

# A Shock to the System

Key Learnings for Successful Large-Scale Organizational Agile Transitions  
(a 3 hour workshop)

Monday May 21, XP 2012, Malmö

*Once considered as an approach limited to small, co-located teams, agile development has evolved to a culture embraced by large, distributed organizations. Our goal is to move beyond agile teams to foster an agile organization. The transition to “agile” may be initiated within legacy-driven organizations by grassroots teams trialing agile approaches and evolve to sanctioned pilot projects. In some cases the adoption of agile may be accelerated by the acquisition of an agile company. Cultural shock and reformation may ensue when agile teams begin integration with the behemoth that is represented by the legacy-driven organization. Through a mixture of challenges and successes best practices can evolve. This workshop and the subsequent panel discussion will explore essential ingredients for success.*

by

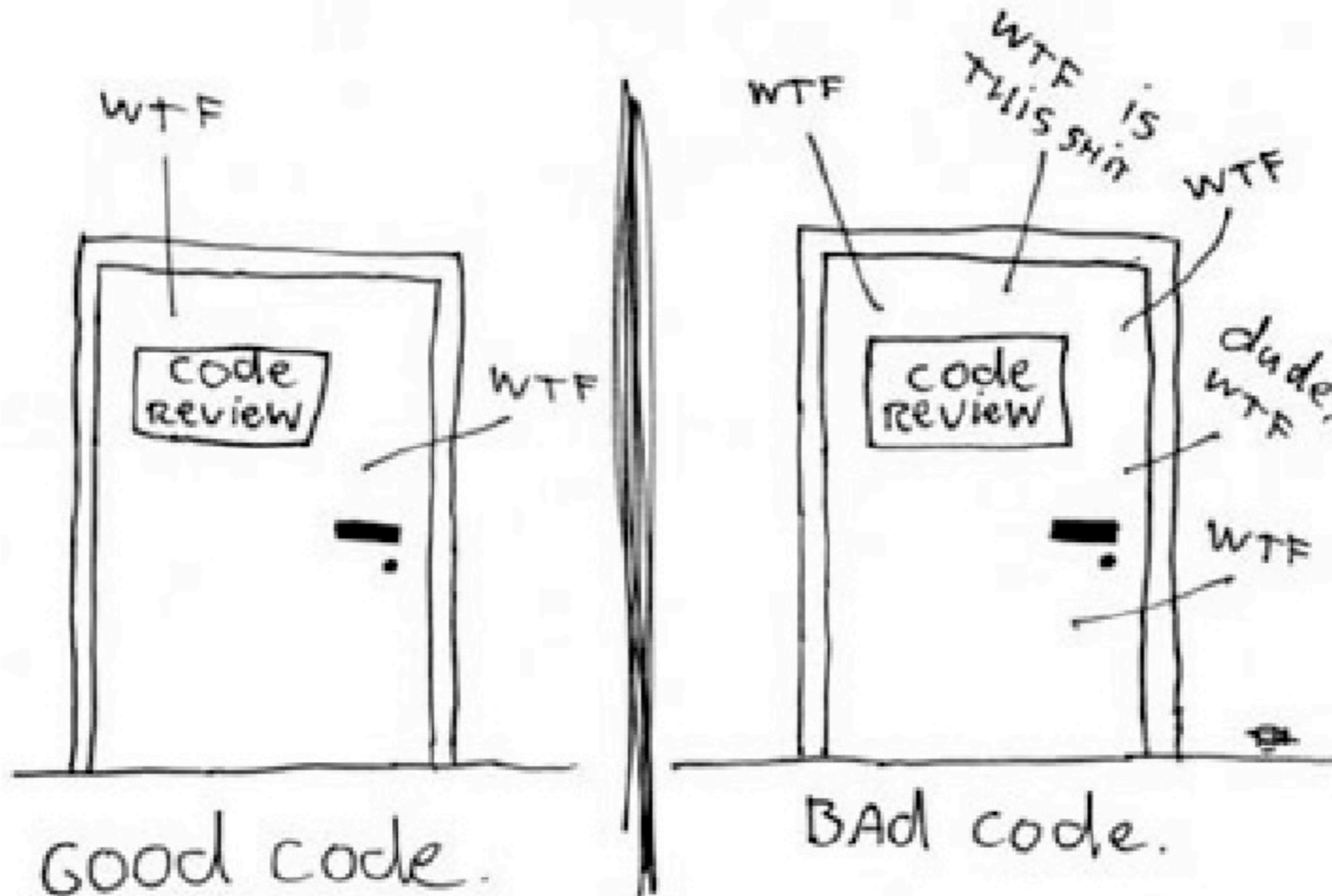
Steven Fraser, Olve Maudal, Ken Power

## **Workshop goals**

In the context of large organizations (5k+ engineers) attempting to become more agile, this workshop will:

- discuss typical issues
- identifying possible improvements
- prioritize potential opportunities

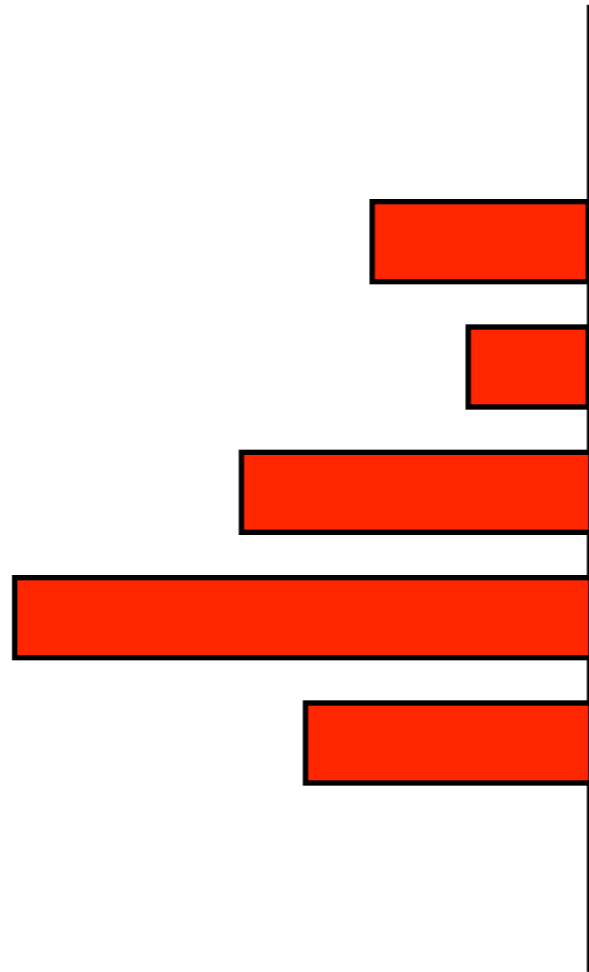
The ONLY VALID MEASUREMENT  
OF CODE QUALITY: WTFs/MINUTE



