

Scaling Dimensions

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<http://brussels2015.agileconsortium.net/>



About me

Writing and building software since many years

First exposure to Lean in the early 1980s

Return to developing software

First XP exposure in 2000, Scrum 2003

Slowly connecting the dots ..

Today:

Coaching Organizations in Agile Culture, Methods, Practices and Principles, Training in Scrum

improuv 



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About **improuv**

improuv is an agile consultancy
located in München and Hamburg.

Our expertise is Lean and Agile change:

- Scrum, Kanban Trainings and Certifications
- Agile Change Assessment, Coaching and Mentoring
- Agile Transformation using Scrum, Kanban, XP, SAFe

We are drivers in the Agile Community



DeutscheScrum - Beginning in 2007, we organize a yearly non-profit conference for the German speaking Scrum Community www.deutschescrum.org

agiletuesday 

Agile Tuesday München - Since 2008 we organize a monthly event with contributions from the agile Community in München www.agiletuesday.org

agileworld   

ScrumAlliance - we are member and Registered Education Provider of the ScrumAlliance. <http://srumalliance.org>



Contributions to Conferences - we are frequent contributors to several conferences and workshops - see <http://improuv.com/de/publikationen>

Working in the large



http://upload.wikimedia.org/wikipedia/commons/9/9e/BASF_Werk_Ludwigshafen_1881.JPG



Latitude: 49,5082550048828
Longitude: 8,48116874694824
Heading: -1,61632478237152
Altitude: 11.082,18 Meters
Terrain Elevation: 0,00 Meters

<http://commons.wikimedia.org/wiki/File:Basf-ludwigshafen-ww-1.jpg#mediaviewer/File:Basf-ludwigshafen-ww-1.jpg>

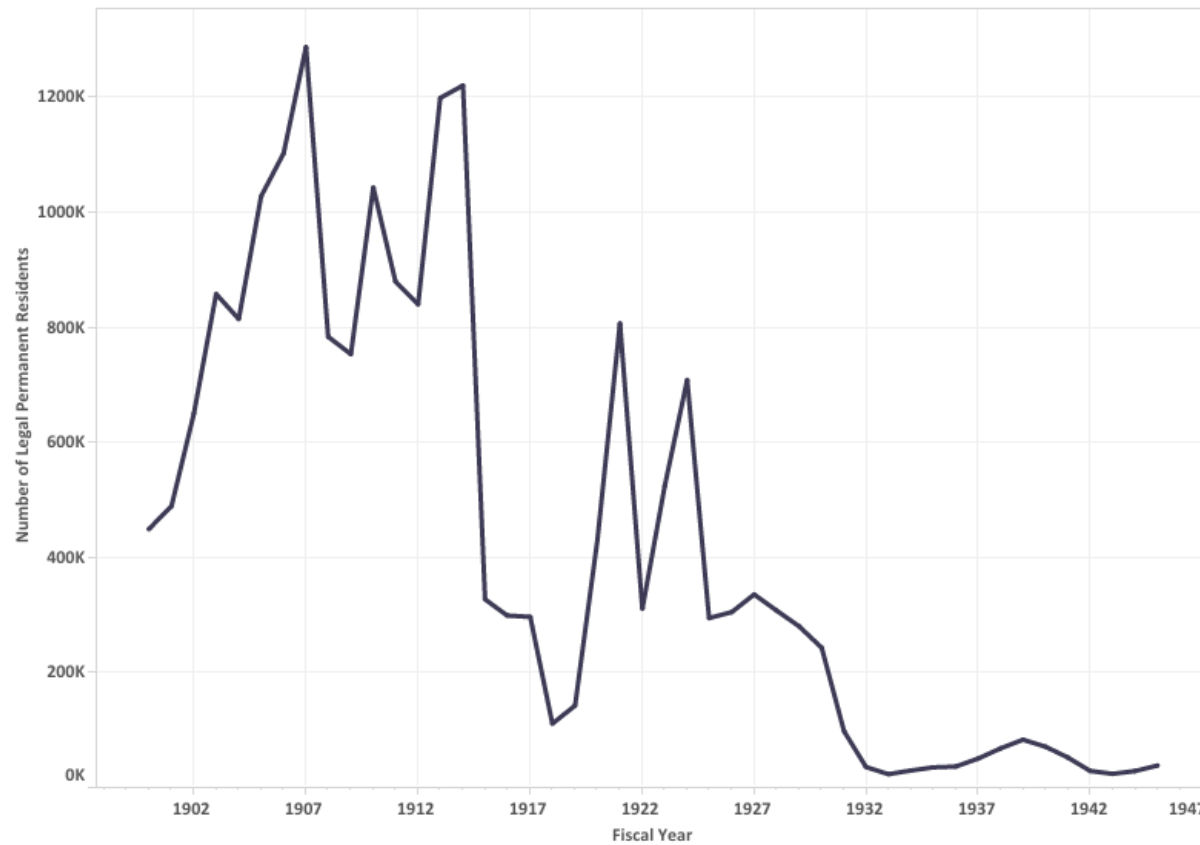
Industrial Scaling:

Process first,
adding resources



Talking about
adding resources...

