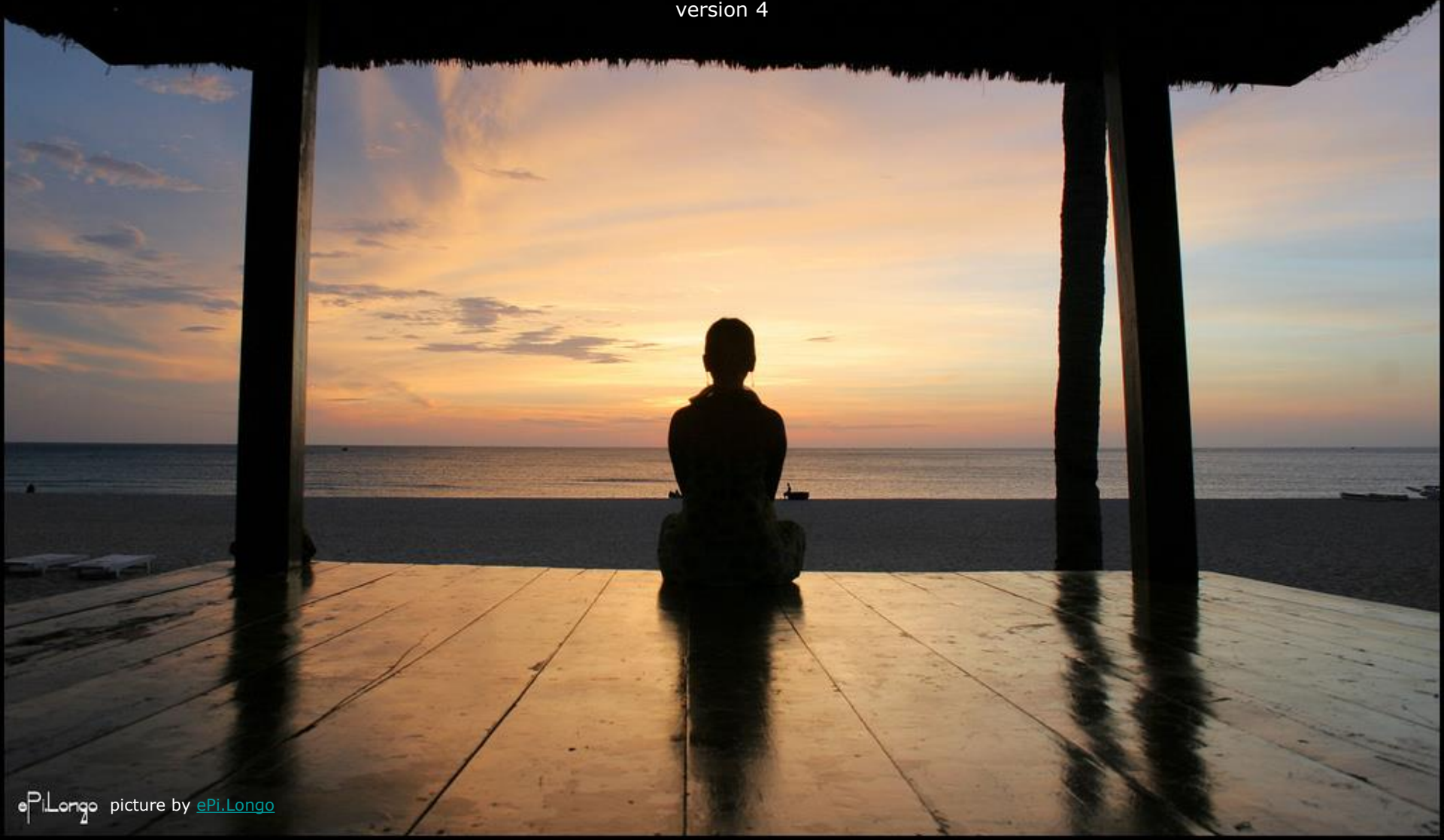


The Zen of Scrum

Jurgen Appelo – jurgen@noop.nl

version 4



Jurgen Appelo

writer, speaker,
trainer, entrepreneur...

www.jurgenappelo.com



Agenda

Problems

Agile

Scrum Roles

Scrum Process

Hot Issues

Results



4



5



6



7



8



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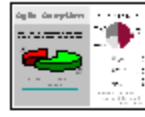
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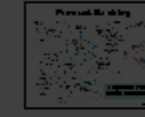
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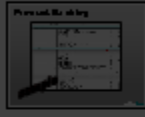
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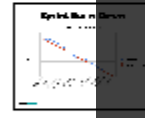
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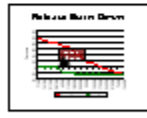
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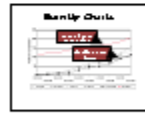
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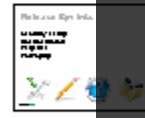
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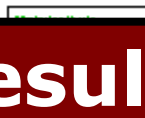
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Problems

with traditional software
development



A photograph of a waterfall cascading over dark, layered rocks in a lush green forest. The water is white and frothy as it falls, creating a sense of motion. The surrounding trees are vibrant green, and the scene is captured in a long-exposure style, giving the water a silky appearance.

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

32% of projects delivered successfully

Long duration defers revenue

(Source: Standish Report 2009)

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 2003)

Poor Progress Visibility

% Task complete not sufficient

Average overrun 43%

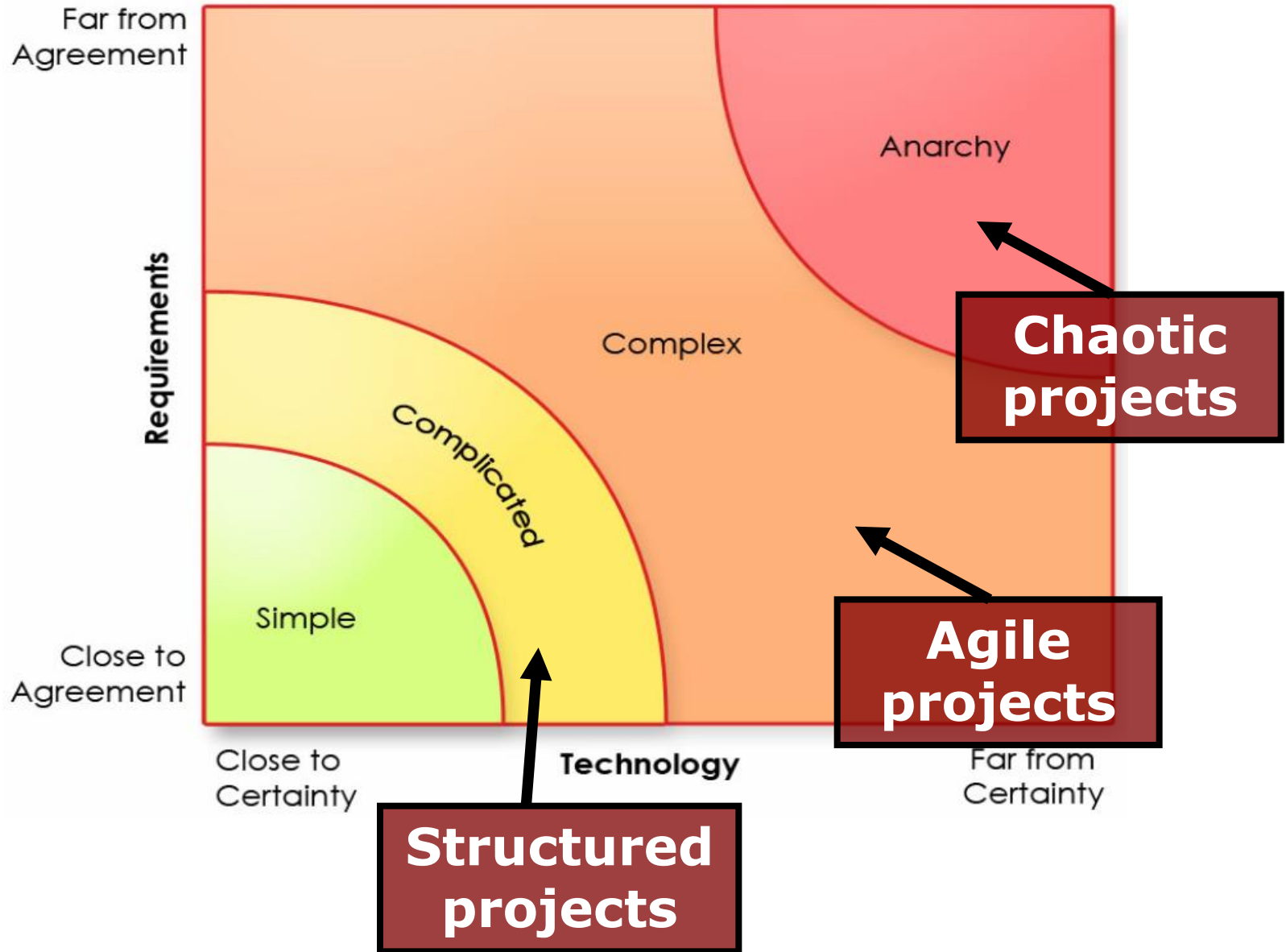
(Source: Standish Report 2003)

Agile

software
development



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

JOHN KERN

BRIAN MARICK

ROBERT C. MARTIN

STEVE MELLOR

KEN SCHWABER

JEFF SUTHERLAND

DAVE THOMAS



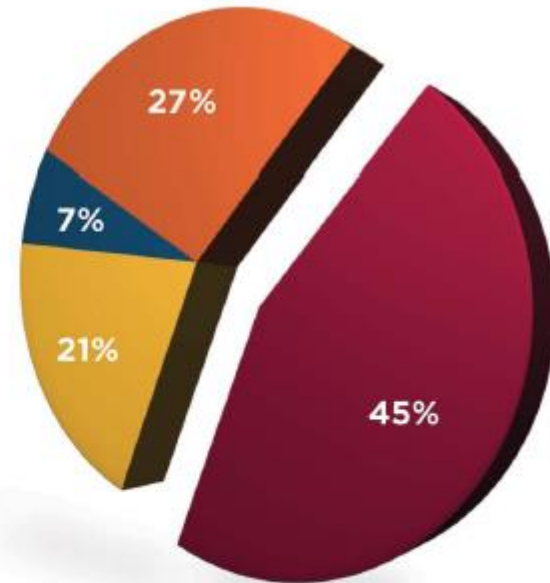
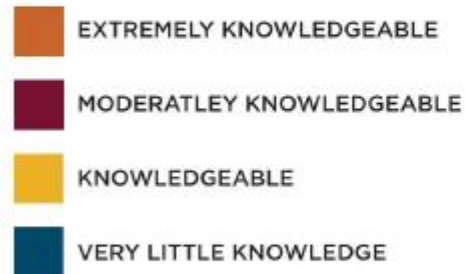
Agile Principles

