



Why 47% of Agile Transformations Fail

Jeff Sutherland, Co-Creator of Scrum and Creator of Scrum@Scale

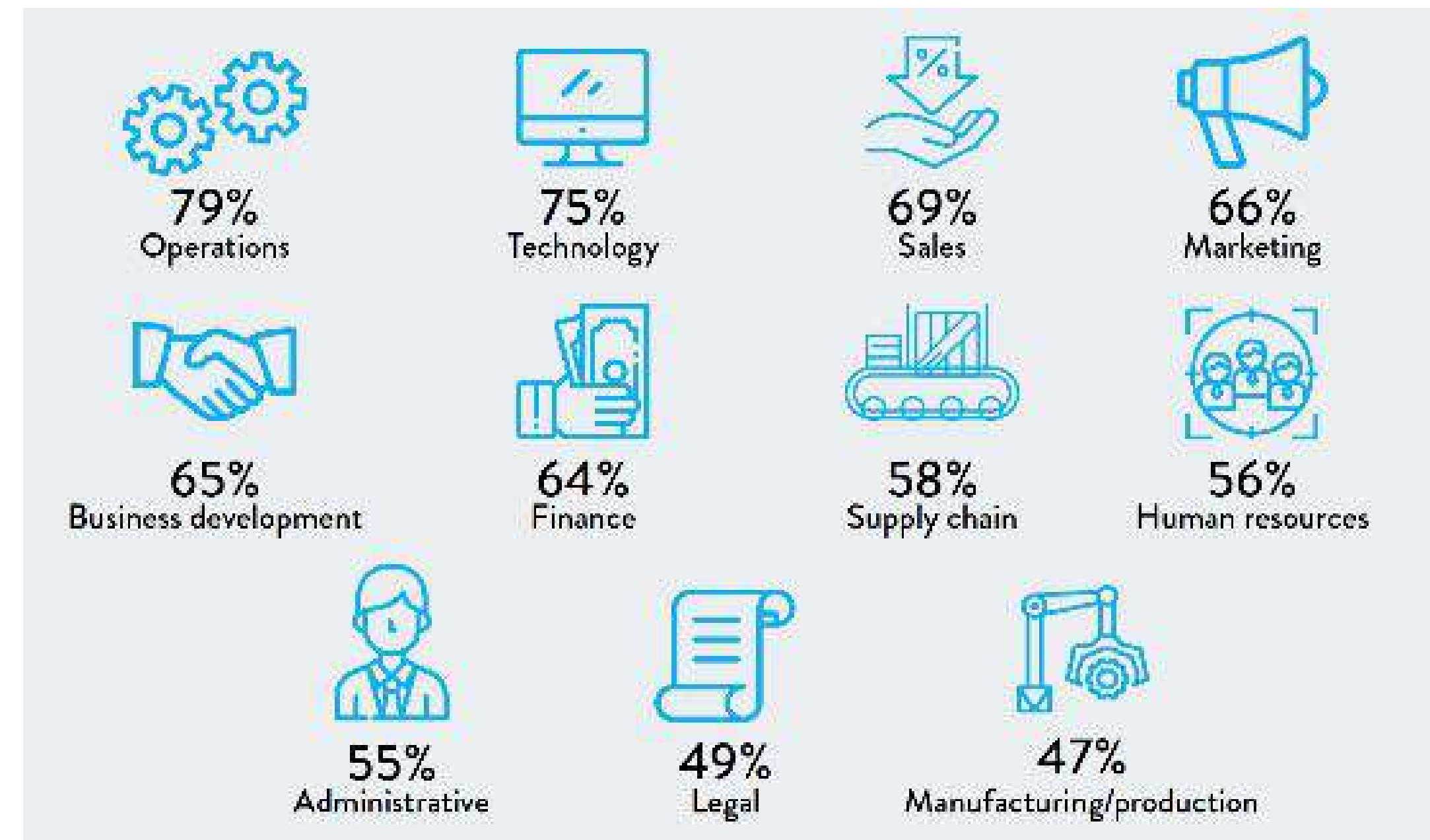
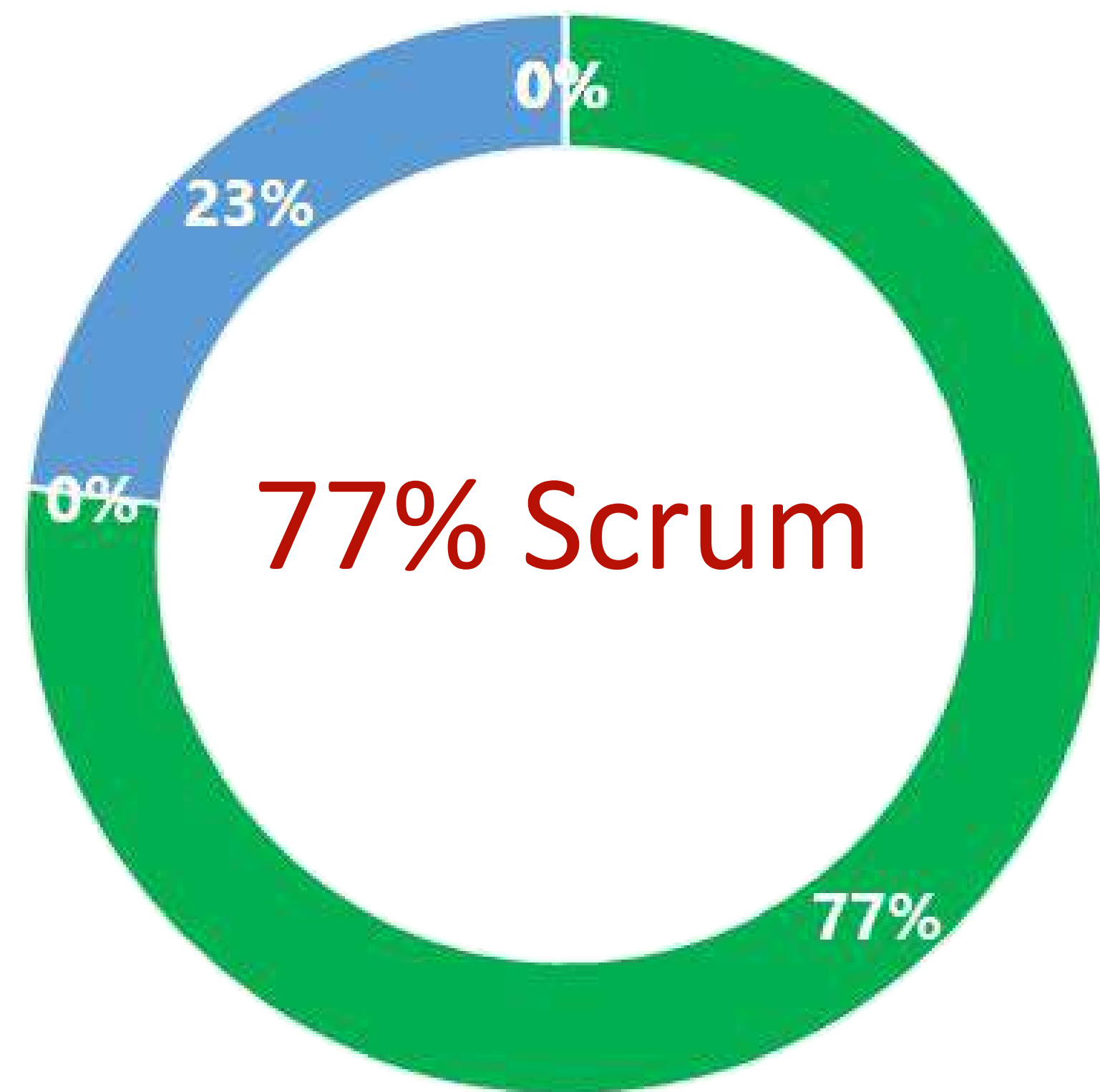
SCRUM INC HAS A HISTORY OF TRANSFORMING ORGANIZATIONS

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.