U.S. Immigration 1900-1940



<http://www.migrationpolicy.org/programs/data-hub/us-immigration-trends#history>



When is this model successful

Taylorism relies on

- cheap, replaceable resources
- a dominant market position (stable planning environment)

**How did we end up talking about
small groups of people**

Adding people to a late
project makes it later

Brooks's Law

7 ± 2

XP software techniques

**A surprising number of things can
be achieved with smaller Teams**

Experiences and Achievements with small Teams

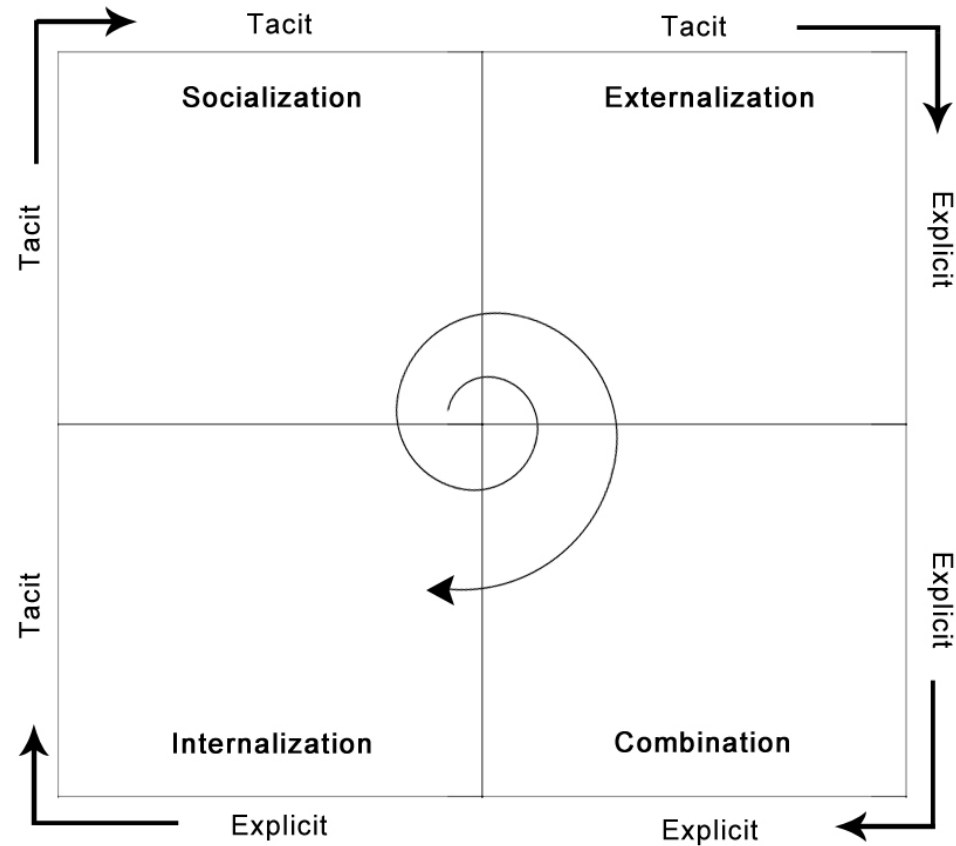
Achievements ...

