

Agile Project Management





About ourselves Pardeep Maheswaree

Pardeep.maheswaree@vaibmu.com

+358 45 8731388

www.linkedin.com/in/pardeepmaheswaree

www.vaibmu.com



Pardeep is a strategist specialized in strategic analysis and planning at corporate, business and functional level, management of technology and innovation, mergers and acquisitions, strategic alliance management and business development

Learn more about our team and our network www.vaibmu.com/team



About ourselves

Aitor Elorriaga

aelorriaga@innopole.net

+34 687 416 910

<http://www.linkedin.com/pub/aitor-elorriaga/5/509/45>

www.innopole.net



Aitor is RTD Manager at INNOPOLE. Aitor has held executive and expert positions in IT strategy consultancy, critical systems quality assurance and medical devices software development. Currently coordinates and manages 2 large scale EU RTD Projects: ExtremeFactories (Agile Innovation Methodology) & U-QASAR (Software Quality Assurance Platform).

Member of Vaibmu's network of collaborators.



AGILITY VS. PREDICTABILITY

SCRUM
ExtremeProgramming
Adaptive Software Development
Crystal

...

vs.

RUP
Waterfall
METRICA3

...

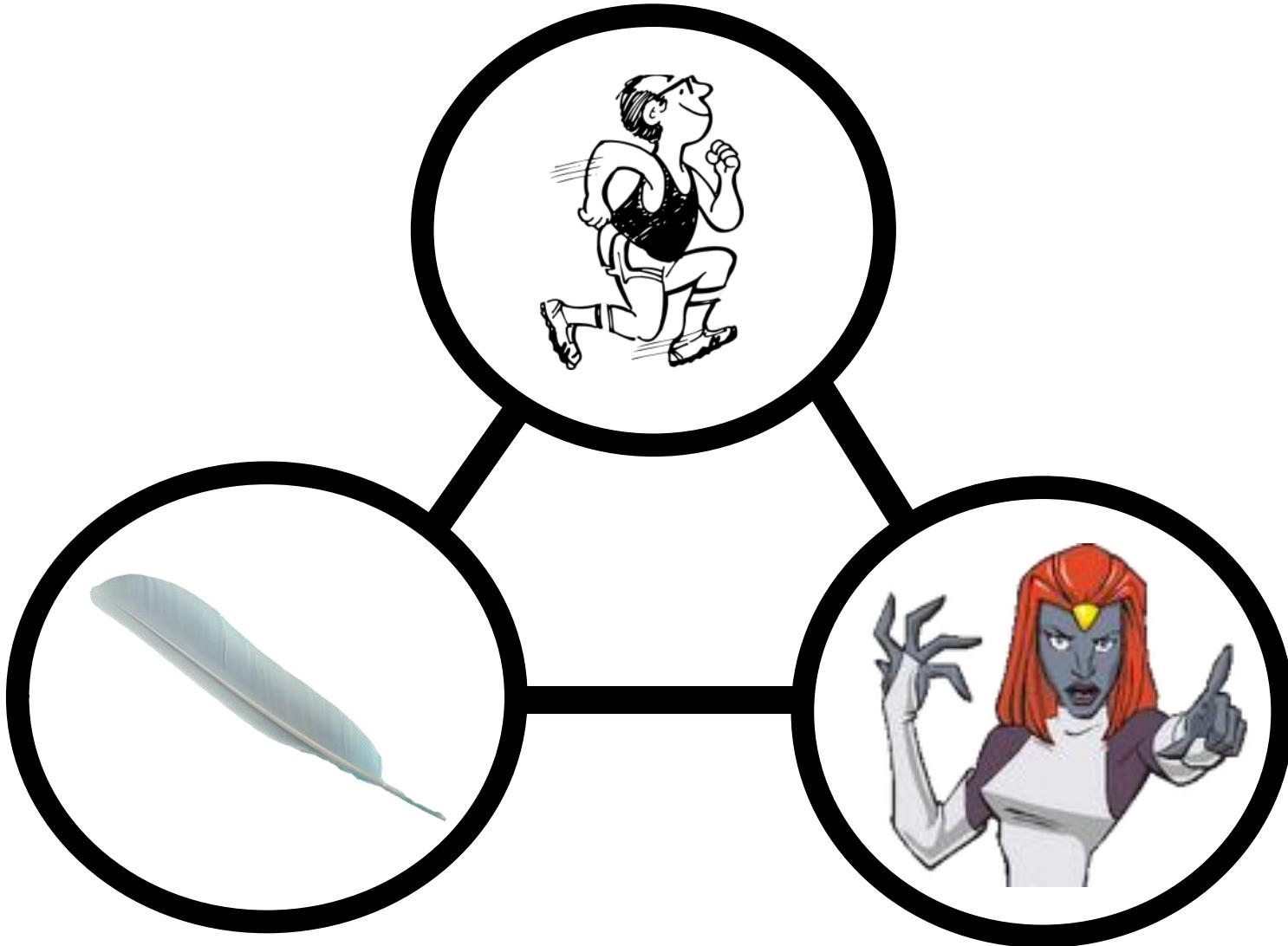
ag·ile (j'l, -l) *adj.*

1. Characterized by quickness, lightness, and ease of movement; nimble.
2. Mentally quick or alert: an agile mind.

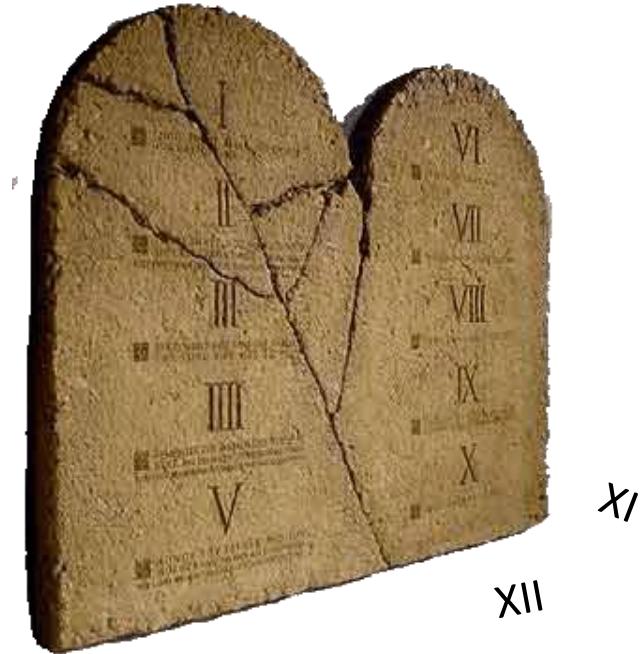
[French, from Latin *agilis*, from *agere*, *to drive, do*; see *ag-* in Indo-European roots.]

agile·ly *adv.*

agile·ness *n.*



The 12 principles of



the Agile Manifesto

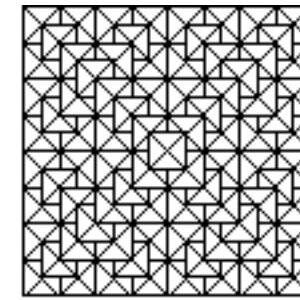
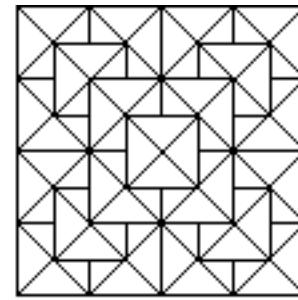
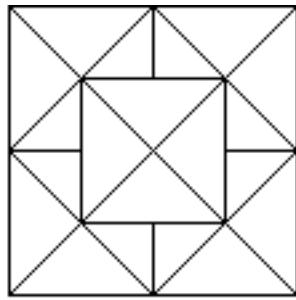
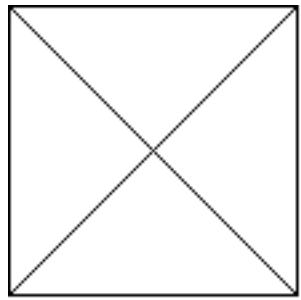
agilemanifesto.org



