

# You Can't Be Agile If Your Testing Practices Suck

Beyond  
Agility

Peter Gfader

 @peitor

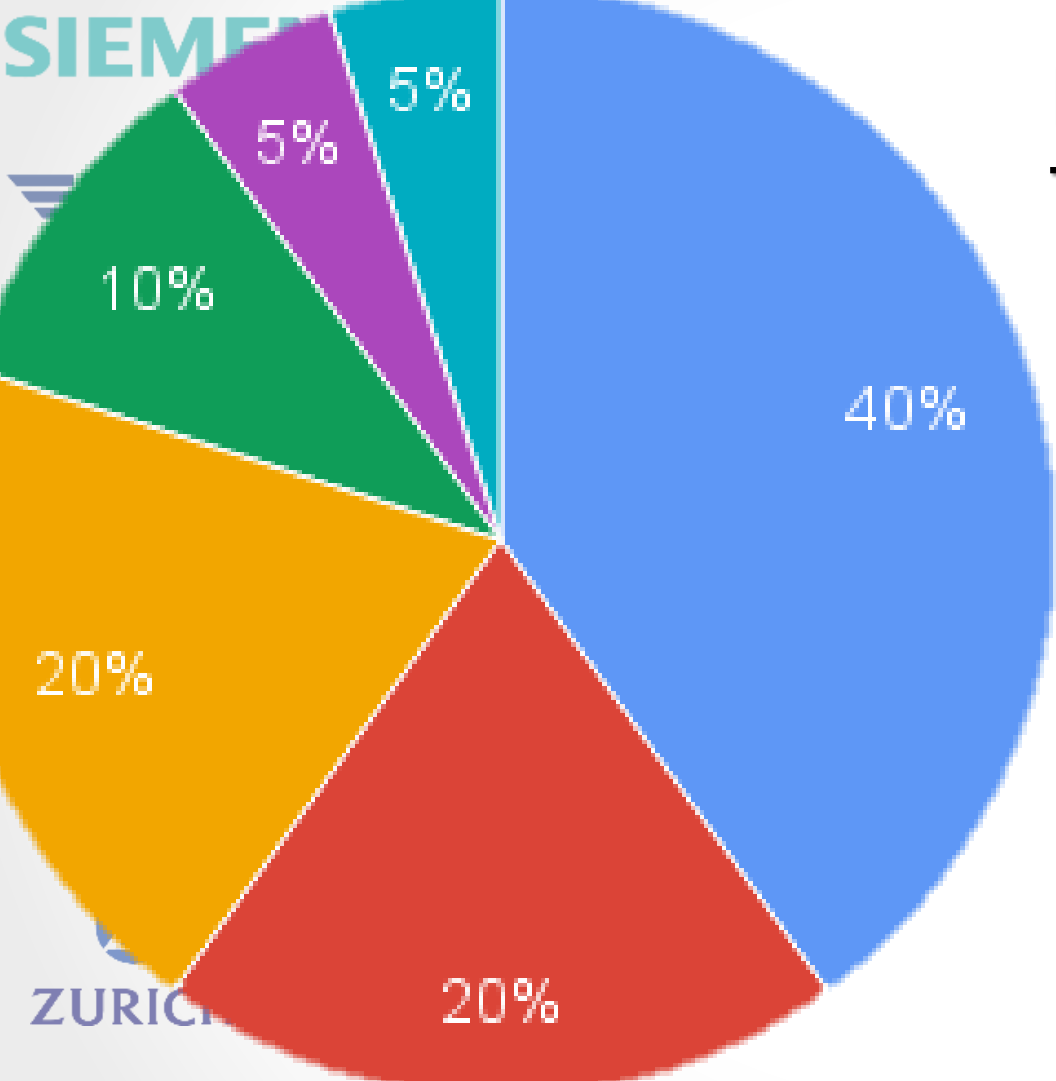
*Start the  
conversation  
#testcon2019*



**About me**

# Peter Gfader

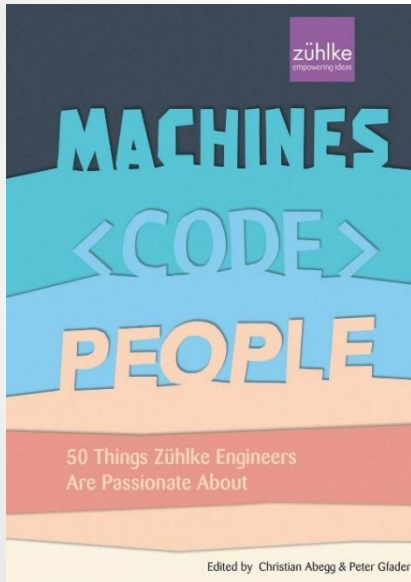
## The Agile Architect



- Private
- Developing
- Coaching
- Training
- Writing
- Speaking

# Peter Gfader

## The Agile Architect



<https://beyond-agility.com/books/>



<https://www.meetup.com/Software-Craftsmanship-Zurich/>

**About You**

# What do you **do** in software?

- Analyze
- Discover
- Design
- Code
- Test
- Architect
- Document
- Coach
- Manage



# You Can't Be Agile If Your Testing Practices Suck

*Beyond  
Agility*

Peter Gfader

 @peitor

*Start the  
conversation  
#testcon2019*



**Is this what Agile  
is about?**





## TIS-70 Scrum Board

QUICK FILTERS: [Critical partners](#) [Only my partners](#) [Recently updated](#)



Backlog

Agile board

Releases

Reports

All issues

Components

Add-ons

PROJECT SHORTCUTS

Mars Team HipChat Room

Space Station Dev Roadmap

Teams in Space Org Chart

Orbital Spotify Playlist

Hyperspeed Bitbucket Repo

+ Add shortcut

### 12 To do

▼ TIS Developer Love 3 issues

**TIS-37**  
 ↑ Service should return prior trip details and info  
  
[SeeSpaceEZ plus](#) 2

▼ Everything Else 21 issues

**TIS-68**  
 ↑ Homepage footer uses an inline style-should use class  
  
[Large Team Support](#)

**TIS-20**  
 ↑ Engage Saturn Shuttle lines for group tours  
  
[Space Travel Partners](#) 3

**TIS-12**  
 ⚠ Create 90 day plans for all departments in Mars office

### 2 In progress

**TIS-10**  
 ↑ Bad JSON data coming back from hotel API  
  
[SeeSpaceEZ plus](#)

**TIS-17**  
 ↑ Engage Saturn's Rings Resort as preferred  
  
[Space Travel Partners](#)

### 3 Done

**TIS-8**  
 ↑ Requesting flights is now taking > 5 seconds  
  
[SeeSpaceEZ plus](#)

**TIS-56**  
 ↑ Add pointer to main css file to create child themes  
  
[Large Team Support](#)

**TIS-45**  
 ↑ Email non registered users to sign up with TIS  
  
[SeeSpaceEZ plus](#)

# *„We have Squads now“*

*Thanks Spotify for a new word for Team.*







**#pain**



# What is your current pain? What I heard...

- **Lack of Innovation**
- Operational issues
- Not working with My people
- No time for improving
- Too slow
- **Late** delivery
- Too **little visibility**
- Too many dependencies to manage
- Poor morale
- Too many **issues in production**
- Timelines not predictable
- **Morale** is low
- Problems discovered **too late**
- Hiring **great people**
- **Competition**
- Low **Employee satisfaction**
- People **very busy** certain time, certain time team is over or understaffed
- They have the **wrong Mindset**
- **Quality** is low
- Feedback is very low and late
- Lack of **know how**
- Too many **regulations**, ISO norms, laws, compliance rules



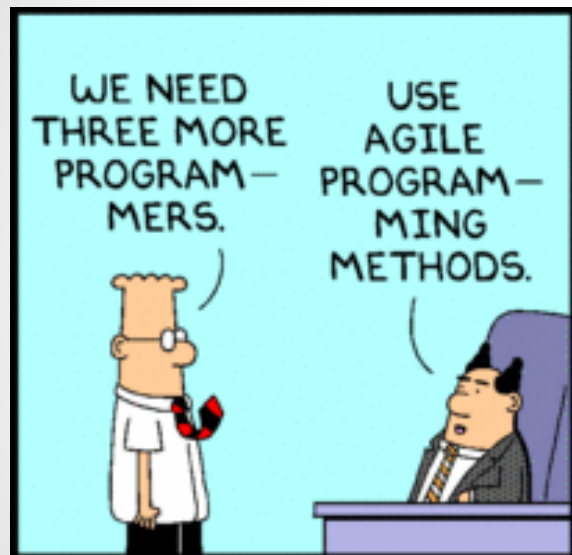


Which pain is  
gone with  
Agile?