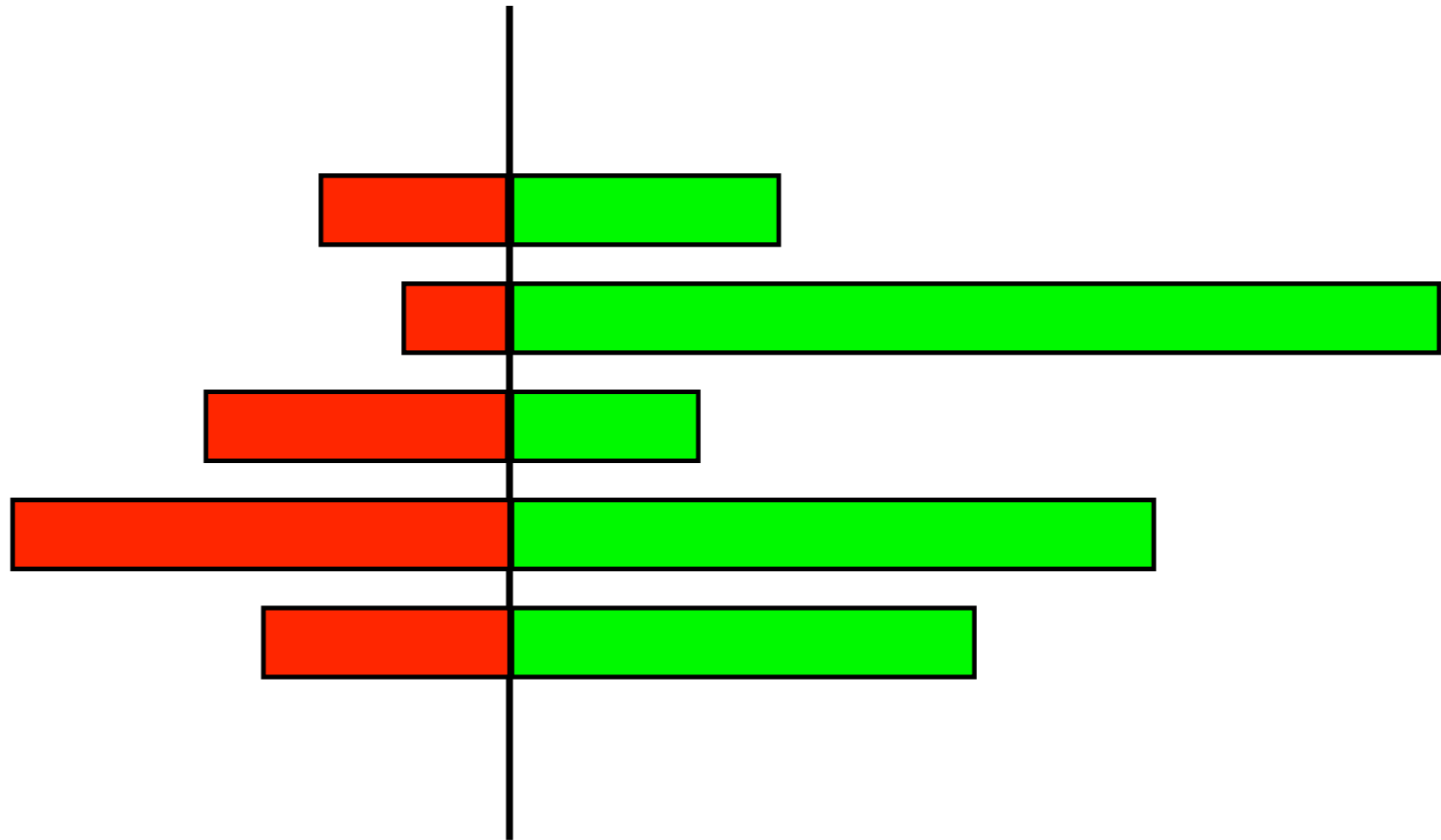
(c) 2008 Focus Shift

**Some thoughts about negative and positive components**

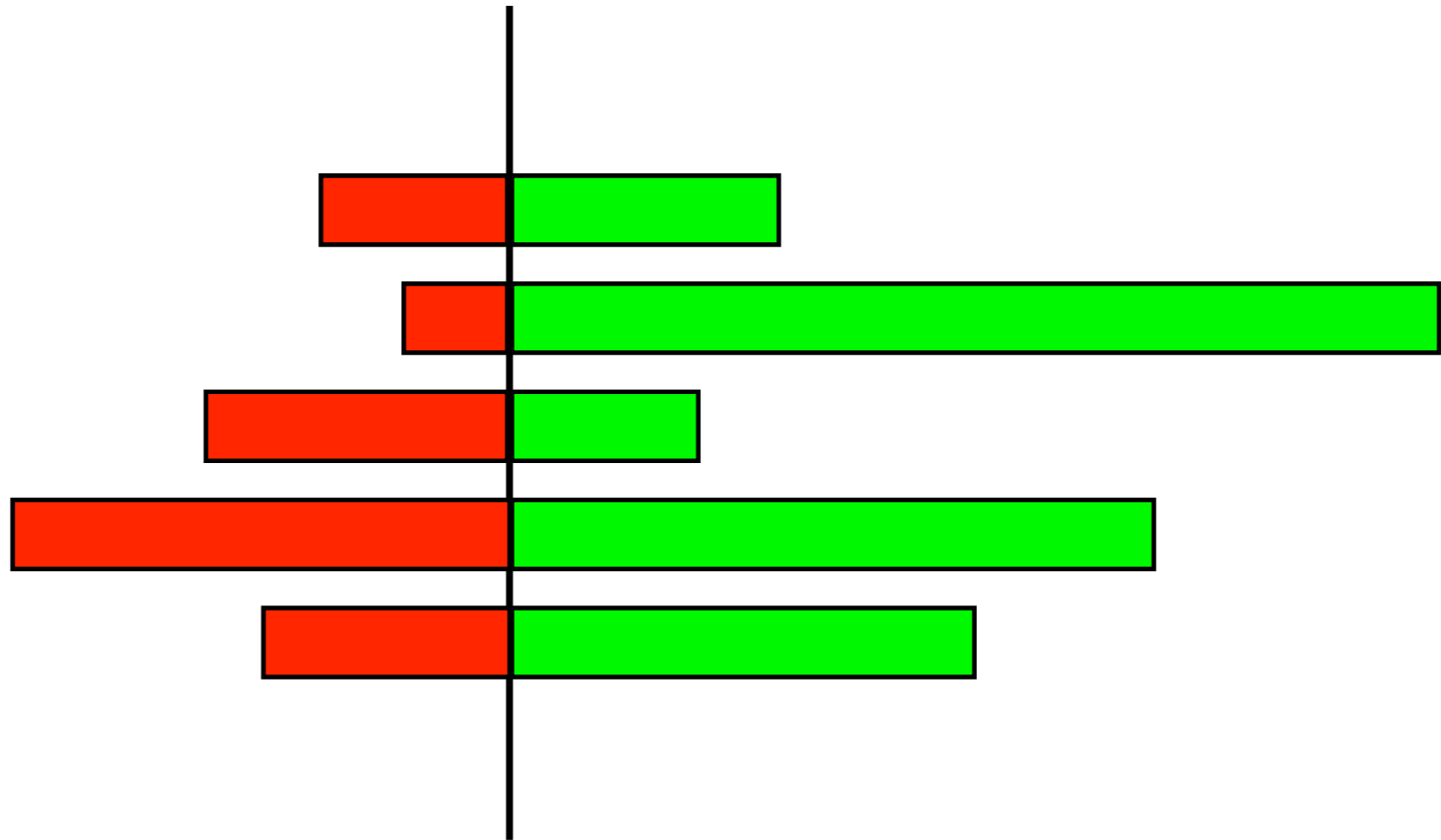
everything has a negative component ...



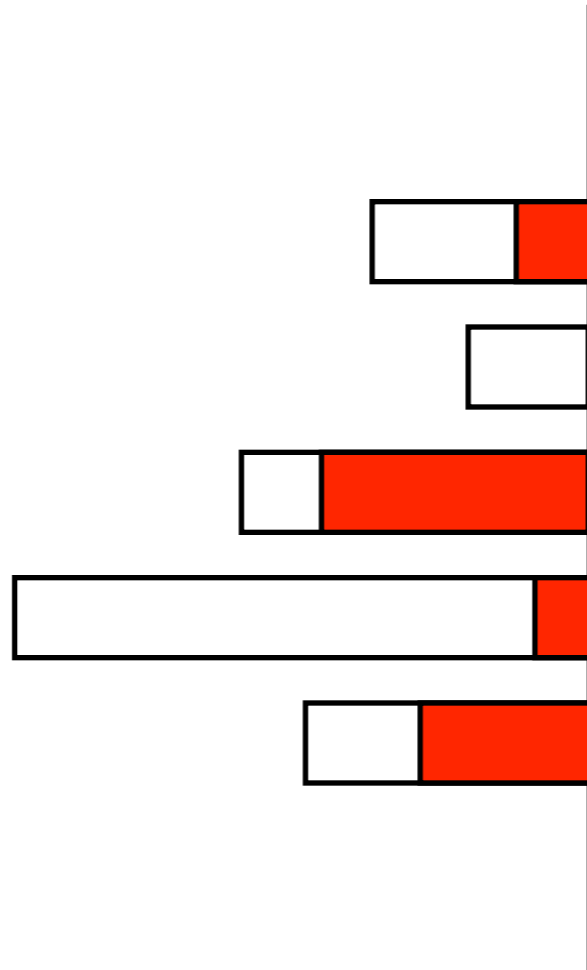
... as well as a positive component



so if you want to improve something...