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

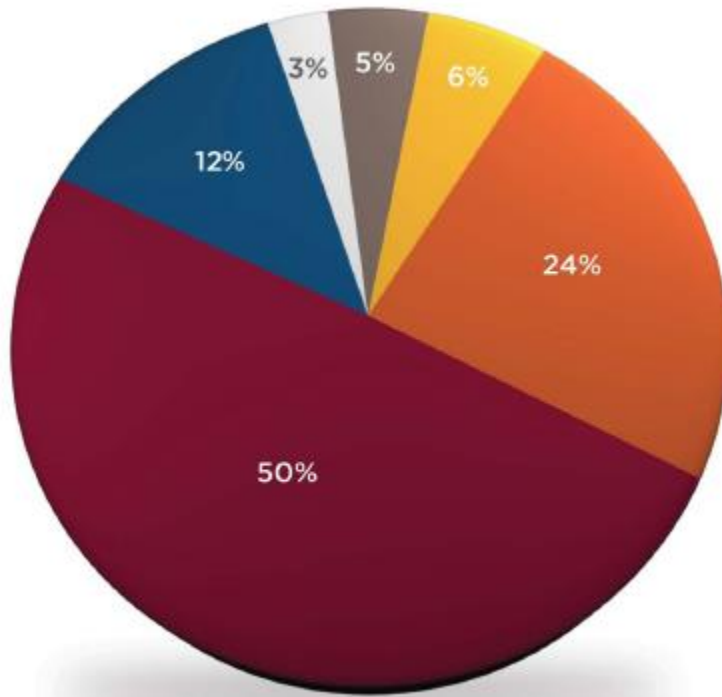
EXPERIENCE WITH AGILE DEVELOPMENT PRACTICES

Respondents were quite knowledgeable about Agile Development, with 93% saying that they were at least "knowledgeable" about Agile practices.



How experienced are you with Agile development practices?

Agile Adoption



AGILE METHODOLOGY MOST CLOSELY FOLLOWED

Scrum or a variant were by far the most common Agile methodologies employed.



Scrum



The Gurus

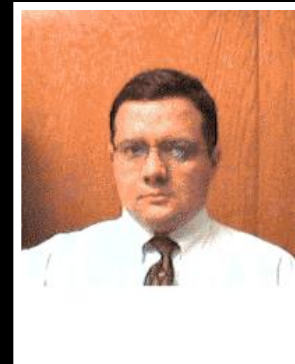
Ken Schwaber



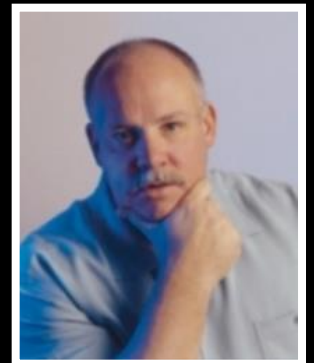
Jeff Sutherland



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

A photograph of a rugby goalpost on a grassy field. The goalpost consists of two vertical wooden posts and a horizontal crossbar. The base of each post is wrapped in red padding. A rugby ball is suspended in the air between the posts, just above the crossbar. The background shows a line of green trees under a grey, overcast sky.

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

Scrum Roles



Product Owner

**Owner of project vision
Represents the customer**

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
Troubleshooter
Scrum guide**



Scrum Master

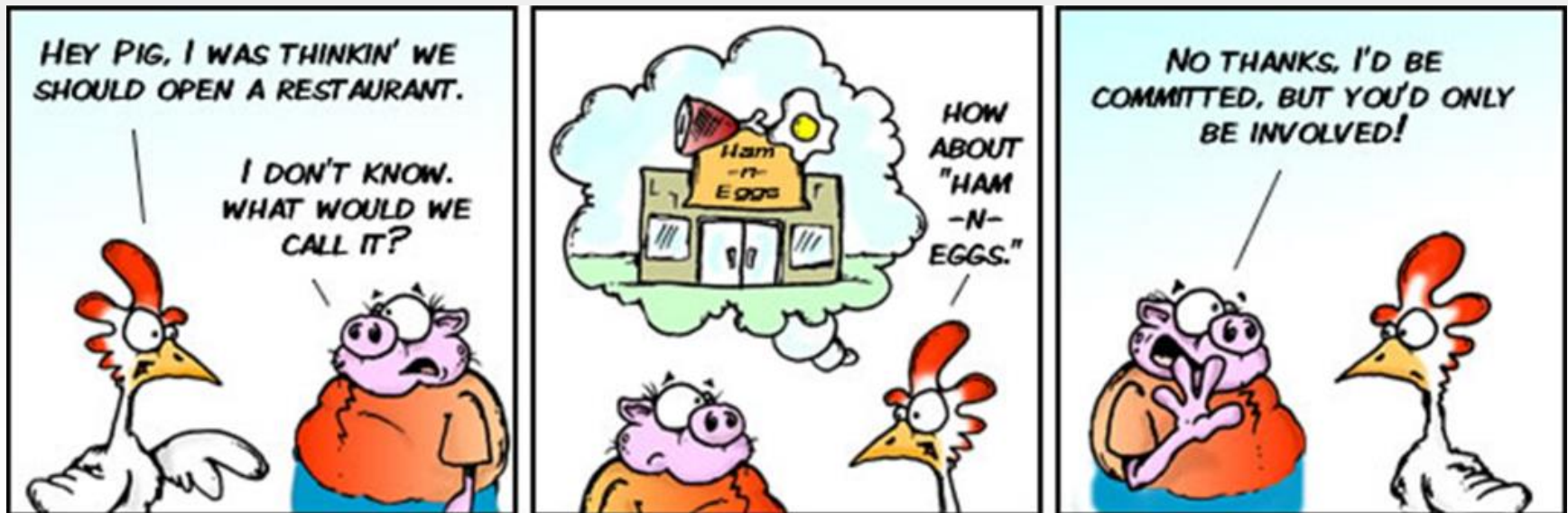
Remove impediments
Prevent interruptions
Facilitate the team
Support the process
Manage management