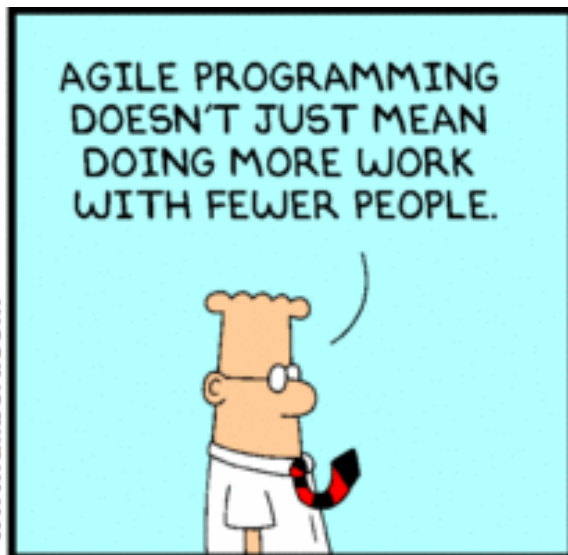
**What Agile  
is not**

Agile is not

*"Doing what I say...  
Just faster"*



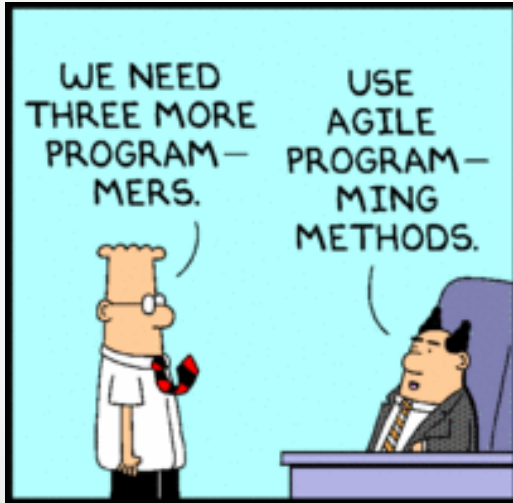
www.dilbert.com scottadams@aol.com



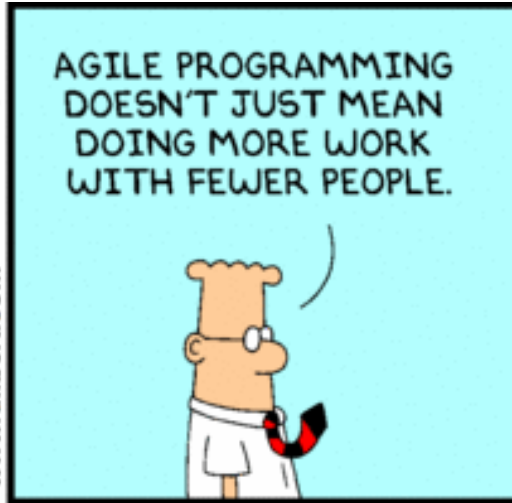
11-14-05 © 2005 Scott Adams, Inc./Dist. by UFS, Inc.



# Agile is not Cheaper



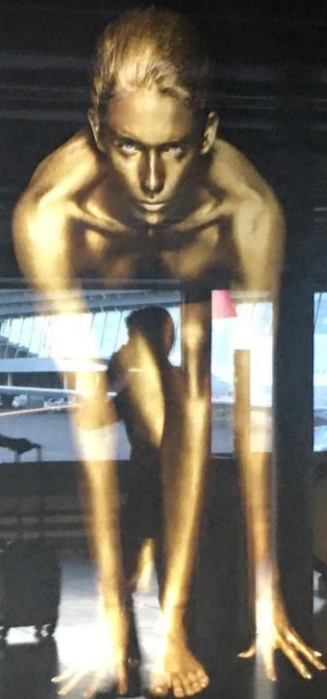
www.dilbert.com scottadams@aol.com



1/14/05 ©2005 Scott Adams, Inc./Dist. by UFS, Inc.



# Ready for Agile Private Banking?



So...

What is Agile then?

# What is Agile for you?

Elevator Pitch In Pairs





...before some definitions...

# Some Definitions

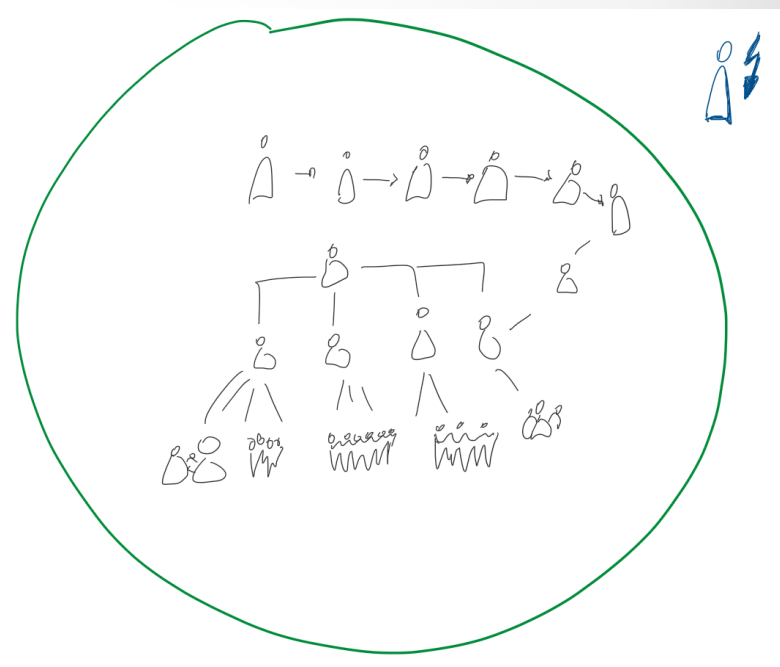
# "Company"

=

A system

That solves external problems

And makes more money than it spends.



# "Company"

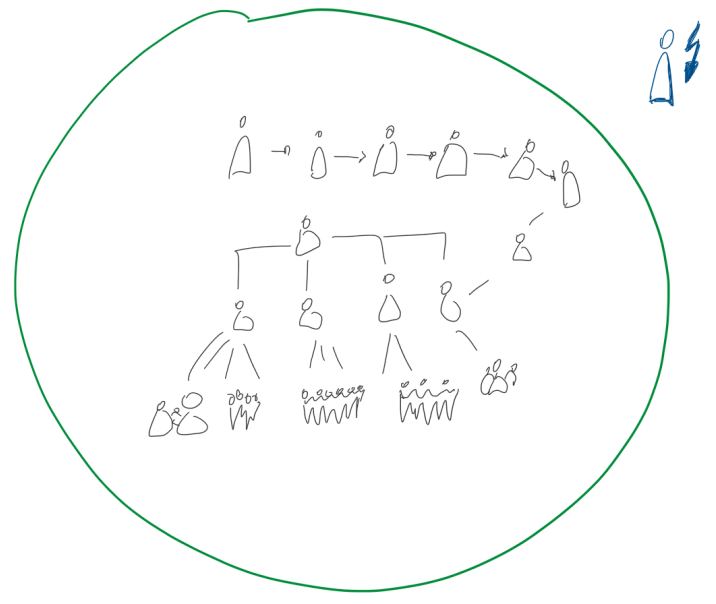
=

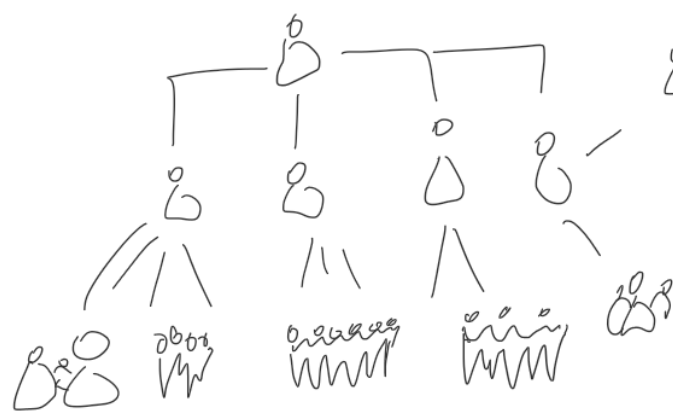
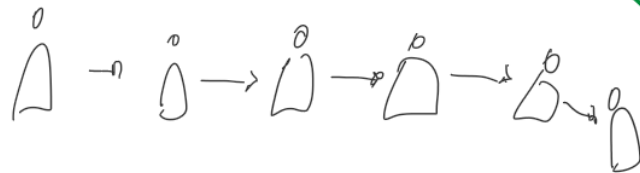
A system