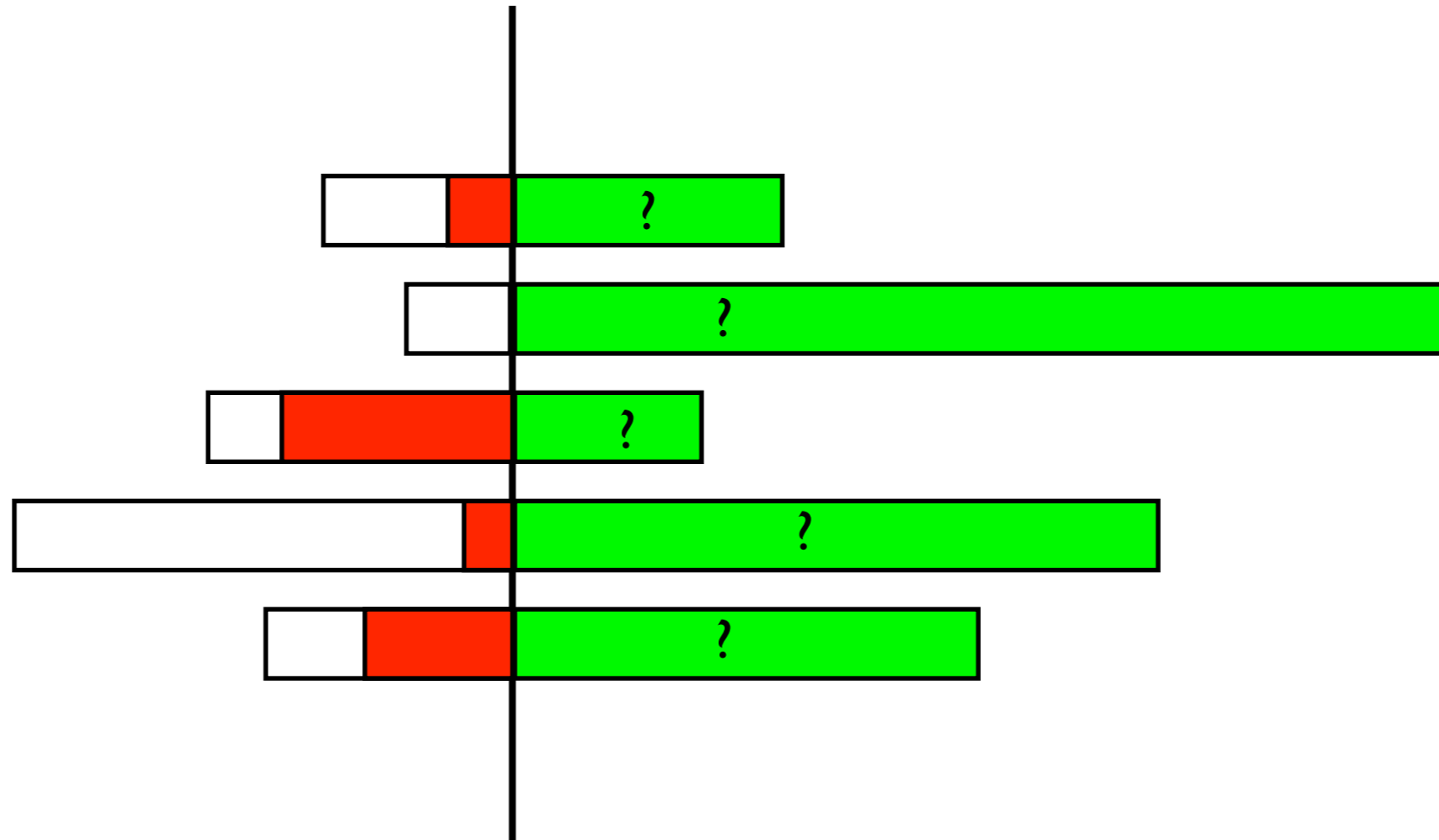


... do **not** just try to fix the negative stuff ...