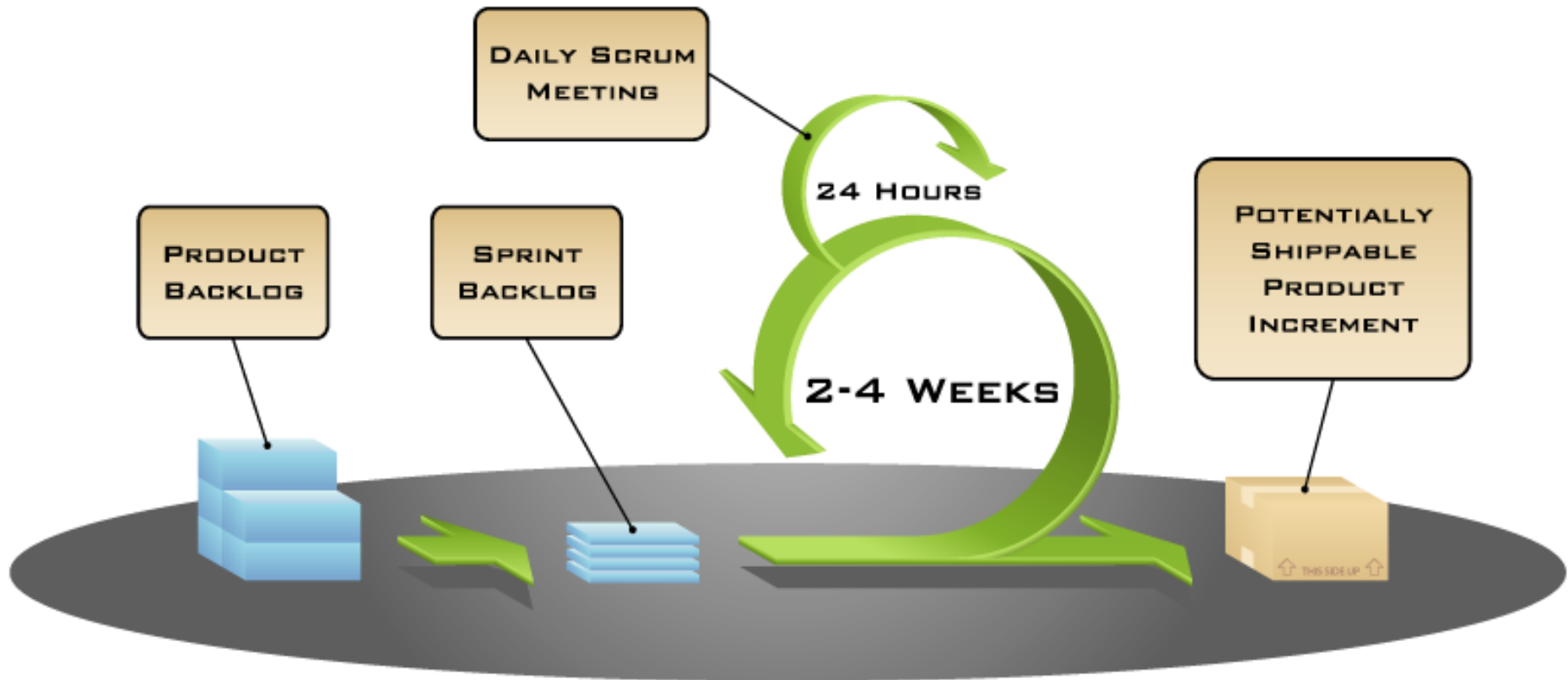
Pigs and Chickens

**Product Owner
Scrum Master
Team Members**

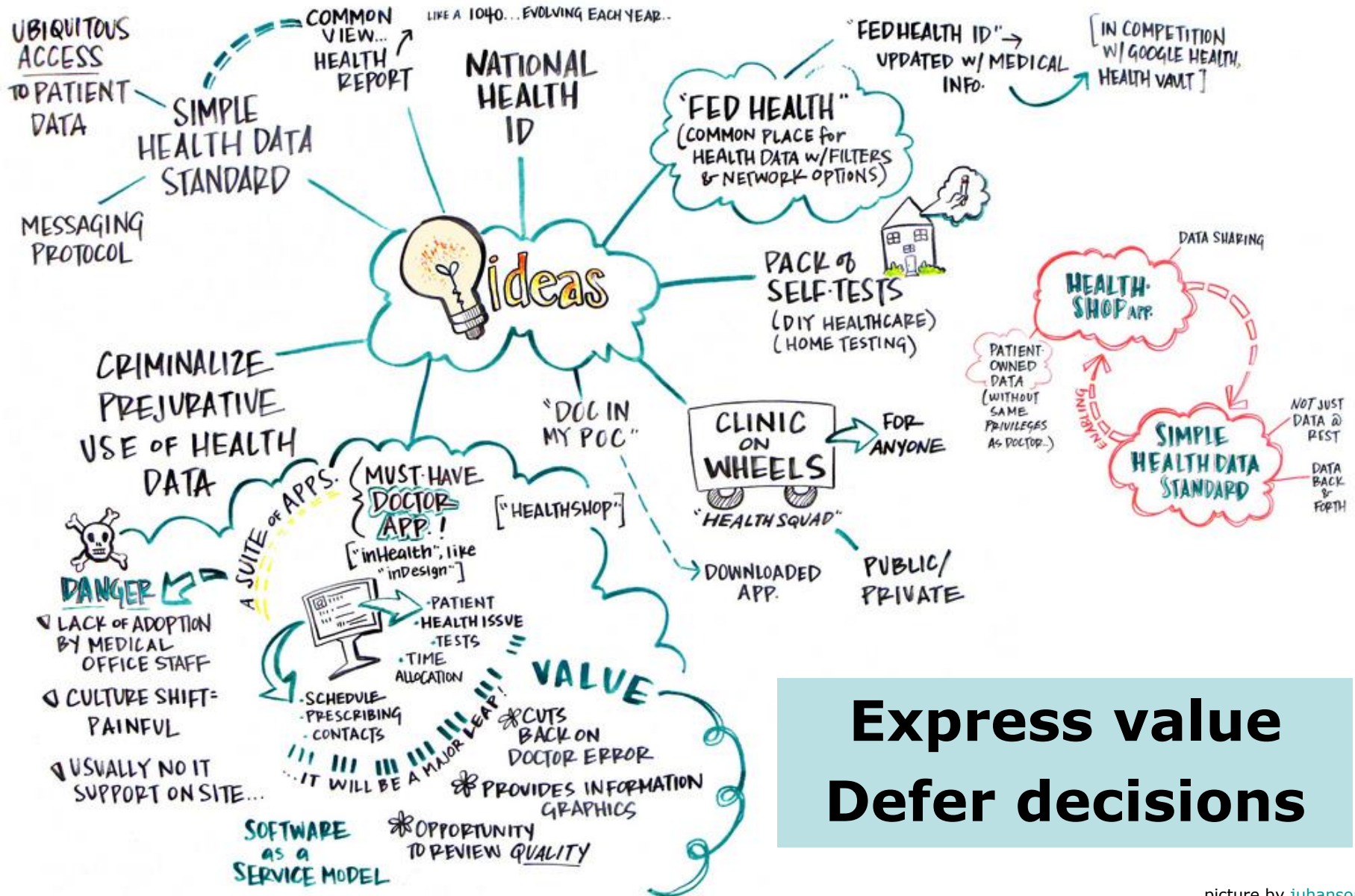
**Users
Managers
Marketing**



Scrum Process



Product Backlog



**Express value
Defer decisions**

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
	16	Additional Editors (which ones)	240	T&M
	17	Study Variable Manager	240	T&M
	18	Haplotypes	320	T&M

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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		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	Study types	240	T&M

**Prioritized by
value & risk**

**Includes rough
estimates**

**Better to describe
as user stories**

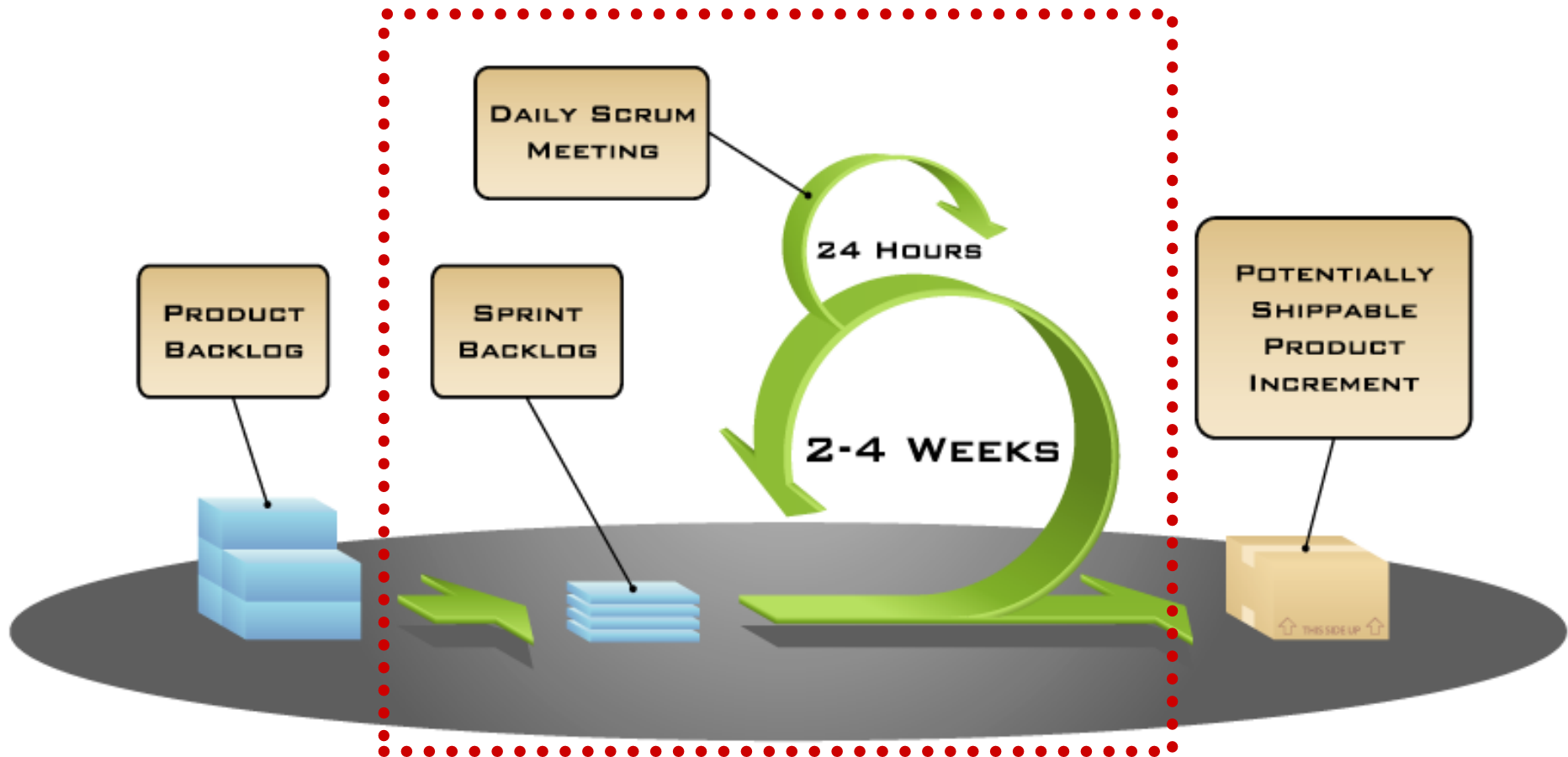
**Publicly
visible**

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



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Timeboxed – Frozen features
Variable scope – Shippable result

Sprint Planning

Team capacity, Product backlog,
Current product, Business, Technologies +

Goal =



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

½ - 1 hour
per sprint/week



Sprint Planning (Part 2)

Tactical level planning

Define sprint backlog items

Estimate sprint backlog items

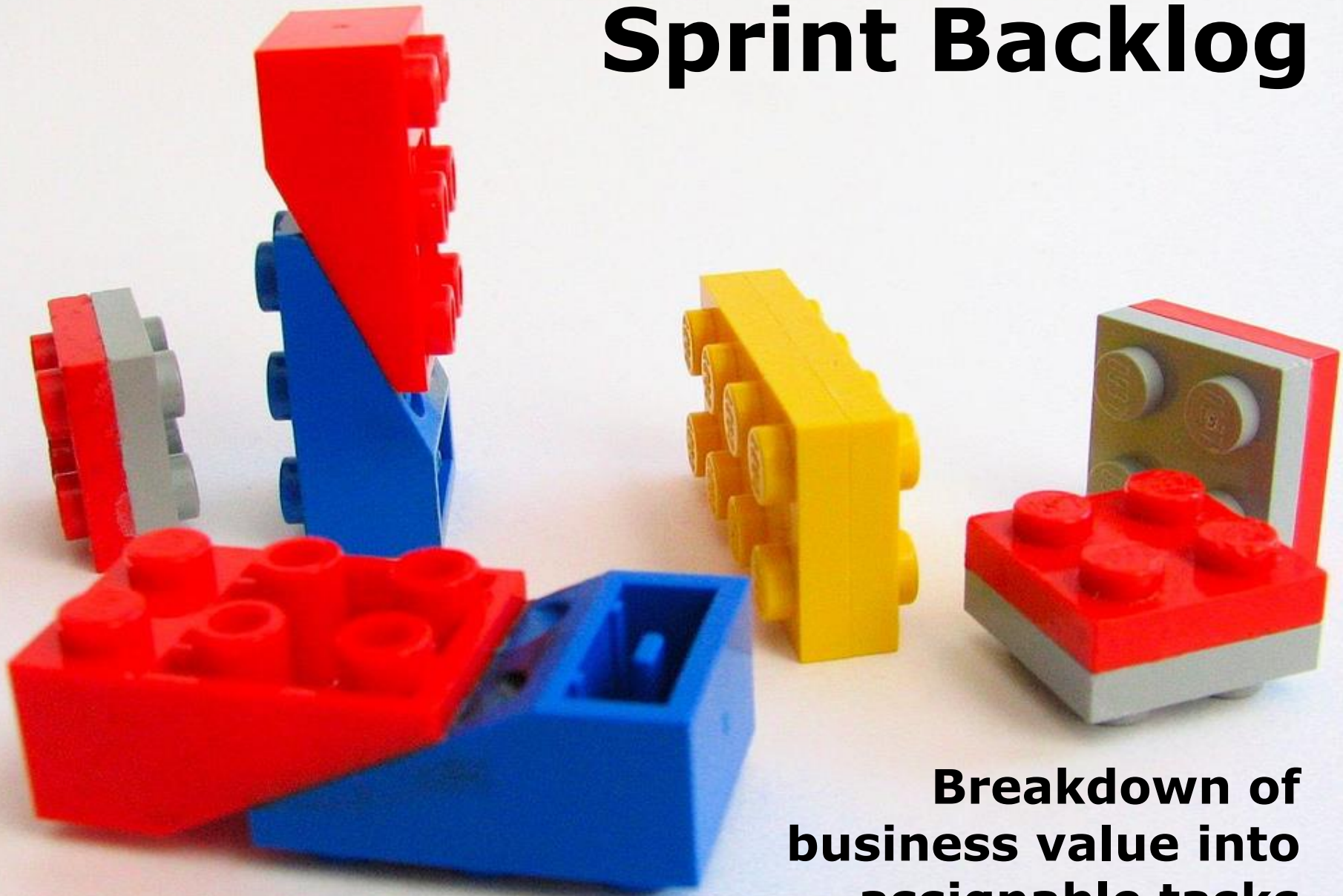
Use velocity (Yesterday's Weather)