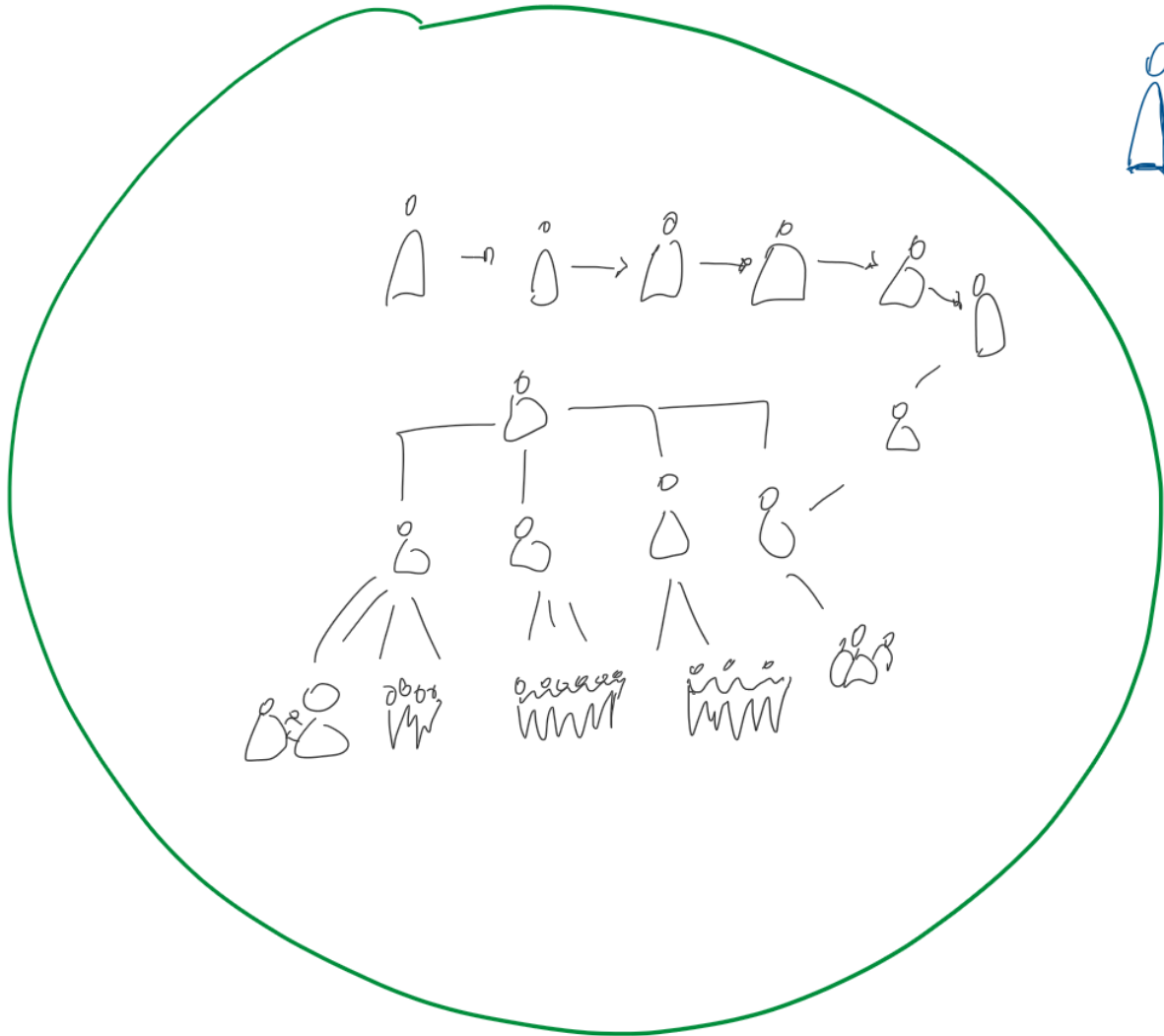
That solves external problems

And makes more money than it spends.

by providing Products or Services







**Back to  
Agile**



**Peter Gfader**

@peitor

A mindset to deliver value faster and continuously improve the way doing it. [#Idefineagile](#)

8:57 PM · Jan 21, 2014 · [Twitter for iPhone](#)

<https://twitter.com/peitor/status/425718700290105344>

5 years later... We can do better...



# Agile

A mindset  
to survive our  
complex world  
as per the  
Agile Manifesto



# 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.

<http://agilemanifesto.org/>

A woman with grey hair is wearing a metal helmet with a lightbulb on top. She is looking out from a box, with a large red arrow pointing from her towards the text on the right. The background shows a building with many windows.

# Agile

A mindset  
to survive our

**VUCA** world

as per the  
Agile Manifesto

VUCA?

VUCA =

volatility

uncertainty

complexity

ambiguity

VUCA =

volatility  
uncertainty  
complexity  
ambiguity

*"I don't know"*

Can you admit that  
you don't know?

You should!



You should!

Or someone else will

**Uber**, the world's largest taxi company **owns no vehicles**.

**Airbnb**, the world's largest accommodation provider **owns no real estate**.

**Facebook**, the world's most popular media provider **creates no content**.

**Instagram**, the most valuable photo company, **sells no cameras**.

**Netflix**, the fastest growing television network, **lays no cables**.

**Alibaba**, the world's most valuable retailer **has no inventory**.

# Agile ... Why?

Agile is about **working smarter**, rather than harder.

It's about generating **more value** with **less work**.

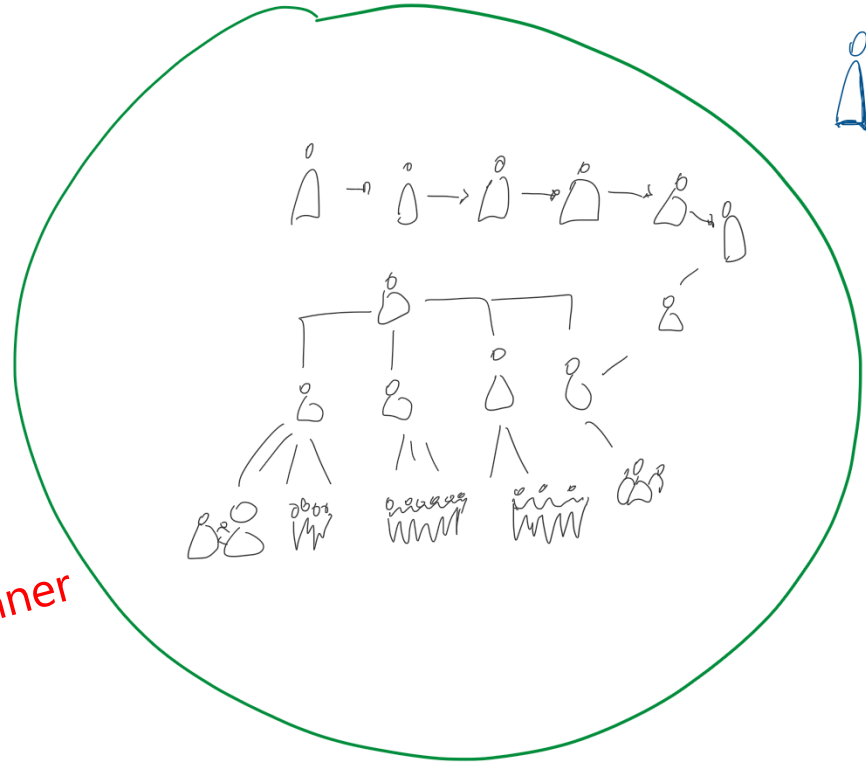
→ particularly more monetizable value with less work.

# More Definitions

# "Operational Agility"

How quick can we  
deliver value  
(in the form of a Product/Feature)  
to changing  
demands from the  
market?

Focus on the inner  
green circle



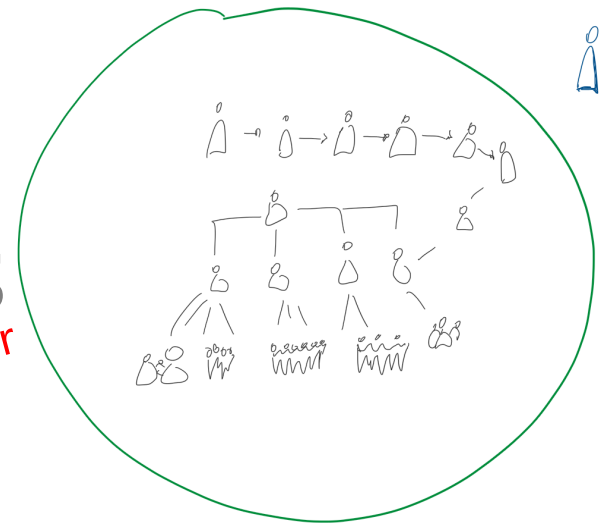
# „Strategic Agility“

„Business Agility“

How quick can an organisation improve its competitive position

& create opportunities for growth.

Focus on the outer green circle







Die erste Digitalkamera,  
die Ingenieur  
Steven Sasson im  
Jahr 1973 während  
seiner Tätigkeit für East-  
man Kodak erfand.