1. Augmented learning
2. Predictable development
3. Fast feedback
4. Fun and personal development

and:

5. Isolate teams from
dysfunctional
organizations

Augmented Learning



SECI model by Nonaka, Takeuchi 1994ff

Learning speed = Development Speed

Alistair Cockburn

Predictable Development

XP -> defined and measurable results

- Working software is the primary measure of progress
(Agile Manifesto)

Regular Sprints -> Controlling flow under uncertainty

- F5: The principle of Periodic Resynchronization:
Use a regular cadence to limit the accumulation of variance
(Don Reinertsen, Principles of Product Development Flow)

Fast Feedback

7±2

- stable teams
- collective responsibility
- avoid handovers
- controlling uncertainty through short regular cycles

People have limited bandwidths

Fun and personal development

„Carrots & Sticks are so last Century. Drive says for 21st century work, we need to upgrade to autonomy, mastery and purpose.“

Daniel Pink, The surprising truth about what motivates us

Scaling Challenges these Achievements

Scaling Dimensions and Challenges

More complex products

- Understanding the whole product becomes harder

Complete value chain

- Eliminate traditional division of work involves more different job types

Up the corporate mountain

- Higher levels of hierarchy need different abstractions to function

More people

- Resulting in the need to involve more people
- Communication bandwidth, faster learning

A (scaled) environment is never perfect

- Continuously imperfect organization
- Continuously imperfect people (hopefully: diverse people)
- Continuously changing environment
- Diverse learning cycles

Scaling is about choosing a path

Values

- Values are necessary for creating a shared mindset and culture

Principles and Practices

- What are desirable practices

A Starting Point (a framework?)