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 Link	Front End Screens	Anjali	Pending	0.5	0.5	0.5		
	Manual Testing	Anu	Pending	0.5	0.5	0.5		
	Integration Testing	Anu	Pending			0.5		
Work Remaining				21	11	6		

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		
		0	0		
		2	0		
		2	0		
		2	1		
		1	0		
		1	0		
		1	0		
		1	1		
		1	1		
		1	1		
		0.5	0		
		0.5	0		
		0.5	0		
		0.5	0		
		0.5	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	0	
		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

Daily Scrum

Commitment and accountability

Say what you do, do what you say

Whole world is invited



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





**Sprint
backlog**

**Tasks
to do**

**Burndown
chart**

**Completed
tasks**

Task Board

Definition of Done

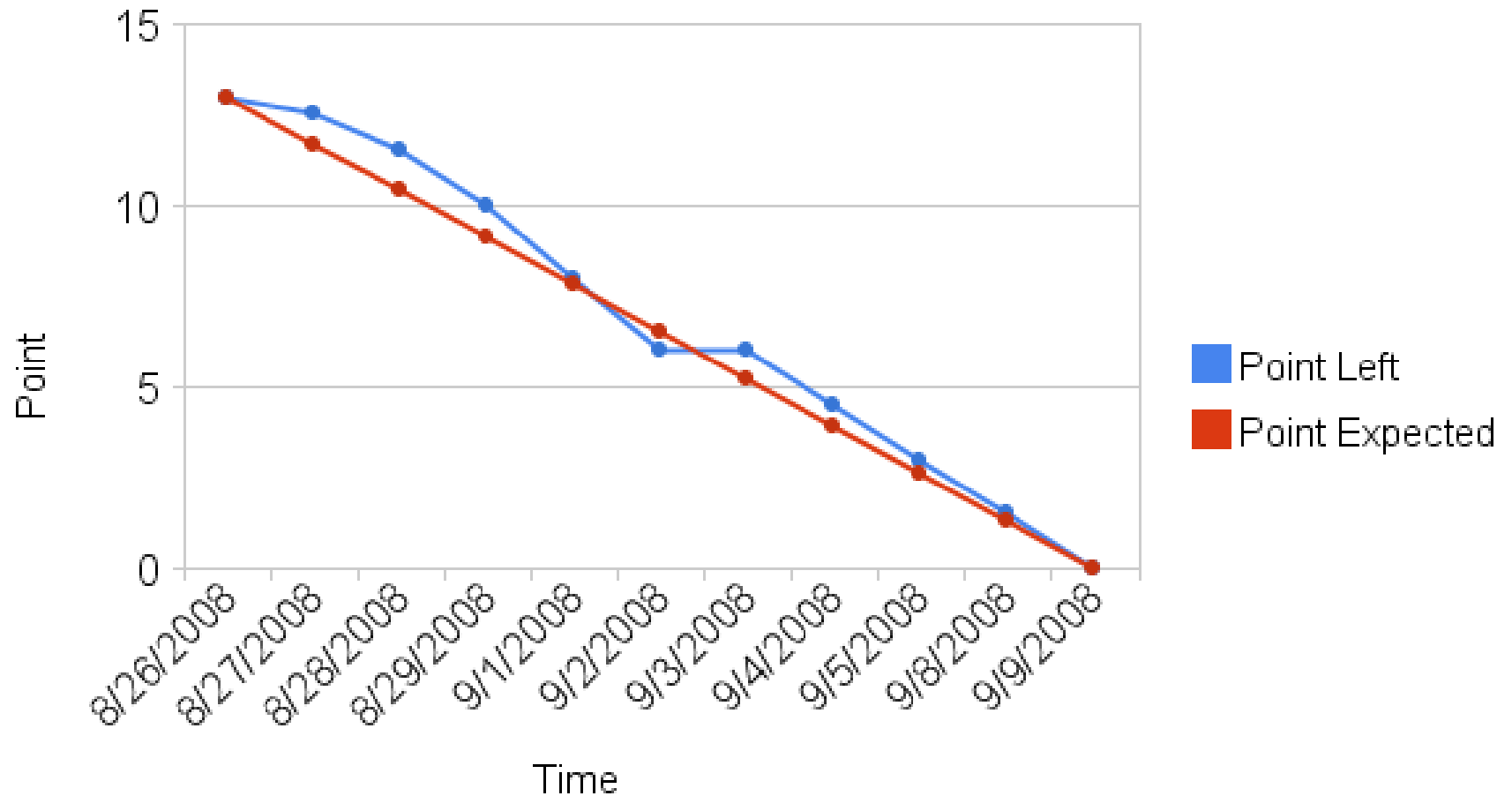
Avoid the 90% syndrome

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**



Sprint Review

Informal, no slides

Whole team participates

The world is invited

Sprint Review

Preparation needed

Show complete features

Accept or reject results

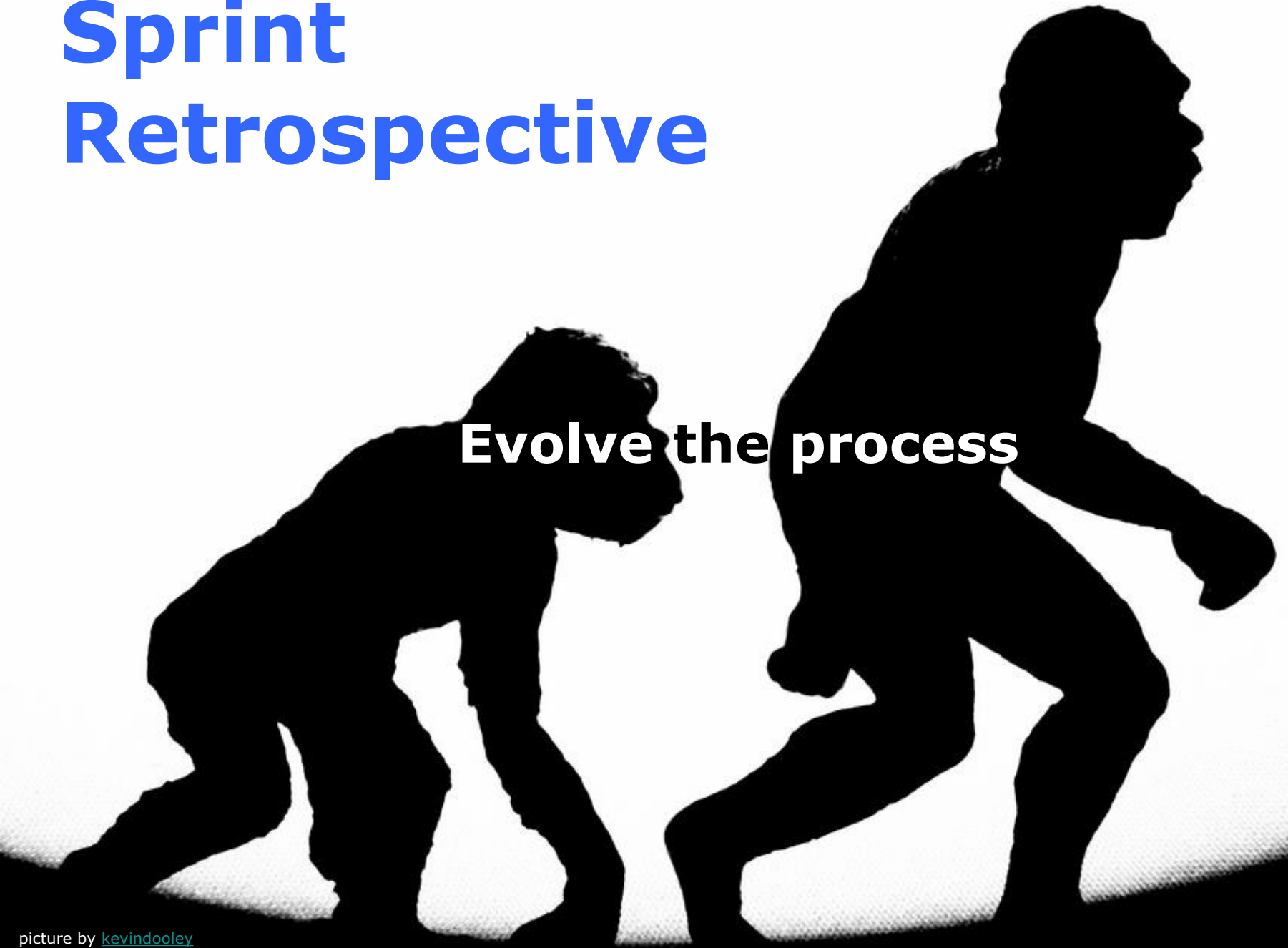
1-2 hours

per sprint/week



Sprint Retrospective

Evolve the process



Sprint Retrospective

Reflect on process and product
Whole team participates



Sprint Retrospective

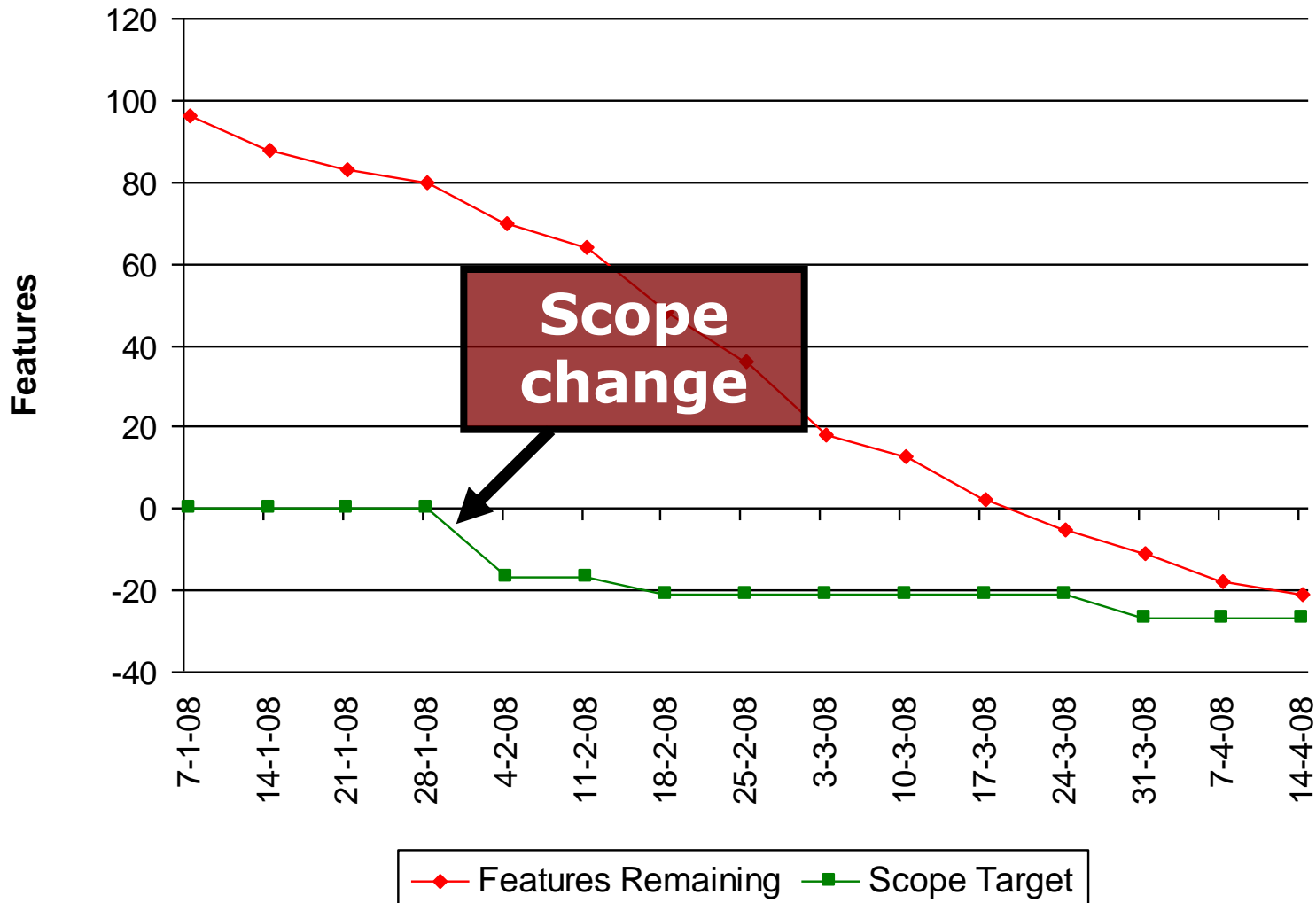
What to start doing

What to stop doing

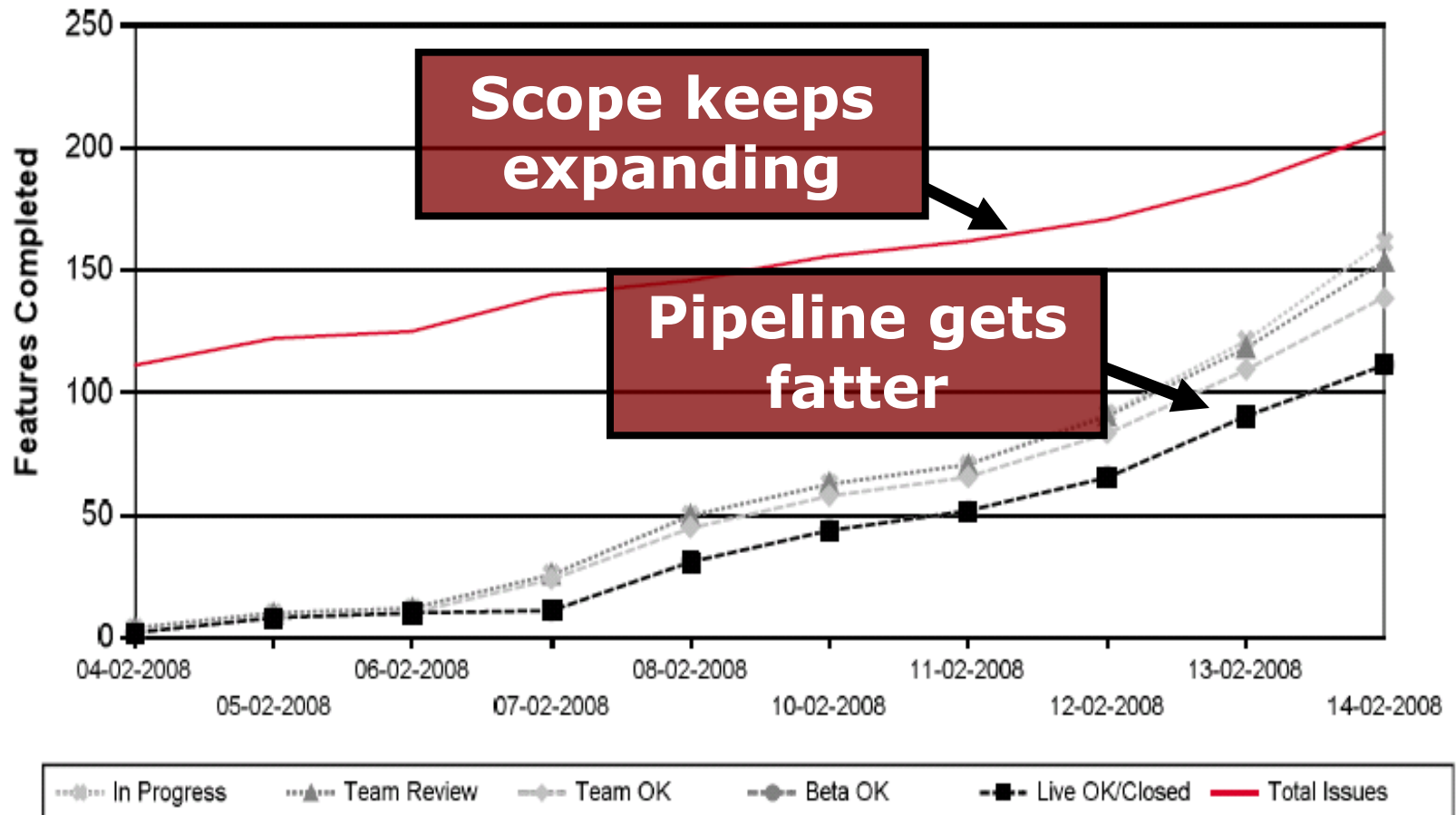
What to continue doing

(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

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”