**Customer focus**  
is invaluable.

# Our world changes...

- Globalization
- Deregulation
- Knowledge work
- The Internet
- Greater competition
- Faster pace
- Digitization of everything
- The customer is the boss

*“We are seeing more change in the next 15 years than in the last 15 years.*

*The big question is always, do we car manufacturers learn to become tech companies more quickly than a tech company learns to be an automotive player?”*

Peter Schwarzenbauer – Aug 2017  
BMW management board



*"We are seeing more change in the next 15 years than in the last 15 years.*

*The big question is always,*

*do we car manufacturers learn to become tech companies more quickly than a tech company learns to be an automotive player?"*

**Is the car the problem?**

**Mobility?**

**Transportation?**

**City Life?**

**Environment?**

**Society?**

Peter Schwarzenbauer –  
BMW management board







**Back to the  
pain**



**From the #pain to  
Major Challenges**

# Major challenges

1.  Vision to 1 week Outcomes
2.  Good Engineering Skills
3.  Continuous Improvement
4.  Leadership



# What Worked

*„Peter tell me what to do“*

**#TODO**  
**Stop Talking „Agile“**



## Stop

„Scrum says“

„This is not Agile“

„Let’s do this in an agile way“

„XP recommends ...“

„In the SAFe book its written“

„This is not Lean enough“

„You must be co-located for XP“

„Let’s make this transparent by putting it in wall“

“We are iterative and adaptive“

“Great showcase and demo“



## Start

„Customer“

„User“

„Risk“

„Market“

„Competition“

„Value“

„Product“

„Sponsor“

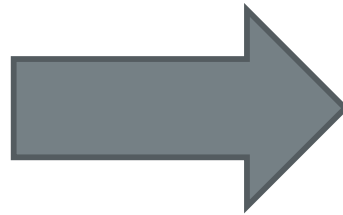
„Money“

**#moreContent**

*„How do we  
become  
agile?“*



*„How do we become agile?“*



How can we discover and deliver Value faster?

<https://beyond-agility.com/stop/>

What is Value in our Organization? Product?

Customer  
Satisfaction

Release  
Stabilization

Usage  
Index

X

Employee  
satisfaction

Release  
Frequency

Defects

Revenue  
per  
Employee

Cycle  
time

Innovation  
Rate

X

Product/Cost  
Ratio

On-Product  
Index

X

Installed  
Version  
Index

Current  
Value

Time  
to  
Market

Ability  
to  
Innovate

# Value Metrics #TODO

Evidence-Based Management Metrics

<https://www.scrum.org/resources/evidence-based-management-guide>

Metrics for Pirates AARRR

<https://www.slideshare.net/dmc500hats/startup-metrics-for-pirates-long-version>

Googles HEART

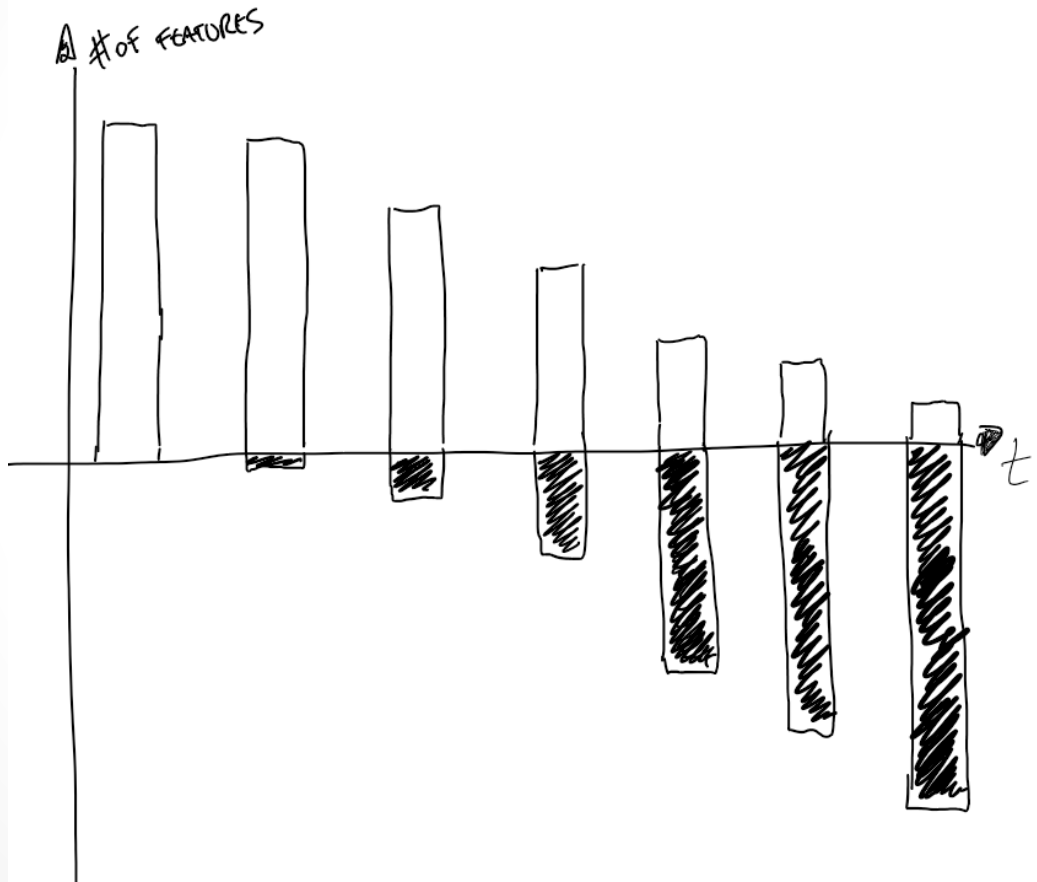
<https://www.dtelepathy.com/ux-metrics/>

THE BITTERNESS OF POOR QUALITY  
REMAINS LONG AFTER THE SWEETNESS  
OF LOW PRICE IS FORGOTTEN.