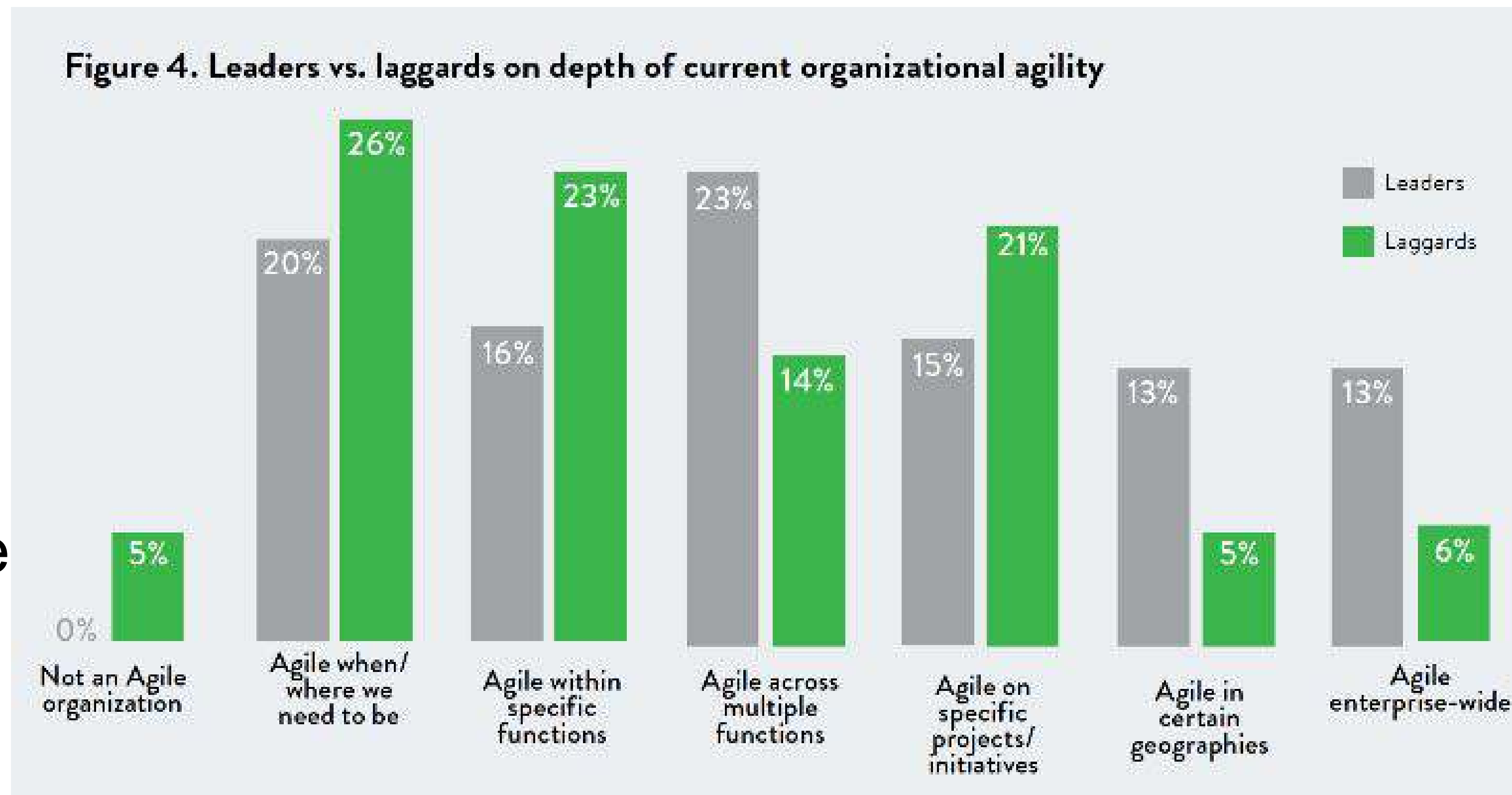
Agile Transformations are 77% Scrum



Deployed Widely Throughout the Enterprise

Source: THE ELUSIVE AGILE ENTERPRISE: How the Right Leadership Mindset, Workforce and Culture Can Transform Your Organization. Forbes 2018

Where Does Success Come From?



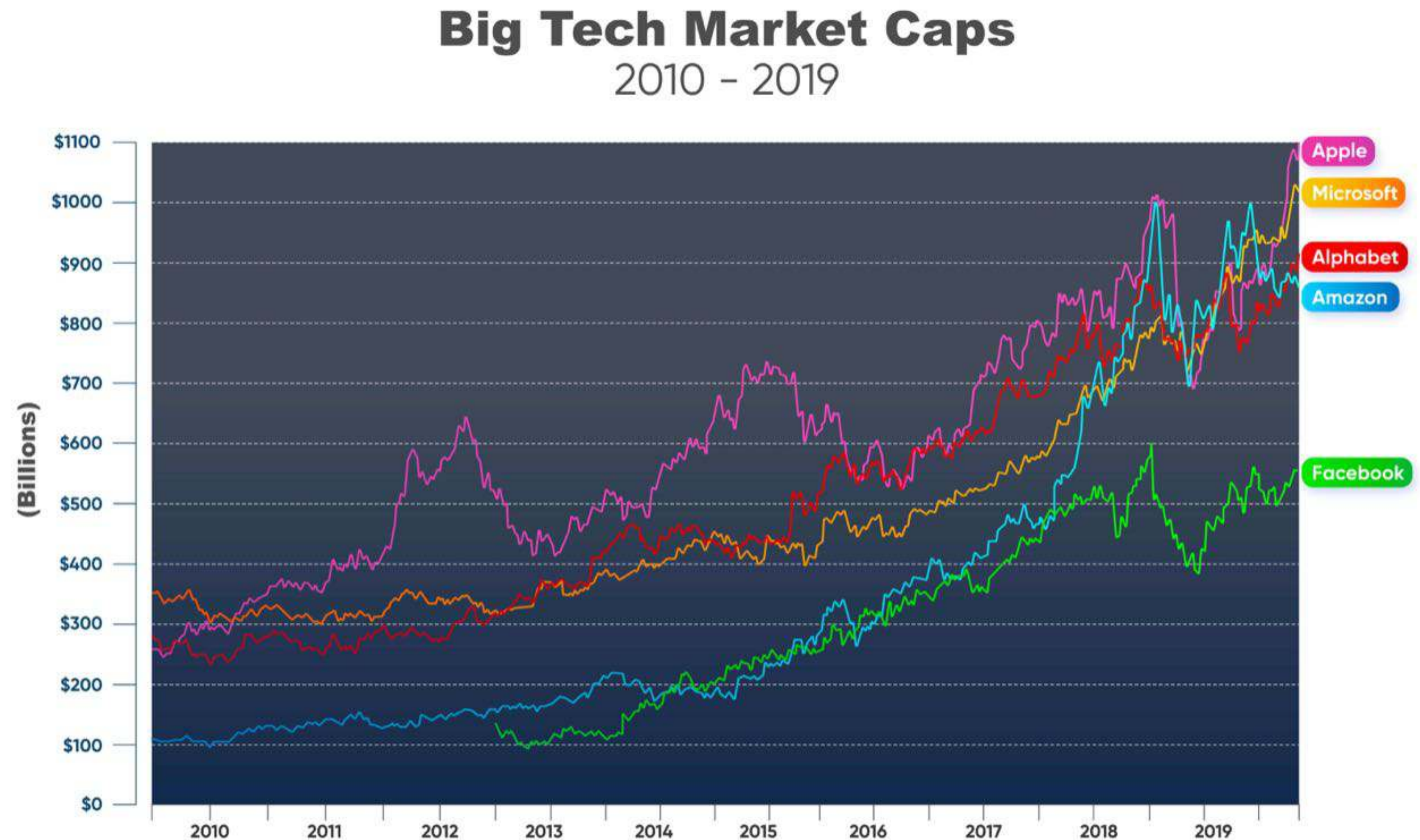
0% of leading companies are not agile!