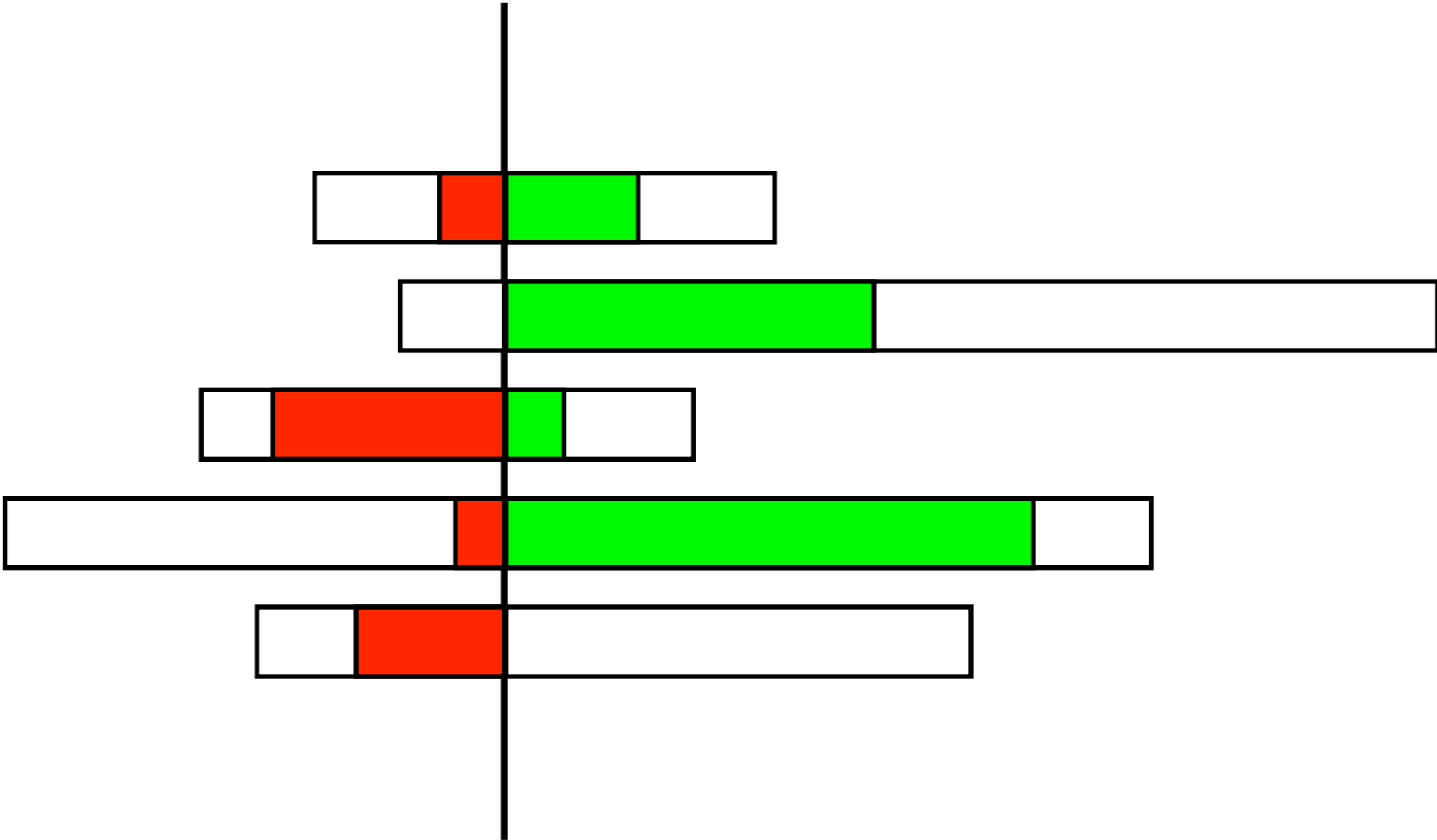


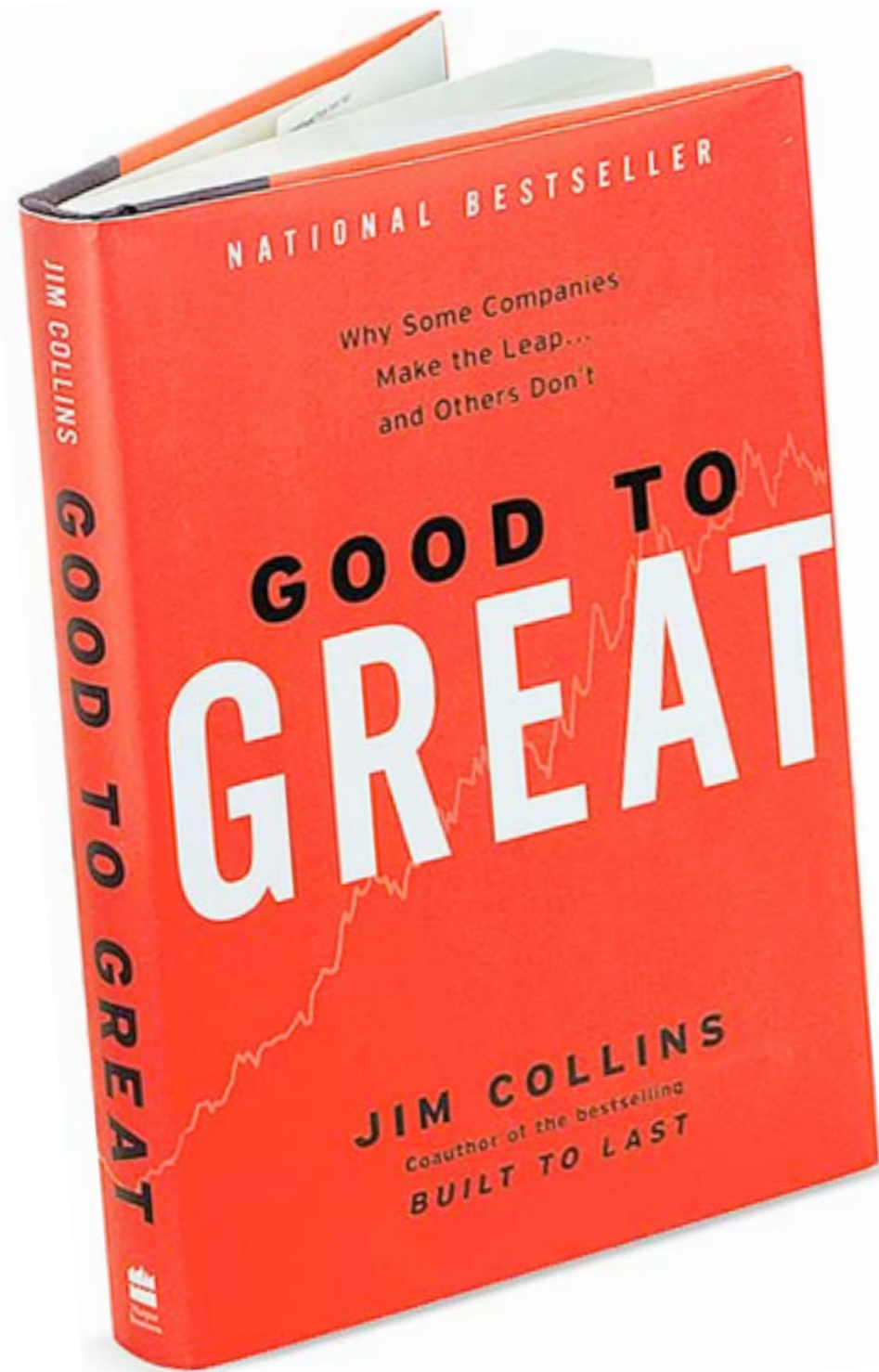


... without also understanding how it will affect the positive component



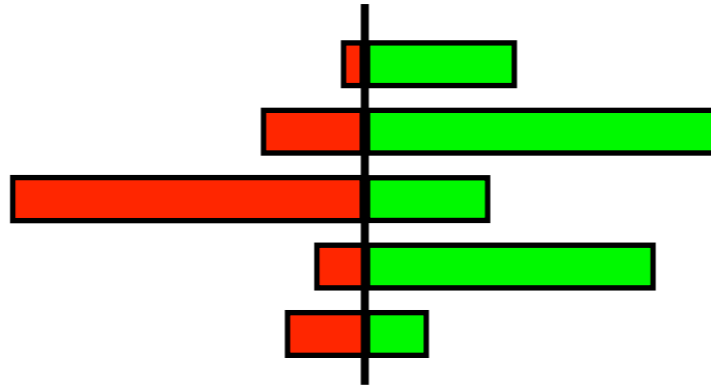
because you might end up by reducing the positive component by even more



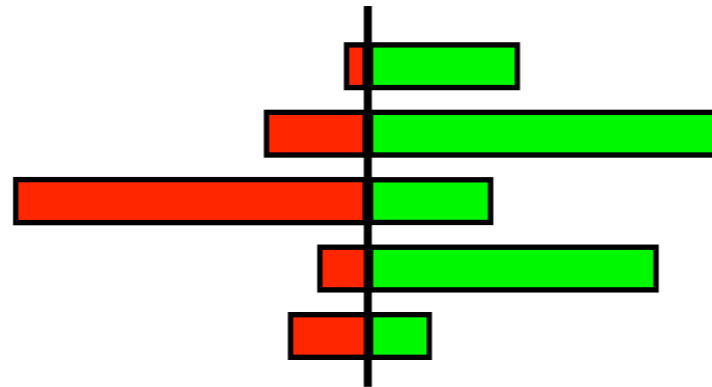


Managing your problems can only make you good, whereas building your opportunities is the only way to become great. (Collins, 2001)

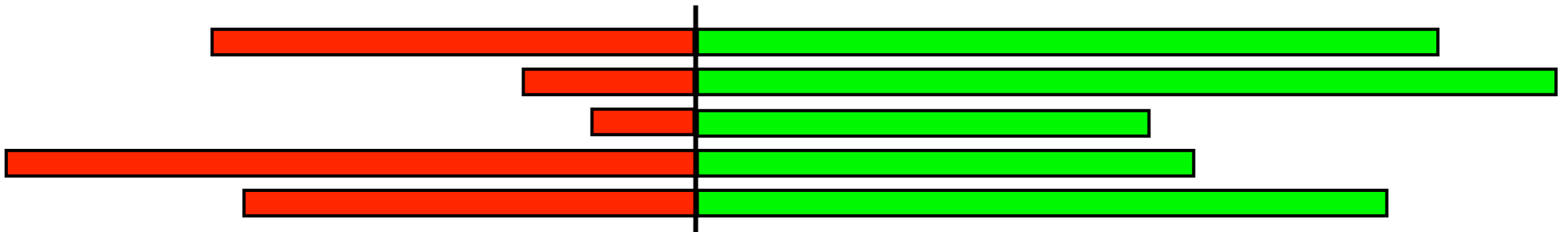
you do not want to end up like this...



you do not want to end up like this...



here is the profile of a GREAT organization...



## Agenda (13:30 - 17:00)

- Welcome and set the stage
- Introduction of participants
- Gather data
- Coffee break
- Gather insight
- A lightning talk about organization improvements
- Identify potential improvements
- Prioritize
- Reflection

# Introduction of participants

Who are you? (name, company)

What do you do? (what role do you play)

What do you hope to get out of this workshop?



Elizabeth, researcher

Kai, Ericsson

Andrea, Siemens

Thomas, Ericsson

Petri, Univers Researcher

## WHO

Jaune, SAAB

Diana, Consulting

JB, Siemens Nokia Networking

Dana, Consulting

Per, IKEA IT

Ulrik, PhD student

Stefan, SAAB

Todd, Landmark / Halliburton

Fredrik, SAAB

Janik, student

Henrik, consultant

Siva, student

Stavros, —"

Indi, —"



# WHAT

Defence Industri

Process Surgion

Consultant

Mentor

Agile evangelist

Internal Services and IT

Research

Head of R&D

Students

Change agents

## Hopes / Goals

- Exchange good experiences + ideas; make connections
- Interested in large-scale agile  $\Rightarrow$  how it works, how to support it, how to facilitate it
- Managing legacy code; any kind of tips
- Not get fired  $\ddot{\smile}$
- How to make the shock sustainable
- We are 150k users of tools we develop ourselves  $\Rightarrow$  the # of people we expect to work together is much bigger than 5k [in an agile way]
- ideas for thesis
- Transform R+D into agile; what you expand # of, tend to lose agile principles  $\Rightarrow$  here for inspiration
- The role of innovation; driving innovation
- Tricks, keys how to influence the people around me in how to work with agile
- Just interested in the topic
- Hear about problems associated with implementing large agile/lean
- Understand more about large organizations (+1) (+1)
- Very interested to hear what other ppl. have experienced. Maybe hear about some research.
- How do we get there?
- Keen to learn about really big org. transformations
- Here to hear some key learnings from others.
- Looking for current state-of-the-art. What are the burning issues?

<http://www.pvv.org/~oma/xp2012pics/CIMG0399.JPG>

# Gather data



# The Speedboat Game

(from Luke Hohmann's innovation games)



# The Speedboat Game

(from Luke Hohmann's innovation games)



what is holding you back?