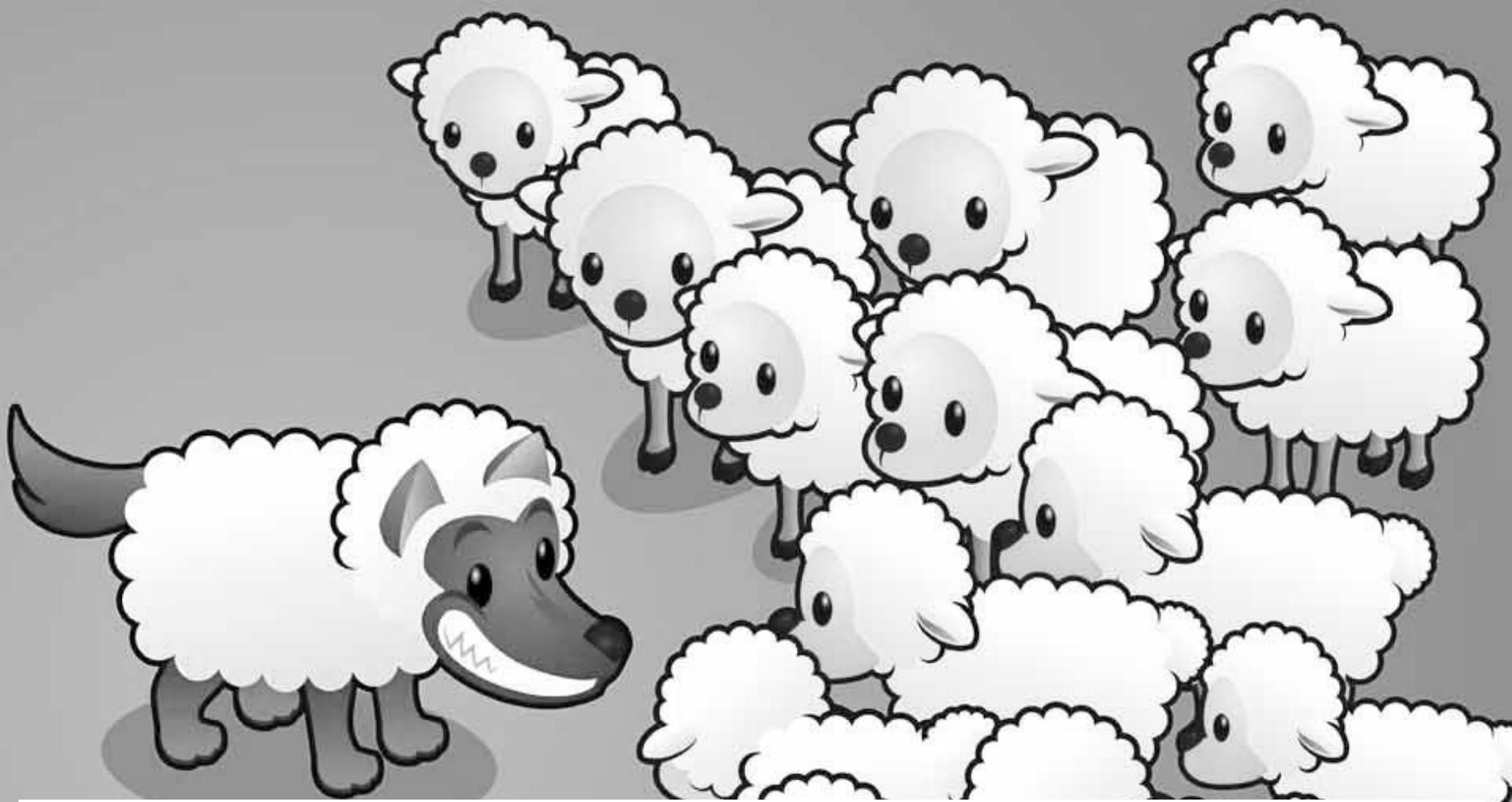
1 - Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.



2 - Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.



3 - Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.



4 - Business people and developers must work together daily throughout the project.

5 - Build projects around motivated individuals.
Give them the environment and support they need,
and trust them to get the job done.



MOTIVATION

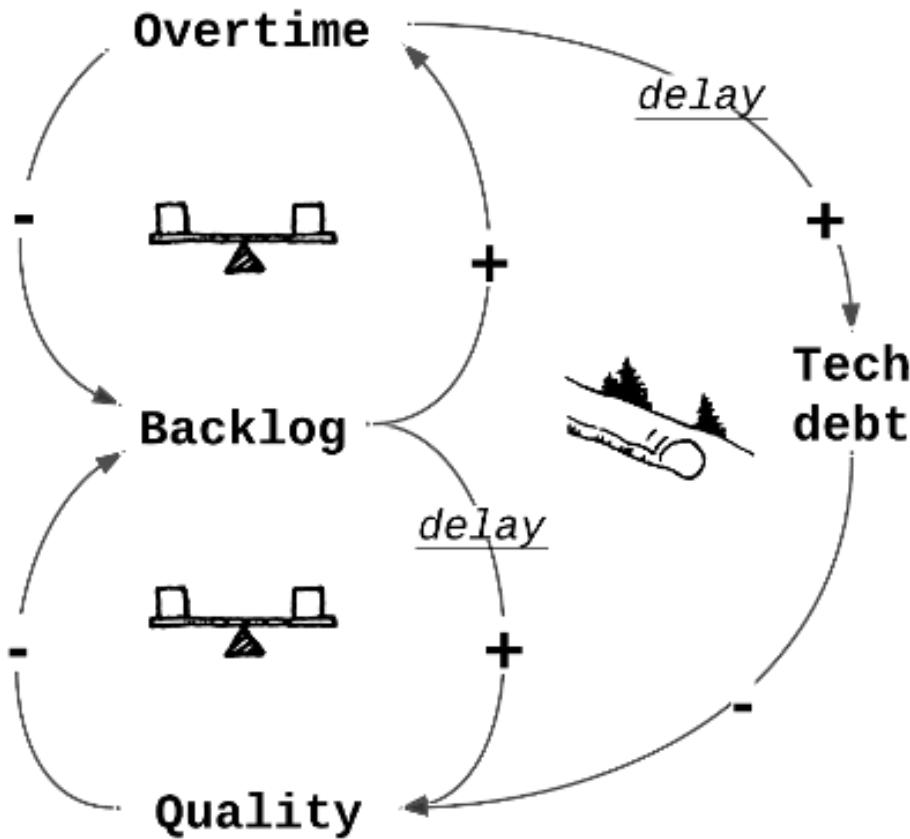
Chuck Norris doesn't need motivation,
motivation needs Chuck Norris.



6 - The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.



7 - Working software is the primary measure of progress.



8 - Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.



9- Continuous attention to technical excellence and good design enhances agility.

“Simplicity is the key to
brilliance”

Bruce Lee

10 -
Simplicity--the art of
maximizing the
amount
of work not done--is
essential.



A large flock of birds, likely starlings, is captured in flight against a clear, light blue sky. The birds are densely packed, creating a dark, swirling, and organic shape that resembles a massive, fluid mass. The perspective is from below, looking up at the birds as they curve across the frame.

11- The best architectures,
requirements, and designs emerge
from self-organizing teams.

