Why 47% of Agile Transformations Fail

Jeff Sutherland, Co-Creator of Scrum and Creator of Scrum@Scale
SCRUM INC HAS A HISTORY OF TRANSFORMING ORGANIZATIONS

AGILE AND SCRUM ARE CHANGING THE WORKPLACE. WE PIONEERED THAT CHANGE.

Scrum Inc. was founded in 2006 by Dr. Jeff Sutherland, co-creator of Scrum and signer of the Agile Manifesto. We have helped hundreds of companies and thousands of teams fundamentally evolve to innovate faster, deliver value, and thrive in an ever-changing world. We continue to lead the inspection, adaptation, and evolution of Scrum and the Scrum Guide.
Agile Transformations are 77% Scrum

Deployed Widely Throughout the Enterprise

Where Does Success Come From?

0% of leading companies are not agile!

The most successful companies deploy Scrum enterprise wide.

Figure 4. Leaders vs. laggards on depth of current organizational agility

What Does Success Look Like?

• In Aug. 2018, Apple became the first company in history to reach a $1 trillion valuation.

• One month later, Amazon joined the club (though has since fallen back to the billions), and on April 2019, so did Microsoft.

• These are ALL Scrum companies
## Agile is Disrupting All Domains

### Top 25 Automakers by Market Cap

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Mkt Cap (USD $B)</th>
<th>Change (USD $B)</th>
<th>Chg %</th>
<th>Symbol</th>
<th>Price/Sh</th>
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<td>16.17</td>
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<tr>
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<td>15.33</td>
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<td>-</td>
<td>NIO</td>
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<tr>
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<td>M&amp;M.NS</td>
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<tr>
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<tr>
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<td>-2.01%</td>
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<td>10.73</td>
<td>China</td>
</tr>
</tbody>
</table>

*Tesla Model S crushes Porsche Taycan's Nürburgring record.*
Leading Companies Must Stay Agile

Only 17% of leading companies will be leaders 5 years from now.

“These companies — including organizations like Apple and Alphabet — continually find new sources of competitive advantage by reinventing their businesses and adapting to evolving market conditions.”

MIT Sloan Management Review Research Highlight January 09, 2020
Agile Transformation Failure

47% Fail

67% of Failures are Terminal

Source: Forbes Insights and MIT Sloan Management Review
Introducing the Scrum@Scale Guide

Addresses the three Mega-Issues:

• **#1 Prioritize:** Limited resources, ability to focus

• **#2 Deliver:** High-quality, working product is primary measure of progress

• **#3 Refactor:** Ability to change fast – product AND organization
Scrum@Scale Enables Focus Across the Organization
Reduce WIP, eliminate dark work, and focus on value / outcomes

**25% of staff** delivering stories customers will use

64% x 70% = **45% of staff** delivering stories the customer will never or rarely use *(Standish Group)*

**Typically 30% of staff** working on zero value stories

Lack of direction causes staff to make up work.
Unwillingness to prioritize proliferates useless projects.
Delayed decision-making is the primary driver of project failure and budget overrun.

Source: Dr J Sutherland, Scrum.inc based on research by the Standish Group
Genuinely generally applicable
For any type of work
Agile Transformation that Works:
Microsoft Development Tools >3000 people

Lean, Scrum, and Agile: The Connection

TPS 1950’s  
Scrum 1990’s  
Agile 2001  
2014

Inspired

One Parent

Implementation
Delivering On the Promise

The Scrum Framework
Patterns (essential for performance)
Lean tools (necessary for problem solving)
Scrum@Scale (critical for more than one team)
Scrum: Moore’s Law Applied

Transistors on a Chip

Stories in a Sprint

Moore, Gordon E. 1965 Cramming More Components on Integrated Circuits. Electronics 38:8

Jeff Sutherland (2009) ACM StandardView: Volume 6 Issue 1, March 1998

Why I Love the OMG: Emergence of a Business Object Component Architecture
Brook’s Law Makes It Difficult To Scale

“Adding people to a late project makes it later.” Fred Brooks

Communication overhead explodes when adding more people to a project reducing productivity per person.

If a 6 person team takes 11 months to finish a project, a 10 person team takes 17 months.

https://www.qsm.com/process_improvement_01.html

The same phenomenon occurs at the team level. Adding teams reduces productivity per team.
The First Published Project to Overcome Brook’s Law

Distributed Scrum: Agile Project Management with Outsourced Development Teams

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Proceedings of the 40th Hawaii International Conference on System Sciences - 2007
Scaling Without Losing Productivity Per Team is Called Linear Scalability

- Requires a fractal-like design. Every component looks like every other component.
- Small teams with object-oriented information hiding radically reduces communication paths.
- Network design with information transparency. Everyone can see what is going on at all levels.
- These architectures are seen everywhere in nature, social networks, and chip design. They are called scale free architectures.
Using Patterns to Overcome Brook’s Law

- It took a decade of meetings of Scrum experts to create the patterns book.