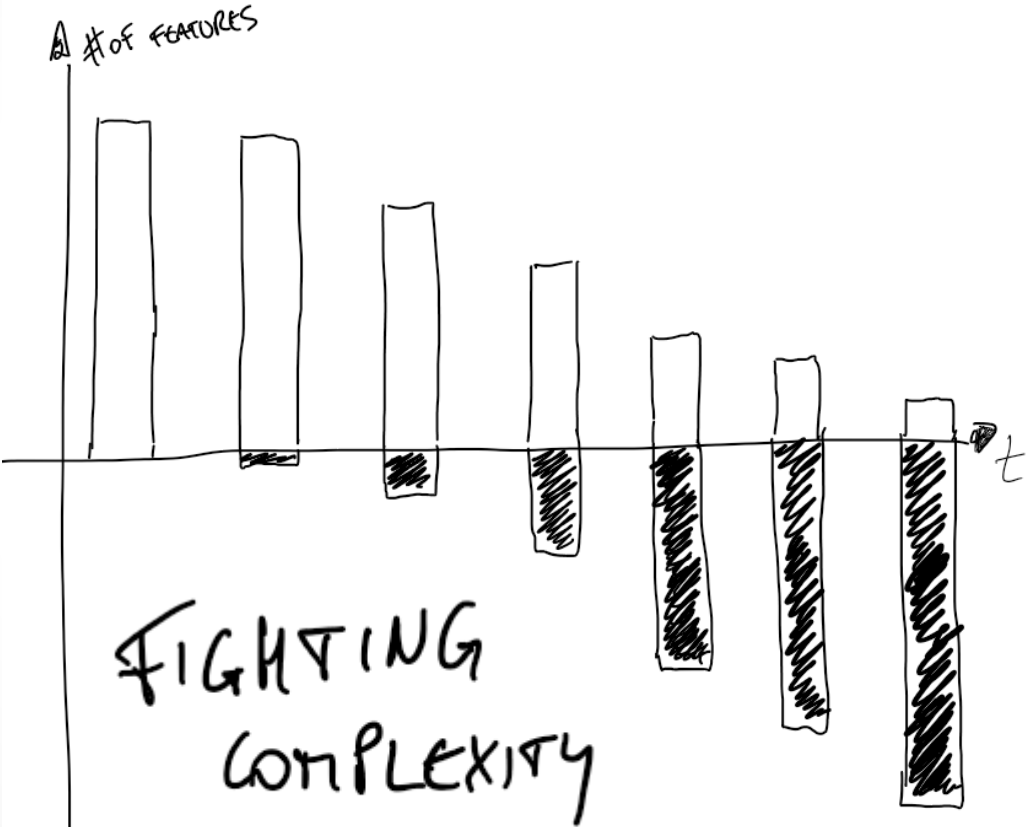




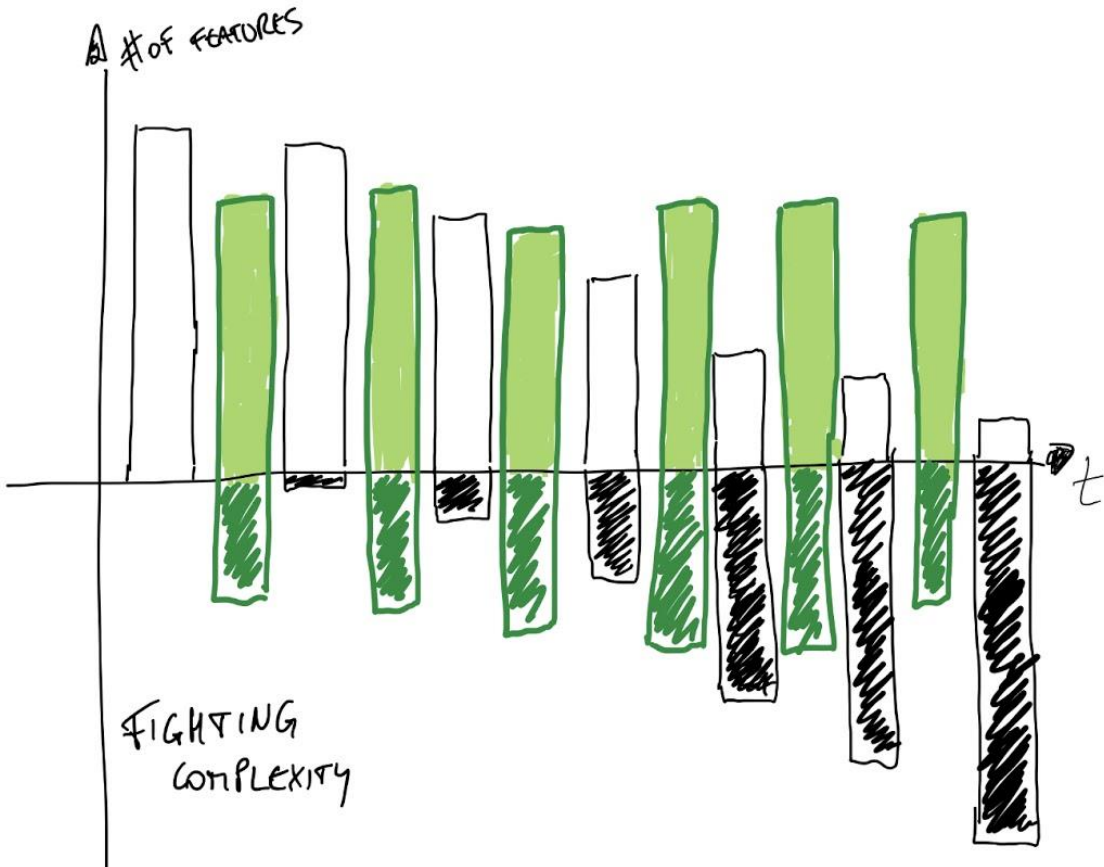
# WHERE WE SPEND OUR TIME?







WHERE WE SPEND OUR TIME?



# WHERE WE SPEND OUR TIME?



# Major challenges

1.  Vision to 1 week Outcomes
2.  Good Engineering Skills
3.  Continuous Improvement
4.  Leadership

How to  
slow down  
your project / product?



```
protected void Page_Load(object sender, EventArgs e)
{
    if (HttpContext.Current.User.IsInRole("User "))
    {
        FormView1.FindControl("noteRow").Visible = true;
        FormView1.FindControl("RequiredFieldValidator4").Visible = false;
        // TODO: Fix this - What if Action is 2nd parameter in URL
        if (Request.Path.Contains(@"ClientProfile.aspx?Action=Add"))
        {
            FormView1.FindControl("thLoginID").Visible = true;
            FormView1.FindControl("tdLoginID").Visible = true;
            FormView1.FindControl("txtLoginID").Visible = true;
        }
    }
    else
    {
        FormView1.FindControl("noteRow").Visible = false;
    }

    if (HttpContext.Current.User.IsInRole("Administrator"))
    {
        if (!Request.Path.Contains(@"AdministratorProfile.aspx"))
        {
            if (!Request.Path.Contains(@"Profile.aspx"))
            {
                FormView1.FindControl("txtLoginID").Visible = false;
                FormView1.FindControl("lblLoginID").Visible = false;
                -- Snip snip snip - more controls are hidden or shown -- --

                if (Request.Path.Contains(@"UserProfile.aspx") && HttpContext.Current.User.IsInRole("User") && (Request.QueryString["Action"] == null || Request.QueryString["Action"] == "Add"))
                {
                    FormView1.FindControl("thLoginID").Visible = true;
                    FormView1.FindControl("lblLoginID").Visible = true;
                    -- Snip snip snip - more controls are hidden or shown -- --

                }
                else
                {
                    FormView1.FindControl("thLoginID").Visible = false;
                    FormView1.FindControl("lblLoginID").Visible = false;
                    -- Snip snip snip - more controls are hidden or shown -- --

                }
            }
        }
        else
        {
            FormView1.FindControl("thDateRegistered").Visible = false;
            FormView1.FindControl("tdDateRegistered").Visible = false;
        }
    }
}
```



```
protected void Page_Load(object sender, EventArgs e)
{
    if (HttpContext.Current.User.IsInRole("User "))
    {
        FormView1.FindControl("noteRow").Visible = true;
        FormView1.FindControl("RequiredFieldValidator4").Visible = false;
        // TODO: Fix this - What if Action is 2nd parameter in URL
        if (Request.Path.Contains(@"ClientProfile.aspx?Action=Add"))
        {
            FormView1.FindControl("thLoginID").Visible = true;
            FormView1.FindControl("tdLoginID").Visible = true;
            FormView1.FindControl("txtLoginID").Visible = true;
        }
    }
    else
    {
        FormView1.FindControl("noteRow").Visible = false;
    }

    if (HttpContext.Current.User.IsInRole("Administrator"))
    {
        if (!Request.Path.Contains(@"AdministratorProfile.aspx"))
        {
            if (!Request.Path.Contains(@"Profile.aspx"))
            {
                FormView1.FindControl("txtLoginID").Visible = false;
                FormView1.FindControl("lblLoginID").Visible = false;
                -- Snip snip snip - more controls are hidden or shown -- --

                if (Request.Path.Contains(@"UserProfile.aspx") && HttpContext.Current.User.IsInRole("User") && (Request.QueryString["Action"] == null || Request.QueryString["Action"] == "Add"))
                {
                    FormView1.FindControl("thLoginID").Visible = true;
                    FormView1.FindControl("lblLoginID").Visible = true;
                    -- Snip snip snip - more controls are hidden or shown -- --
                }
                else
                {
                    FormView1.FindControl("thLoginID").Visible = false;
                    FormView1.FindControl("lblLoginID").Visible = false;
                    -- Snip snip snip - more controls are hidden or shown -- --
                }
            }
        }
        else
        {
            FormView1.FindControl("thDateRegistered").Visible = false;
            FormView1.FindControl("tdDateRegistered").Visible = false;
        }
    }
}
```



Write crappy code



# Why do we write bad code?



# 1. Hypothesis For Bad Code

*Broken Window Theory*

# Broken Window Theory



## 2. Hypothesis For Bad Code

*We write bad code,*

*because we **read bad code***

# Write crappy code?

You have never seen good code!

*Santa Claus. Osterhase.*

# Write crappy code?

You have never seen good code!

Read good code

→ Make code easier to read

Easy code to read

→ Easy code to change

→ Easy to maintain

# Code Readings?

- Code Reviews
- Peer work reviews
- Pair Programming
- Mob Programming
- Pre Commit
- Gerrit
- Pull Requests





# Code Readings?

- Peer Reviews
- Whole Team Code Reviews
- Pair Programming
- Mob Programming
- Pre Commit
- Gerrit
- Pull Requests
- Open source (Read? Write?)



# #**TODO** Tips Code Reviews

- Code, !Person
- Constructively propose changes

→ Questions!

# Code Reviews

- Code, !Person
- Constructively propose changes
  - Questions!
- Review not only code
  - Tests
  - Build process
  - ..

→ **Grow as a team**



# Pair Programming





<https://twitter.com/mpetrinidev/status/1042805522603417600>

# #TODO

## Strong Style Pair Programming

*"For an idea to go from your head into the computer  
it MUST go through someone else's hands"*

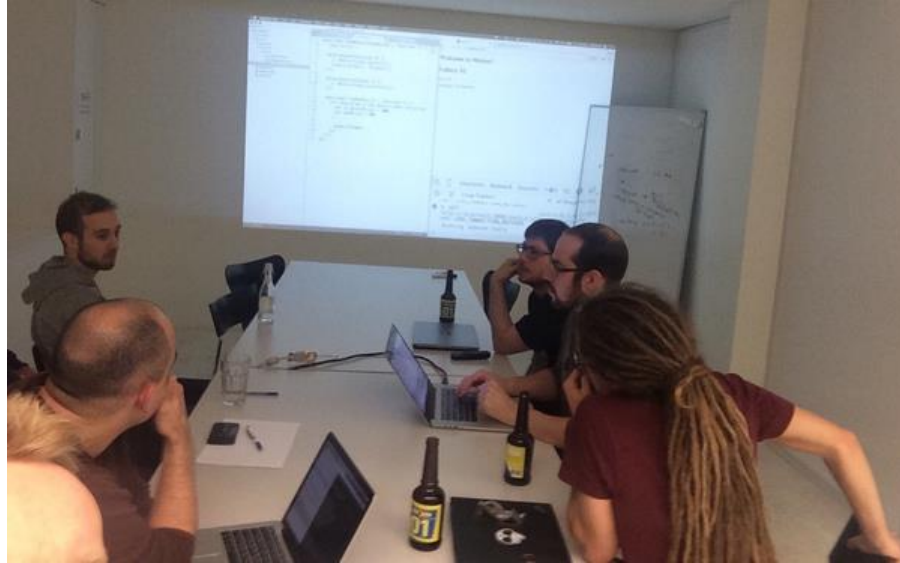
<http://llewellynfalco.blogspot.com/2014/06/llewellyns-strong-style-pairing.html>