# Split into groups

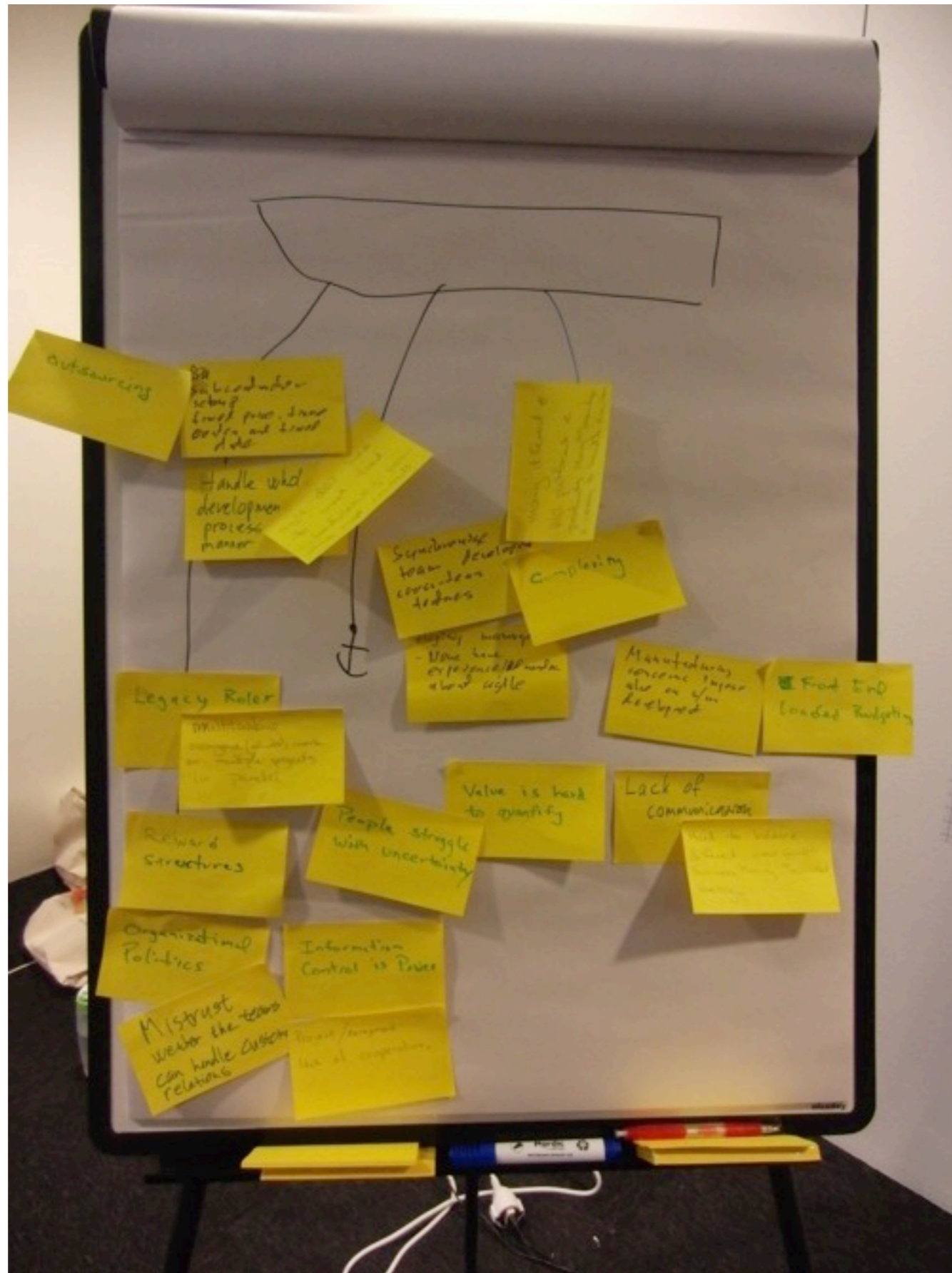
Identify anchors that are holding back your “ship”