The most successful companies deploy Scrum enterprise wide.

Source: THE ELUSIVE AGILE ENTERPRISE: How the Right Leadership Mindset, Workforce and Culture Can Transform Your Organization. Forbes 2018



















































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

Rank	Company	Mkt Cap (USD \$B)	Change (USD \$B)	Chg %	Symbol	Price/Sh	Country
1	 Tesla	278.33	-	-	TSLA	1,500.64 USD	 USA
2	 Toyota	175.12	-	-	TM	126.49 USD	 Japan
3	 Volkswagen	85.17	0.90	1.07%	VOW.DE	151.60 EUR	 Germany
4	 Daimler	48.25	2.21	4.80%	DAI.DE	39.48 EUR	 Germany
5	 Honda	45.71	-	-	HMC	26.44 USD	 Japan
6	 BMW	44.22	0.90	2.08%	BMW.DE	59.99 EUR	 Germany
7	 Ferrari	44.11	-	-	RACE	177.39 USD	 Italy
8	 General Motors	38.42	-	-	GM	26.85 USD	 USA
9	 SAIC*	30.88	0.15	0.48%	600104.SS	18.50 CNY	 China
10	 BYD	29.51	-0.28	-0.93%	1211.HK	69.00 HKD	 China
11	 Ford	27.28	-	-	F	6.86 USD	 USA
12	 Maruti Suzuki	23.89	0.23	0.96%	MARUTI.NS	5,931.50 INR	 India
13	 Hyundai	22.91	1.46	6.82%	005380.KS	117,500 KRW	 South Korea
14	 Fiat Chrysler (FCA)	21.25	-	-	FCAU	10.50 USD	 Italy/USA
15	 Geely	20.12	0.40	2.05%	0175.HK	15.90 HKD	 China
16	 Nikola	18.96	-	-	NKLA	52.53 USD	 USA
17	 Suzuki	17.93	-	-	SZKMF	37.47 USD	 Japan
18	 Subaru	16.51	0.18	1.13%	FUJHY	10.73 USD	 Japan
19	 Nissan	16.17	0.90	5.92%	NSANY	8.23 USD	 Japan
20	 NIO	15.33	-	-	NIO	12.94 USD	 China
21	 Groupe PSA	15.03	0.17	1.17%	UG.PA	14.70 EUR	 France
22	 Mahindra	9.74	0.28	2.92%	M&M.NS	587.55 INR	 India
23	 FAW	9.07	0.07	0.81%	000800.SZ	13.77 CNY	 China
24	 Renault	7.92	-0.00	-0.04%	RNO.PA	23.93 EUR	 France
25	 Changan	6.42	-0.13	-2.01%	000625.SZ	10.73 CNY	 China



Tesla Model S crushes Porsche Taycan's Nürburgring record.

Leading Companies Must Stay Agile

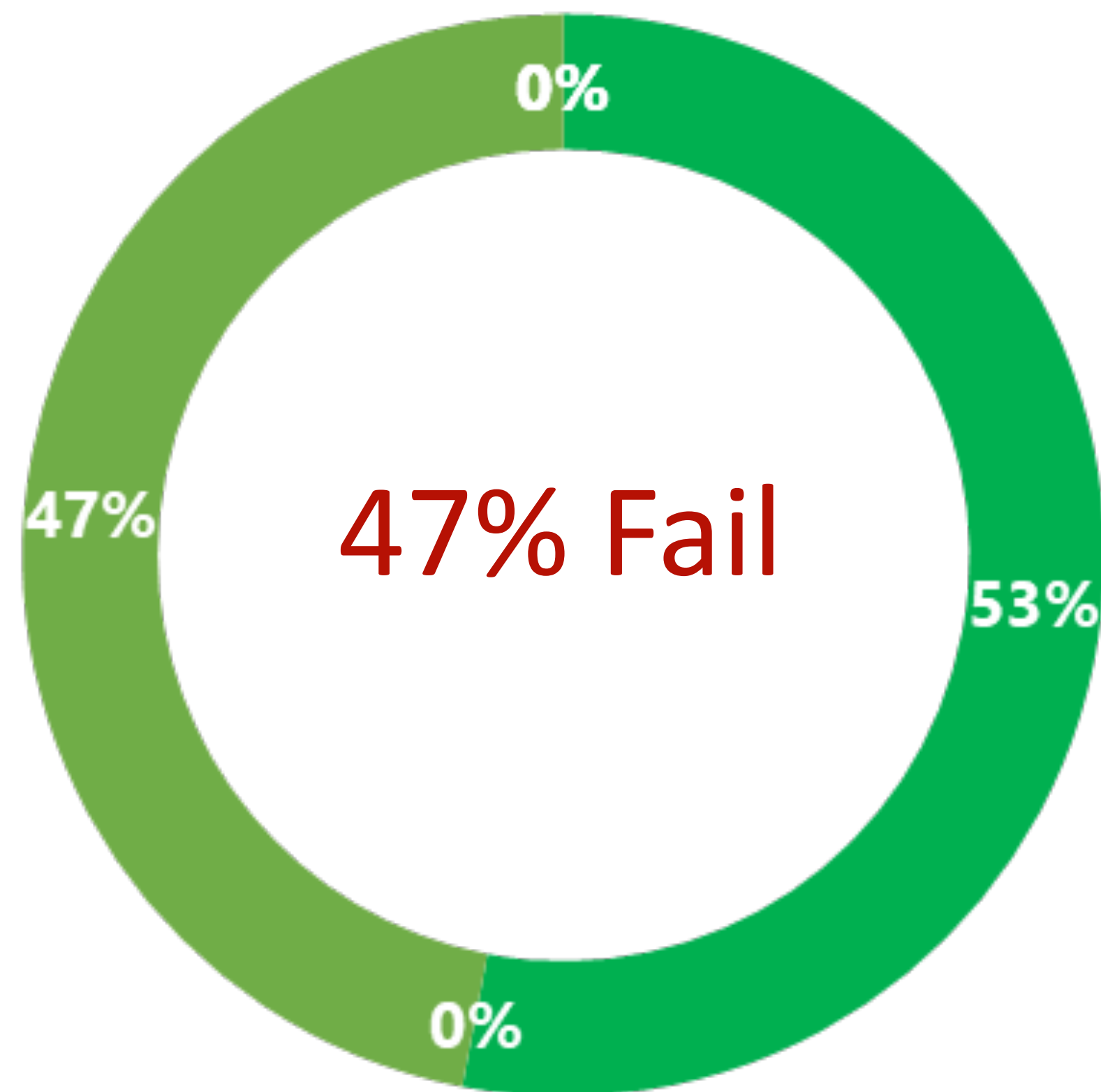
Only 17% of leading companies will be leaders 5 years from now.