# Mob Programming

- Whole team
- Work on same thing
- Same time
- Same space
- Same computer



# Mob Programming



# #TODO: Review Code

- In your team
- With 1 peer
- Open source
- Brown bags – Lunch time discussion

# #TODO: Code to read in the Team

<https://github.com/nsubstitute/NSubstitute>

<https://github.com/techtalk/SpecFlow>

<https://github.com/sf105/goos-code>

<https://github.com/machine/machine.specifications>

<https://github.com/BjRo/xunitbddextensions>

<https://github.com/dtchepak/DaveSquared.StringsTheThing>

*Good code is like a joke!*

*Good code is like a joke!*

No need for explanation

# 3. Hypothesis For Bad Code

*"Nobody can write  
good code in 1 sit-in."*

There is no "Right the 1<sup>st</sup> time"

# 3. Hypothesis For Bad Code

“Nobody can write good code in 1 sit-in”

-> **Refactoring**



# #TODO Refactoring

<https://github.com/NotMyself/GildedRose>

<https://github.com/jcbozonier/Refactoring-Katas>



# The little issue with Refactoring?



# Without Tests

Unclear **what works**  
and what doesn't

We are never **done.**





# With Tests

Change and  
refactor without  
**fear.**

Refactoring  
+  
Tests  
=  
?

Refactoring

+

Tests

=

*No Business Value  
Waste?? Overhead??*



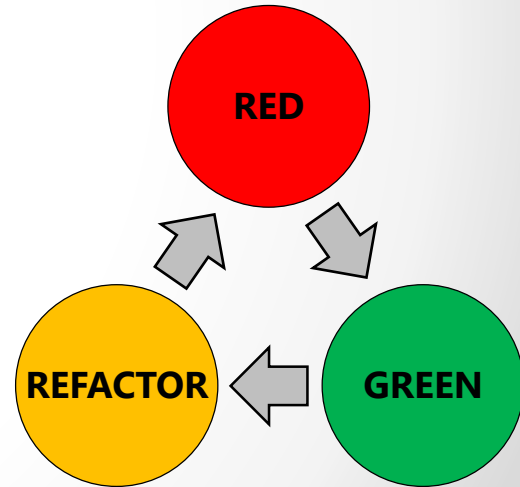
Refactoring  
+  
Tests  
=  
?

**TDD**



# Test-Driven Development (TDD)

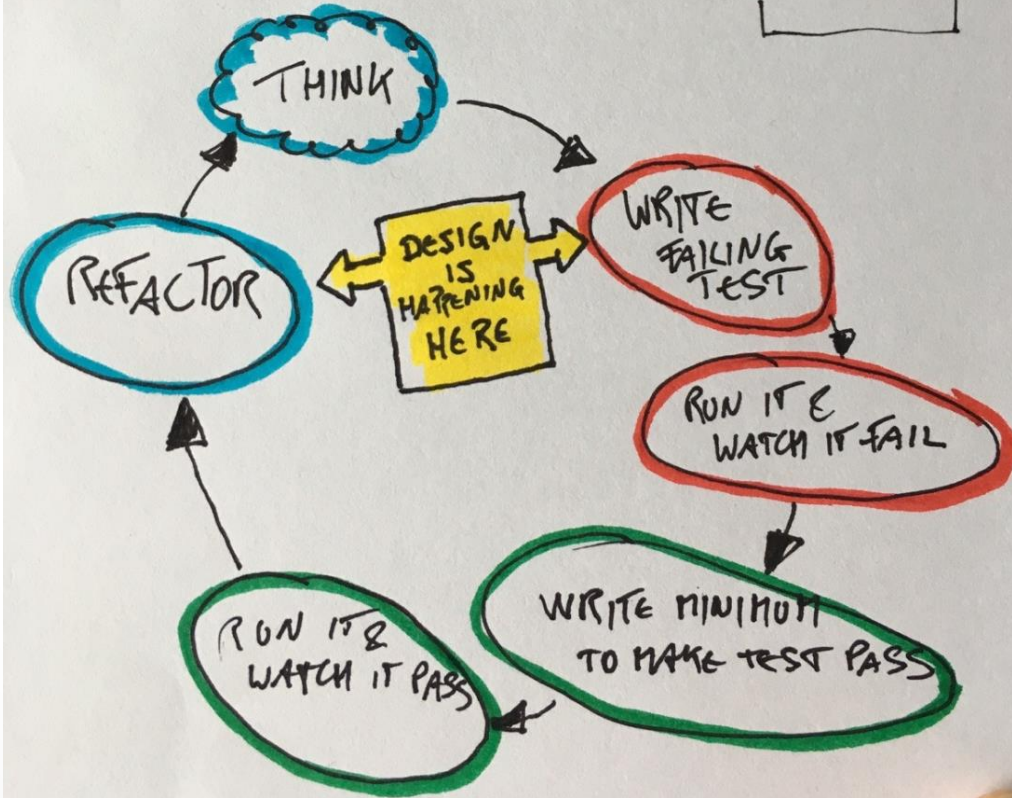
Writing tests prior to writing the production code.



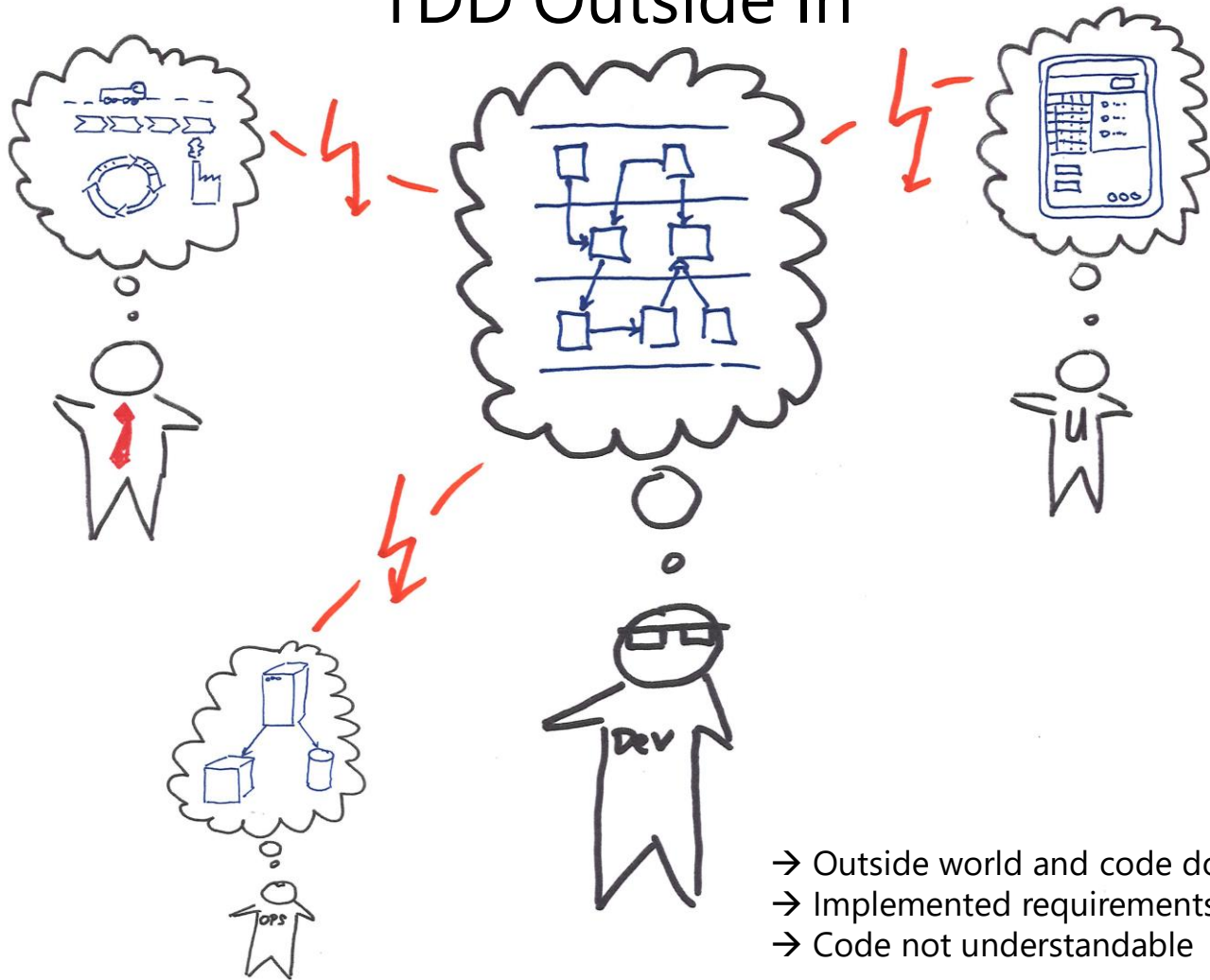
*Its that easy 😊 😞 ?*

TDD AS I THINK OF IT

NOV 2016



# TDD Outside In



- Outside world and code do not match
- Implemented requirements unclear
- Code not understandable

# Test Driven Development

TDD = Testing technique?