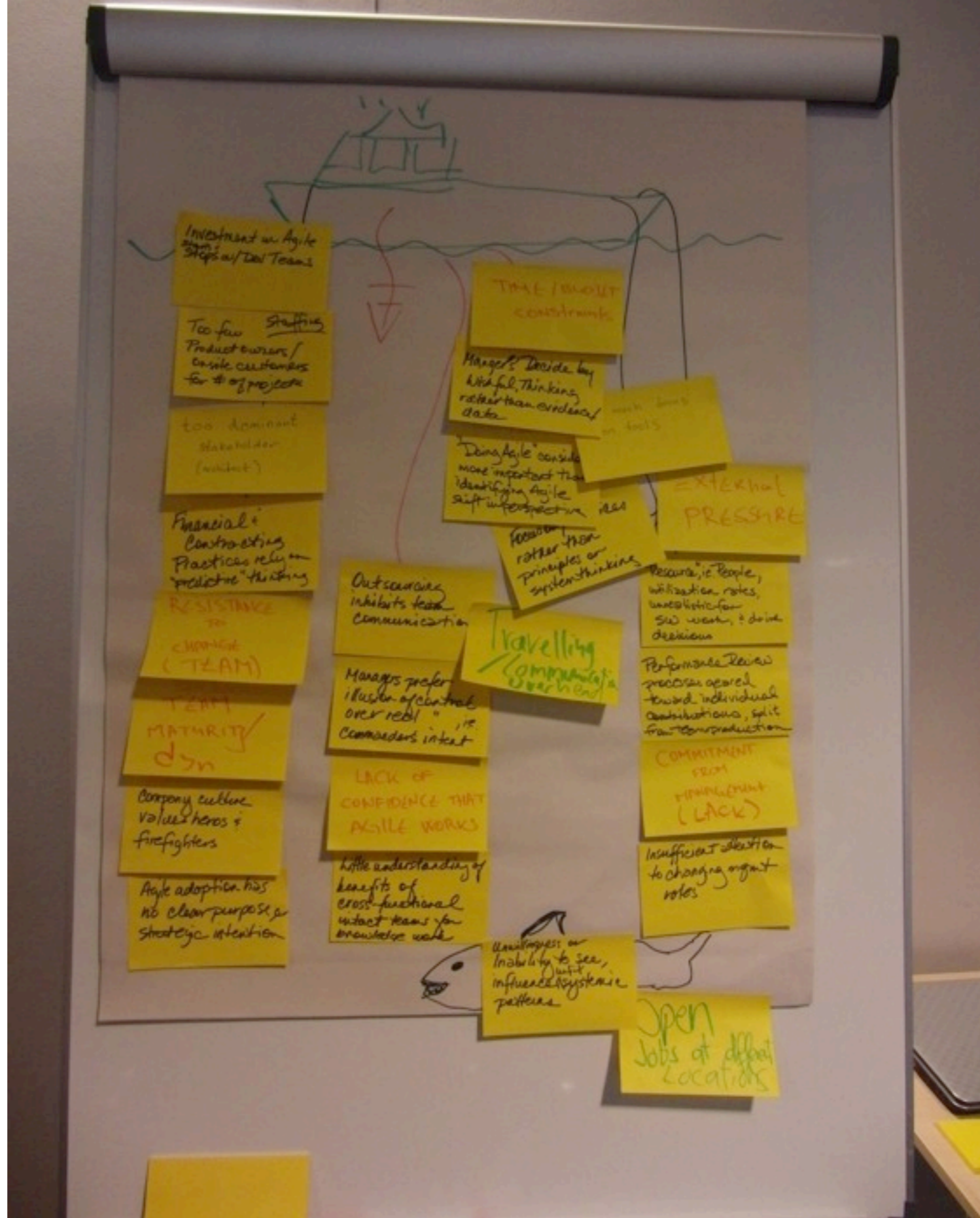




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Group A	Group B	Group C	Group D
Agile interpreted as "you can change your mind any time you want"	Value is hard to quantify	Lack of ability to measure value	Company culture values heroes and firefighters
Current job descriptions	Legacy roles	Lack of energy / drive	Lack of confidence that agile works
Try to put agile in current process boxes	Handle whole development process in an agile manner	Courage limited by old management thinking	Insufficient attention to changing management roles
Process over people in large orgs	Subcontractor setup first price. Fixed content and fixed date.	Lacking support from management	"Resource". i.e., people, utilization rates, unrealistic for software work; drive decisions
Product ownership	Management push Agile into organization which creates resistance	Current org has product/project champions -> agile org must have customer value champions. Difficult change!	Managers prefer illusion of control over real control, i.e., commander's intent
Management is incapable of balancing long term and short term improvement decisions and investments	Many different Hardware platforms and products. Many software branches and versions to handle simulation.	Cultural problems	Too dominant stakeholder (architect)
Lack of transparency - you don't know what other's are doing	Complexity	Too many levels of hierarchy (some ignorant of agile, even of software)	Open jobs at different locations
Supplier contracts	Organizational politics	Walls in the organization	Little understanding of benefits of cross-functional intact teams for knowledge work
The trust for contracts	Project / management lack of cooperation	Working as individuals rather than one team	Agile as the last silver bullet on the market
Agile contracts	Hard to balance different view points: business, planning, technical, strategy	Customers also have to be flexible	Too much focus on tools
Command and control trained middle management	Information control is power	Lack of trust (up and down the org)	Aging managers - none have experience / knowledge about agile
Distributed management	Multitasking: everyone (almost) work on multiple projects in parallel	Hard to maneuver (full speed)	Focus on practices rather than principles or systems thinking
Traditional steering and follow up of org does not allow for the flexibility agile gives	Reward structures	Legacy code	External pressure
Agile considered as an SW confidential	People struggle with uncertainty	People worry they need to do everything in cross-functional teams	Staffing. Too few product owners / onsite customers for # of projects
Communication	Outsourcing	Lack of measures	Travelling / communication overhead
Business and orderer (product owner) placed far from each other	Poor portfolio Management. "More is better". Everything is top priority.	Agile makes things transparent and (some) people don't like it	Investment in agile starts and stops with dev teams
No direct customer involvement	Front-end loaded budgeting	Resistance of part of middle management losing their status	Financial contracting practices rely on "predictive" thinking
Dependencies of software legacy components	Agile dev has to meet fixed schedules, e.g., promotions, customer contracts	People have their habits (hard to change)	Resistance to change (team)
We don't know how to measure value. Only cost cutting matters.	Manufacturing concerns imposed also on software development	Skills limited by old way of working	Unwillingness or inability to see, influence unfit systemic patterns
Separate org for operation of services/applications. Do not want the frequent deployments / changes.	Lack of communication	Unrealistic expectations	Managers decide by wishful thinking rather than evidence / data
Change is experienced as a threat. People fears that they will loose control.	Mistrust wheter the team can handle customer relations	Conflicting interests	"Doing agile" considered more important than identifying agile shift in perspective
	Synchronize team developing cross-team features	Unclear destination	Lack of commitment from management
			Outsourcing inhibits team communication
			Team maturity / dynamics
			Time / budget constraints



# Coffee break

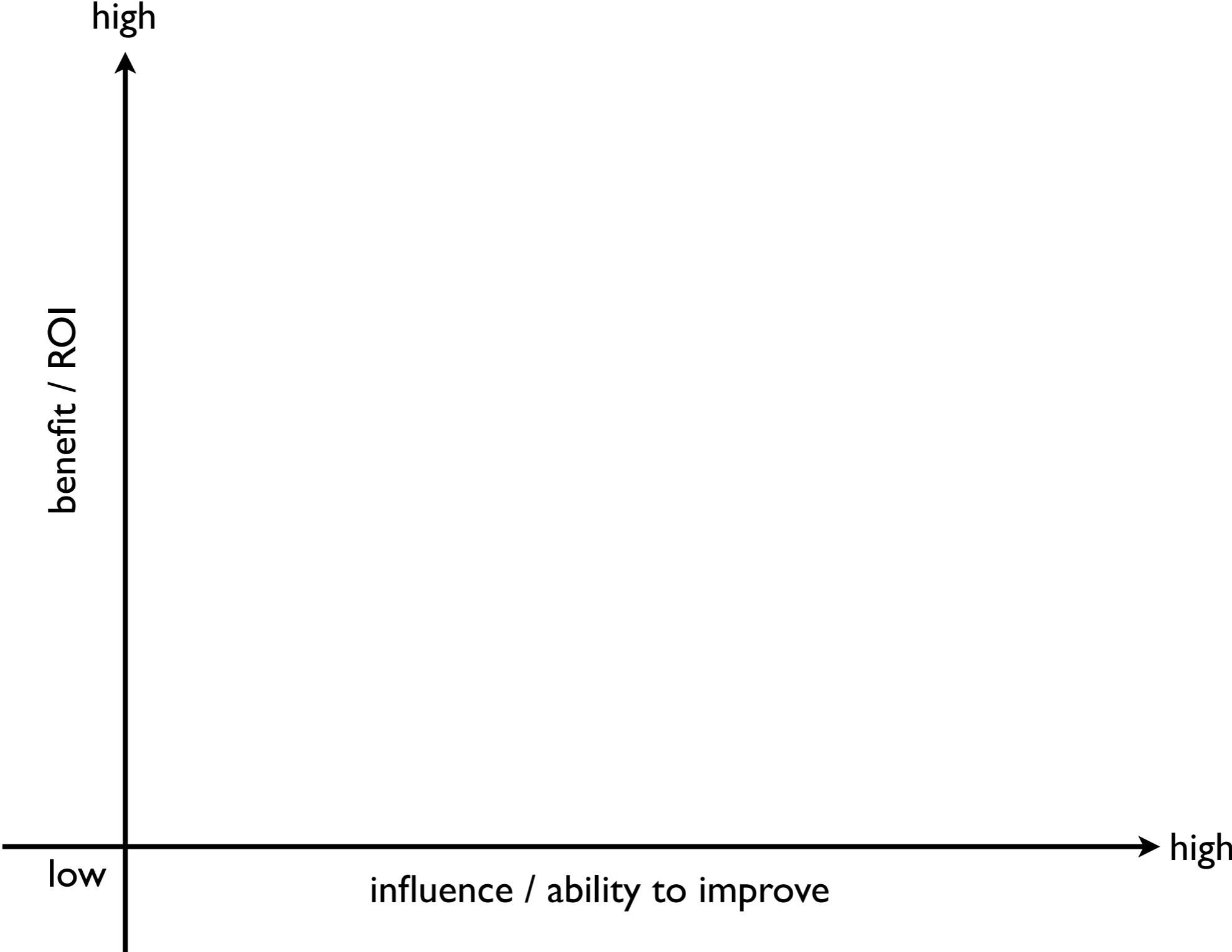


# Gather insight





# Influence diagram



# Initial Influence Diagram



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# Influence Diagram after rearranging



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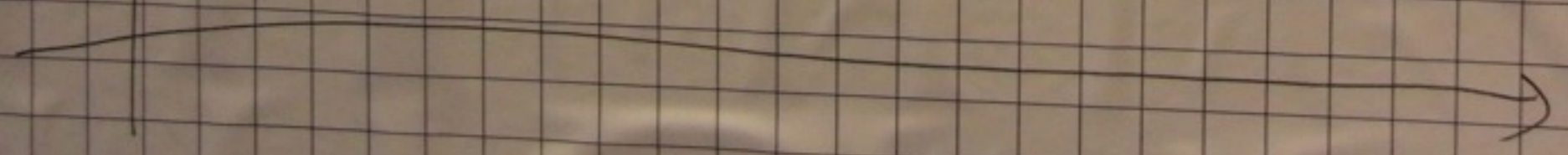
sell Apple

