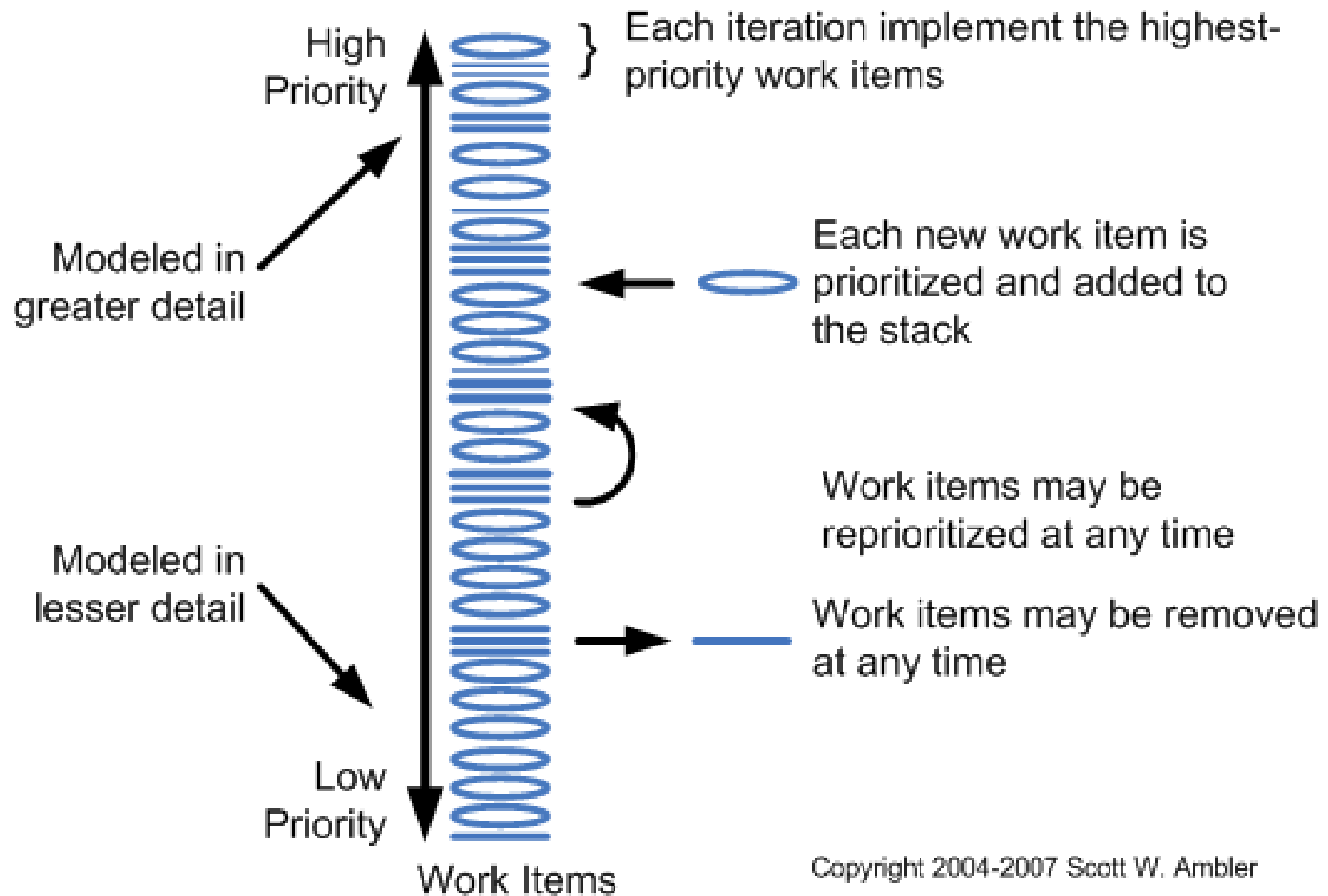


Agile requirements change the management process

Agile requirements change management process



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

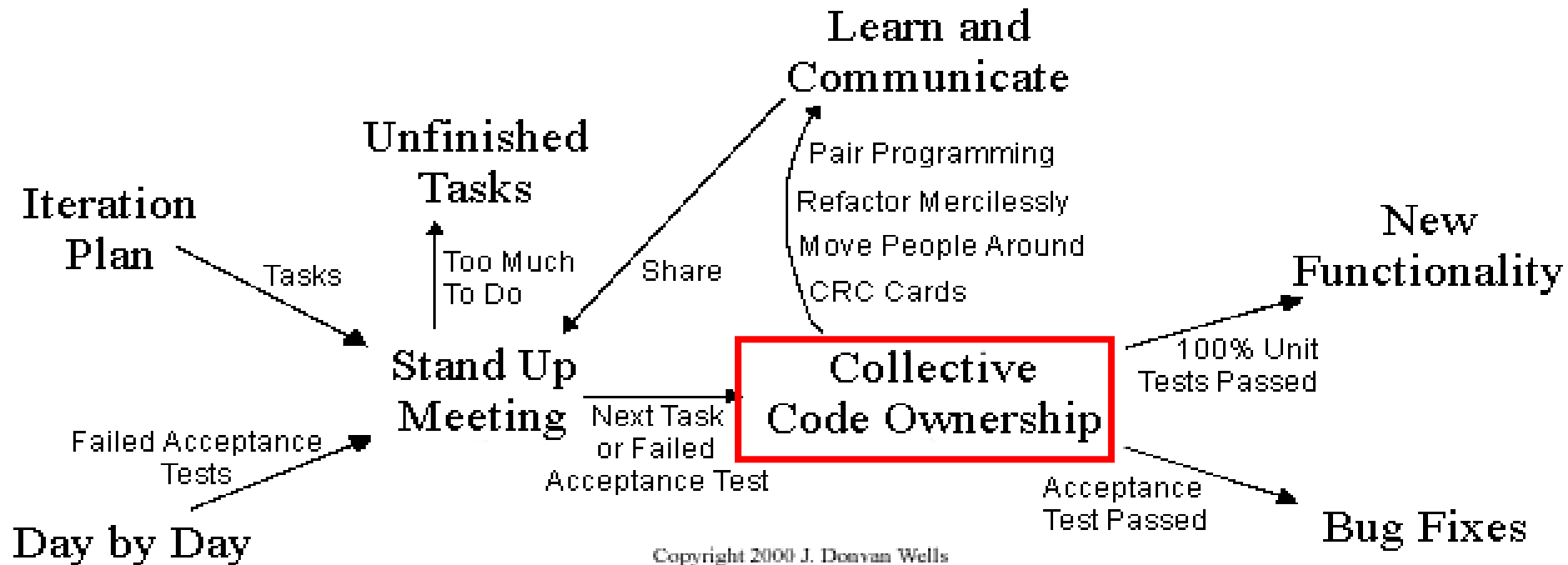


Copyright 2004-2007 Scott W. Ambler

At <http://www.agilemodeling.com/essays/agileRequirementsBestPractices.htm>



Active learning exercise “Planning game – Priorities”