“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

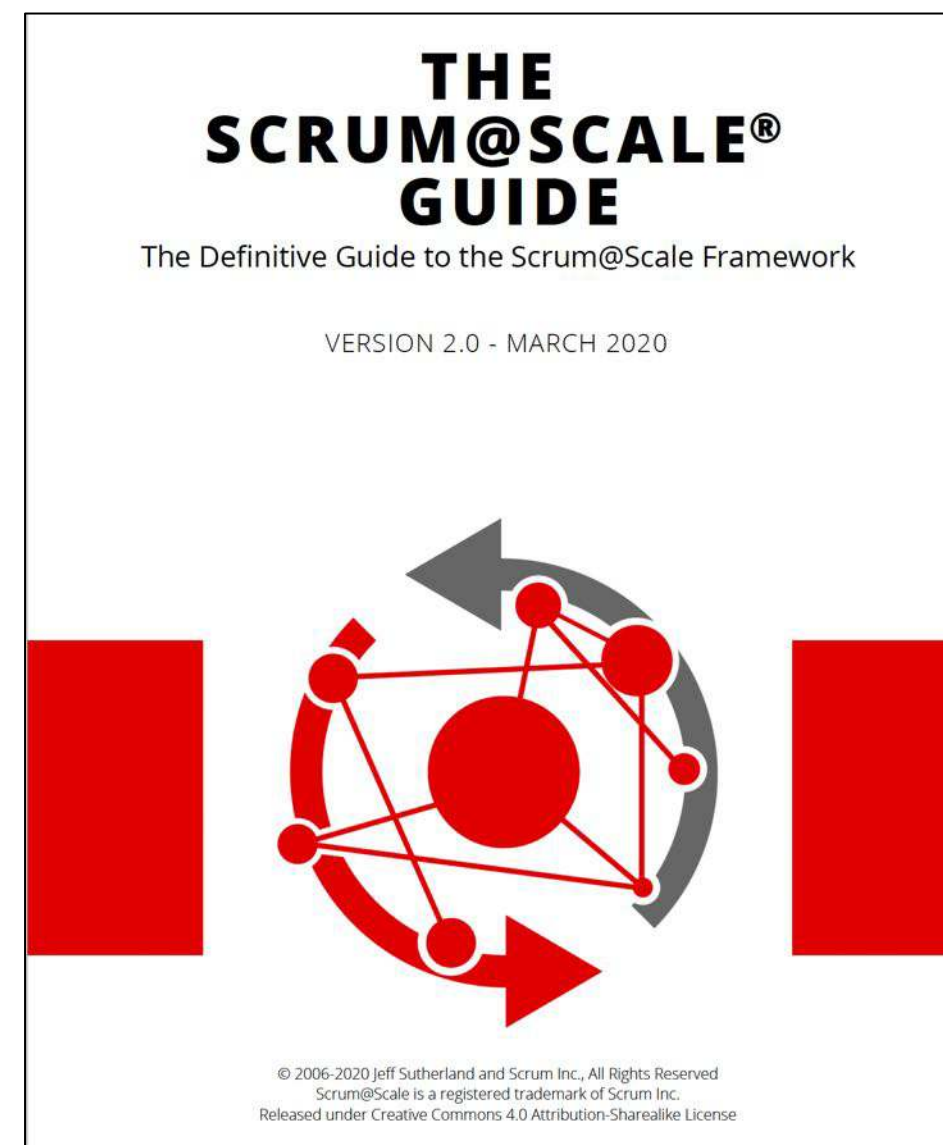
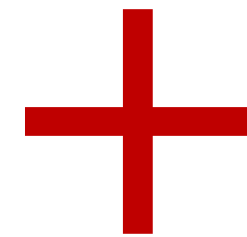
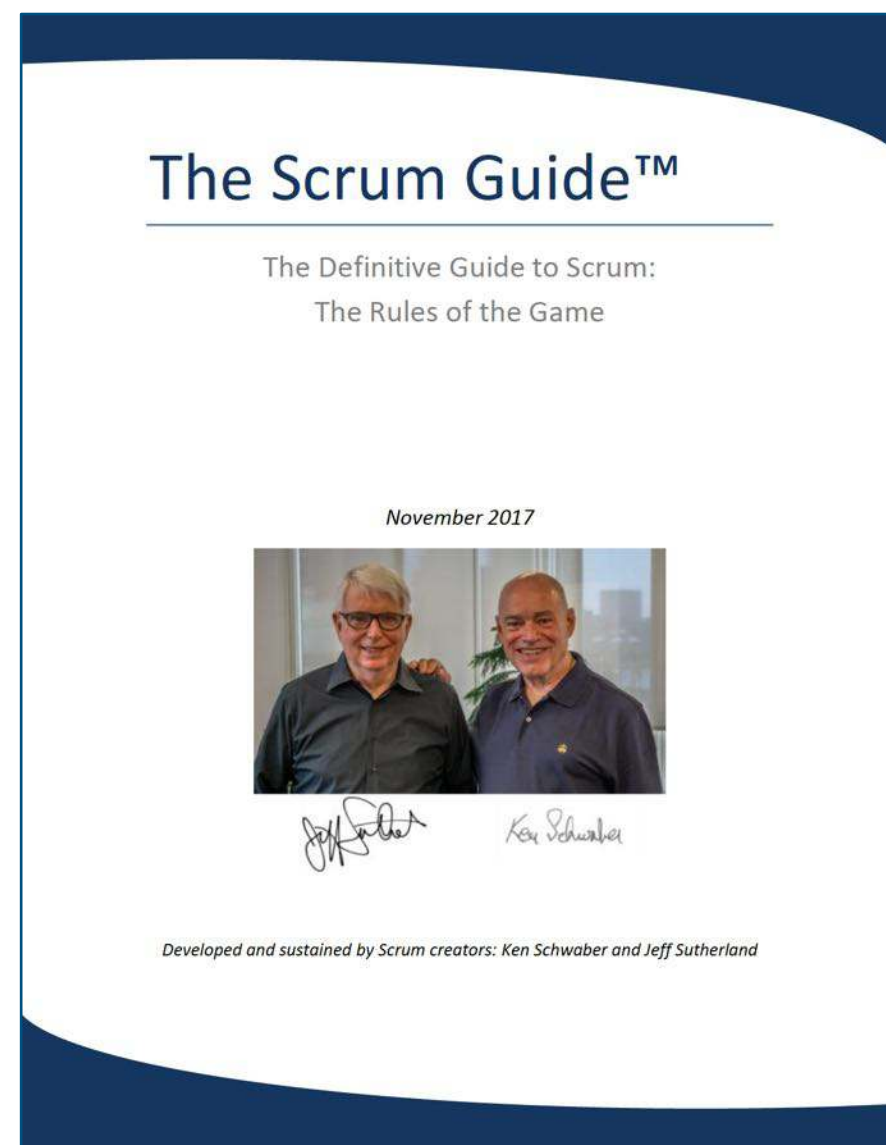