↑  
organisation  
Culture

Communication  
Value  
METRICS

Legamaster

MAGIC-CHAR





# The PDCA Cycle

Follows the steps of the Scientific Method

**Plan:** develop a hypothesis or experiment

**Do:** conduct the experiment

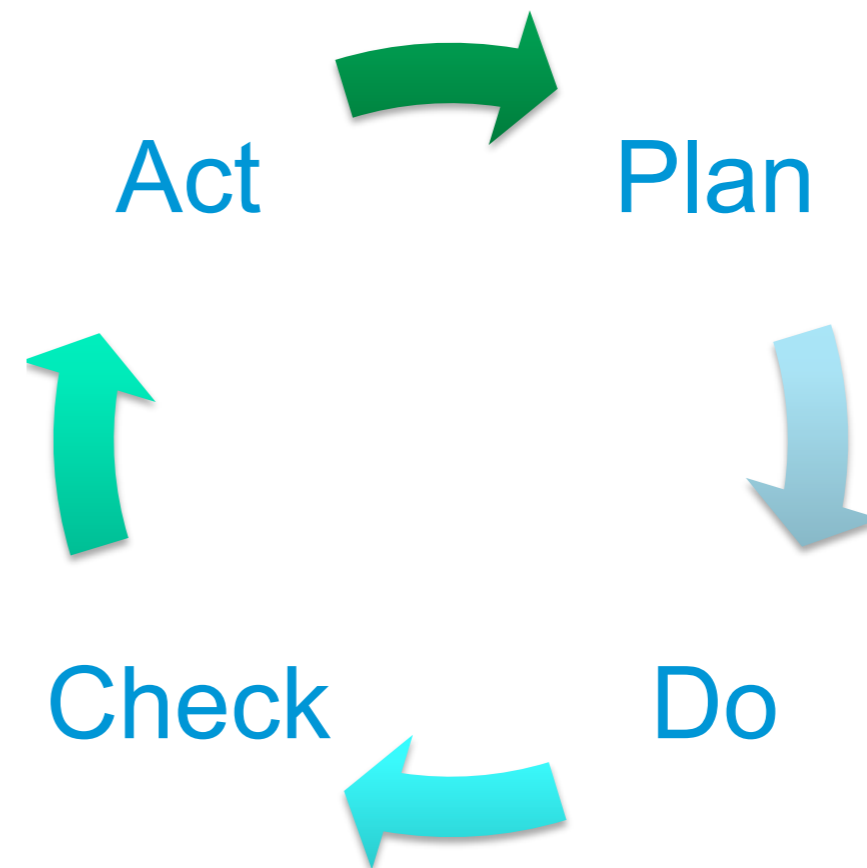
**Check:** collect measurements

**Act:** interpret the results and take appropriate action

Also known as

The Deming Cycle

The Shewart Cycle



# Identify potential improvements



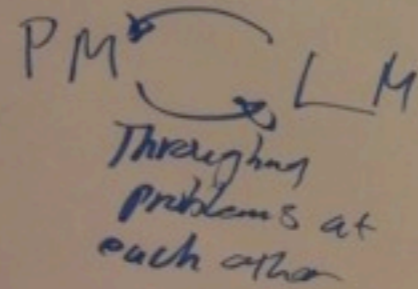
# Improvement memo

<p>&lt;title&gt;</p>	
<p>&lt;before improvement&gt;</p>	<p>&lt;action taken&gt;</p>
<p>&lt;effect&gt;</p>	

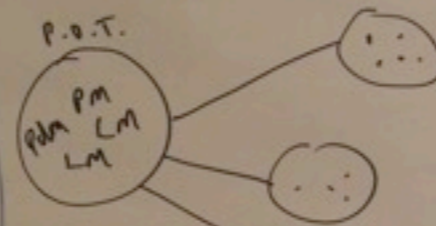


# Lack of communication between project & line org.

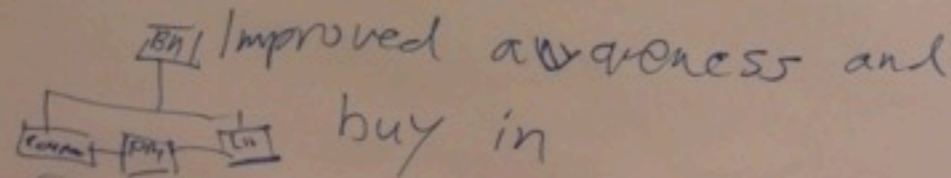
Project managers talk about line managers rather than with them. Knowledge transfer is limited.



- set of rules/values common for ~~PM~~ PM, LM
- series of work steps with external facilitator



- define line mgr resp in project



# Outsourcing

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>- Communication challenges due to distance + time shift</li><li>- Cultural issues</li><li>- Outsourcer does not understand business</li><li>- Requirements are not detailed</li></ul> | <ul style="list-style-type: none"><li>- Bring remote team to collocate with team</li><li>- Send product owner to remote location</li><li>- Find an outsourcer that understands the Biz.</li><li>- Business Demo</li><li>- Effort into communication<ul style="list-style-type: none"><li>- video, webex, movies.</li></ul></li><li>- Find cultural fit.</li></ul> |
|---|---|

- it can work, but it takes effort.

- it is easy to make it fail.

# Meta process f multiple units

- Large org, many unit, each with own

process

Hard to the whole to work together, produce one product

- Process framework for whole split into

- product line

- products

- Clean/sep if whenever poss

- Customized process framework instantiation per unit

- Tg structure to synch PL w products

- Gradual commitment

- Similar way of working bt units but with room f. specialization

# Selling Agile Transformation

Org tries to push/  
impl Agile process.  
~~resist~~ Middle mgmt, & down  
resist, argue, resist.

- interactive <sup>train</sup> training sessions for every one. Why? How? Principles (in-house designed) - overview + more detailed
- giving resp/ownership of process to line <sub>(roll-out)</sub>
- process engineers as experts / supportive role

- increased knowledge & motivation for change

- more active line process/how-we-work

management in

# Fire fighting

# HEROES



- quality low
- stress
- too much pressure
- threat to delivery on time
- Lack of appreciation = motivation / commitment ...
- Lack of team spirit / team

- ① Iterations cycles
- ② Continuous integration, test automation
- ③ Get early customer feedback appreciate
- ④ Knowledge sharing

<http://www.pvv.org/~oma/xp2012pics/CIMG0426.JPG>

- Quick feedback
- Higher Quality early in the project
- Higher Motivation
- Team spirit

# SETTING AGILE INTENTION VISION

LACK OF MOTIVATION  
RESISTANCE TO change  
LACK OF commitment  
Missing management support  
LACK OF direction / dest  
Lack of energy for change  
Lack of baseline

- ① SET common values in bottom up processes
- ② prioritize values
- ③ find and select metrics
- ④ Live the values in the organization:
  - Communicate
  - Take into account in decisions
- ⑤ REFLECT

- Values became part of daily work life  
(common vocabulary) shared mindsets
- Communication channel for 1
- Ethical tool
- change facilitator
- base for improvement / getting rid of wasteful processes

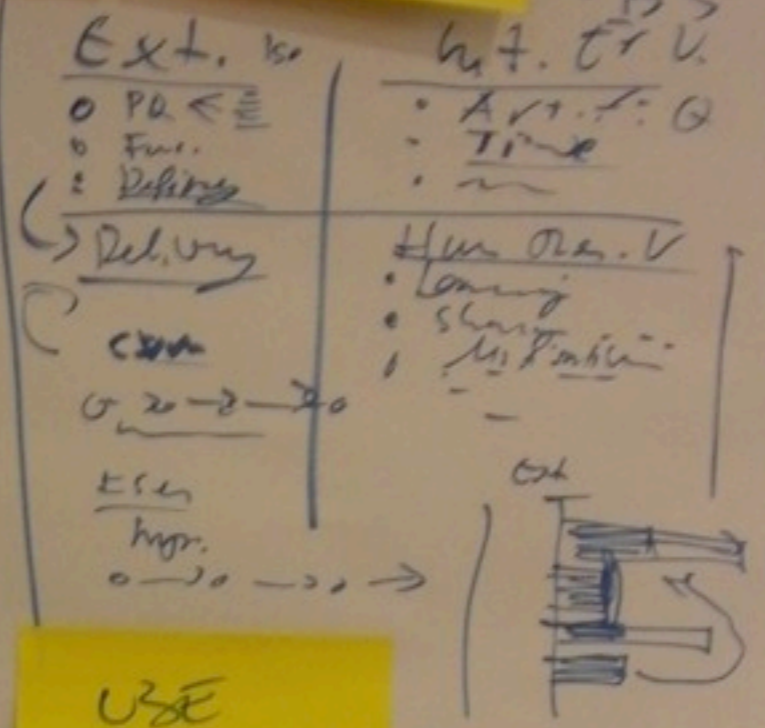
T Lack of ability to measure Value

B Value is hard to quantify

# ORGANIZATION VALUES

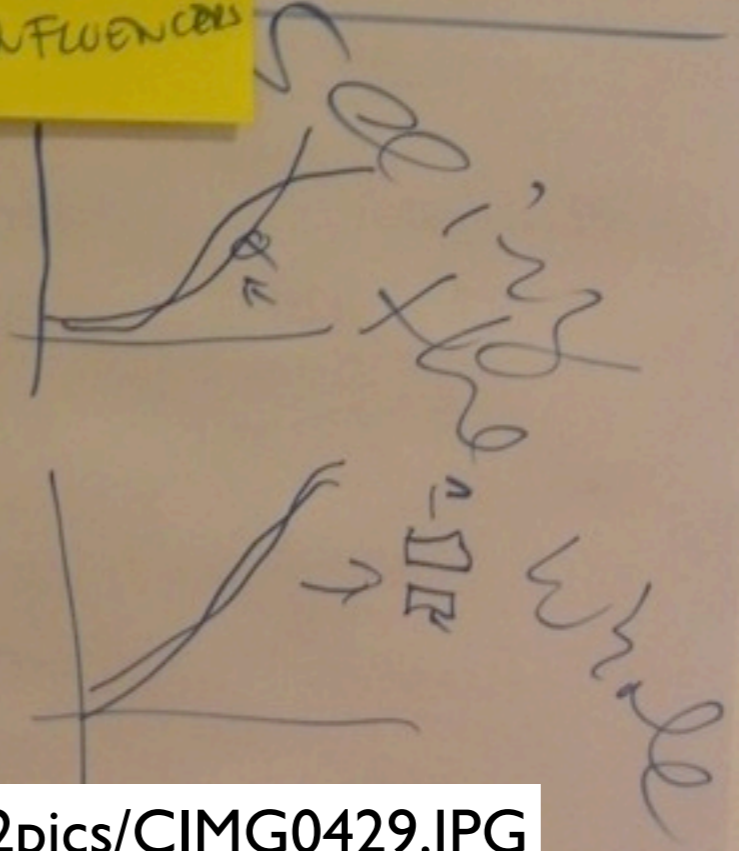
- Lack of und. of value and doing VS M
- measuring very limited perspectives on waste (waiting time as ex.)
- Improvement = Lead-Time ↓↓↓