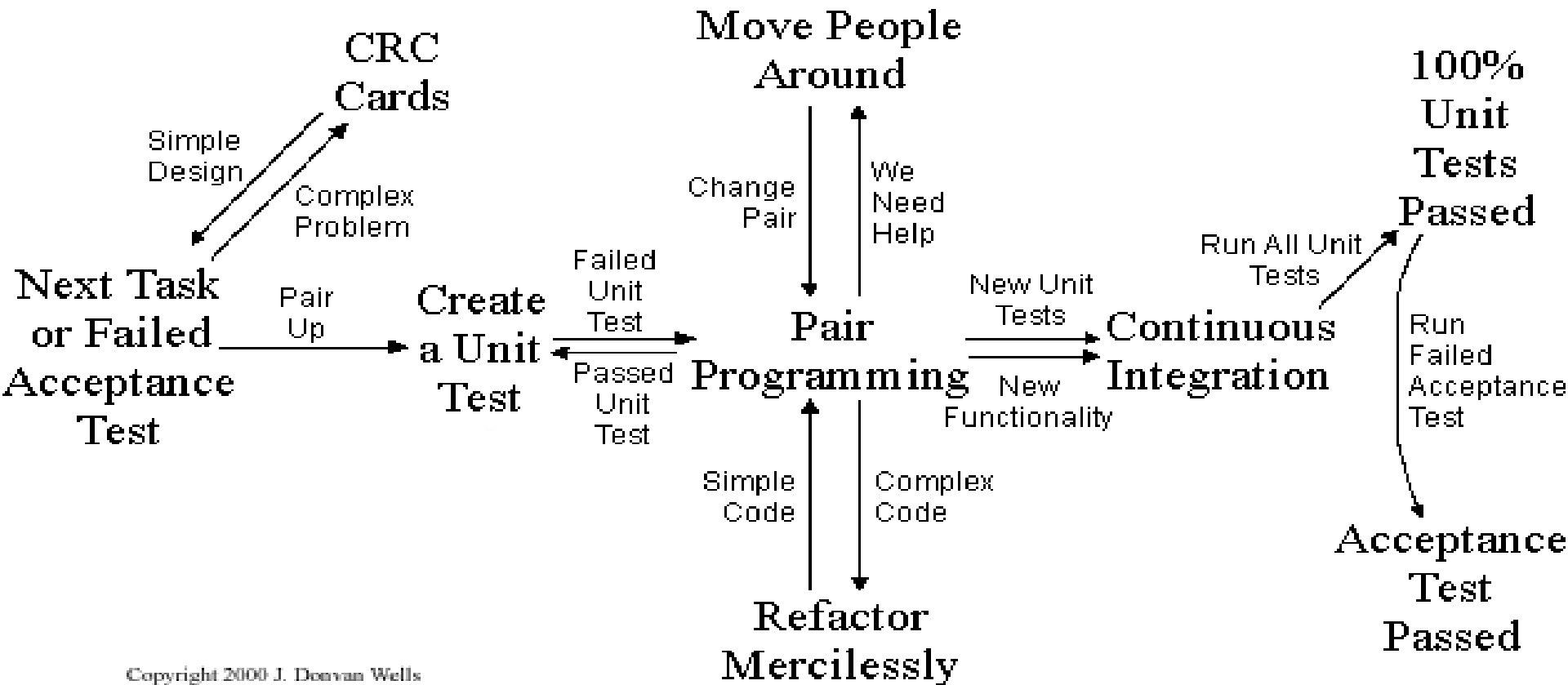
Class, Responsibilities, and Collaboration (CRC)

From *Extreme Programming: A gentle introduction* at <http://www.extremeprogramming.org/map/development.html>

Collective Code Ownership



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



Copyright 2000 J. Donovan Wells

From *Extreme Programming: A gentle introduction* at <http://www.extremeprogramming.org/map/code.html>



How established is Agile?

How „good“ is Agile?



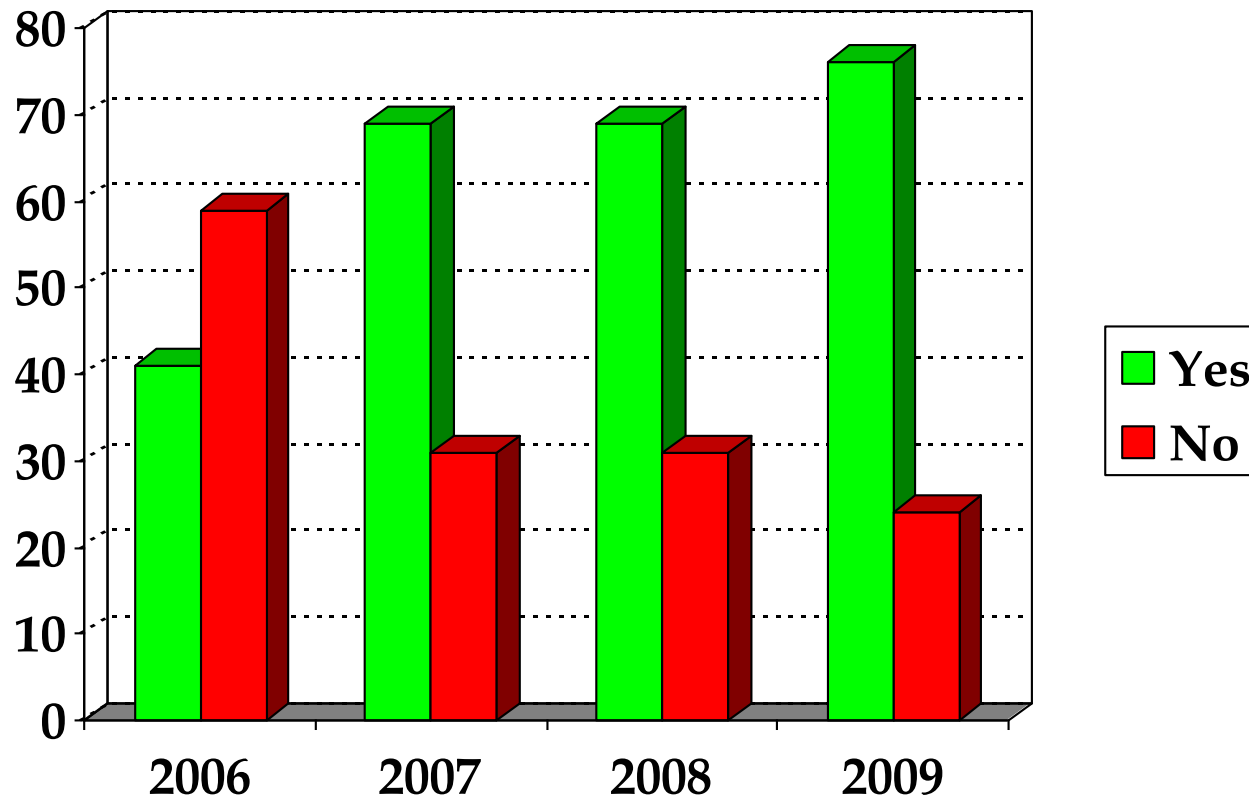
Fig. from http://leadinganswers.typepad.com/leading_answers/2007/11/agile-estimatin.html

Some facts...



From **Scott Ambler's** 2006-2008 *Agile Adoption Rate Surveys*
posted at <http://www.agilemodeling.com/surveys/>

Has Your Organization Adopted One or More Agile Techniques?



Agile Dev Survey



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



At:

<http://www.versionone.com/>

From:



Published:

February 26th, 2013

- Conducted between August 9th and November 1st, 2012
- 4048 respondents
- 60% from North America, 27% from Europe