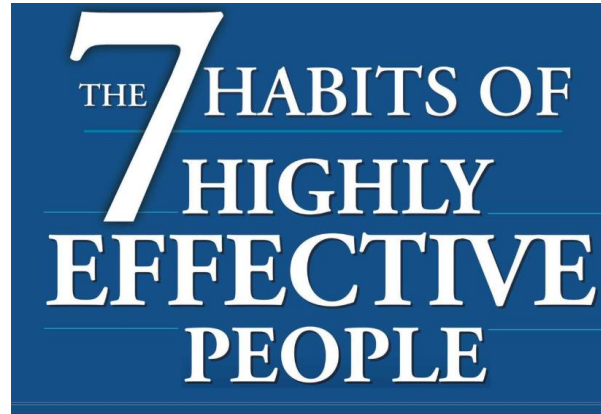
TDD = Design technique?

TDD = Learning technique?

**TDD = Thinking technique?**

# Habit 2/7

# Begin with the end in mind



POWERFUL LESSONS  
IN PERSONAL CHANGE

**Stephen R. Covey**

READ BY THE AUTHOR

# #Todo Practice Globally

November 16th (or 15th), 2019

Global Day of Code Retreat

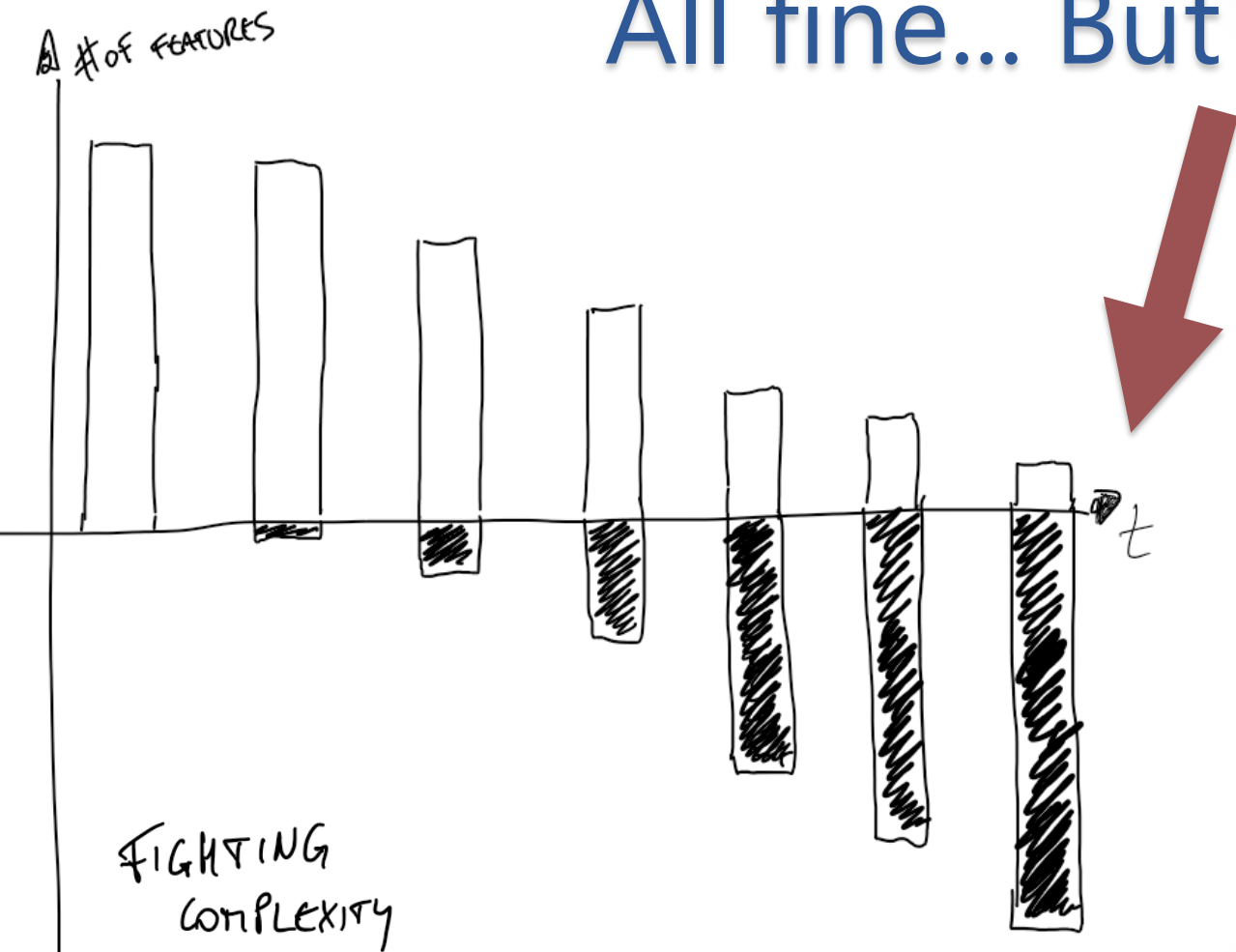
<https://www.coderetreat.org>

# #Todo Find your peers



<https://www.meetup.com/topics/software-craftsmanship/>

# All fine... But we are here

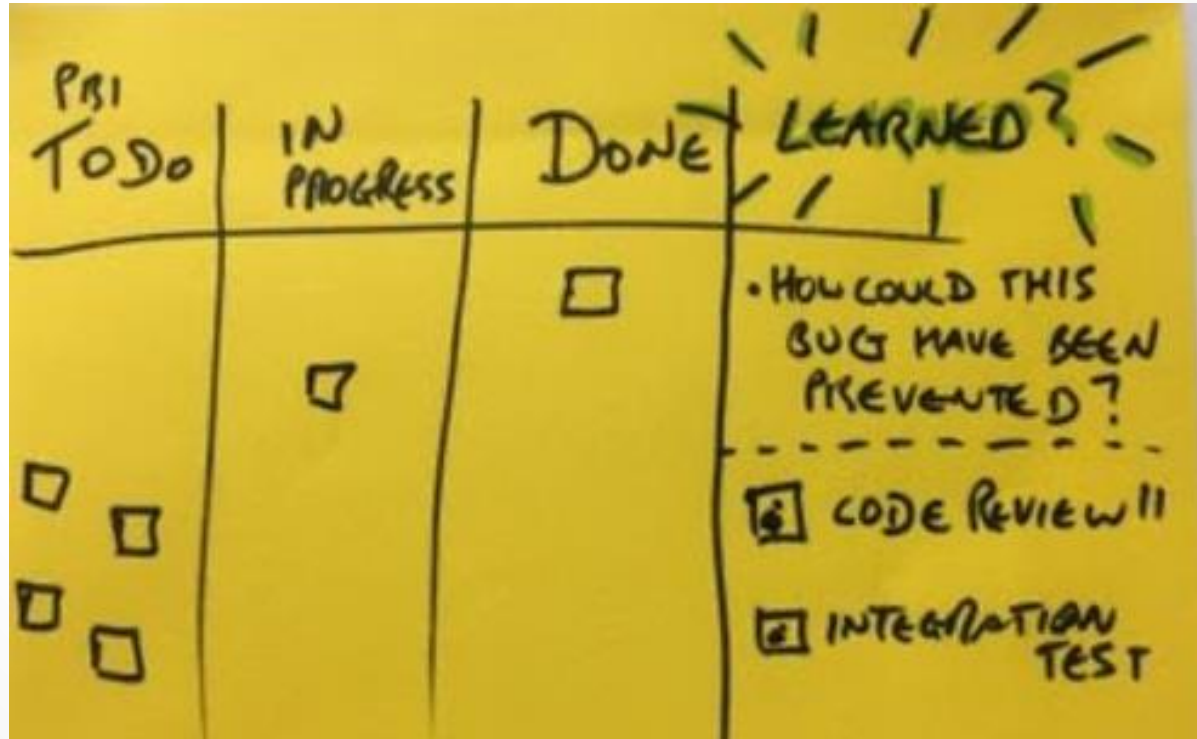




# Proper Root Cause Analysis

# Proper Root Cause Analysis

## 1. Gather Data during Sprint



# Proper Root Cause Analysis

## 2. Cluster and Analyse in Retrospective

5Whys

# Proper Root Cause Analysis

## 3. Delegate to Team

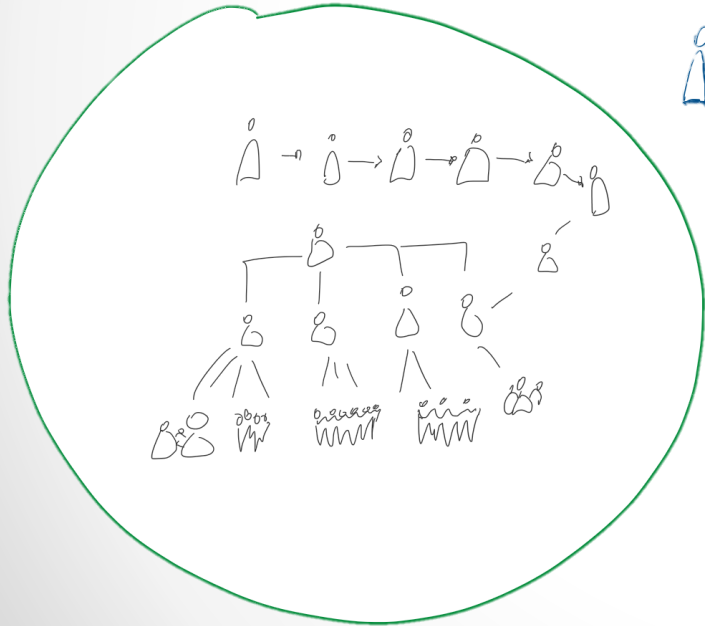
Dive deeeeeep

# Proper Root Cause Analysis

4. How to prevent this in future?

# Proper Root Cause Analysis

## 5. Maximize learning

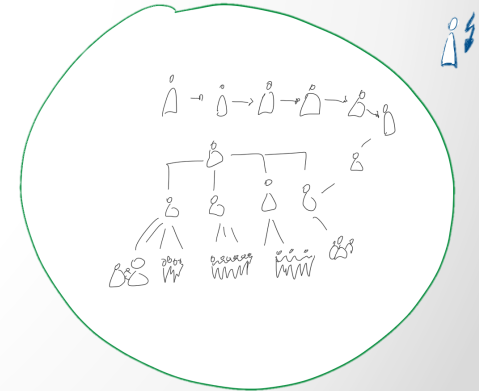


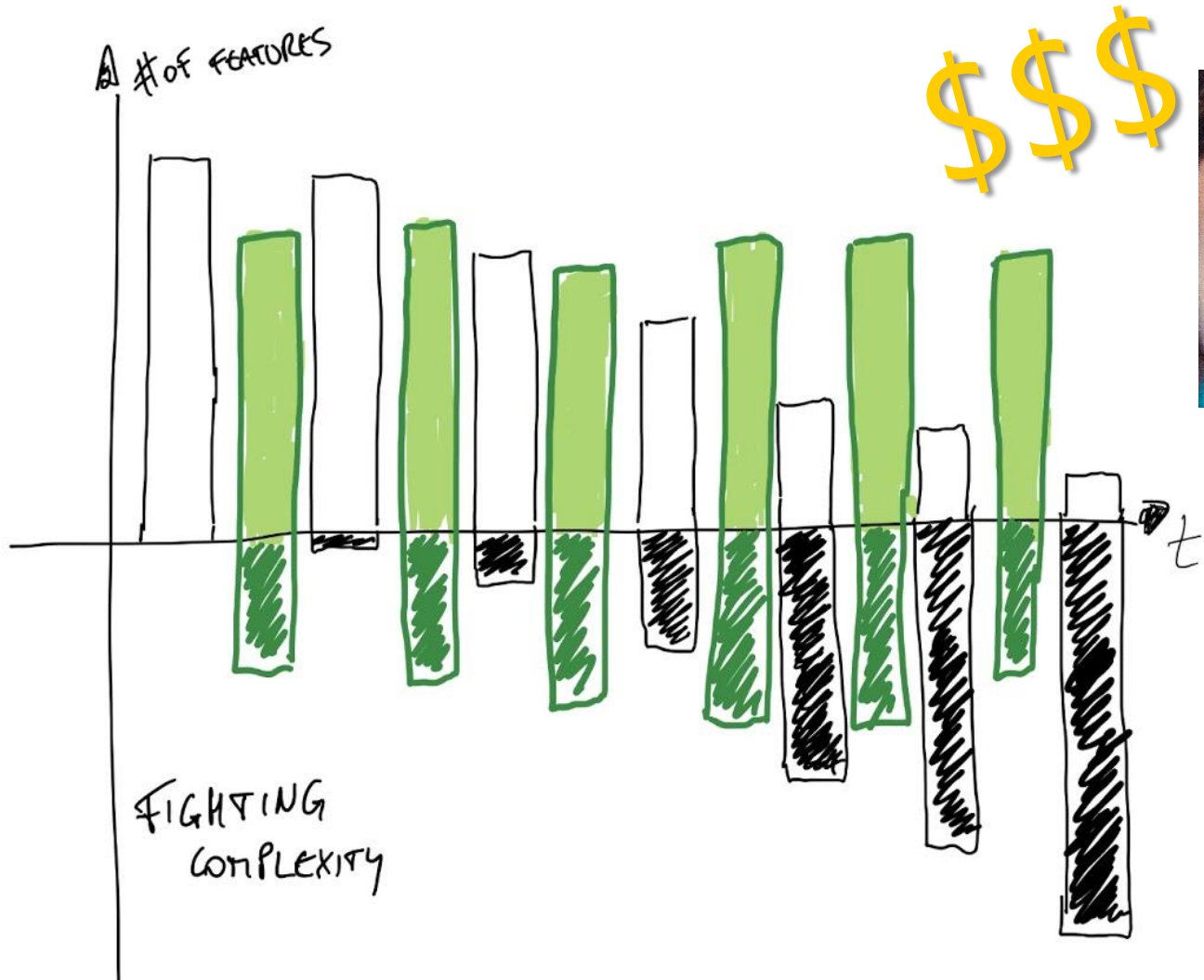
From individuals  
to team (s)

to organizational learning

# 5 Steps - Proper Root Cause Analysis

1. Gather Data
2. Retrospective
3. Delegate to Team -> Deep Dive
4. Prevent this in the future
5. Maximize learning









# How to sell to Managers? Investment

*Well crafted & tested code  
is expensive.*

# Investment

*Well crafted & tested code is expensive.*

*Fixing bad code is very, very, very, very expensive.*

Agile/Lean/Scrum/Kanban/DevOps don't matter.

What matters is to get better at understanding your future customer and providing value faster.

<https://beyond-agility.com>

# Thank You!



<https://twitter.com/peitor>



<https://www.linkedin.com/in/petergfader/>



[peter@beyond-agility.com](mailto:peter@beyond-agility.com)