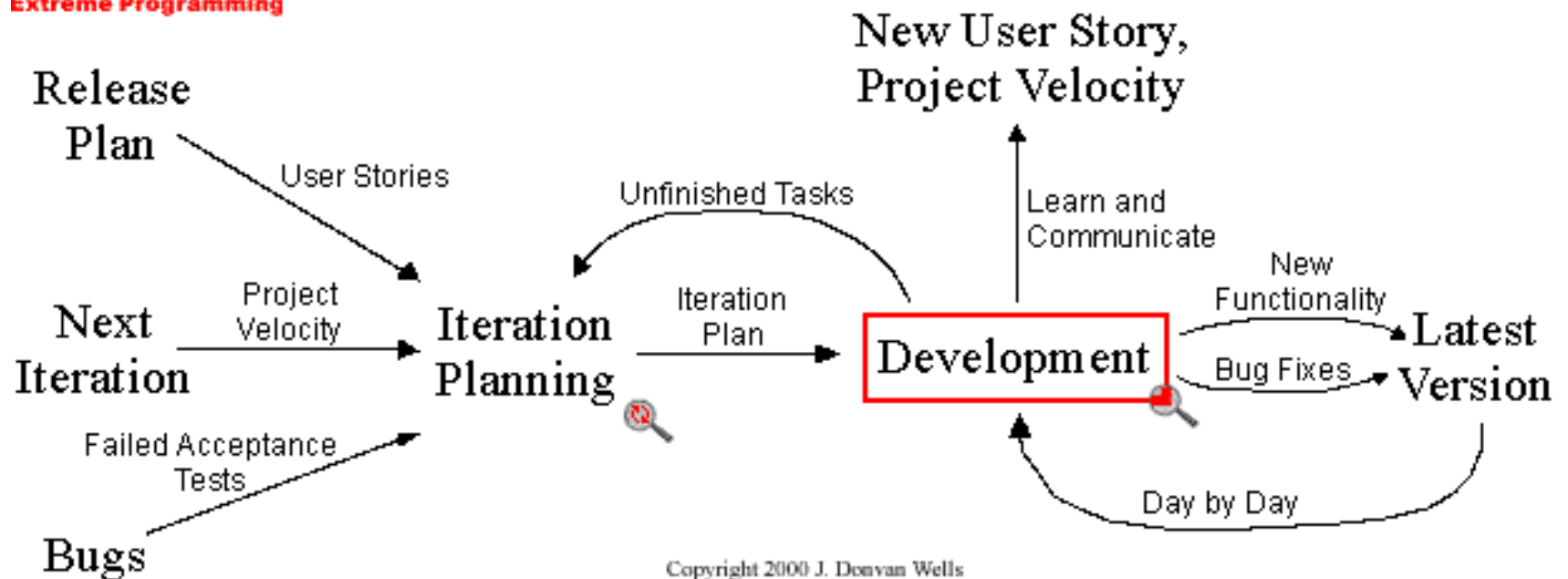
Hot Issues



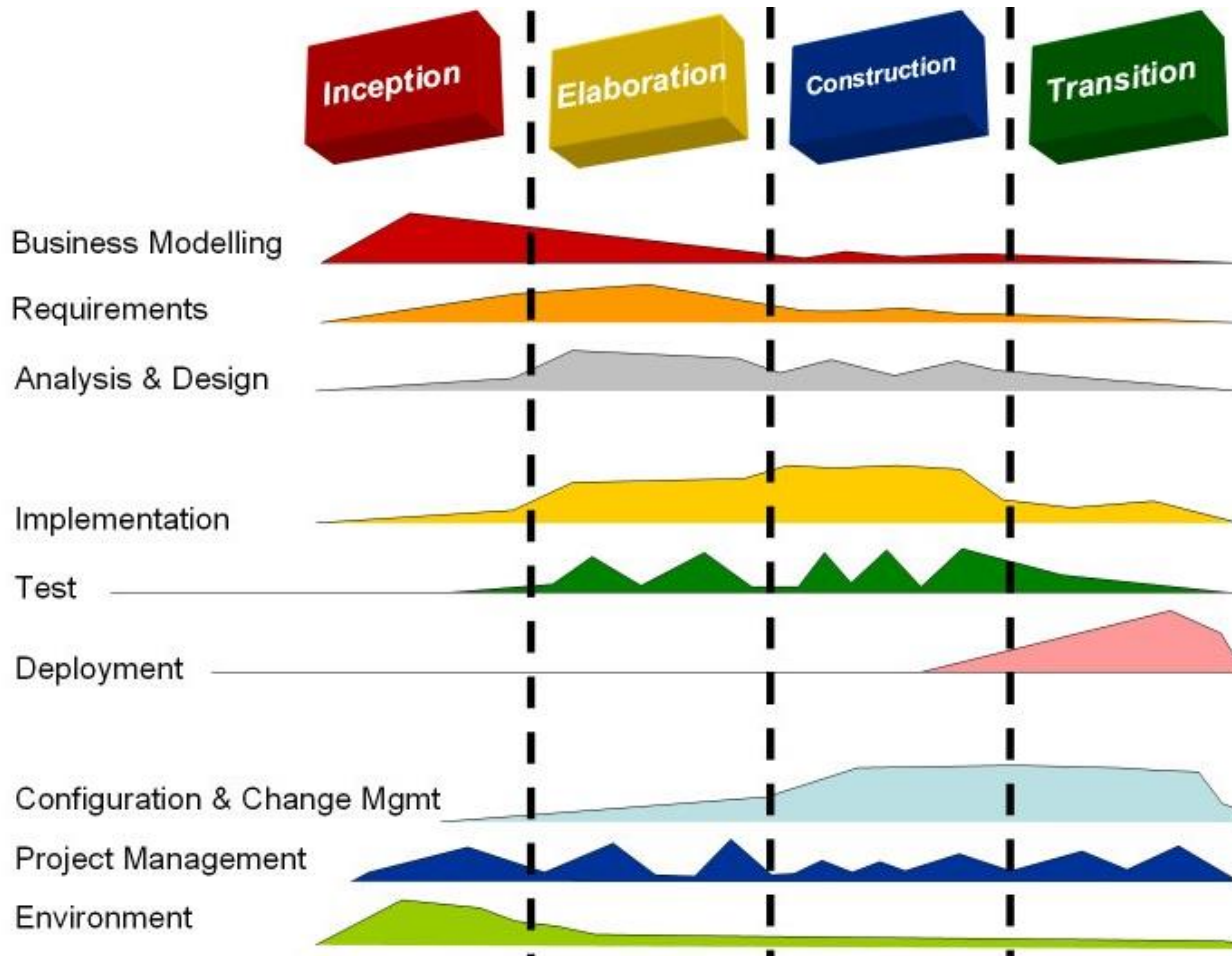
Scrum vs. XP



Iteration

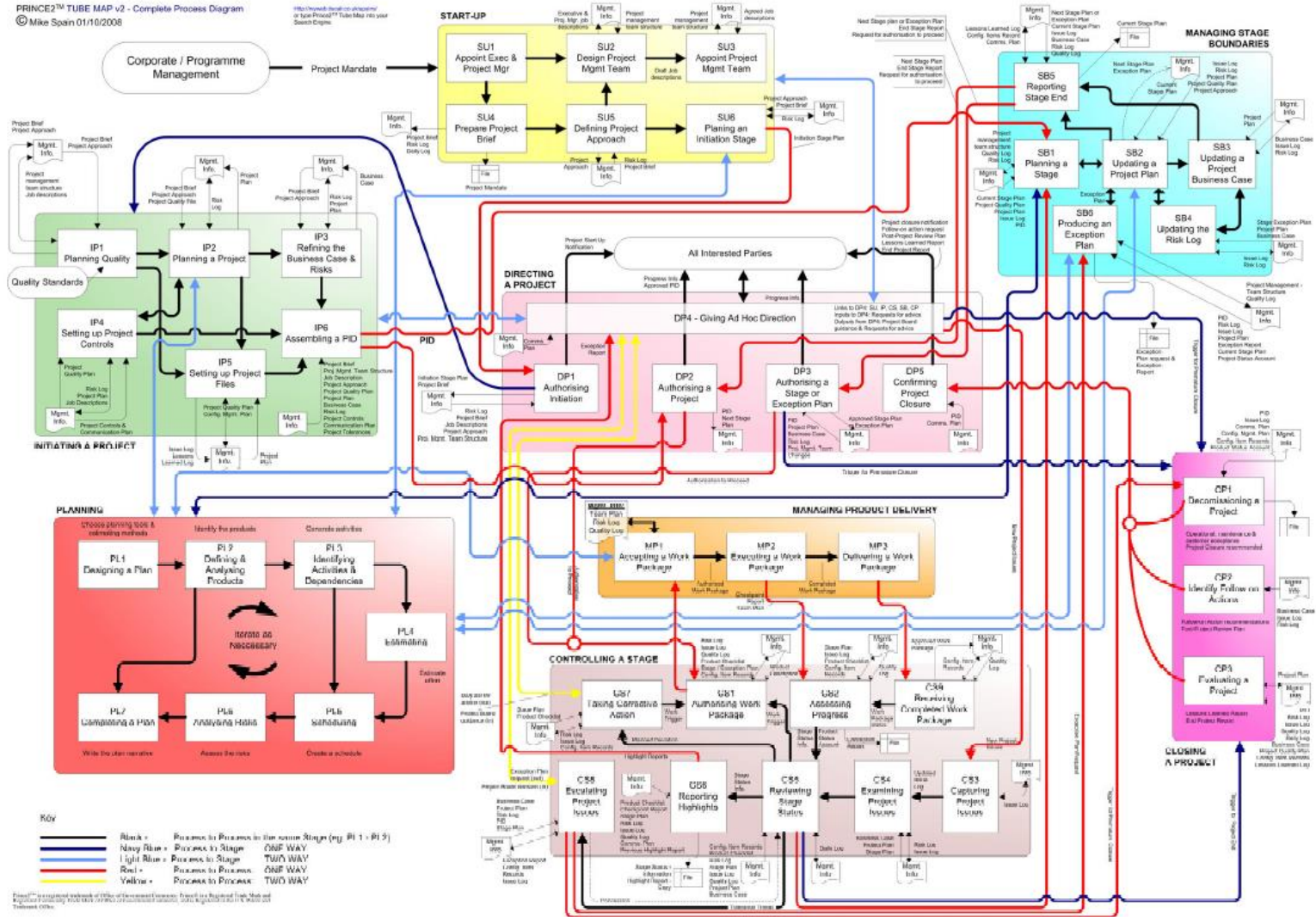


Scrum vs. RUP

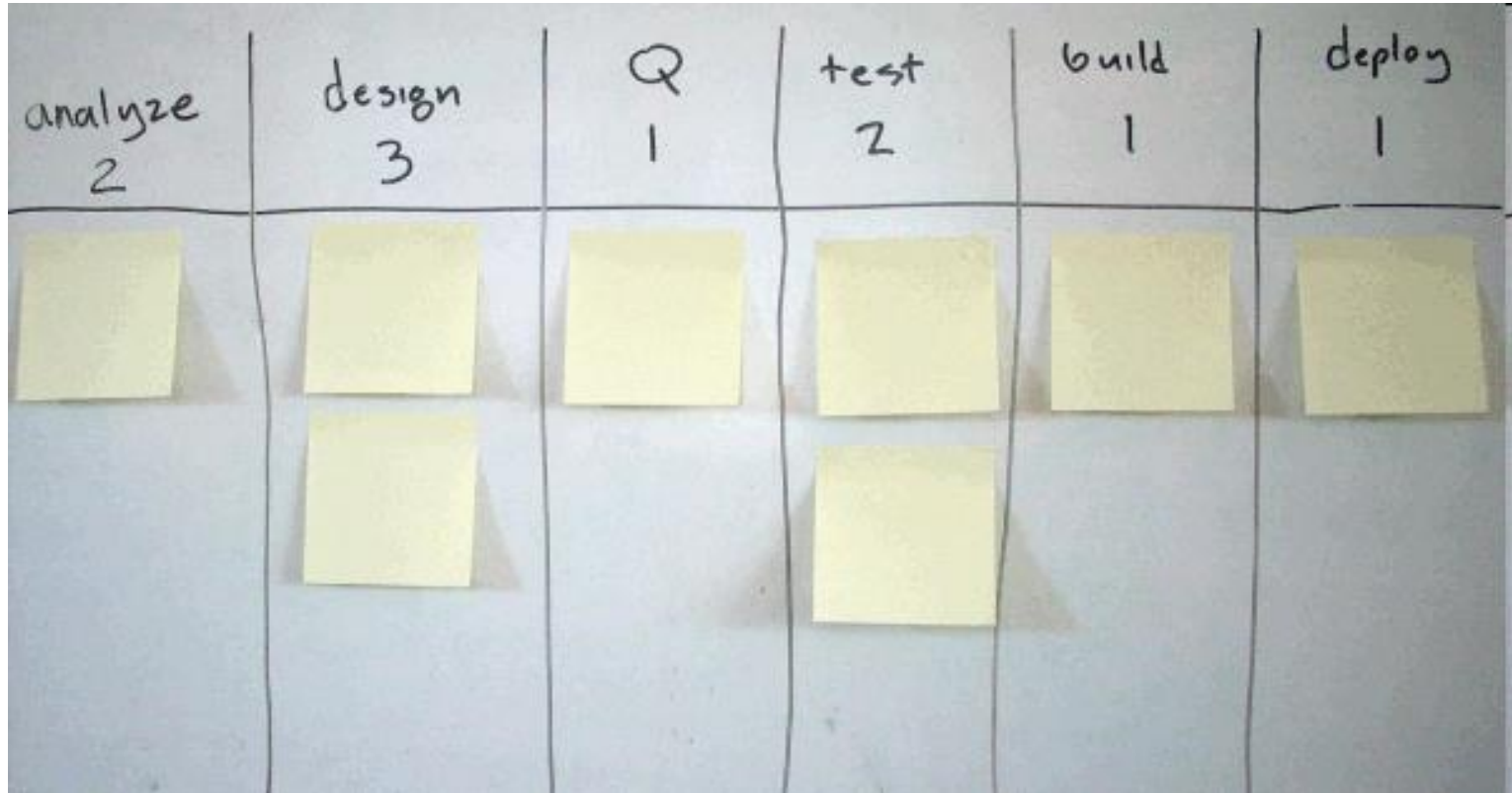