PLEASE ALLOW US
TO CONDUCT A
BRIEF INTERLUDE
OF SHAMELESS

NAVEL

o
I
Z
V
a

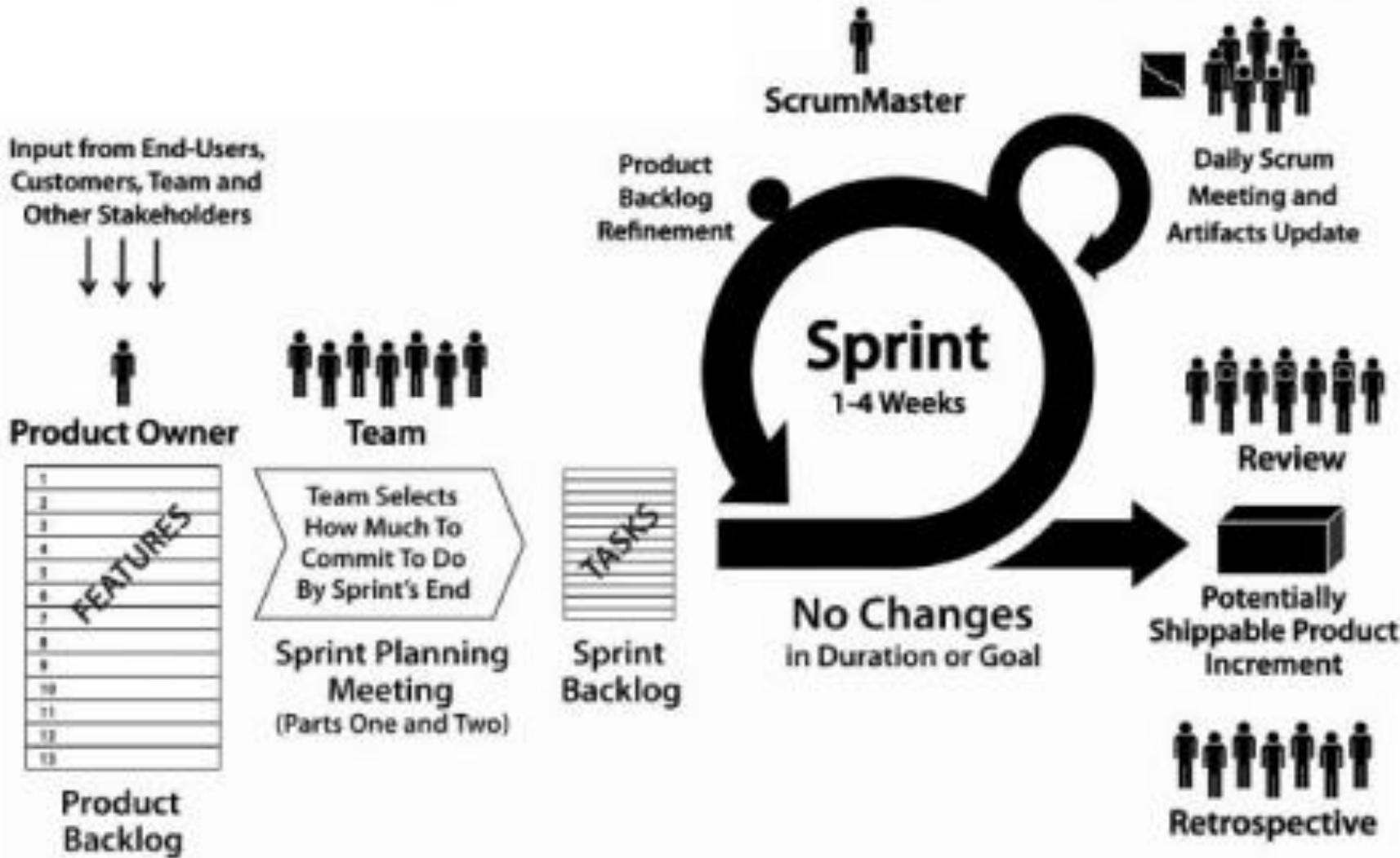


12 - At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

But agile is not only
about software...

SCRUM

The process



SCRUM

The team





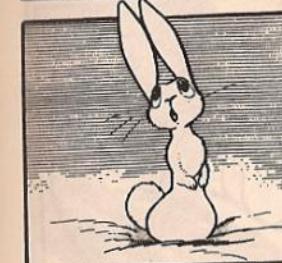
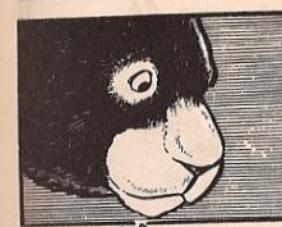
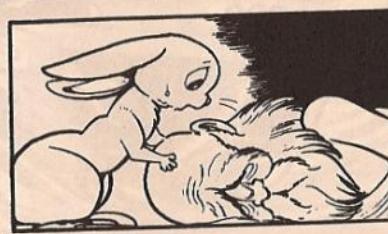
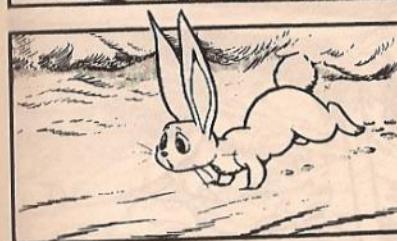
FRRR

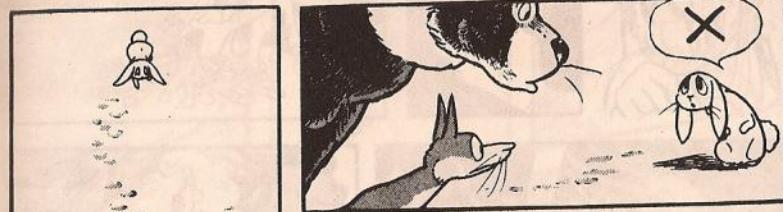
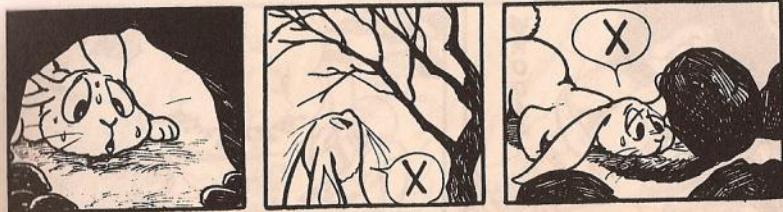
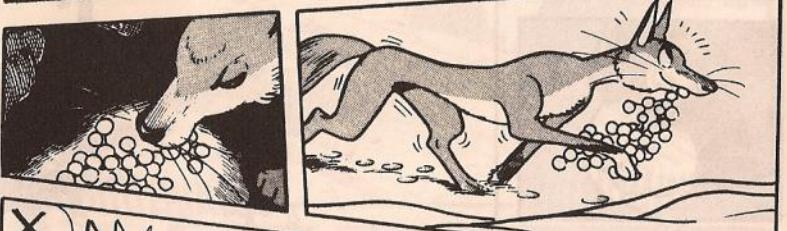
THUMP

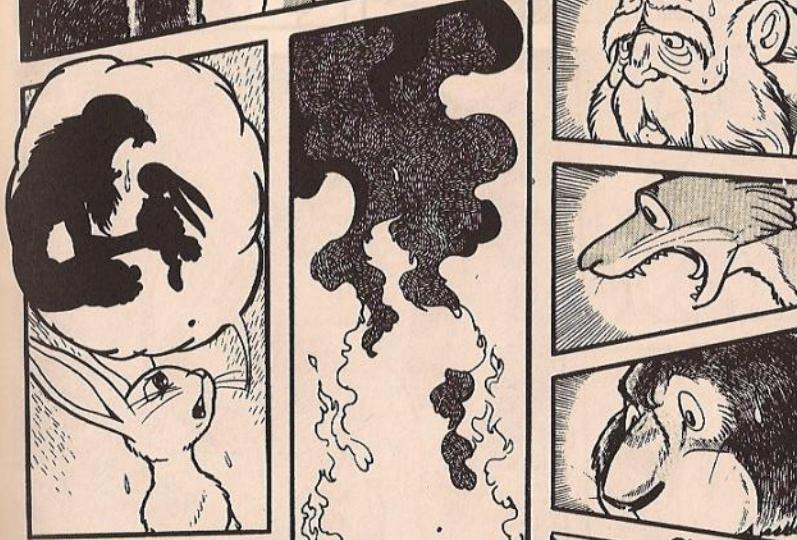
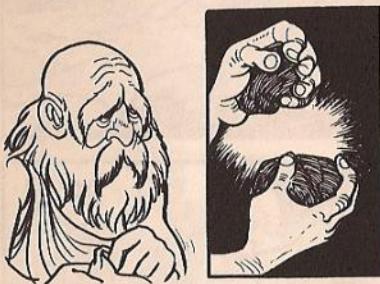