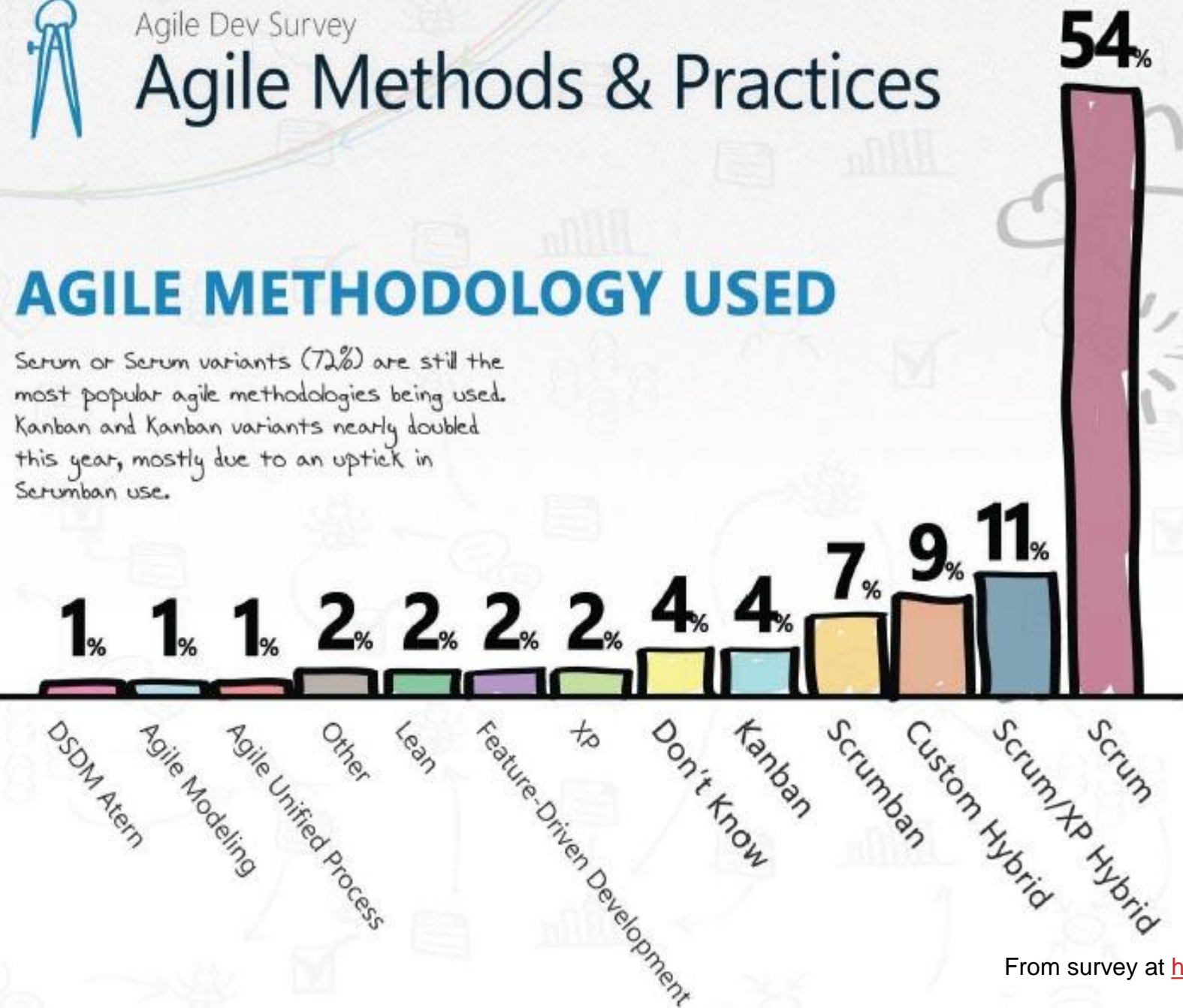
Agile Dev Survey

Agile Methods & Practices

7th
ANNUAL
STATE of
AGILE

AGILE METHODOLOGY USED

Scrum or Scrum variants (72%) are still the most popular agile methodologies being used. Kanban and Kanban variants nearly doubled this year, mostly due to an uptick in Scrumban use.

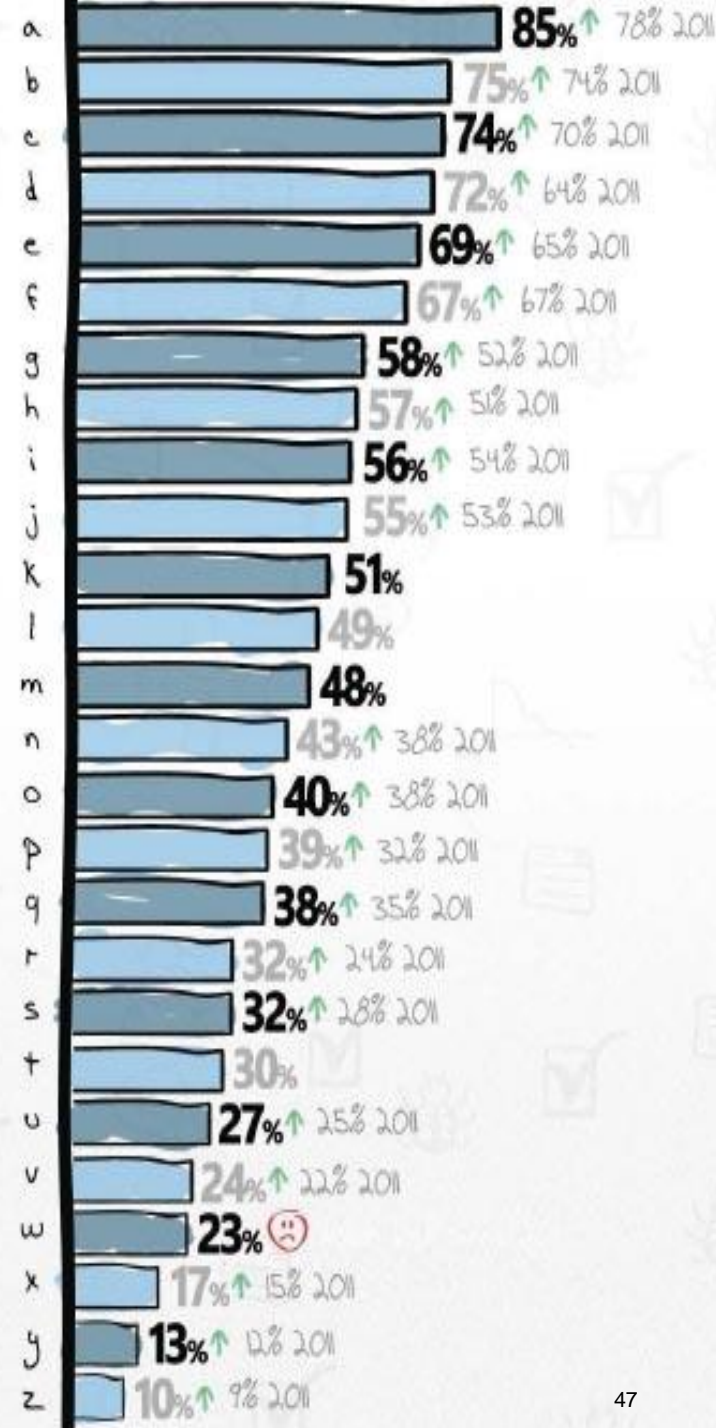


AGILE TECHNIQUES EMPLOYED

Again this year, core agile tenets currently in use are* Daily Standup, Iteration Planning and Unit Testing. The two techniques that grew the most in usage from this year to last year were Kanban and Retrospectives; yet, agile techniques increased in every area but one (Continuous Deployment).

*Respondents were able to select multiple options.

a Daily Standup	n Open Workarea
b Iteration Planning	o TDD
c Unit Testing	p Digital Taskboard
d Retrospectives	q Story Mapping
e Release Planning	r Kanban
f Burndown/ Team-Based Estimation	s Collective Code Ownership
g Velocity	t Pair Programming
h Coding Standards	u Automated Acceptance Testing
i Continuous Integration	v Analog Taskboard
j Automated Builds	w Continuous Deployment
k Dedicated Product Owner	x Agile Games
l Integrated Dev/QA	y Cycle Time
m Refactoring	z BDD



*Respondents were able to select multiple options.

From survey at <http://versionone.com/>

WHY AGILE?