<https://beyond-agility.com>



Scan me

Peter Gfader

# References

Your Todo List 😊

# References

- Steve Denning 3 Laws of Business Agility  
<https://www.infoq.com/presentations/3-laws-business-agility>
- Steve Denning – Why Agile  
<https://businessagility.institute>
- Future Leadership Training
- Haier HBR – The end of bureaucracy  
<https://hbr.org/2018/11/the-end-of-bureaucracy>
- Book: The Leader's Guide to Radical Management  
<http://www.stevedenning.com/Books/radical-management.aspx>

# References

- Pragmatics of Agile Development  
[http://www.agiledeveloper.com/presentations/pragmatics\\_of\\_agile\\_development.pdf](http://www.agiledeveloper.com/presentations/pragmatics_of_agile_development.pdf)
- Kanban VS Scrum  
<http://www.infoq.com/minibooks/kanban-scrum-minibook>
- Agile Software Development  
<http://www.agiledeveloper.com/presentations/AgileSoftwareDevelopment.zip>
- A Thinking Tool called Agile  
[https://sites.google.com/site/leanagileandscrum/lean-agile-scrum-conference-2010/presentations-las-2010/00\\_Kniberg\\_Keynote.pdf?attredirects=0&d=1](https://sites.google.com/site/leanagileandscrum/lean-agile-scrum-conference-2010/presentations-las-2010/00_Kniberg_Keynote.pdf?attredirects=0&d=1)
- The Four Elements of Simple Design  
<http://www.jbrains.ca/permalink/the-four-elements-of-simple-design>
- <http://agilemanifesto.org/>
- <http://manifesto.softwarecraftsmanship.org/>



# Picture References

- <https://gratisography.com/>
- <https://businessagility.institute>
- <https://twitter.com/peitor>
- <https://craigsmith.id.au/2015/12/03/yow-2015-40-agile-methods-in-40-minutes/>

How do you learn about your  
future customer  
and provide value faster?

**Find out more**

[beyond-agility.com/stop](https://beyond-agility.com/stop)