Scrum vs. PRINCE2

PRINCE2™ TUBE MAP v2 - Complete Process Diagram
© Mike Spain 01/10/2008

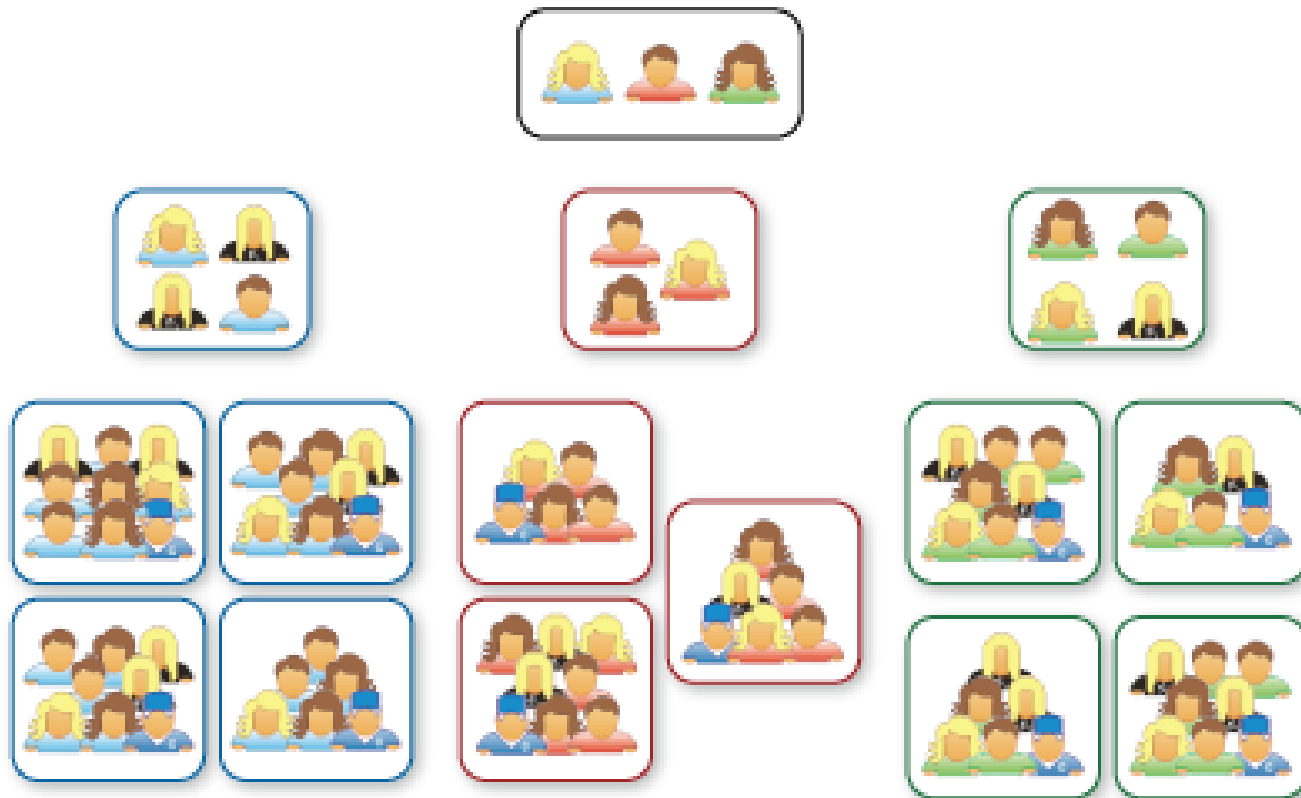


Scrum vs. Kanban

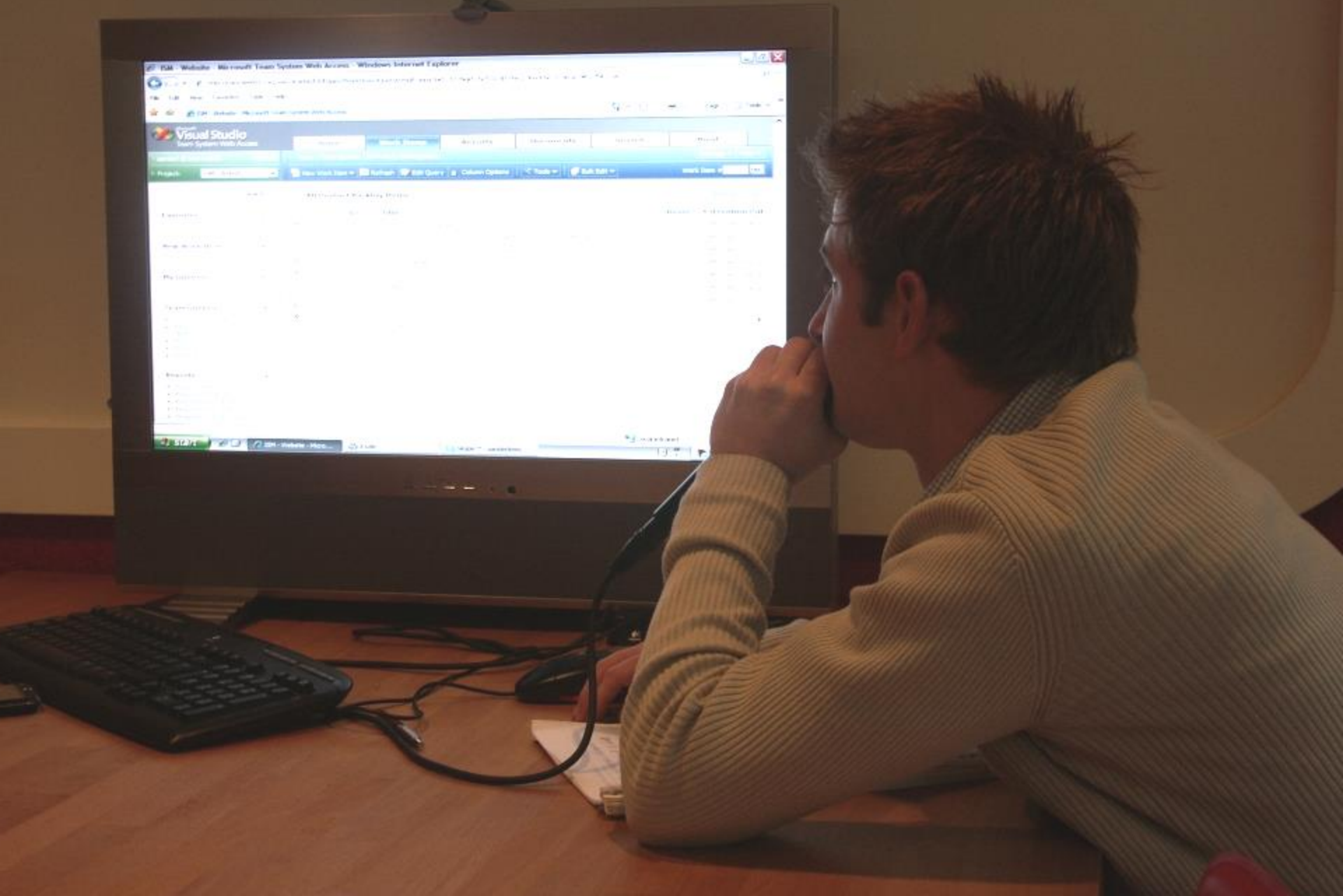


Scaled Scrum

(Scrum of Scrums)