Not important at all Somewhat important Very Important Highest importance

Accelerate time to market



Manage changing priorities



Better Align IT/Business



Increase productivity



Enhance software quality



Project visibility



Reduce risk



Simplify development process



Reduce cost



Enhance software maintainability/extensibility



Improve team morale

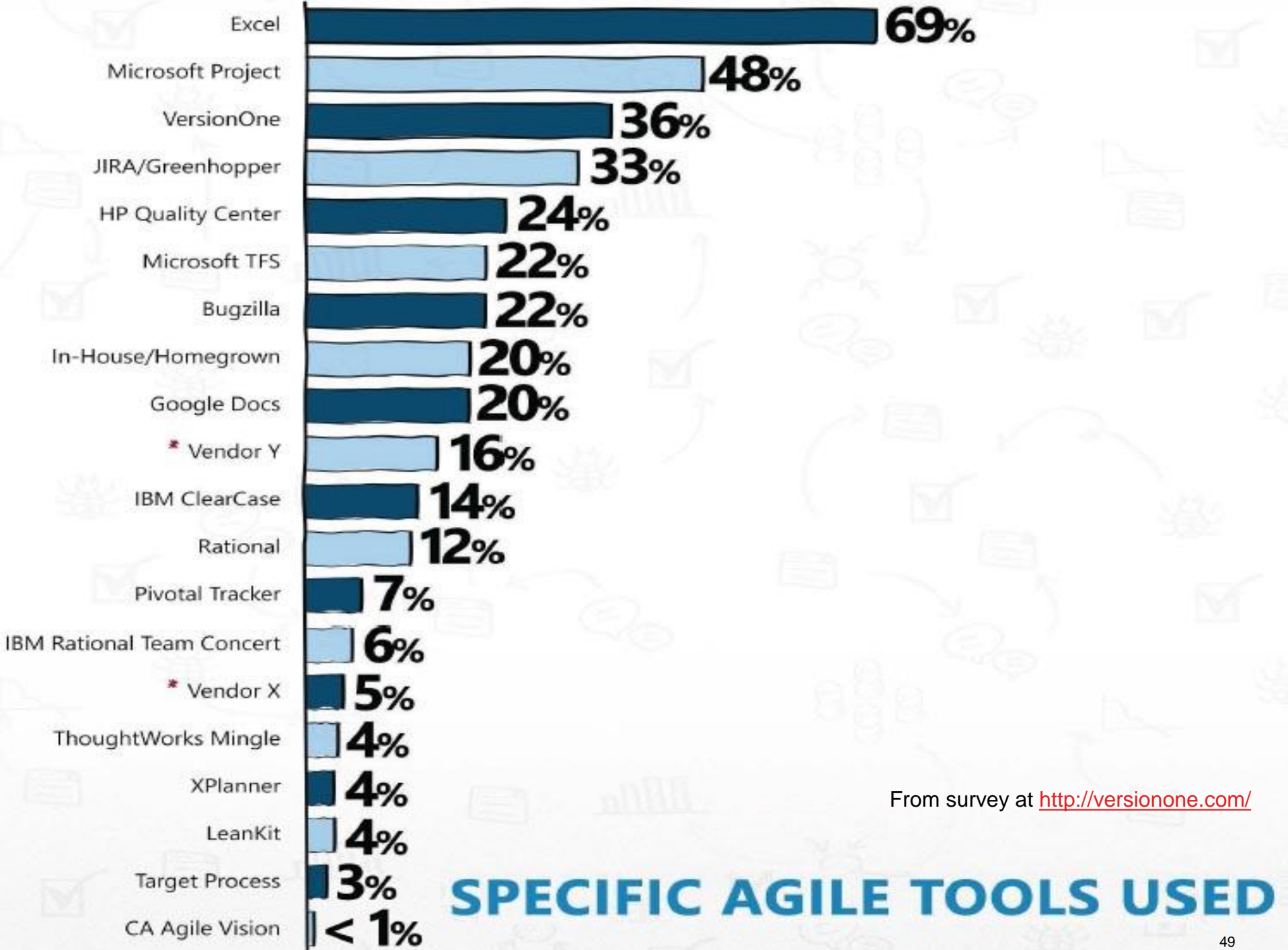


Improve/increase engineering discipline



Manage distributed teams





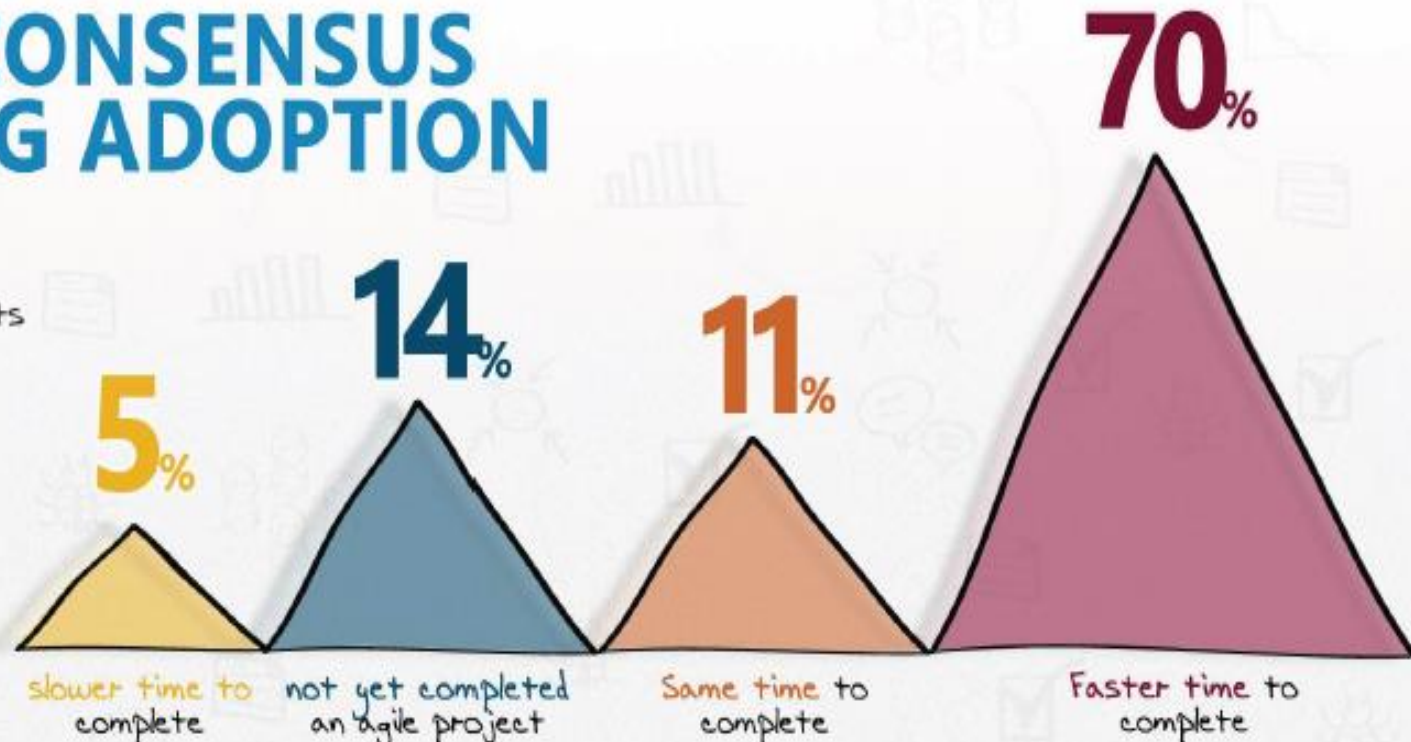
Agile adoption



From survey at <http://versionone.com/>

OVERALL CONSENSUS REGARDING ADOPTION OF AGILE

The vast majority of respondents felt that agile projects have a faster time to completion.