FFF

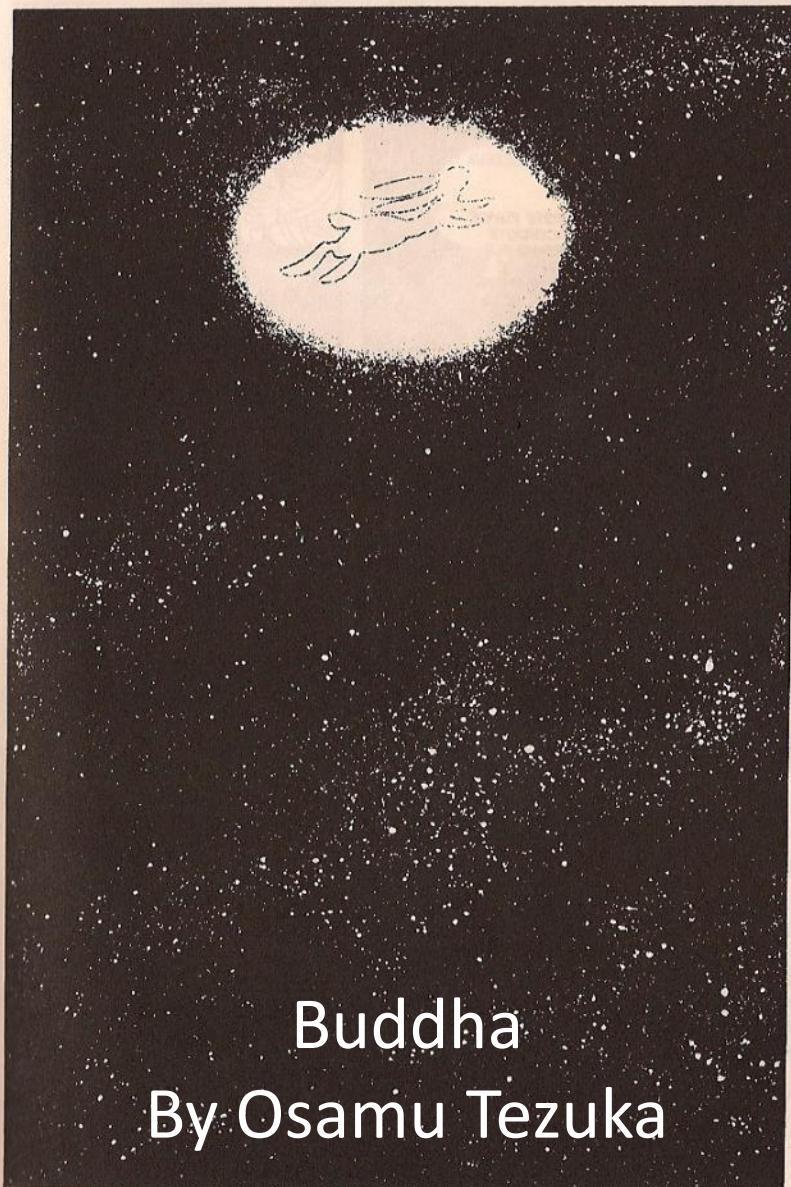
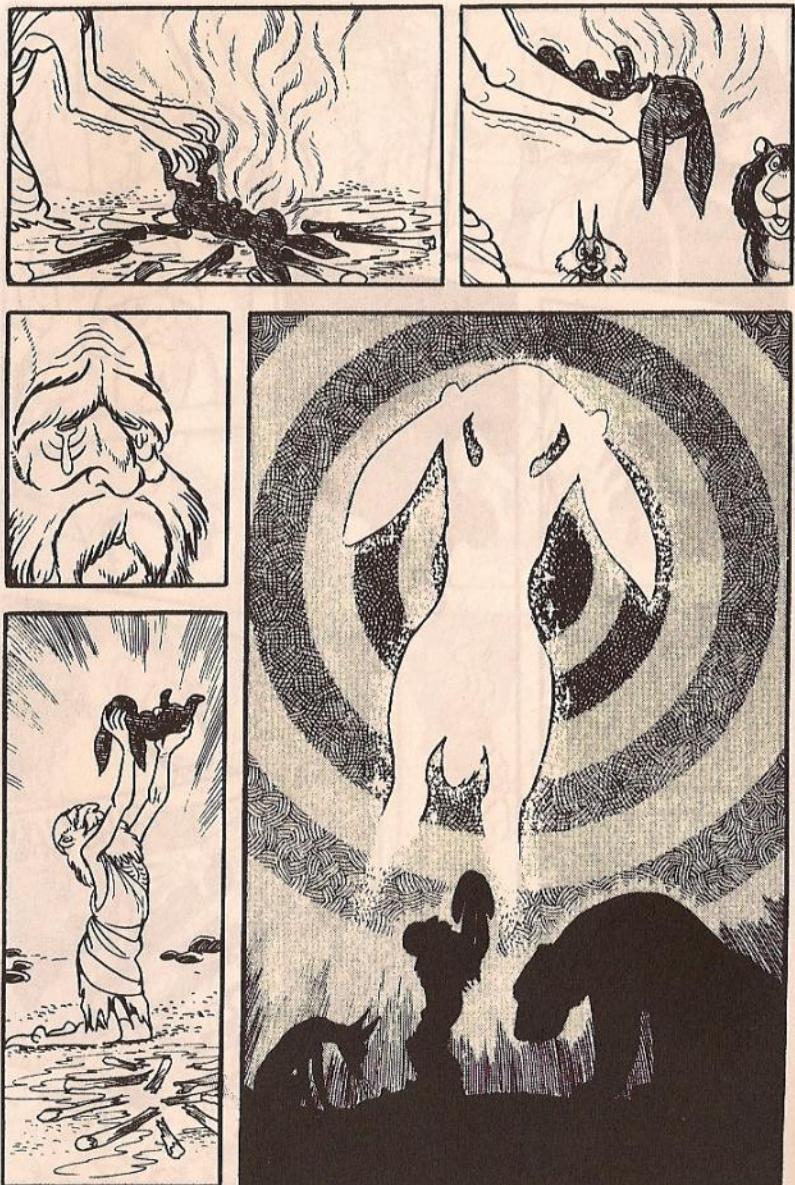
FUUUUUUUUUUUU







CRRRKKK



The Product Owner

Attributes:

Available

Business-savvy

Communicative

Decisive

Empowered

Responsibilities:

Provides Vision.

Provides Boundaries.

The SCRUM Master

Attributes:

Responsible
Humble
Collaborative
Committed
Influential
Knowledgeable

Responsibilities:

Removing impediments to
team's progress.

Authority over the process, not
the team.

The Team

Cross-functional, multidisciplinary teams.

Collective commitment about the scope of Sprint.

Self-organizing

The Product Backlog (1)

High level features description iteratively refined during the project.

Dynamic (open to emergent requirements).

Prioritized.

Responsibility of the PO.

Tool for **communication** between PO and Team.

The Product Backlog (2)

Specify by example → Written as User Stories: As a *<type of user>*, *I want <your goal here>, so that <the reason>*.

Add Acceptance Criteria or Conditions of Satisfaction.

Refined until a User Story can be resolved in 1 Sprint.

The Product Backlog (3)

Business Value:

Which issue shall be implemented first?

Value set by Product Owner

Story Points:

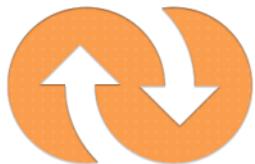
Abstract concept to indicate the complexity/effort of a User Story

Value collectively set by Team

The Sprint Planning (1)

It's about:

Committing the scope of a Sprint



Grab user story from product backlog, evaluate (e.g. planning poker), agree to include in Sprint.