Distributed Scrum



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



More Fun, Happy Teams

Preconditions

Empowerment

Discipline

Courage

Stamina

Passion

Coaching

Stable Teams

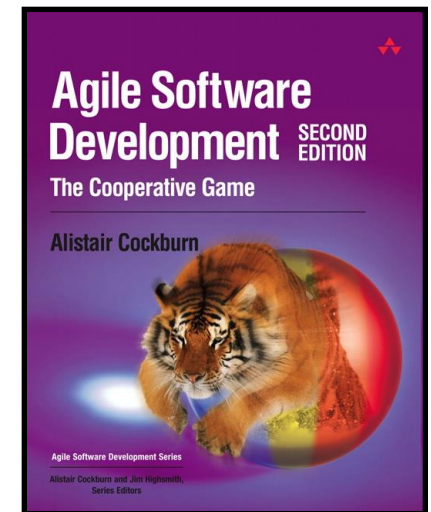
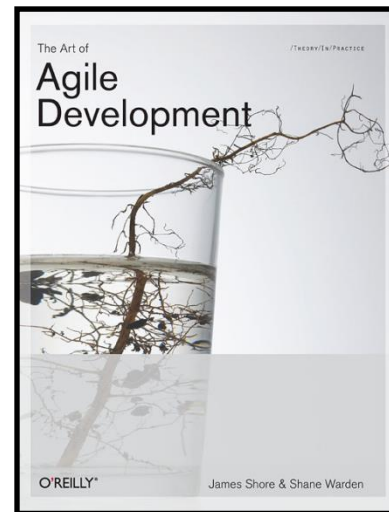
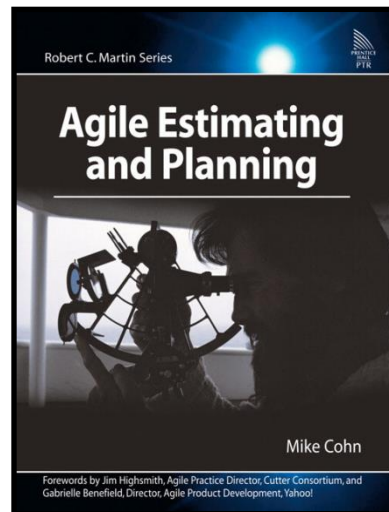
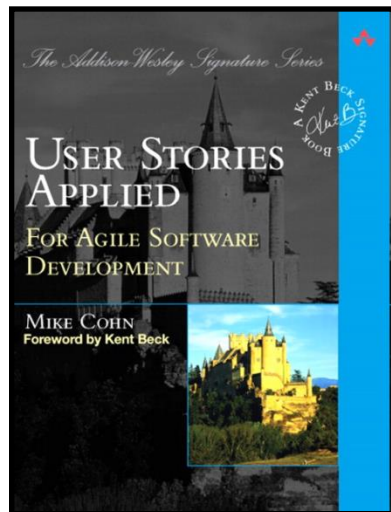
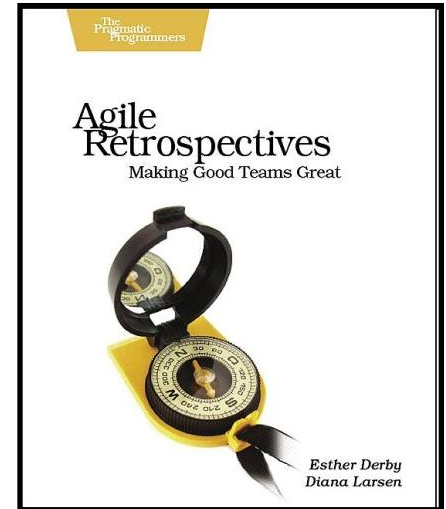
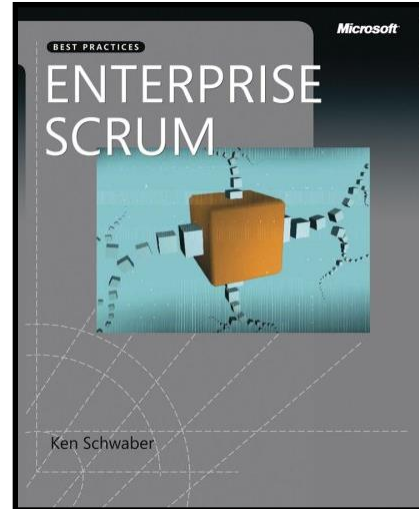
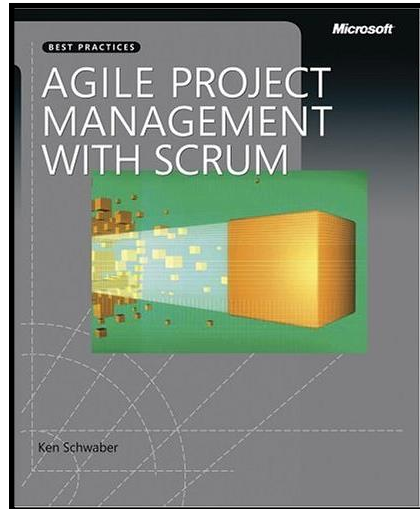
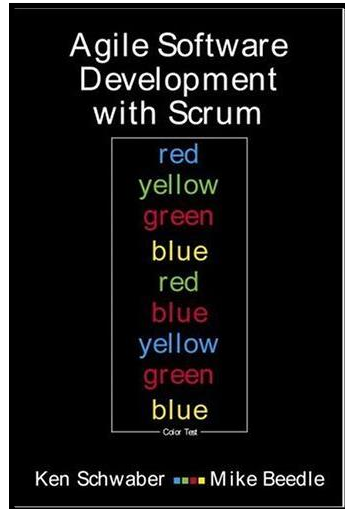
Cross-Functional

Available Customer

Disclaimer

**No Engineering Practices
Looks Simple, Is Hard
No Silver Bullet
Not Complete
Takes Time**

Books



Sites

www.scrumalliance.org

www.scrum.org

www.mountangoatsoftware.com

www.agilesoftwaredevelopment.com

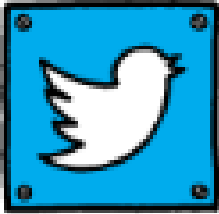
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Q & A





slideshare.net/jurgenappelo



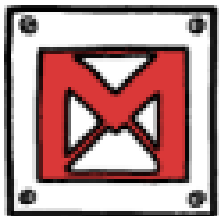
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linkedin.com/in/jurgenappelo

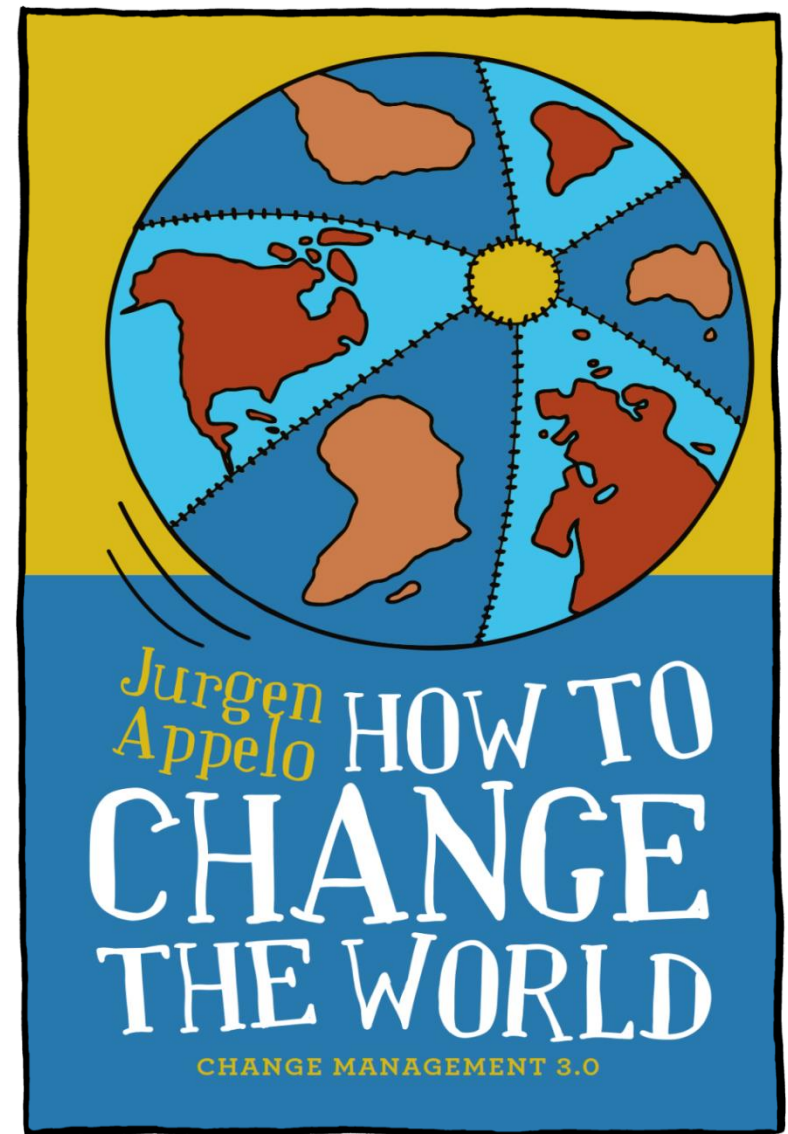
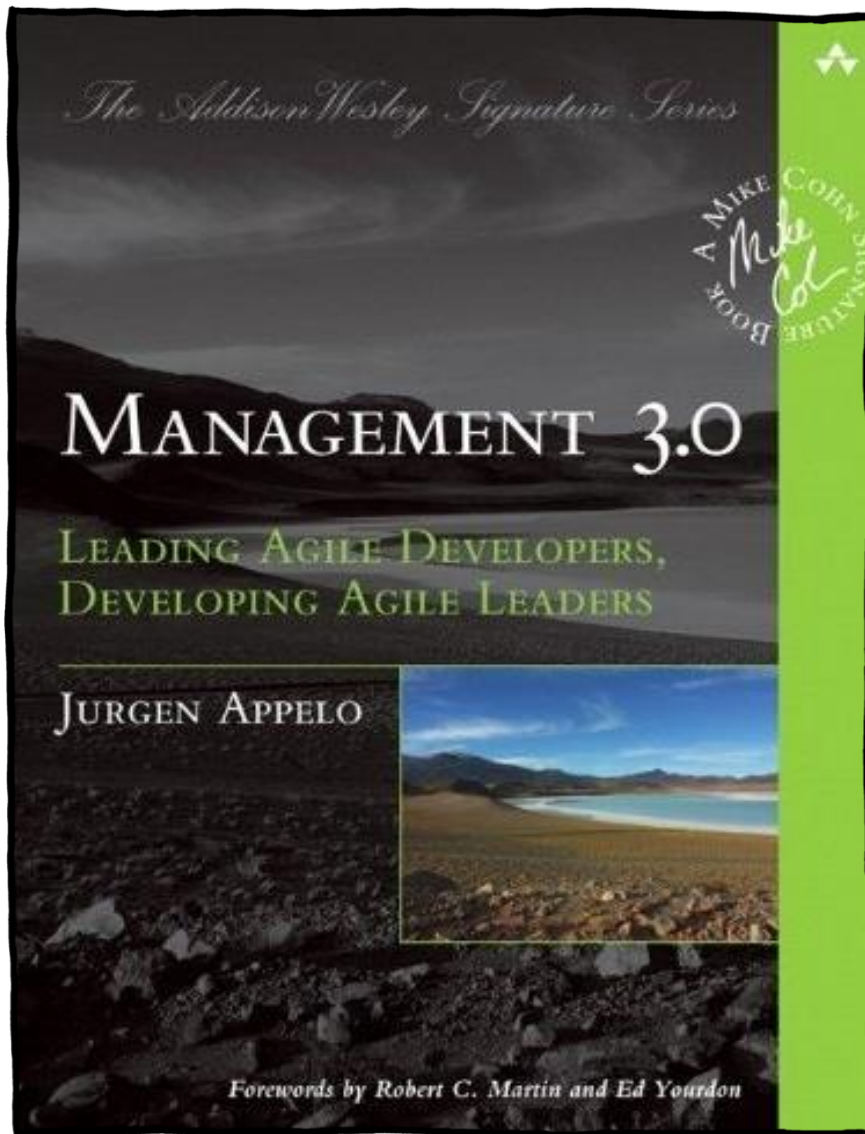


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