- Throughout this work, our Product Owner, Jim Coplien, repeated asserted “there are no scaling patterns.”

- Scrum@Scale was created with this in mind.
A Pattern Language by Christopher Alexander is believed to be the most widely read architectural treatise ever published.

Alexander believes “[t]here is a central quality which is the root criterion of life and spirit in a man, a town, a building, or a wilderness. This quality is objective and precise, but it cannot be named” (Alexander 1979, p 19)


Software developers call it QWAN – the Quality Without a Name!
Mitosis – Splitting a Team

One should grow a **SCRUM TEAM** in an incremental, piecemeal fashion, but eventually the team just becomes too large to remain efficient.

Differentiate a single large **DEVELOPMENT TEAM** into two small teams after it gradually grows to the point of inefficiency—about seven people in the old team.

**Members of separate teams should continue to coordinate with each other informally, and as necessary, through the daily rhythm of **SCRUM OF SCRUMS** events.**
Pattern: Scrum of Scrums

When multiple teams work independently of each other they tend to focus myopically on their own concerns and lose sight of any common goals.

Therefore:
Give the right and the responsibility to collaborate on delivering common goals identified by the Product Owner to the Development Teams themselves. Permit the teams to figure out the best way to coordinate their efforts.

• Sprinting together—at the same cadence, at the same time, using Organizational Sprint Pulse
• Maintaining a common Definition of Done
• Common Sprint Planning, Sprint Review and other mandatory Scrum events
• Holding Backlog Refinement events in common
• Creating semi-formal optimizing networks of Birds of a Feather, utilizing common competencies such as architecture across the teams to proactively handle issues that are known in advance
• Establish a regular Scrum of Scrums event, perhaps daily, after the teams’ Daily Scrum events, to resolve emergent dependencies and issues, and to get things to Done.
Scrum of Scrums Done Right

The Scrum of Scrums is a set of teams that delivers a product increment at the end of a sprint.

The IDX Scrum of Scrums that is the origin of the pattern is a release team.

The Scaled Daily Scrum requires many experts other than Scrum Master to deliver a product increment.

The IDX Scrum of Scrums was responsible for creating a potentially shippable increment of product at least once a sprint and deploying on a regular cadence.
Scaled Daily Scrum

“Establish a regular Scrum of Scrums event, perhaps daily, after the teams’ Daily Scrum events, to resolve emergent dependencies and issues, and to get things to Done (see Definition of Done).

“The SCRUM OF SCRUMS is a well-established pattern, first implemented at IDX Systems (now GE Healthcare) in 1996. Jeff Sutherland was Senior Vice-President of Engineering, with Ken Schwaber on board as a consultant to help roll out Scrum. There were eight business units, each with multiple product lines. Each product had its own SCRUM OF SCRUMS.”
Product Owner Team

The **PRODUCT OWNER** has more to do than a single person can handle well

Therefore:

Create a **PRODUCT OWNER TEAM**, led by the Chief Product Owner, whose members together carry out product ownership.

The **PRODUCT OWNER TEAM** realizes the **VISION** by ordering the **PRODUCT BACKLOG ITEMS** through a single **PRODUCT BACKLOG**.
Metascrum

**SCRUM TEAMS** are in place, but direction (or the threat of interference) from legacy management structures causes confusion about the locus of control over product content and direction.

Therefore:

Create a **META_SCRUM** as a forum where the entire enterprise can align behind the *Product Owners’* backlogs at every level of Scrum in the organization.
Many great VISIONS are beyond the reach of solo efforts, and to achieve such a VISION you need to build the complex product, bring it to the market and leverage feedback. In this case the Product is an Agile Organization.

Therefore:

**Form a team that has all the necessary competencies:** the people who can make and deliver the product (a DEVELOPMENT TEAM), a PRODUCT OWNER who guides product direction, and a SCRUMMASTER who facilitates learning.
Minimal Viable Bureaucracy

Mitosis
Scrum Team
Scrum of Scrums
Product Owner Team
MetaScrum
Executive Action Team

There is a Scrum Team that owns the agile implementation called an Executive Action Team (EAT).
There is a Product Owner Team called an Executive MetaScrum Team (EMT) that owns the organization’s backlog.
Scrum@Scale Framework
Twice the Work in Half the Time at Scale

- Quicken Loans (Rocket Mortgage) is the largest mortgage loan provider in the U.S.
- Implemented scaled agile framework with 26 release trains for 17000 people
- Cycle time for feature development dropped from 86 days to 42 days.
- The Brand Marketing release train, the digital storefront deployed scaled scrum patterns.
- Scaled scrum patterns amplified reduction in average cycle time to 21 days which was 340% better than the rest of the company.
Survival Depends on Successful Agile Transformations

Minimum Viable Bureaucracy overcomes Brooks Law to achieve linear scalability
This means no decrease in performance per team when adding teams

MVB radically reduces Agile Transformation failure while delivering twice the value in half the time

The secret to the future survival of your company