The Sprint Planning (2)

Estimation:

stories to be implemented within a Sprint

can split into shorter stories

consider Team Velocity & Capacity

Velocity

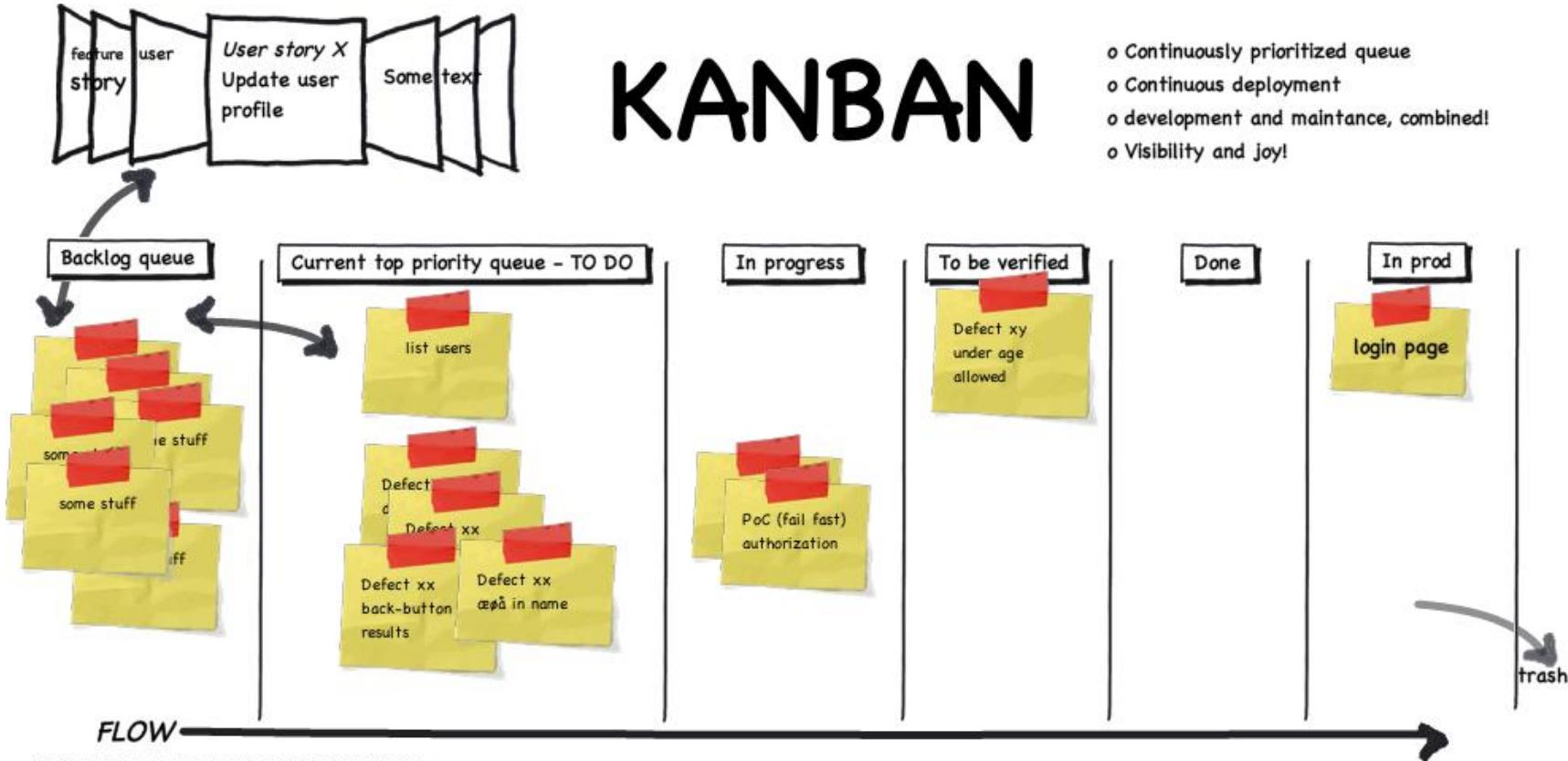
How much work a SCRUM Team is able to deliver in one Sprint?

Units of work / period of time, i.e. Story points / Sprint.



Keep Sprints length invariable

The Sprint (1)



The Sprint (2)

2 – 4 weeks

Split stories into tasks

Members of the team grab tasks freely

Valuable outcomes at the end of the Sprint.

Daily SCRUM meetings: Yesterday/Today/Support?

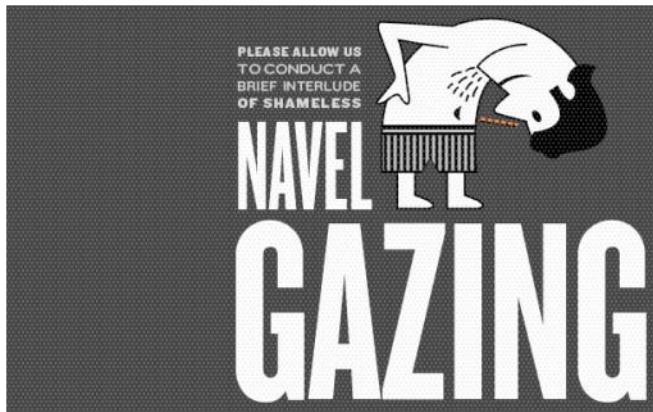
The Review Meeting

Demonstration of the Prototype

Acceptance of stories

Backlog Review → New Stories? Modify existing ones?

Retrospective

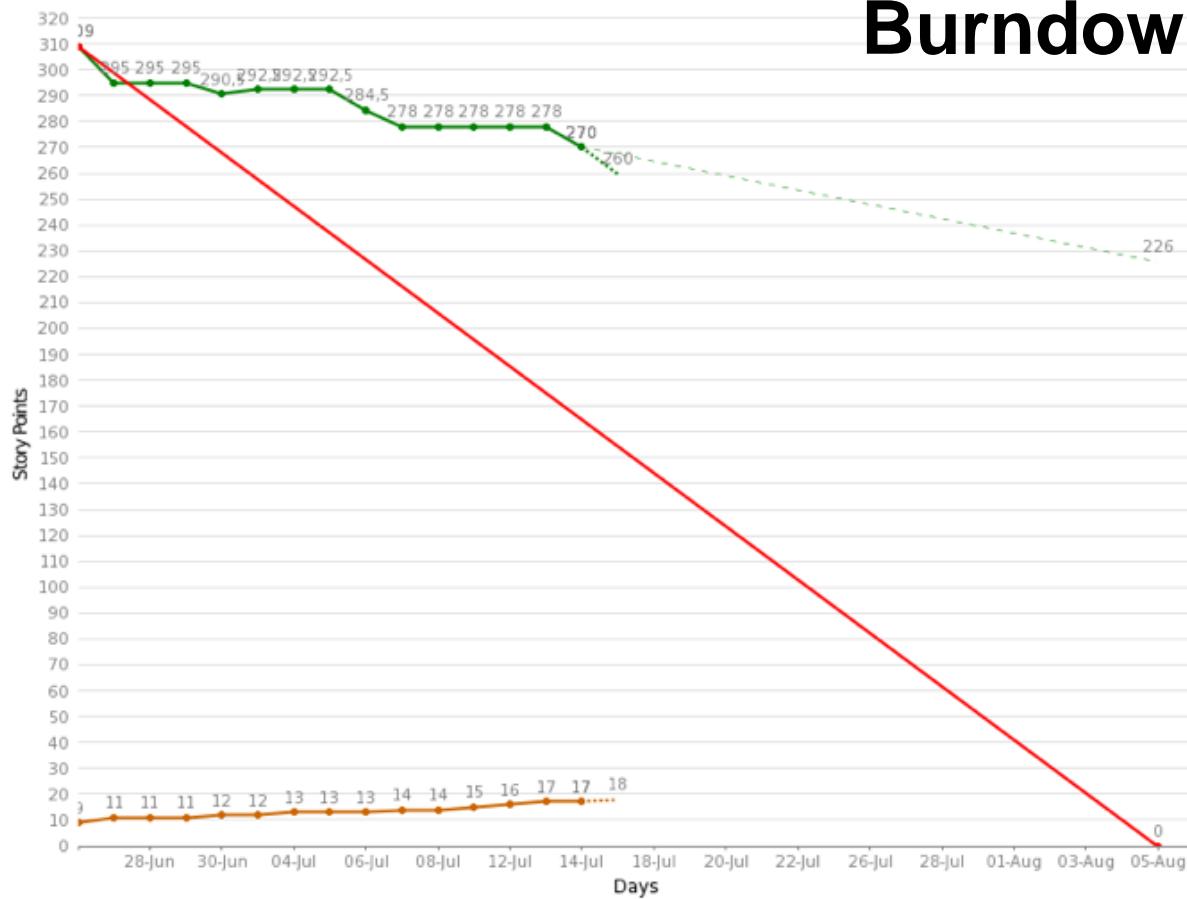


Not working practices?