Agile Transformation Failure



Source: Forbes Insights and MIT Sloan Management Review

Introducing the Scrum@Scale Guide

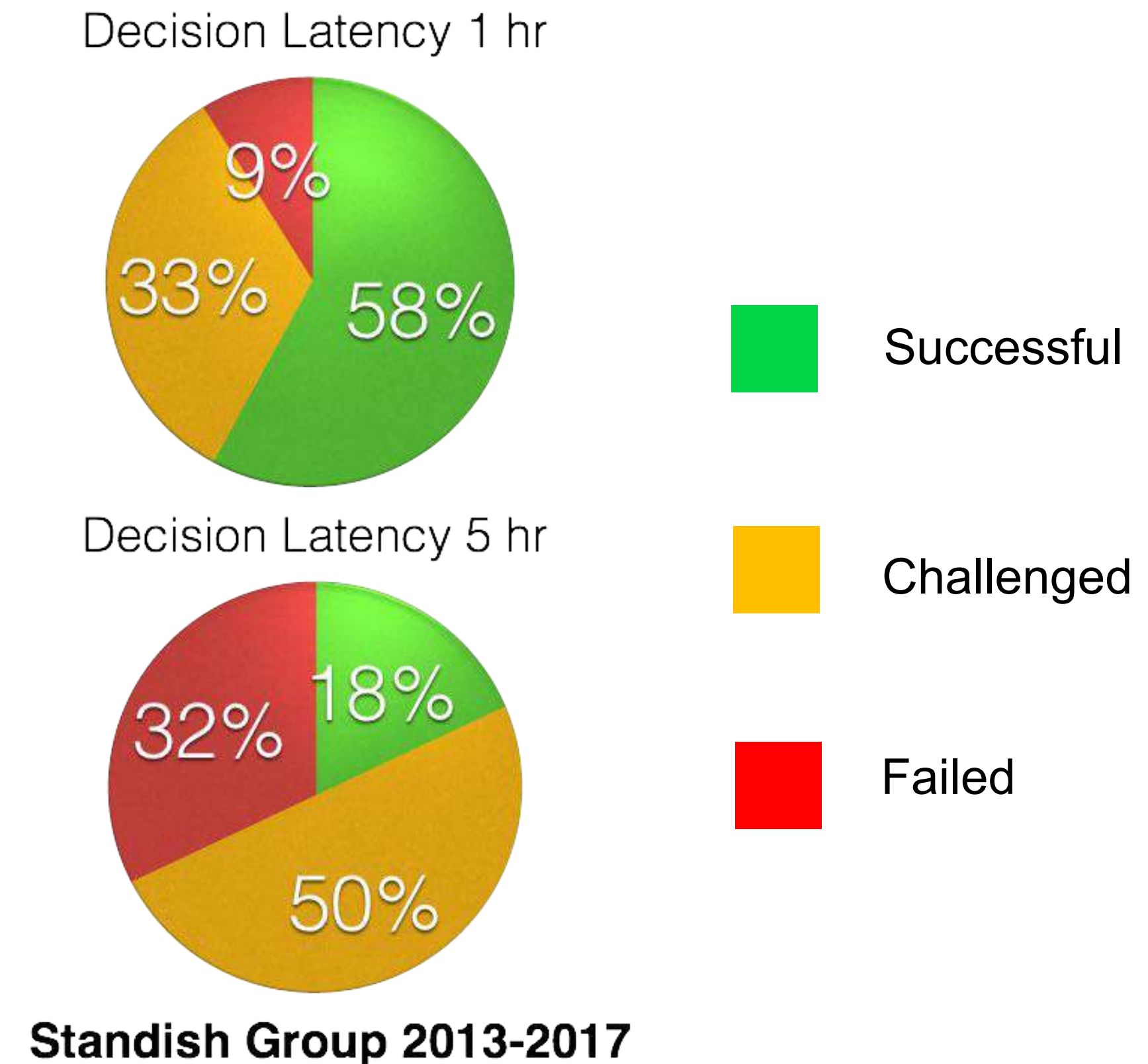
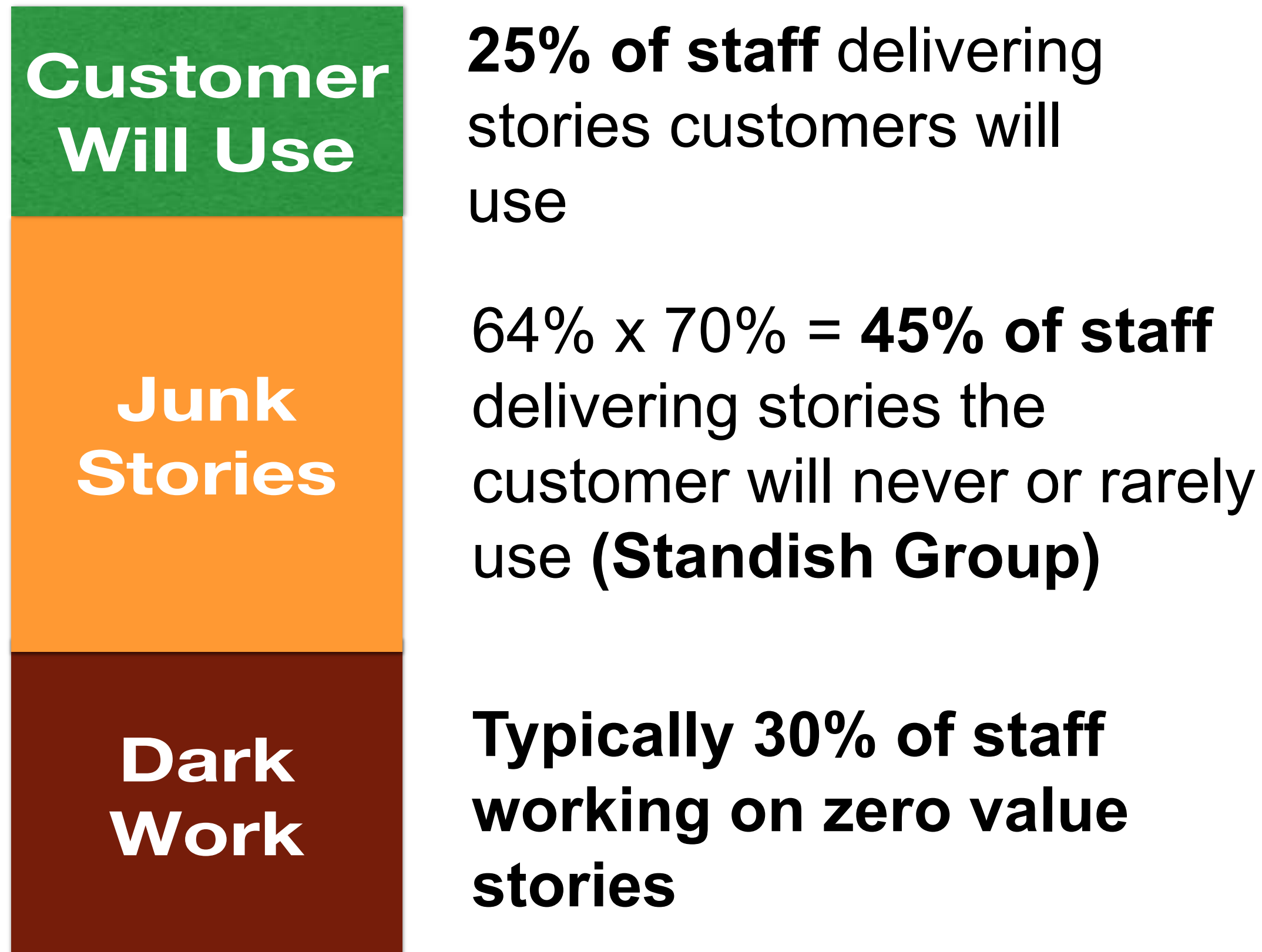


Addresses the three Mega-Issues:

- **#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

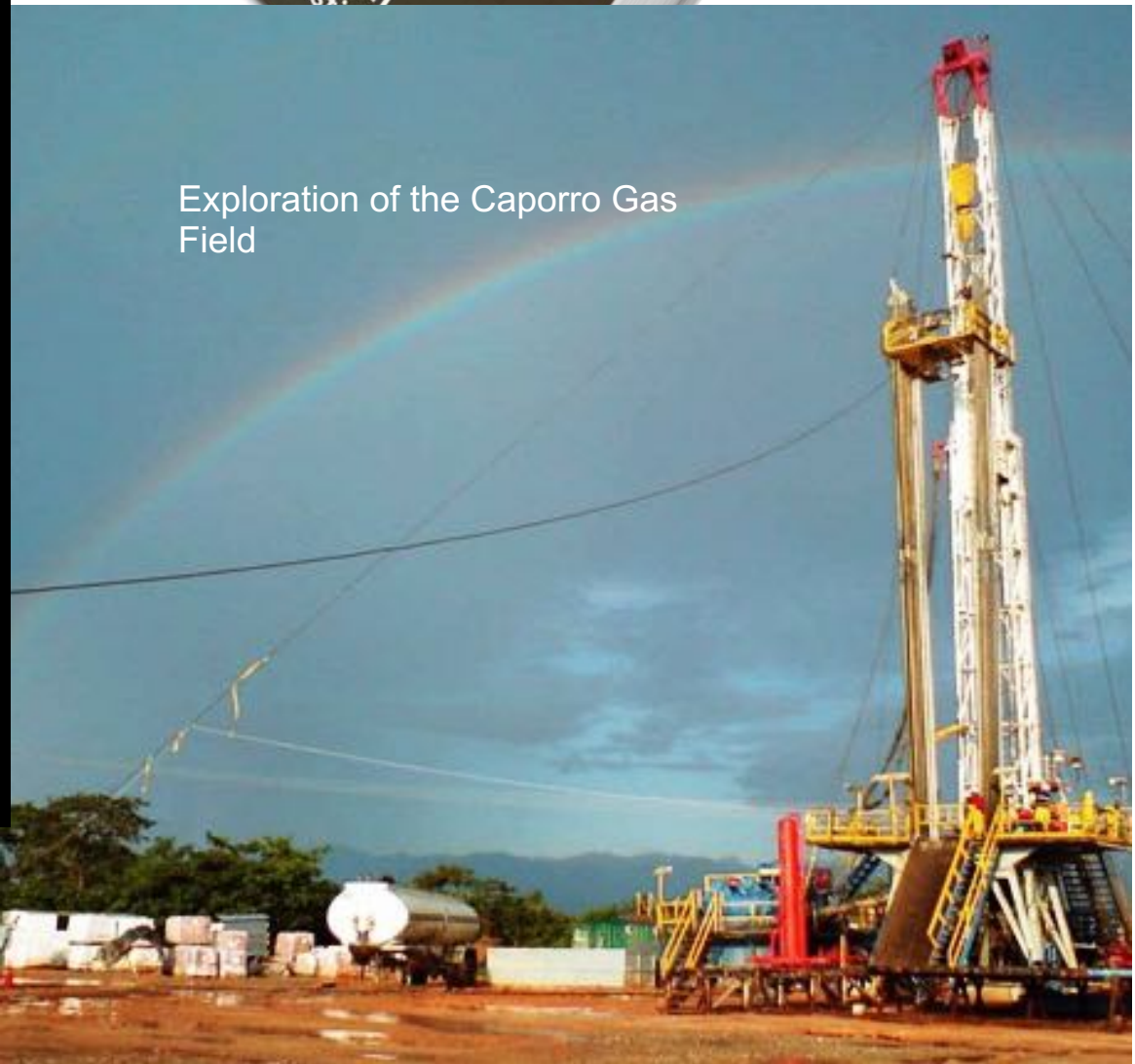
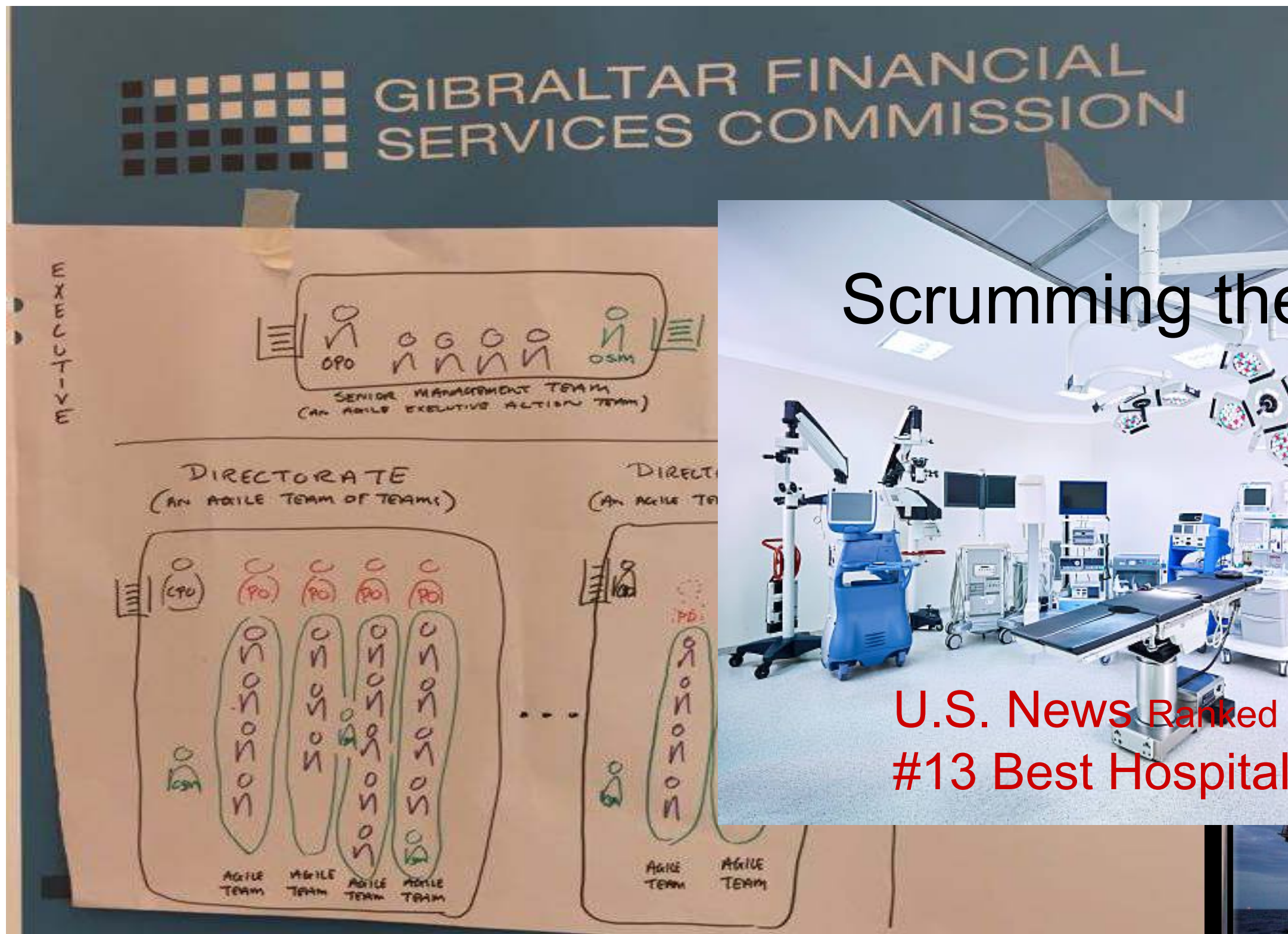


Source: Dr J Sutherland, Scrum.inc based on research by the Standish Group

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.