- Not a Blueprint

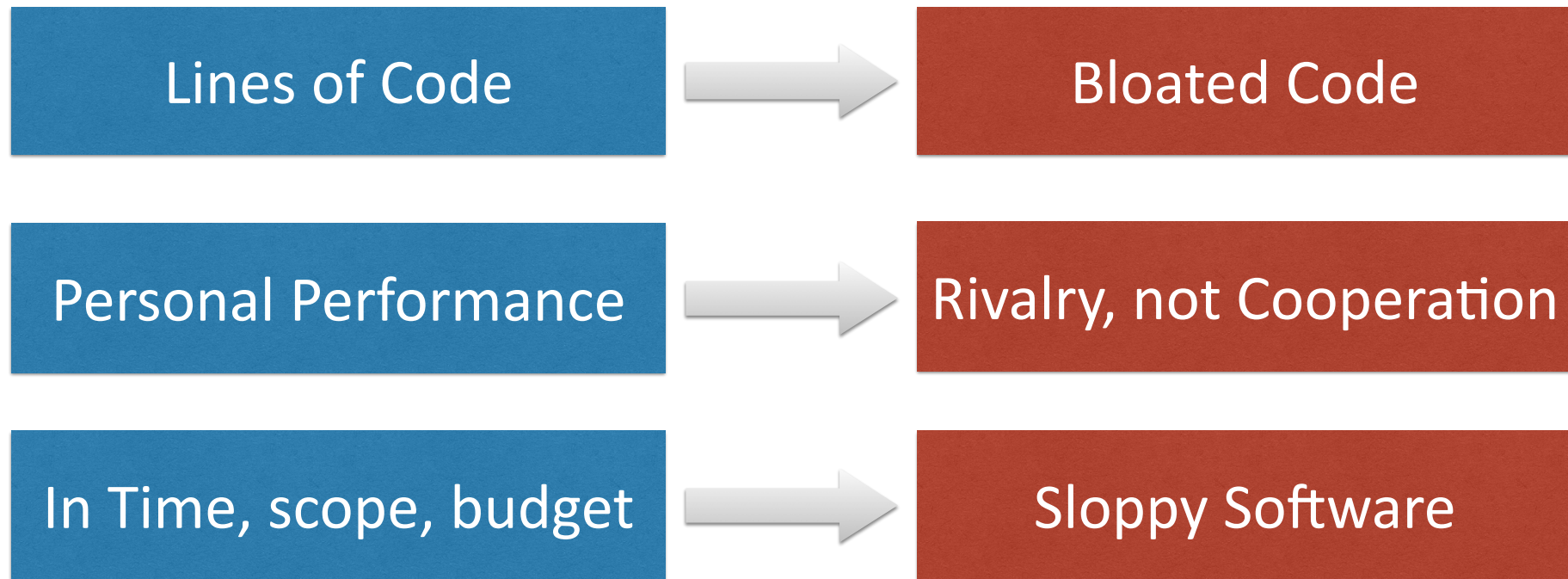
Agile Evolution

- Provide help for a continuous improvement

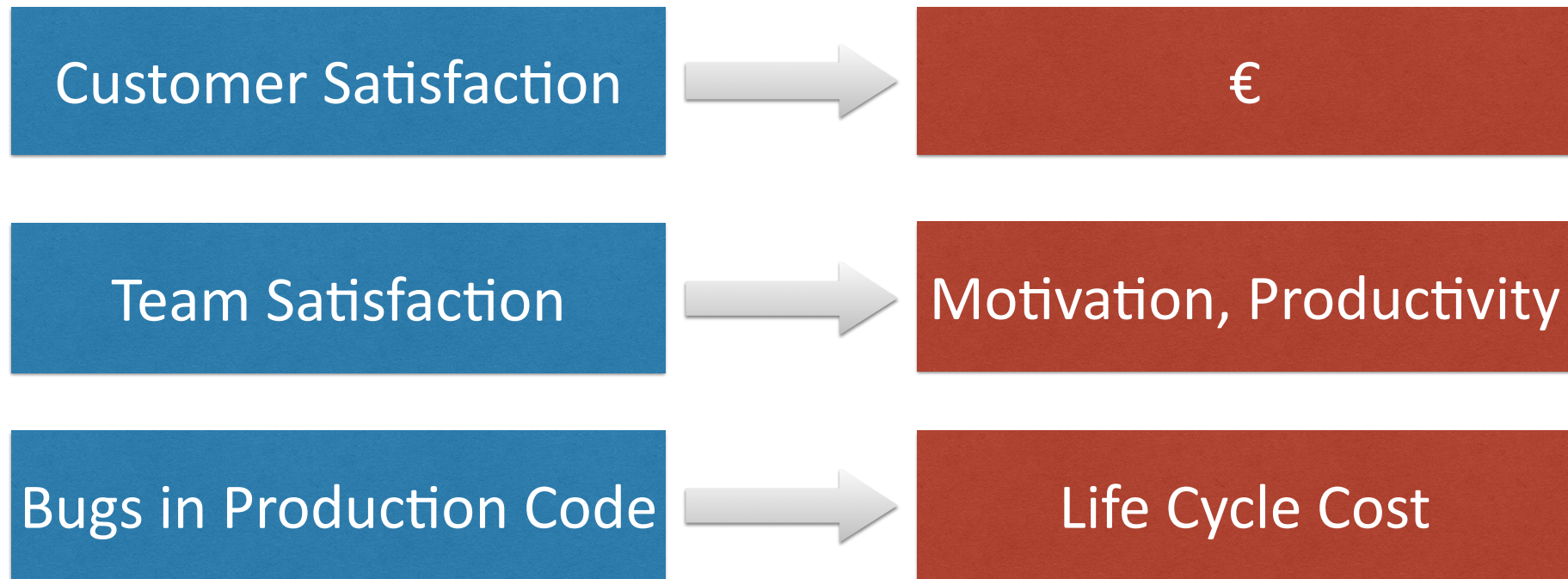
Scaling needs constant adaption

How to select metrics

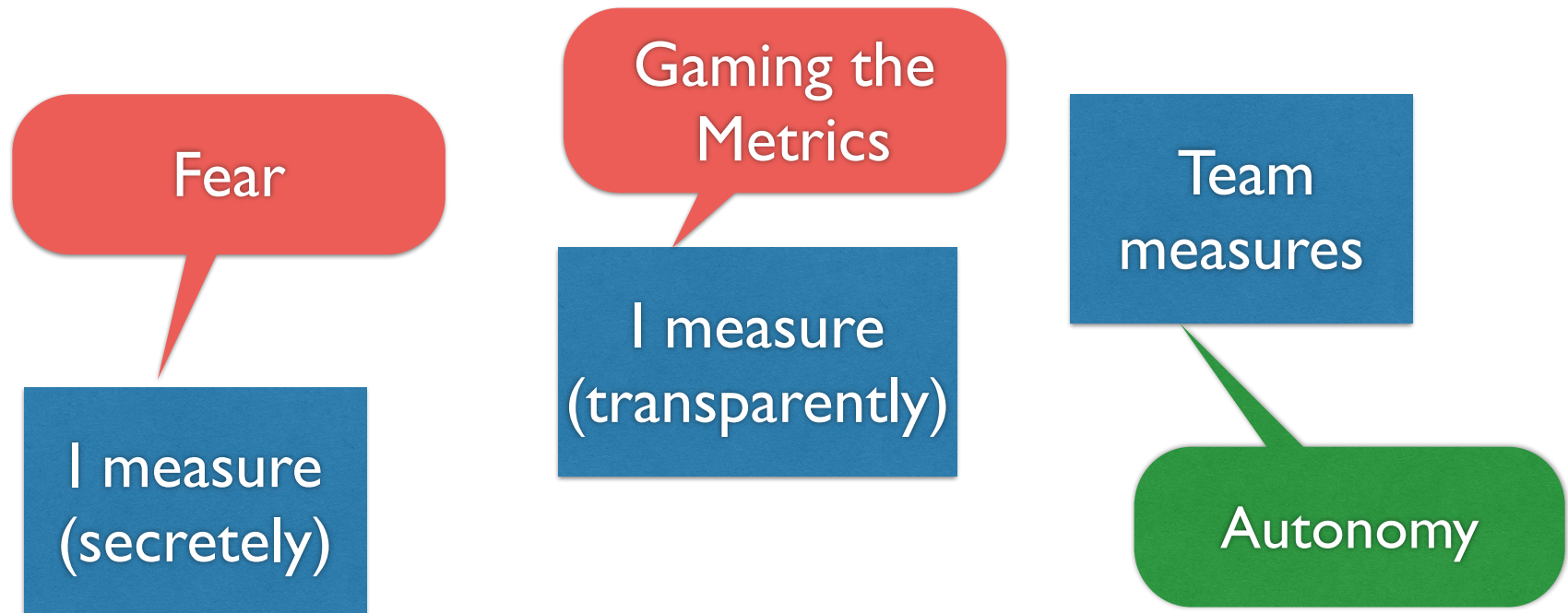
Metrics modify behavior (1)