Create Action Items

Progress Measurement

Burndown charts



The LEGO City Game

By agile42

5 min. Product Owner presenting the Product Vision as well as a high level presentation of the Backlog, Teams can ask questions on stories or requirements

Scrum Lego City by agile42 is licensed under a Creative Commons Attribution-Share Alike 3.0 License.

The LEGO City Game

By agile42

You will have to use Scrum to prove that you can build a LEGO city with fully fledged buildings, cars and natural environments in 20 mins. The city needs to fulfill some specific criteria

Scrum Lego City by agile42 is licensed under a Creative Commons Attribution-Share Alike 3.0 License.

The LEGO City Game

By agile42

Product Owner:

Learn to organize a Backlog properly, prioritizing what is more important first

Learn to measure the Team velocity and based on that make decisions, and re-prioritize the Product Backlog

Learn to negotiate with the Team about acceptance criteria and the deliverable

The LEGO City Game

By agile42

Team:

Experience self-organization and pressure given from the time-box

Learn to communicate focused on the sprint goal

Learn how to plan and organize tasks during a sprint

Learn to estimate fast and precisely based on the experience

Learn to measure performance and improvements

Learn to deal with unexpected events

The LEGO City Game

By agile42

Scrum Master:

Learn to moderate the meetings

Learn to mediate between the Team and the Product Owner

Learn how to deal with Impediments

Learn how to coach and suggest improvements to the Team

The LEGO City Game

By agile42

5 min. Sprint planning meeting, basically commit to some stories and make an initial task breakdown

5 min. Sprint

3 min. Review Meeting (showing the Product Owner what has been build)

5 min. Team Retrospective

Scrum Lego City by agile42 is licensed under a Creative Commons Attribution-Share Alike 3.0 License.

SCRUM

Key factors for success

Communication
Commitment
Responsibility
Motivation
Environment
Tools

Management support
Balanced Team

Towards successful SCRUM adoption

Activities:

Awareness
Desire
Ability
Promotion
Transfer

At different levels:

Organizationally
As individuals
As teams
Per practice

Towards successful SCRUM adoption

Awareness

Communication of the problem

Use of metrics

Exposure to new people and experiences

Run a Pilot project

Focus on 2 most important reasons

Towards successful SCRUM adoption

Desire

Communicate there's a better way

Create a sense of urgency

Build momentum

Scrum test drive

Align incentives

Don't discredit the past

Engage employees in the effort

Towards successful SCRUM adoption

Ability

Provide coaching and training

Hold individuals accountable

Share information

Set reasonable targets

Just do it

Towards successful SCRUM adoption

Promotion

Publicize success stories

Host an agile safari

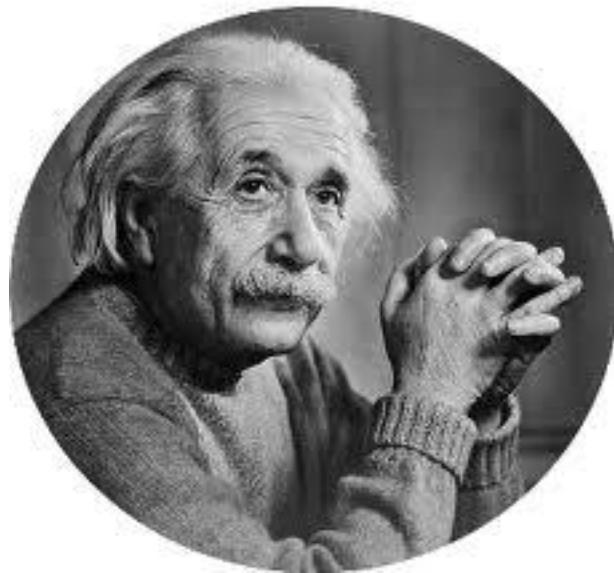
Attract attention and interest

Towards successful SCRUM adoption

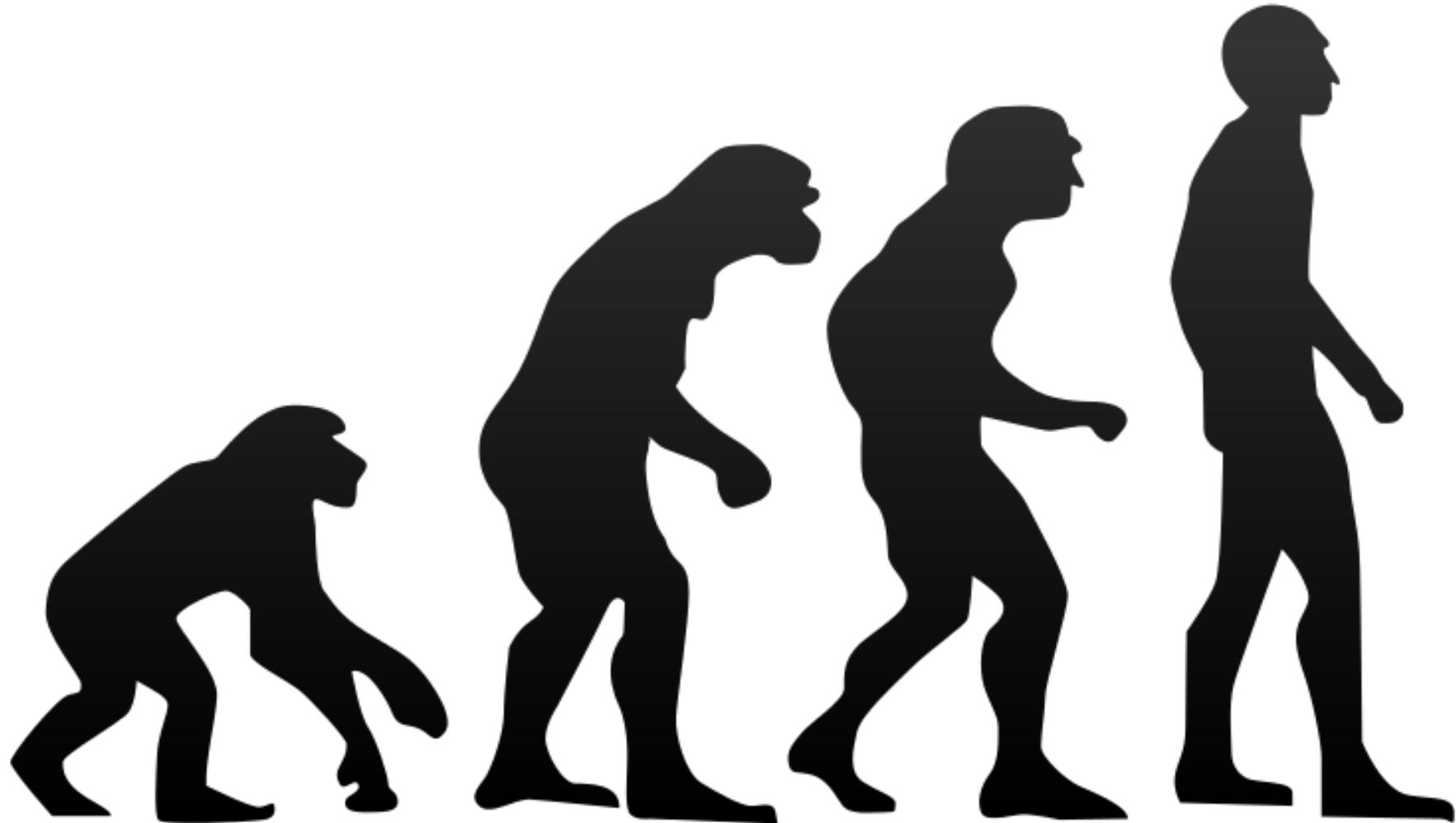
Transfer

It's impossible to remain agile if its implications are not transferred to the rest of the organizations: marketing, HR...