Genuinely generally applicable

For any type of work

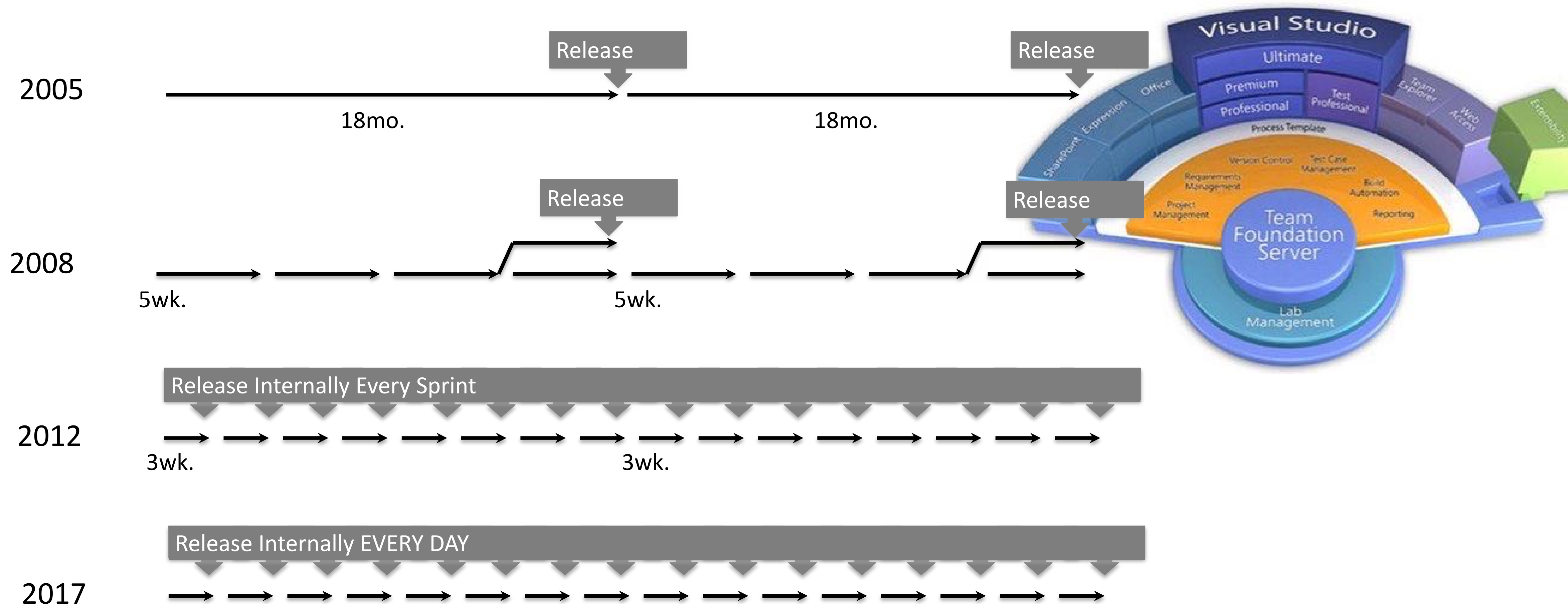


GIBRALTAR FINANCIAL SERVICES COMMISSION

Agile Financial Regulation

Agile Transformation that Works:

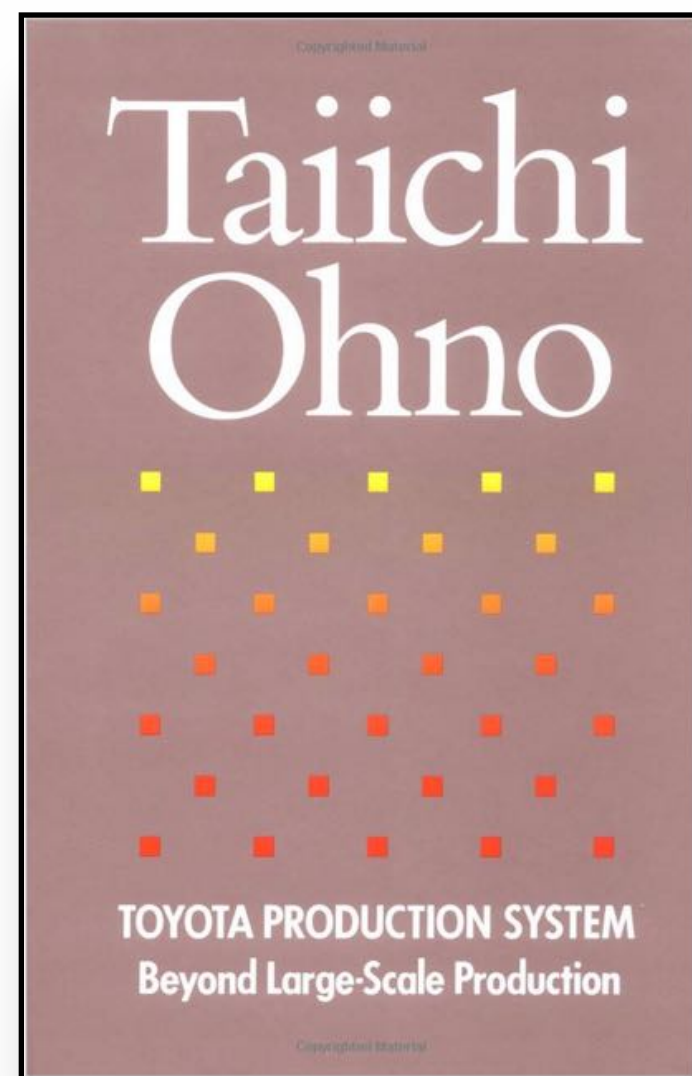
Microsoft Development Tools >3000 people



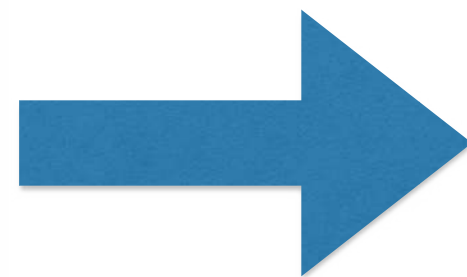
Source: Sam Guckenheimer and Neno Loje. Agile Software Engineering with Visual Studio. Microsoft Press, 2012.