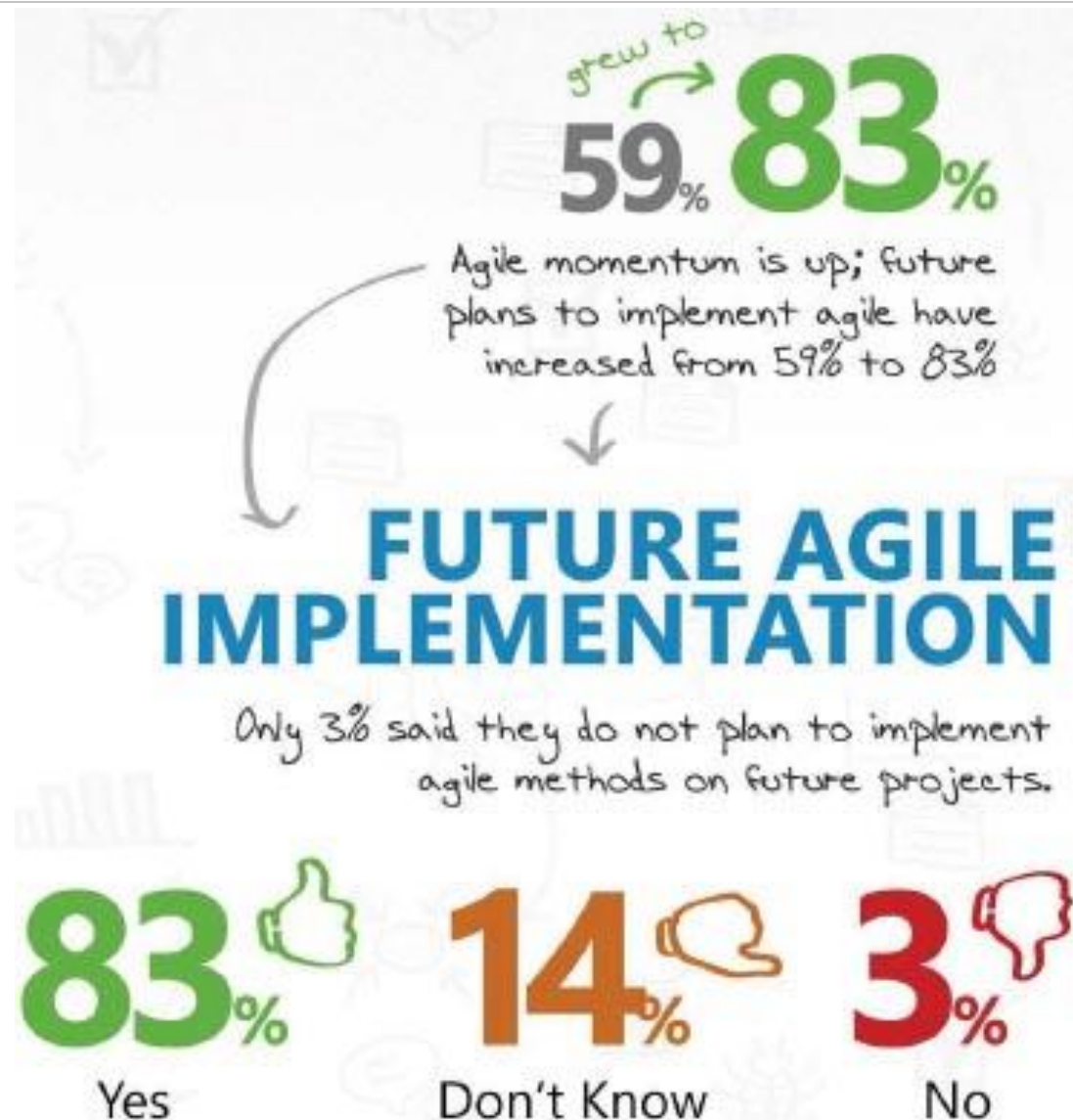


Agile momentum is up!



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law

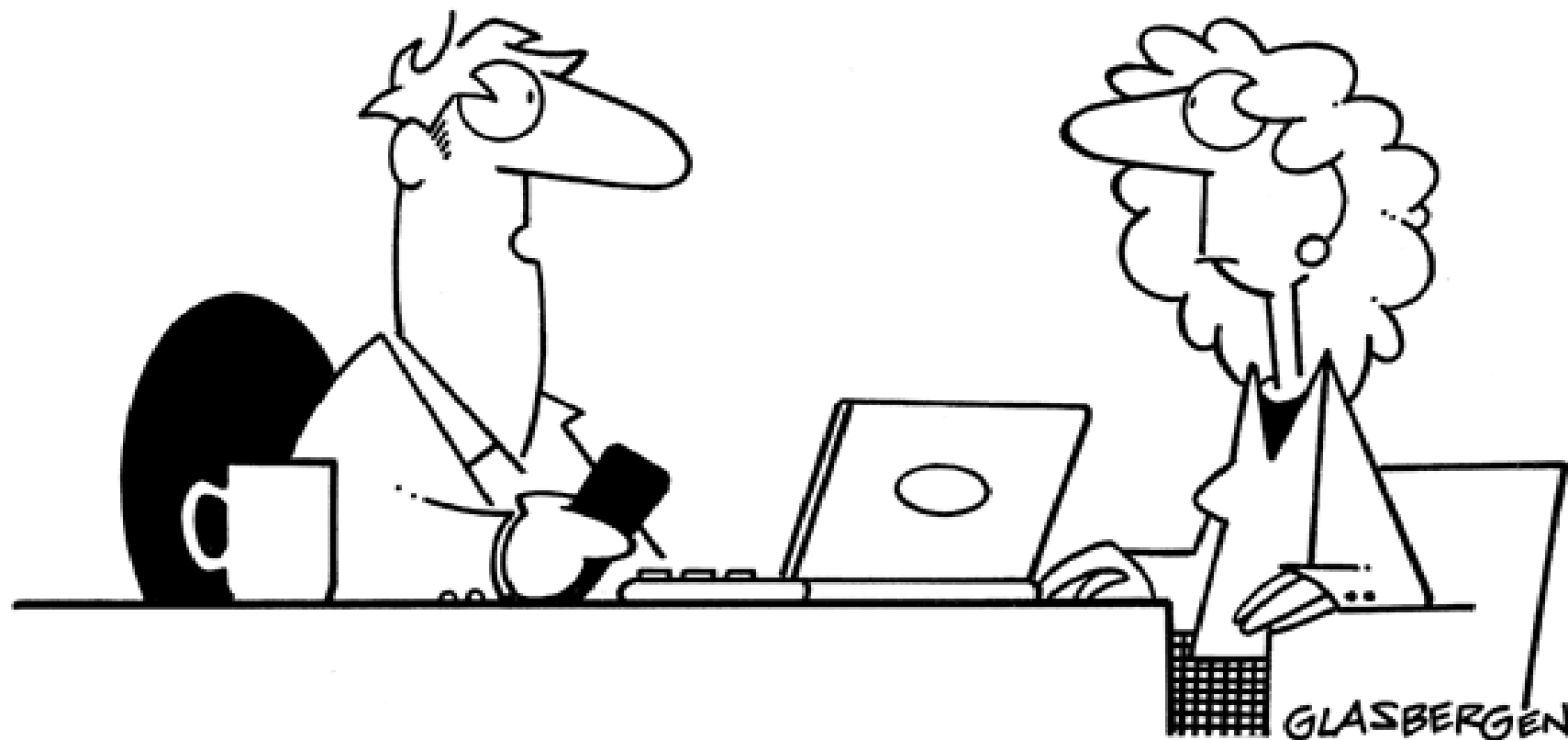
From survey at <http://versionone.com/>





Active learning exercise

EDITORIAL DEPT.



“We’d like you to condense your novel into something that younger people will want to read...in 140 characters or less.”



Sources of inspiration

MEET US IN NASHVILLE
AUGUST 5TH TO 9TH 2013

 **AGILE2013**

NASHVILLE

AUGUST 5-9, 2013

PRESENTED BY 

[PROGRAM](#) [VENUE](#) [SPONSORS](#) [PRESS](#) [ORGANIZERS](#) [FOR SPEAKERS](#) [FAQ](#) [REGISTRATION](#)



WELCOME TO AGILE2013

"PRACTITIONERS MAKING AGILE WORK"

CONFERENCE LINKS

- [Register for Agile2013](#)
- [Registration Rates and Information](#)
- [Agile2013 Conference FAQ](#)
- [Registration Inquiries and Assistance](#)
- [Download the Sponsorship Portfolio](#)
- [Download the Sponsorship Pledge Form](#)

CONFERENCE CONTACTS

- [Agile2013 Chair: Kent McDonald](#)
- [Press Relations: Christie Denniston](#)
- [Registration: Sharon Cooper](#)
- [Volunteer Coordinator: Christine DelPrete](#)



14th International Conference on Agile Software Development, June 3rd - 7th, Vienna

[Register Now...](#)[Research Papers](#)[Industry and Practice](#)[Workshops and Tutorials](#)[PhD Symposium](#)[Student Volunteers](#)

Call for Contributions to XP2013

XP2013 will host dedicated tracks for different target groups to submit contributions or attend specific sessions. If you want to provide your proposal for one of the tracks, refer to any of the following tracks, check out details on requirements and hand in your content to the given contact.

- [Call for Research Papers](#) covering research and experience reports
- [Call for Industry and Practice](#) with a focus on presentations and interactive sessions, experience report presentations and hands-on engineering sessions
- [Call for Workshops and Tutorials](#) for interesting and innovative half-day and full-day learning experiences based on established material or interactive formats

What we are looking for

We invite researchers and practitioners to provide their contributions for

- **Research Papers**
- **PhD presentations**
- **Experience Reports**
- **Presentations**
- **Interactive Sessions**
- **Hands-on engineering sessions**

Other conferences in 2013



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



At <http://www.agiletestingdays.com/>



The Conference for Agile Developers

At <http://www.agiledevpractices.com/> **March 4–7, 2013**
in Potsdam/Berlin, Germany