Towards successful SCRUM adoption



Hire an Expert!!!



SCRUM
Projects

SCRUM
Organizations

Towards successful SCRUM adoption

Iterating towards Agility - Making smaller changes on continual basis

Shamrock's Case

IBM's Case

KeyCorp's Case

Scrum-based strategic planning

Spent months in developing 5 year strategic planning but unable to cope with industry pace



Quarterly strategy scrums (sprints)

Evaluate performance

Identify key strategic issues learned

Create action plan for upcoming period

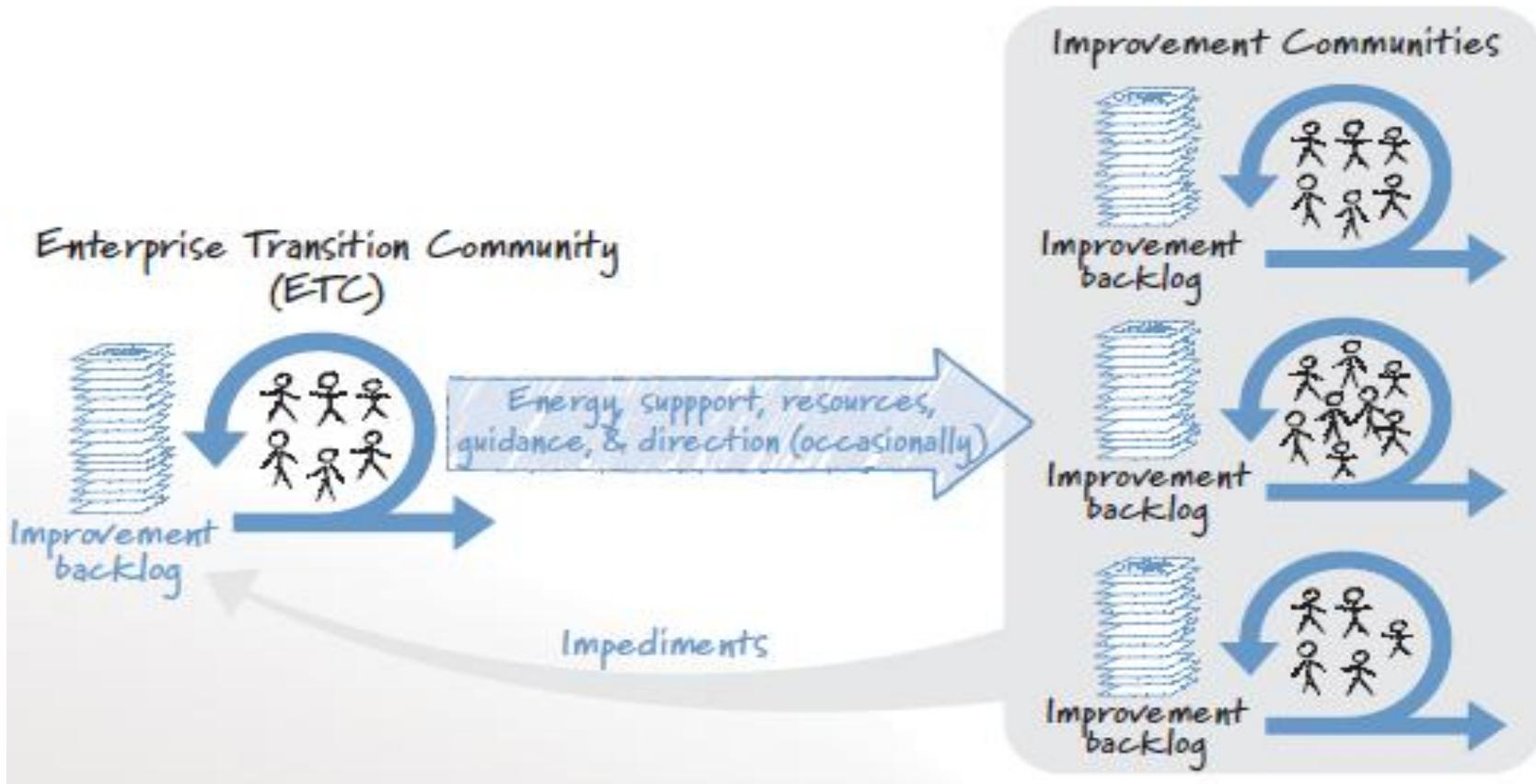
Meet once a year to revisit strategic assumptions

Themes

Goals

Action items

IBM - Communities in Scrum



We've used both two-week and four-week sprints. And, so far, the greatest success we've seen is with those on two-week sprints.

KeyCorp's experience

That first Agile Enablement [ETC] sprint review was painful as leaders stood up and described their plans to remove the impediments they volunteered to address. The message was clear—plans are good, but results count. The dynamic of those reviews changed from that point, and results became the focus.

Transitioning is hard ...

- Successful change is not entirely top-down or bottom-up.
- The end state is unpredictable.
- Scrum is pervasive.
- Scrum is dramatically different.
- Change is coming more quickly than ever before.
- Best practices are dangerous.

Why adopting SCRUM?

Some figures that might be
convincing...

Following contents distributed under
Creative Commons by: Mike Cohn
mike@mountaingoatsoftware.com
www.mountaingoatsoftware.com
Based on chapter 1 of
Succeeding with Agile

The major sources (1)

1.QSMA (Michael Mah 2008)

- Comparison of 26 agile projects to a database of 7.500 primarily traditional projects
- Agile projects ranged from 26–1.000 people

2.David Rico (2008)

- Survey of 51 published academic and research papers

The major sources (2)

3. VersionOne (2008)

- Opt-in online survey of over 3,000 people

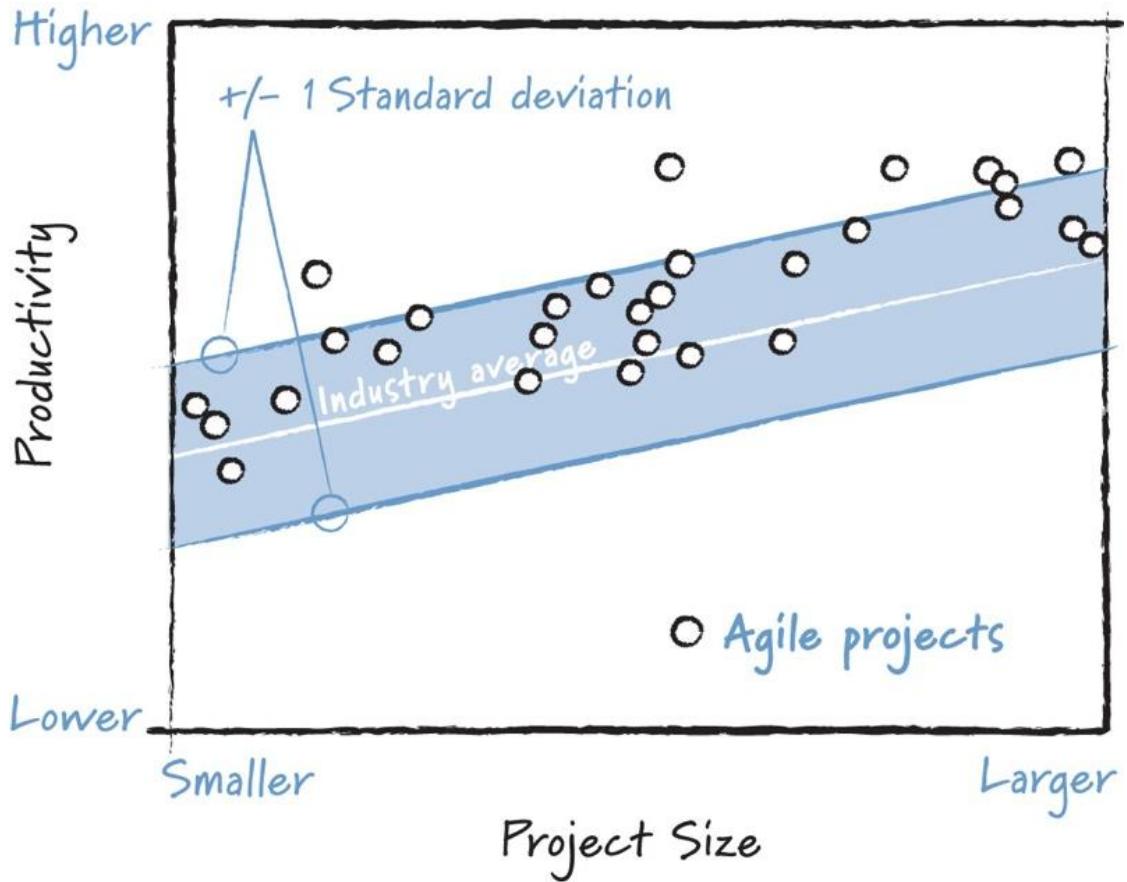
4. Dr. Dobb's Journal (2008)

- Opt-in online survey of 642 people
- Conducted by magazine columnist Scott Ambler

Areas studied

- Higher productivity and lower cost
- Improved employee engagement and job satisfaction
- Faster time to market
- Higher quality
- Improved stakeholder satisfaction

Improved productivity



Agile projects are 16% more productive at a statistically significant level of confidence.