REMOVE BONUS FROM MEASURES P.



Effect

different view while doing USM



Mistrust  
Whether the teams  
can handle custom  
relations

NAME	EMAIL
Don't know	don't know
Don't know	don't know
Don't know	don't know
Don't know	don't know
Don't know	don't know
Don't know	don't know

Before

→ "WE" and "THEY"  
"FIXING" THE MEASURES  
BECAUSE EVALUATION DEPENDS  
THE "OTHER CATS" DON'T  
GET IT

"AREAS" OF ACCOUNTABILITY

MISTRUST:

- TEAM / BUSINESS
- TEAM / MANAGER

Actions

~~NOTHING~~ INTUITIVE  
W/O "WE" & "THEY"  
TOGETHER TO START  
"NO MEASURE" AS  
EVAL.

GUIDELINES

KICK-OFF WITH  
ALL PEOPLE INVOLVED  
& INNOV. GAMES.

- COLLABORATION
- PPL. DON'T WANT TO WORK IN ANOTHER  
WAY ANY MORE
- INTRINSIC MOTIVATION
- STOP TRUST DESTROYERS
- Freedom in acting



# Voting

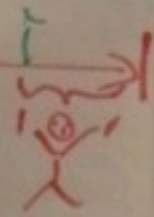


**What is the most valuable improvement memo from this particular workshop?**

# Fire fighting

# HEROES

- quality low
- stress
- too much pressure
- threat to deliver on time
- Lack of appreciation = motivation / commitment ...
- Lack of team spirit / team



- ① Iterations cycles
- ② Continuous integration, test automation
- ③ Get early customer feedback appreciate
- ④ Knowledge sharing

- Quick feedback
- Higher Quality early in the project
- Higher Motivation
- Team spirit

# Meta process f multiple units

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Hard to the whole to work together, produce one product

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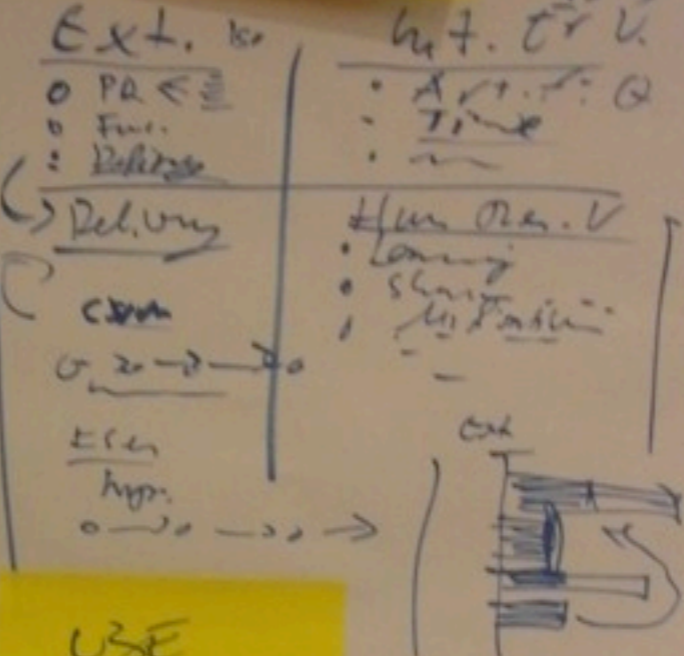
Lack of ability to measure Value

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ORGANIZATION VALUES

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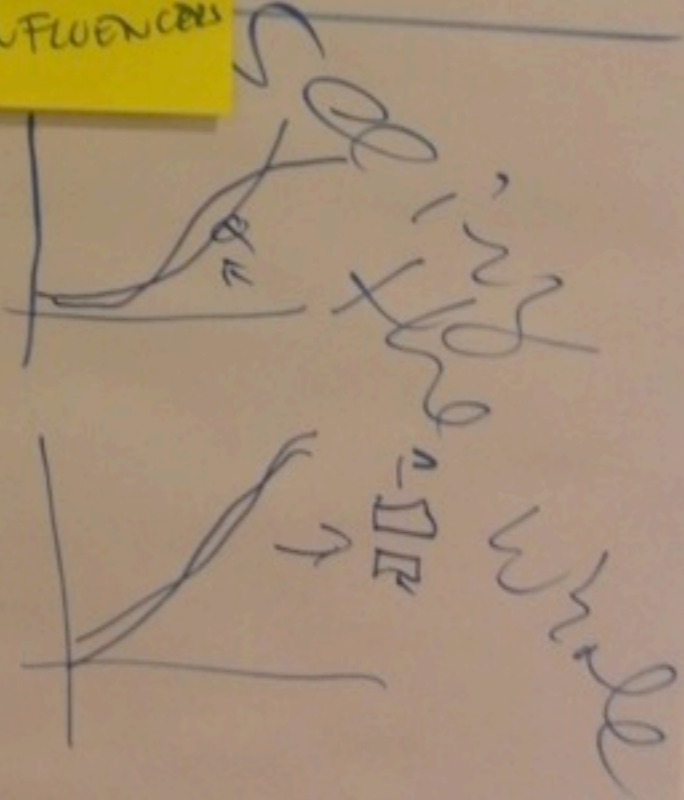
BETTER BONUS FROM MEASURES?



USE INFLUENCES

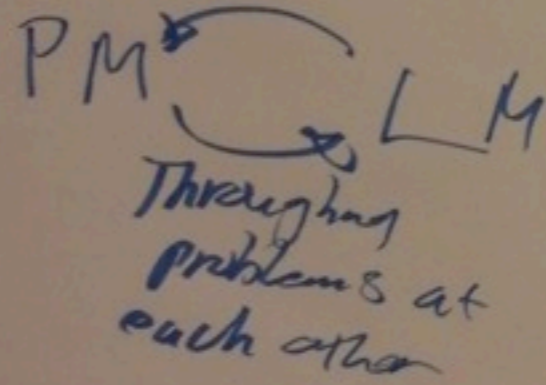
effect

different view while doing USM

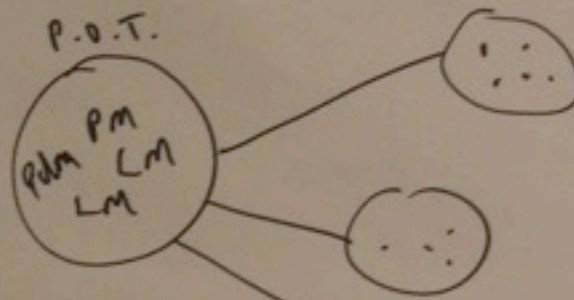


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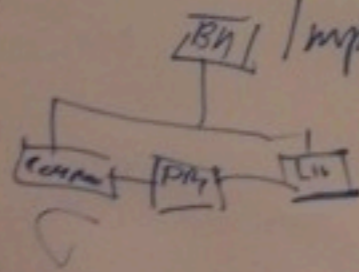


- set of rules/values common for ~~PM~~ PM, LM
- series of work steps with external facilitator



- define line mgr resp in project

Improved awareness and buy in



# Reflection







# Large organizations require exceptional navigation skills



<http://www.youtube.com/watch?v=oetF3UTlwbc>

... WELL, SEEMS LIKE  
HIS PART OF THE BOAT  
IS ABOUT TO SINK