Metrics modify behavior (2)



Who measures Whom



The Problem of KPIs

KPIs should inspire improvement

KPIs lose effectiveness over time

KPIs should be retired

From:

Performance Evaluation

=>

To: Maximize Learning

Alignment > Compliance

Alignment:

- we share the same goals

Compliance:

- do as I say or else ...

Agile Evolution

A framework for
continuous improvement

For Teams, this could mean to assess:

- Product Quality
- Predictive Quality
- Consistent Delivery
- Collaborative Work
- Inter-Team Collaboration
- Empowerment
- Continuous Improvement

1. Product Quality

Teams that excel in this area

- have a good understanding of who their customer is and what their customer's needs are
- know the cost of delay is for each feature and align with their customer's strategies to minimize them
- share a clear product vision that states their target market and competitive advantages
- have backlog items that reflect value to the customer, grouped into Minimal Marketable Features
- strive for simplicity, thus maximizing the amount of work not to be done
- maintain a barely sufficient backlog to fulfill their architectural and predictive needs
- have loosely coupled product increments that allow organic growth in small increments and thus a steady accrual of value

7. Continuous Improvement

Teams that excel in this area

- are master of their process and improve it in a regular, fast cadence (e.g. retrospectives)
- do retrospectives effectively, leading to actionable items that regularly get executed
- provide transparency about core information and regularly reflect on it
- celebrate reflection as high-leverage time, not as “unproductive not-working”
- make progress through small safe-to-fail experiments
- accept failure and exercise them as learning opportunity
- experience management support and regularly face management’s demand to improve the process

Seven Rules for Scaling

1. Don't do it

Think again: what created the need to scale

Look for

- Complexity in your product
- Handovers
- Skill limits

2. Make Agile stick

3 Steps to make Agile stick

To make Agile stick

- Pursue solid Agile practices
- Improve continuously
- Make agile part of your company's DNA

3. Clean up your mess

To clean up ...

Accidental vs. essential complexity

- Simplify your product

Clean up your software code base

- Loose coupling is the one principle that survived all hypes
- Indicator: can you deliver continuously ?

Clean up organizational impediments

- Conway's law: a product will be structured like the organization which created it
- Handovers are evil

4. Think about your values

Agile Evolution Values

- Trust
- Respect
- Curiosity
- Excellence
- Alignment

5. Consider your environment

Things tend to change rapidly these times

From defending your position to thriving in a changing environment

- Adaptability
- Creative Change

Towards a Creative Economy

6. Organize Flow

Turn your matrix organization upside down

A typical matrix organization

- Focuses on resource utilization
- Obscures the important part: value streams

7. Measure to accelerate learning

Measure the right way

Why

- Metrics help to identify „better“

What

- Product, process, skills

How

- Support autonomy and leadership on every level

Implement an Agile Evolution

Assess and improve

- Agile is a path, not a status - Agile Evolution helps to walk the walk

Have a system of metrics

- Helps asking powerful questions and to derive improvement objectives

Guide and measure an improvement and transformation process

- Use metrics to steer the implementation Agile and Lean

A reference model

- Have a Big Picture of your Agile Transformation - evolve this picture constantly

Ask the Team
Inspect and Adapt
Deliver every Sprint
Treat People as Adults

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