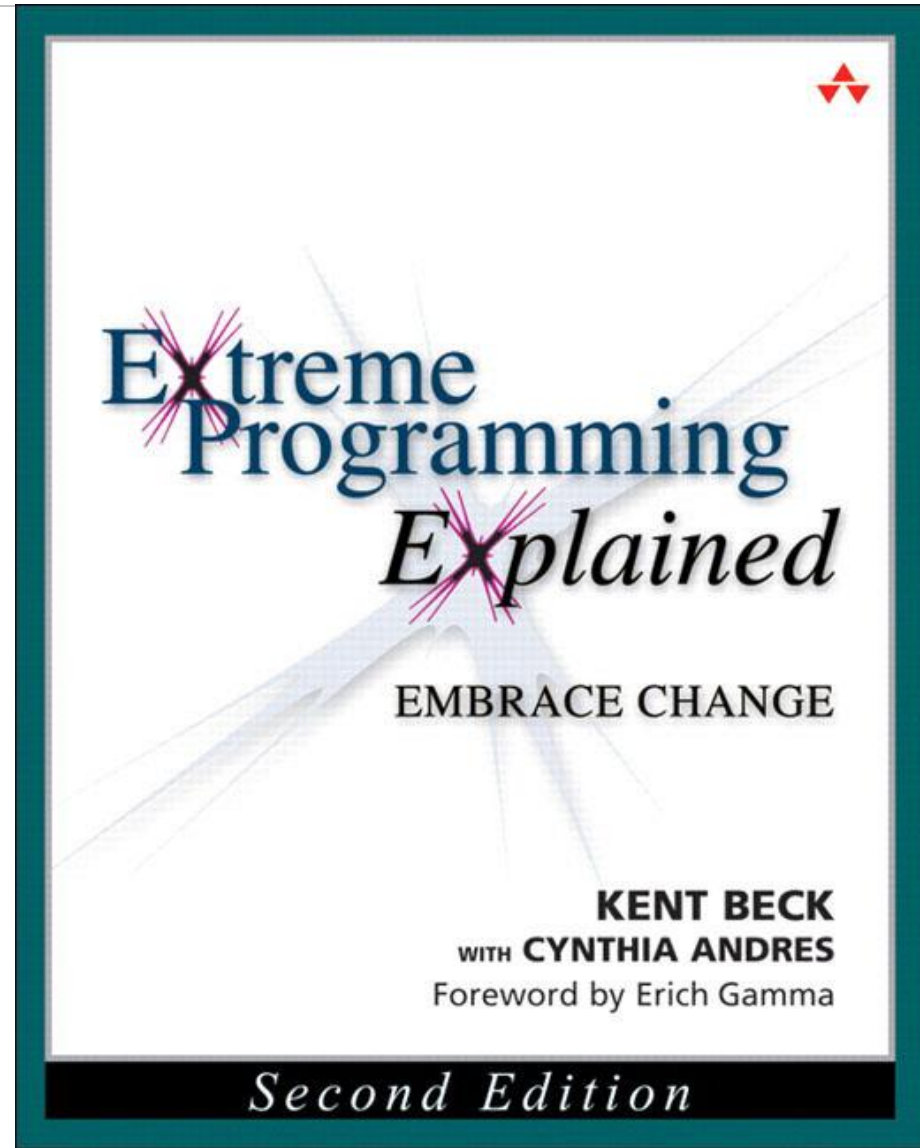
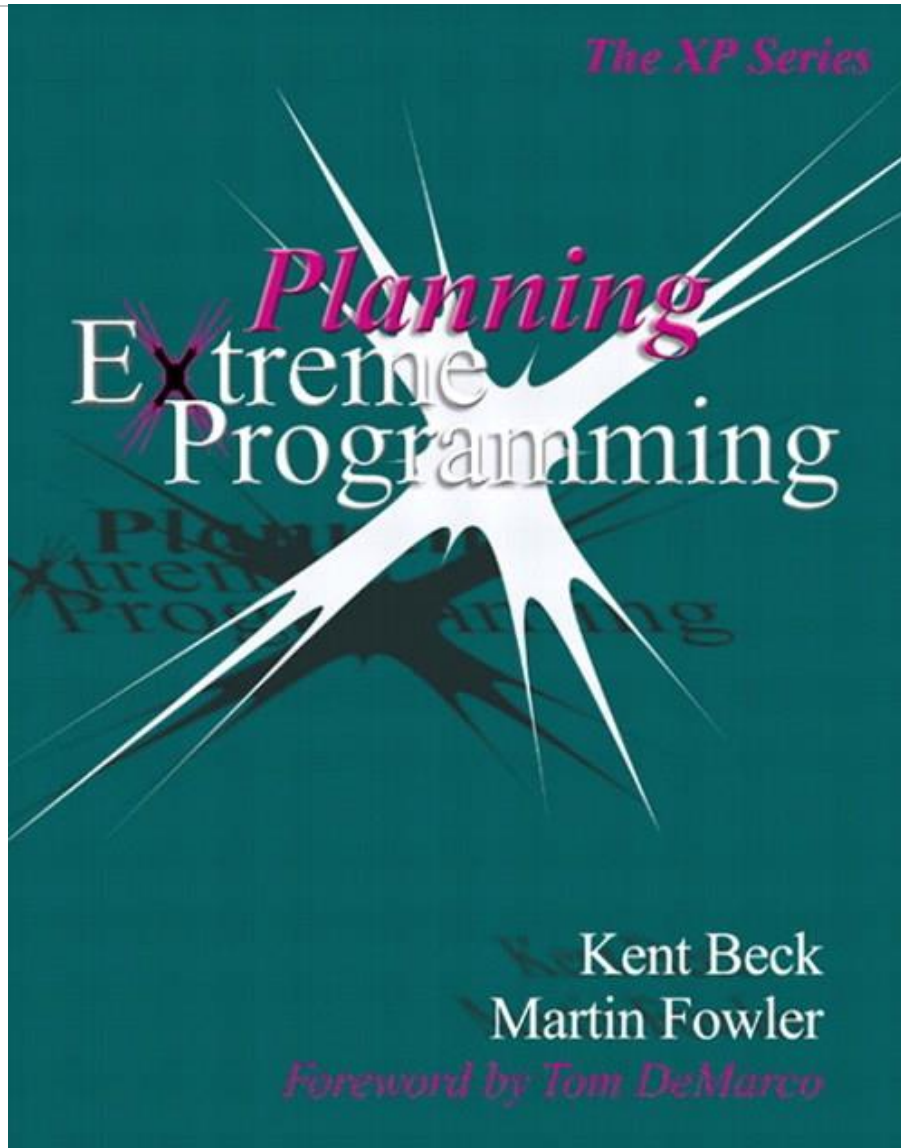


References

The classics...