Source: Mah 2008.

Cost

Development Cost	DDJ	VersionOne
Improved	32%	30%
Significantly Improved	5%	8%

Rico's literature survey

	Lowest Reported Improvement	Median	Highest Reported Improvement
Productivity	14%	88%	384%
Cost	10%	26%	70%

Higher job satisfaction

- Fifteen months after adopting Scrum, **86% of Salesforce.com employees were having a “good time” or the “best time”**
 - Only 40% said that before adopting Scrum
 - 92% would recommend agile to others
- Perhaps employees like agile because there's **2/3rds less overtime** according to University of Calgary research

Higher

Time-to-Market

Lower

Smaller

Larger

Project Size

+/- 1 Standard Deviation

Agile projects

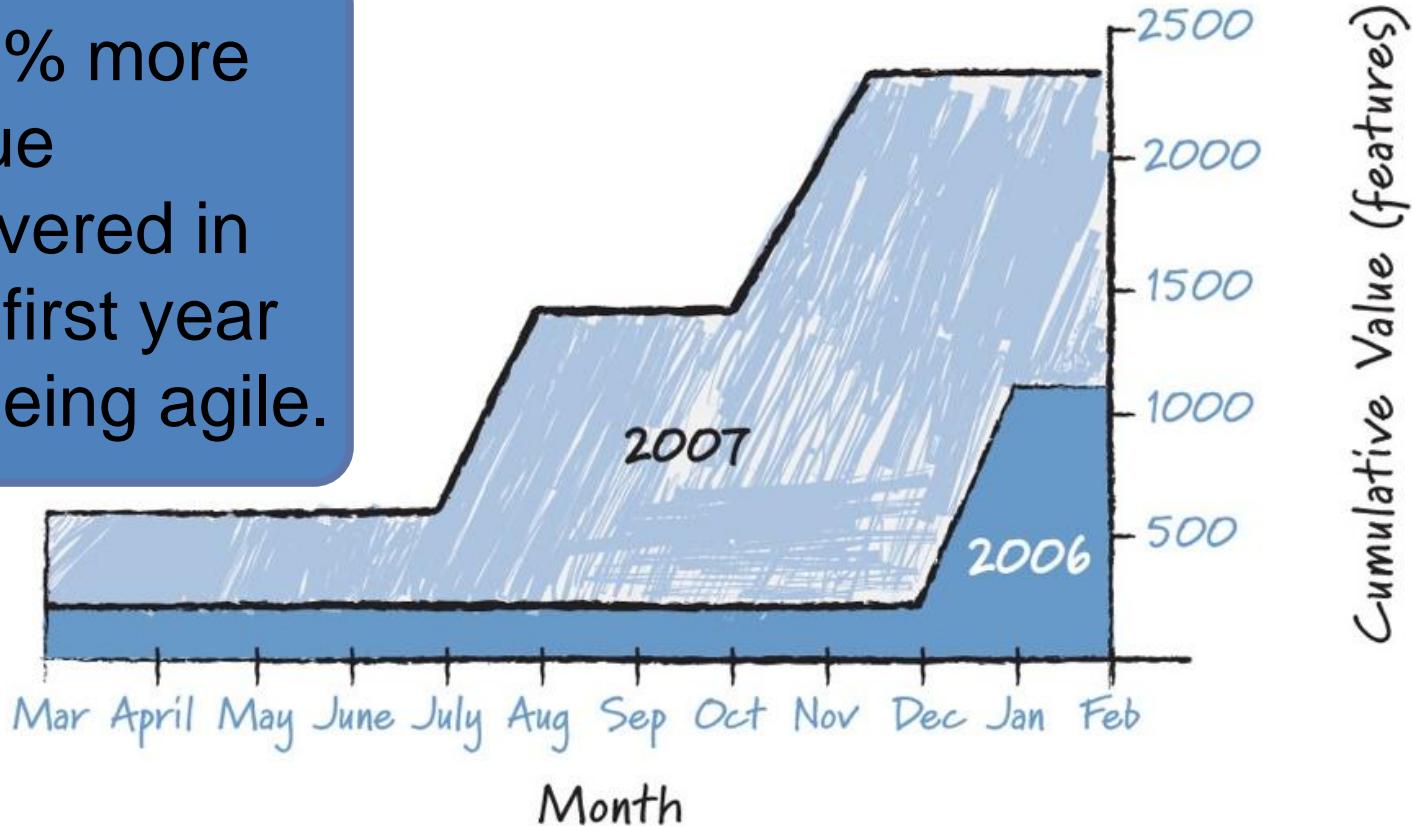
Industry average

Source: Mah 2008.

Salesforce.com

Cumulative Value (features) delivered in Major Releases

568% more value delivered in the first year of being agile.



Source: Greene and Fry 2008.

Higher quality

- Rico
 - Minimum quality improvement of 10%
 - Median quality improvement of 63%
- ePlan Services
 - Over first nine months of using Scrum, defect rate per 1,000 non-comment lines of code went down 70%

VersionOne study

- Quality
 - 44% said quality had improved
 - Another 24% said quality improved significantly
- Fewer defects
 - 84% said defects had gone down by 10% or more
 - 30% said defects were down by 25% or more

VersionOne study

	Improved	Significantly Improved
Enhanced ability to manage changing priorities	41%	51%
Improved project visibility	42%	41%
Improved alignment of IT and business goals	39%	27%
Reduced project risk	48%	17%

What We've Been Doing No longer Works

Run a sprint with your team and create a Scrum implementation backlog i.e. what you need to do to implement Scrum in your organization



Sources (1)

- Ambler, Scott. 2008a. Agile adoption rate survey, February.
<http://www.ambyssoft.com/surveys/agileFebruary2008.html>.
- Cohn, Mike. 2009. *Succeeding with Agile: Software development using Scrum*. Addison-Wesley.
- Greene, Steve, and Chris Fry. 2008. Year of living dangerously: How Salesforce.com delivered extraordinary results through a “big bang” enterprise agile revolution. Session presented at Scrum Gathering, Stockholm.
<http://www.slideshare.net/sgreene/scrum-gathering-2008-stockholm-salesforcecom-presentation>.
- Mah, Michael. 2008. How agile projects measure up, and what this means to you. *Cutter Consortium Agile Product & Project Management Executive Report* 9 (9).



Sources (2)

- Mann, Chris, and Frank Maurer. 2005. A case study on the impact of Scrum on overtime and customer satisfaction. In *Proceedings of the Agile Development Conference*, 70–79. IEEE Computer Society.
- Rico, David F. 2008. What is the ROI of agile vs. traditional methods? An analysis of extreme programming, test-driven development, pair programming, and Scrum (using real options). A downloadable spreadsheet from David Rico's personal website. <http://davidfrico.com/agile-benefits.xls>.
- VersionOne. 2008. The state of agile development: Third annual survey. Posted as a downloadable PDF in the Library of White Papers on the VersionOne website.
http://www.versionone.com/pdf/3rdAnnualStateOfAgile_FullDataReport.pdf.