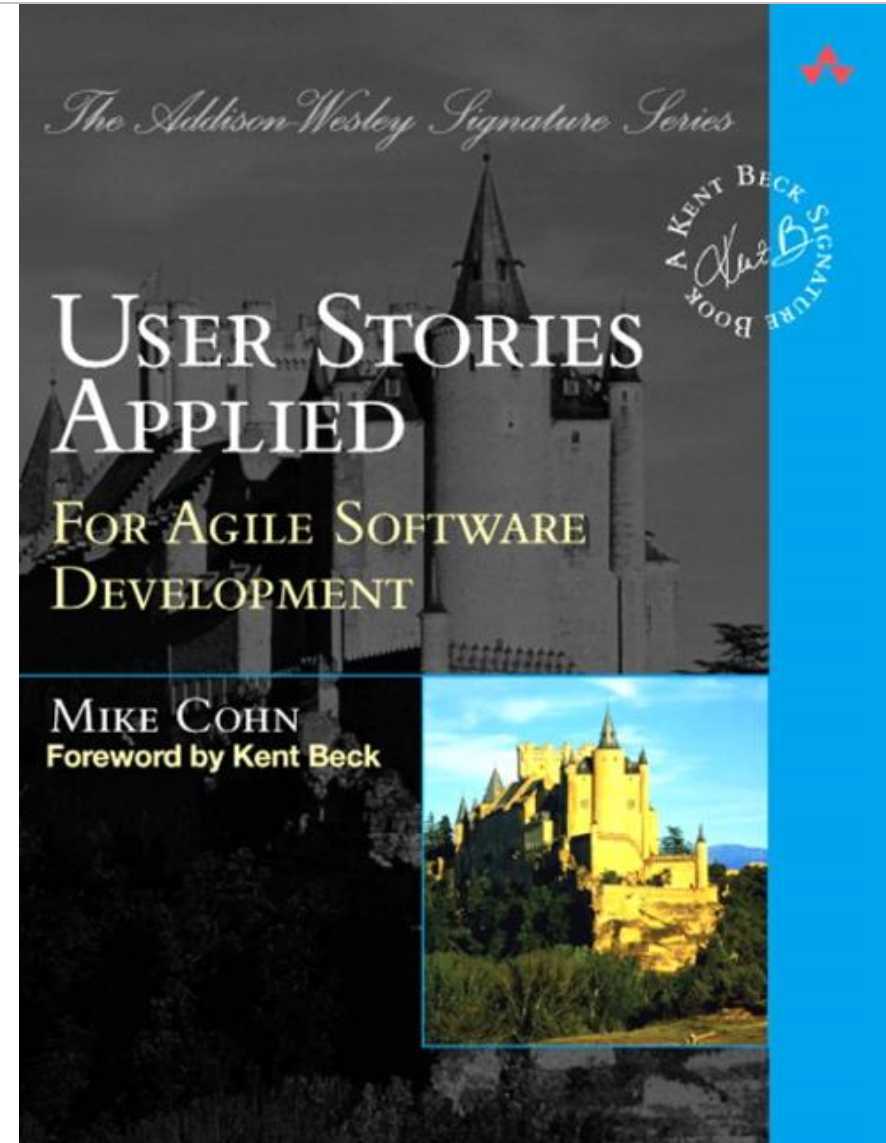
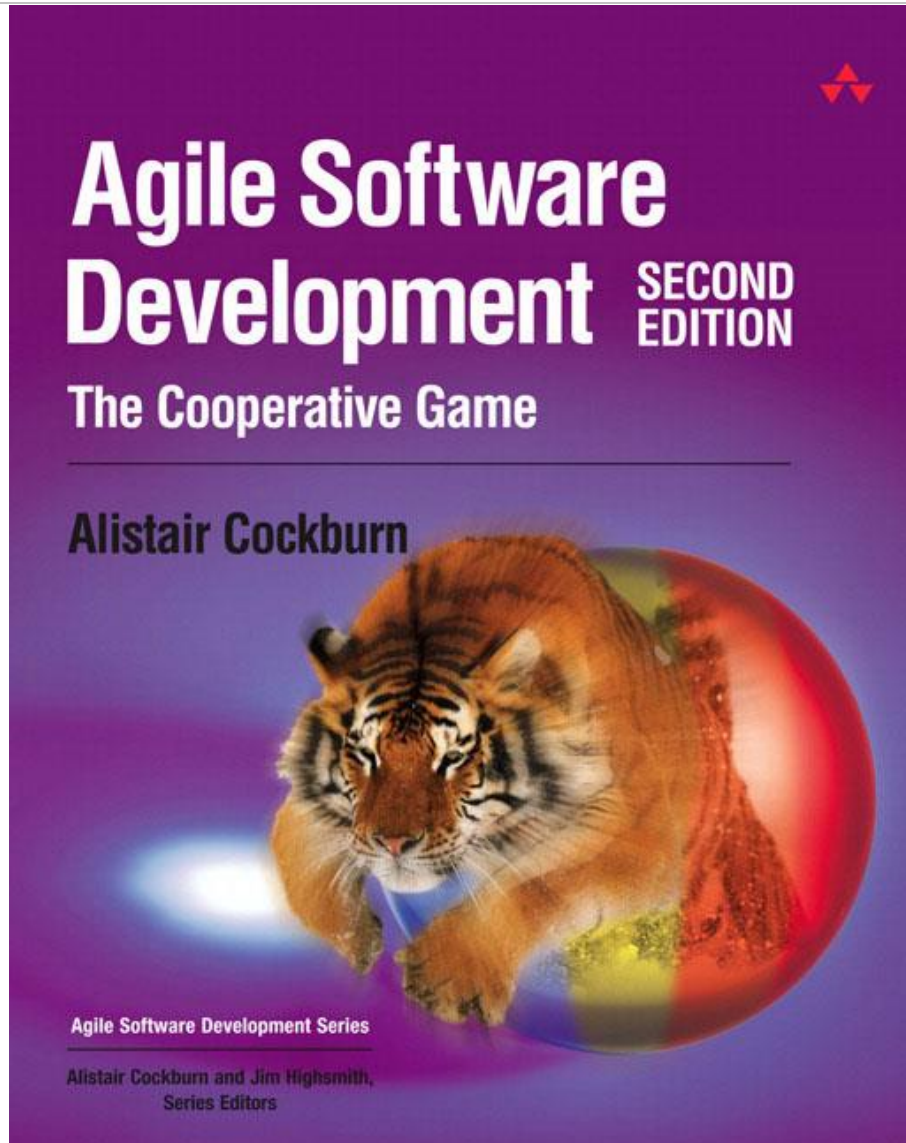
Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



Others...



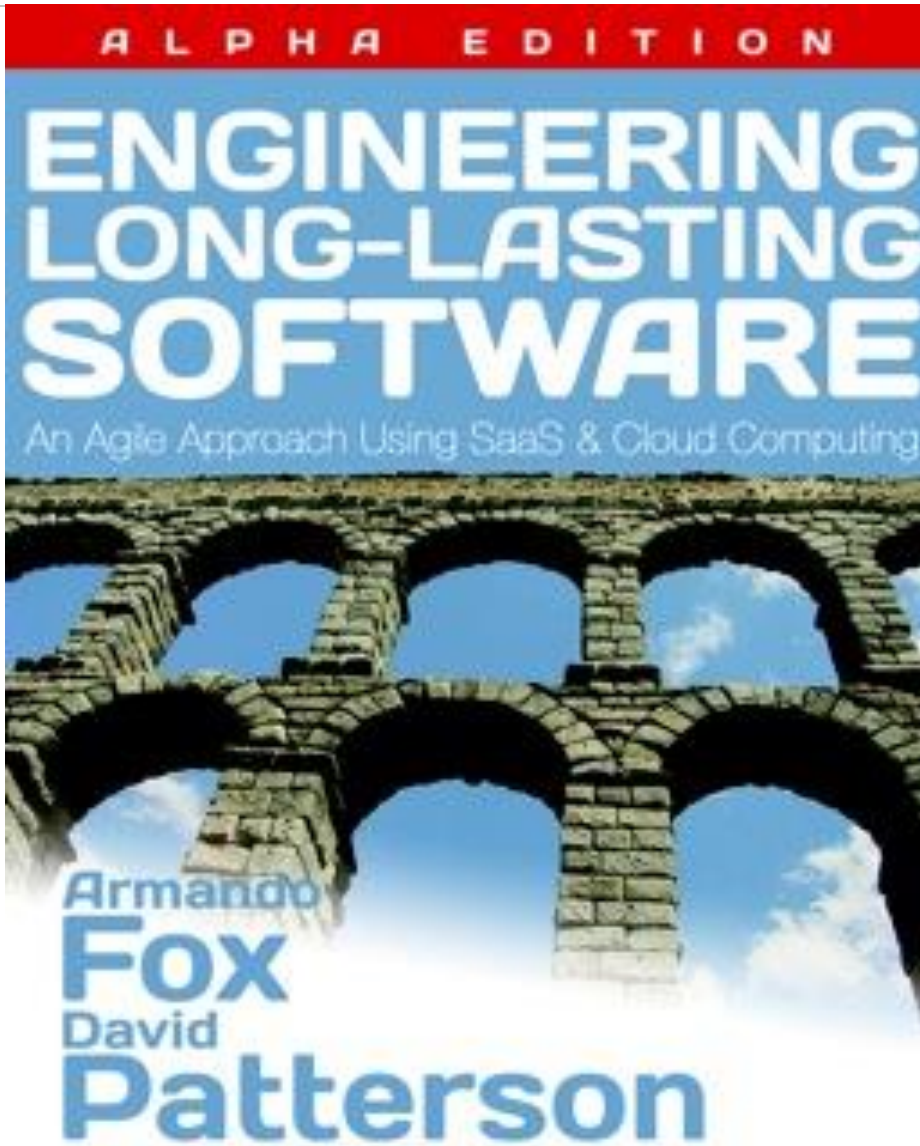
Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



Others...



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



Software Engineering for Software as a Service

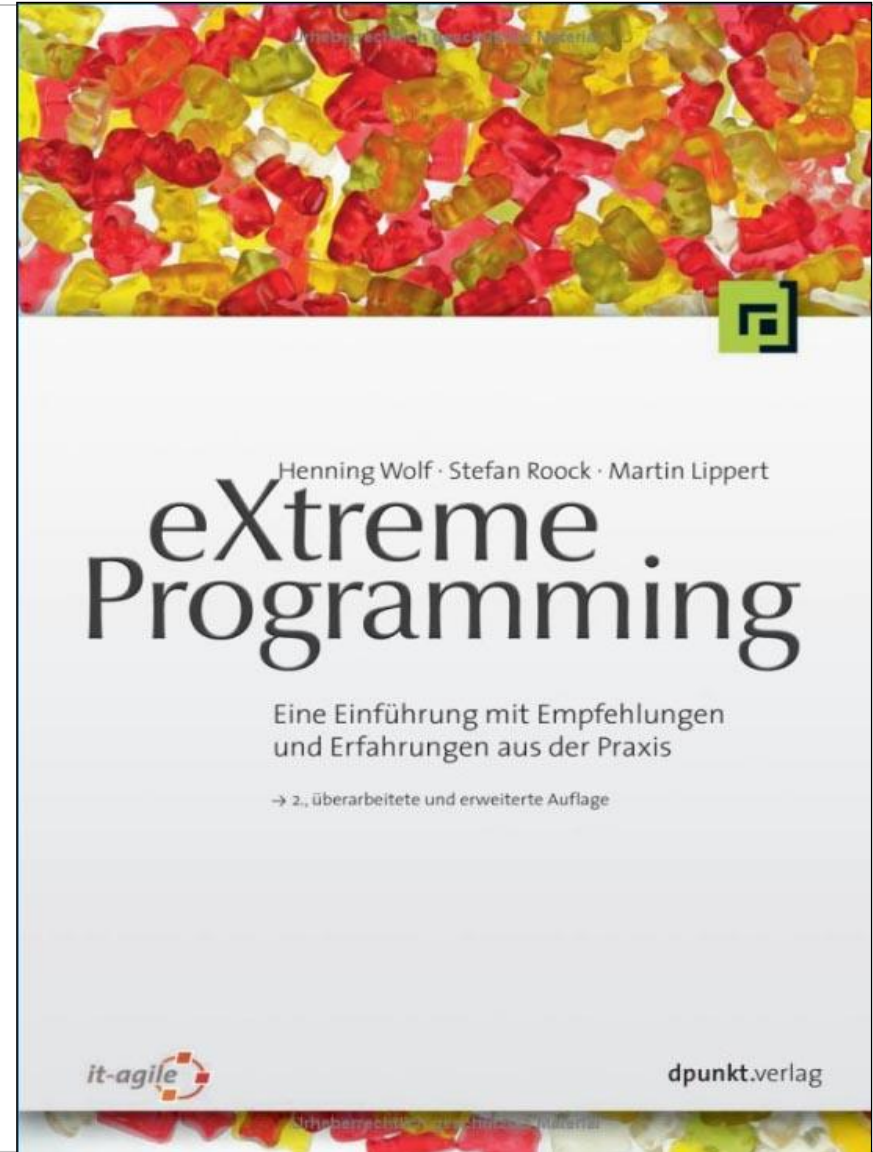
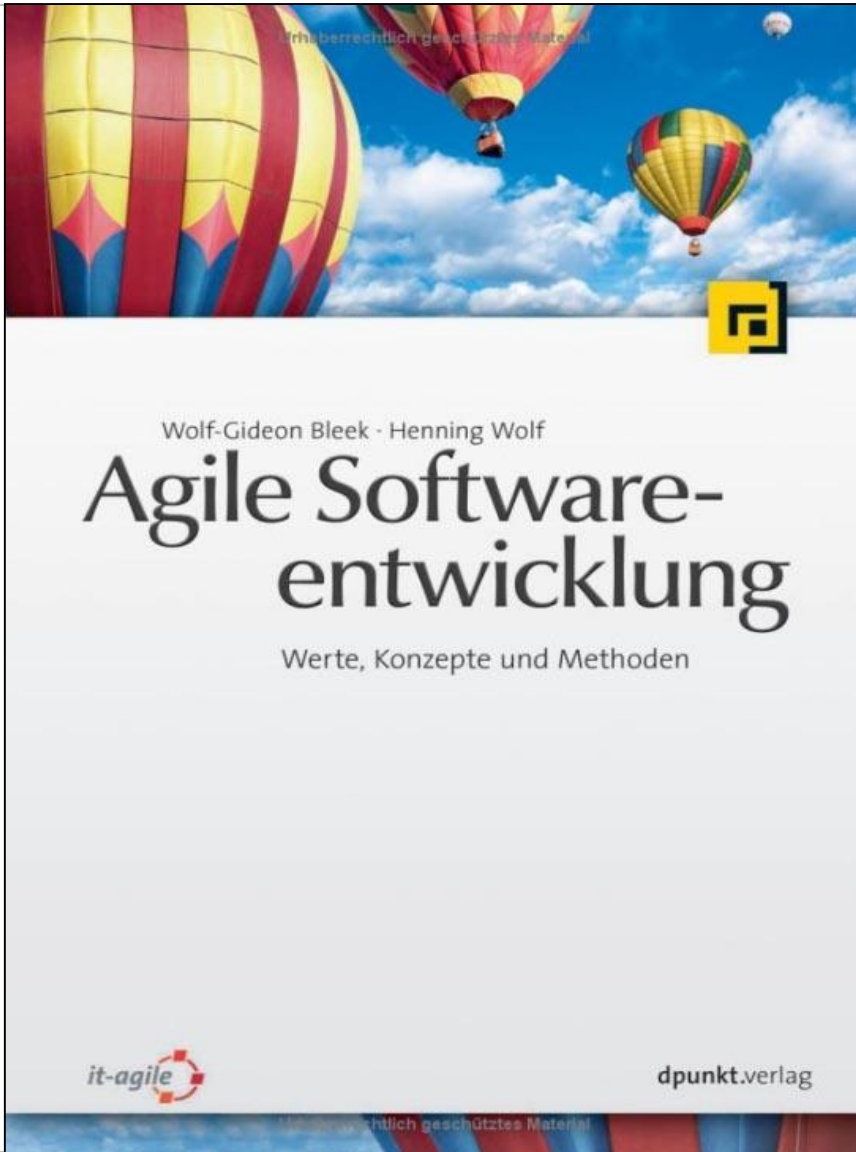
Armando Fox, David Patterson

MOOC at 

Agile and XP in German...



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



Further reading...



- **Agile Alliance**

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

- **Agile Software Development Made Easy!**

<http://www.agile-software-development.com/>

- **Extreme Programming: A gentle introduction**

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

- **Manifesto for Agile Software Development**

<http://agilemanifesto.org/>

Social media for Agile...



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



„Twitter Bird“: Third,
current logo from Twitter
(since June 5th, 2012)



Agile Times [@agiletimes](https://twitter.com/agiletimes)



Agile Blogs [@AgileBlogs](https://twitter.com/AgileBlogs)



AgileDevPractices [@AgileDevPrac](https://twitter.com/AgileDevPrac)




Agile Record [@ar_mag](https://twitter.com/ar_mag)



PMI Agile [@pmiagile](https://twitter.com/pmiagile)

More for Agile...



- **Linked**  groups
- Agile Certifications (e.g., from Scrum Alliance)
- Agile Project management tools
- Tools for collaborative work
- ...and much more!

Would you Agile?



Hochschule für
Wirtschaft und Recht Berlin
Berlin School of Economics and Law



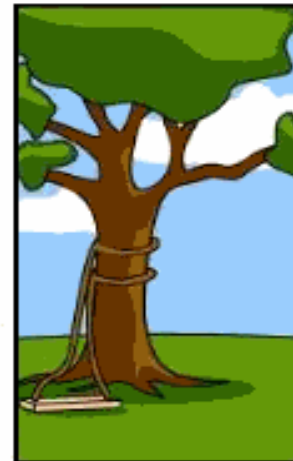
How the customer explained it



How the Project Leader understood it



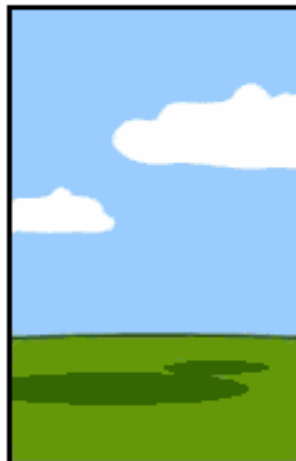
How the Analyst designed it



How the Programmer wrote it



How the Business Consultant described it



How the project was documented



What operations installed



How the customer was billed



How it was supported



What the customer really needed



Thanks for your attention!

Slides of the talk per request:

dagmar@monettdiaz.com