Lean, Scrum, and Agile: The Connection

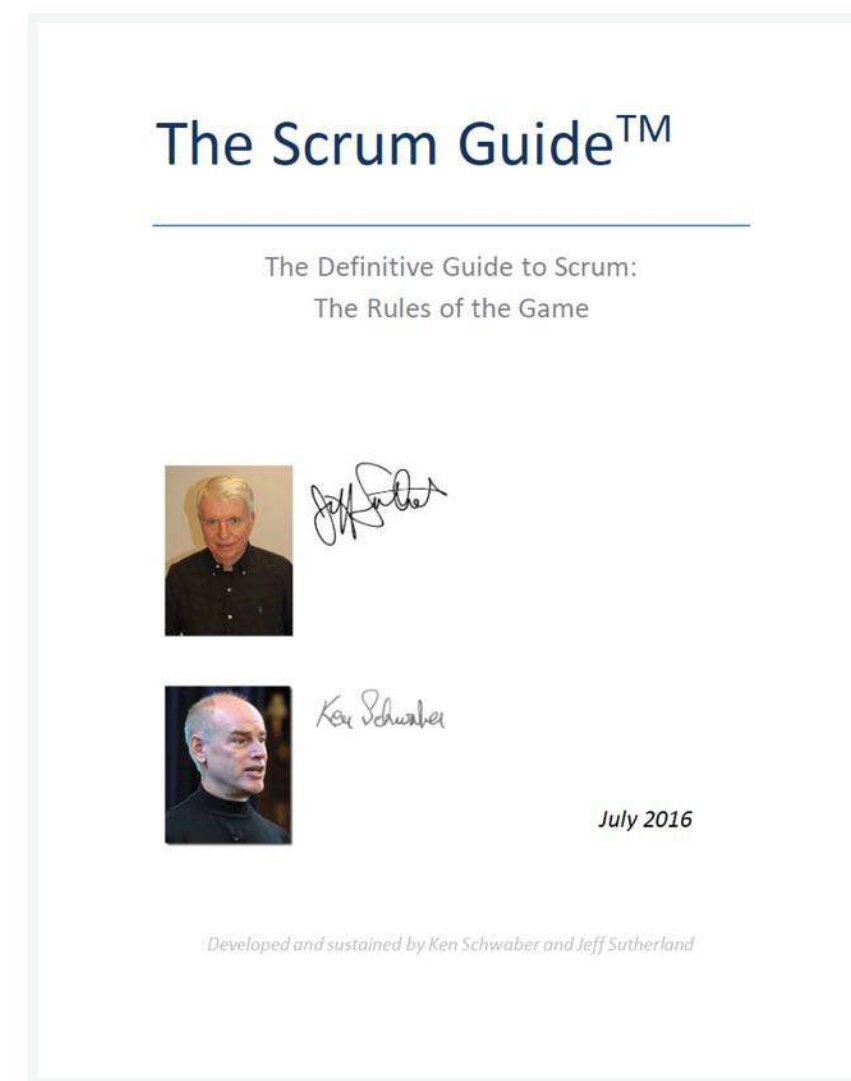
TPS 1950's



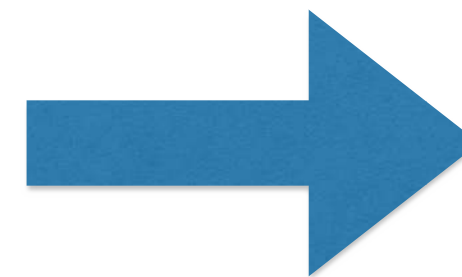
Inspired



Scrum 1990's



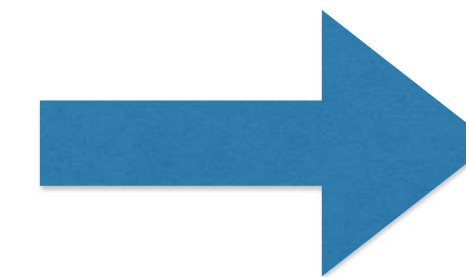
One Parent



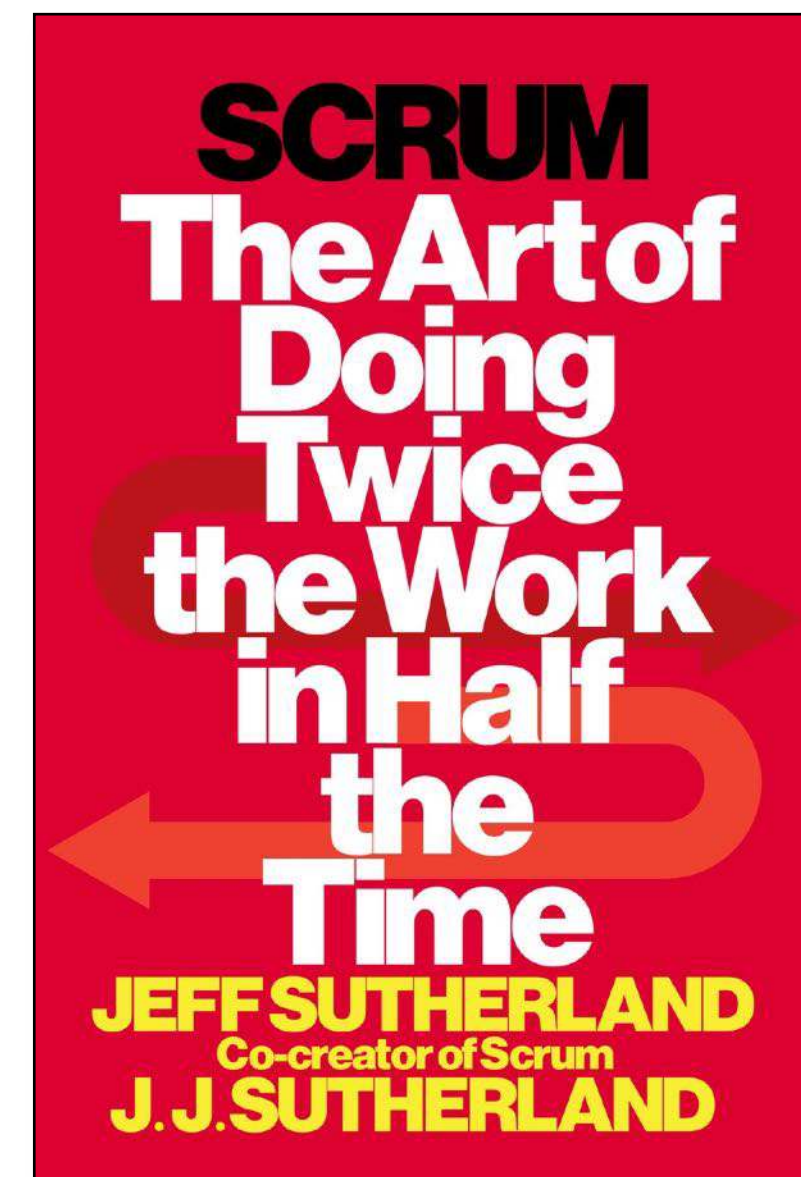
Agile 2001



Implementation



2014



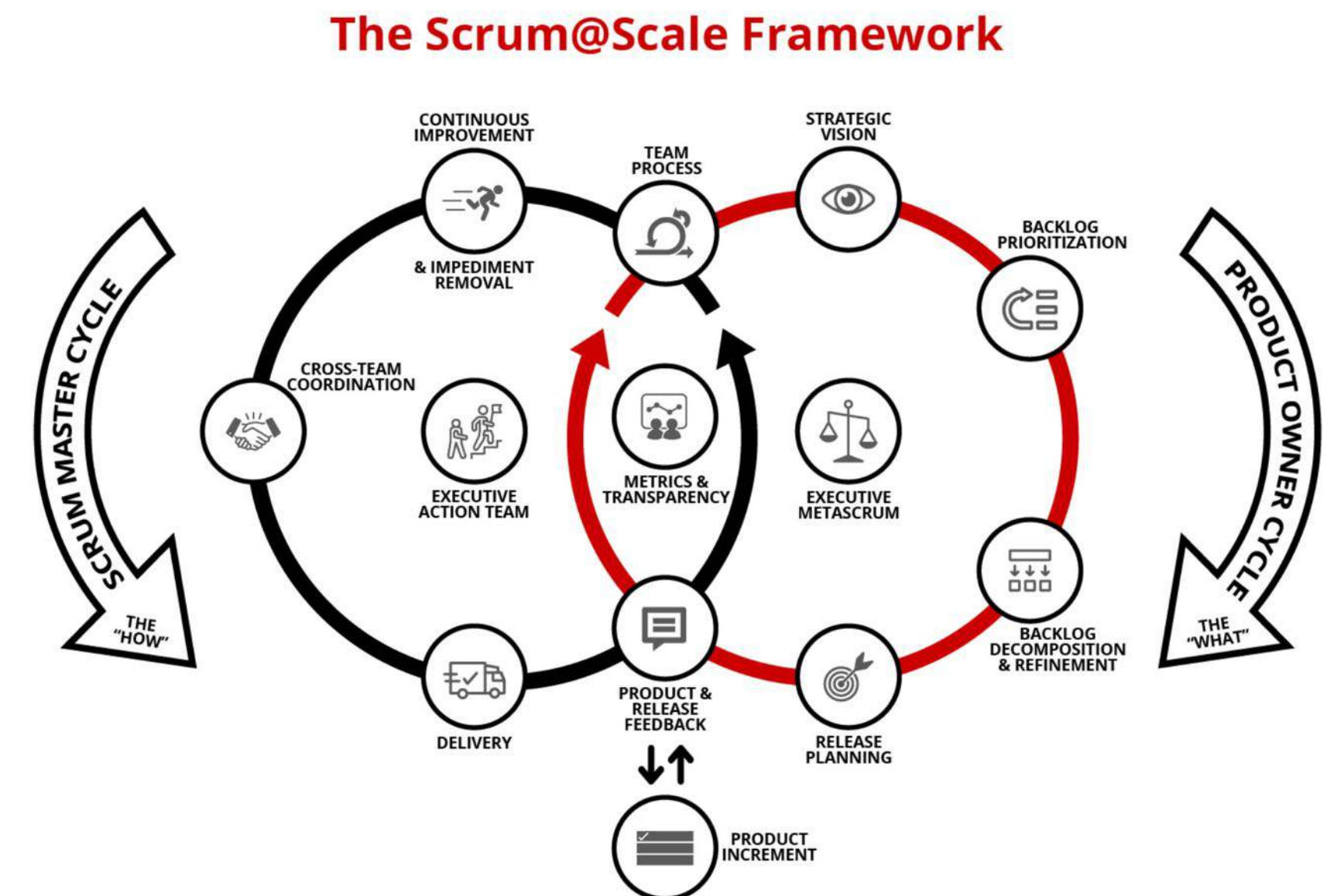
Delivering On the Promise

The Scrum Framework

Patterns (essential for performance)

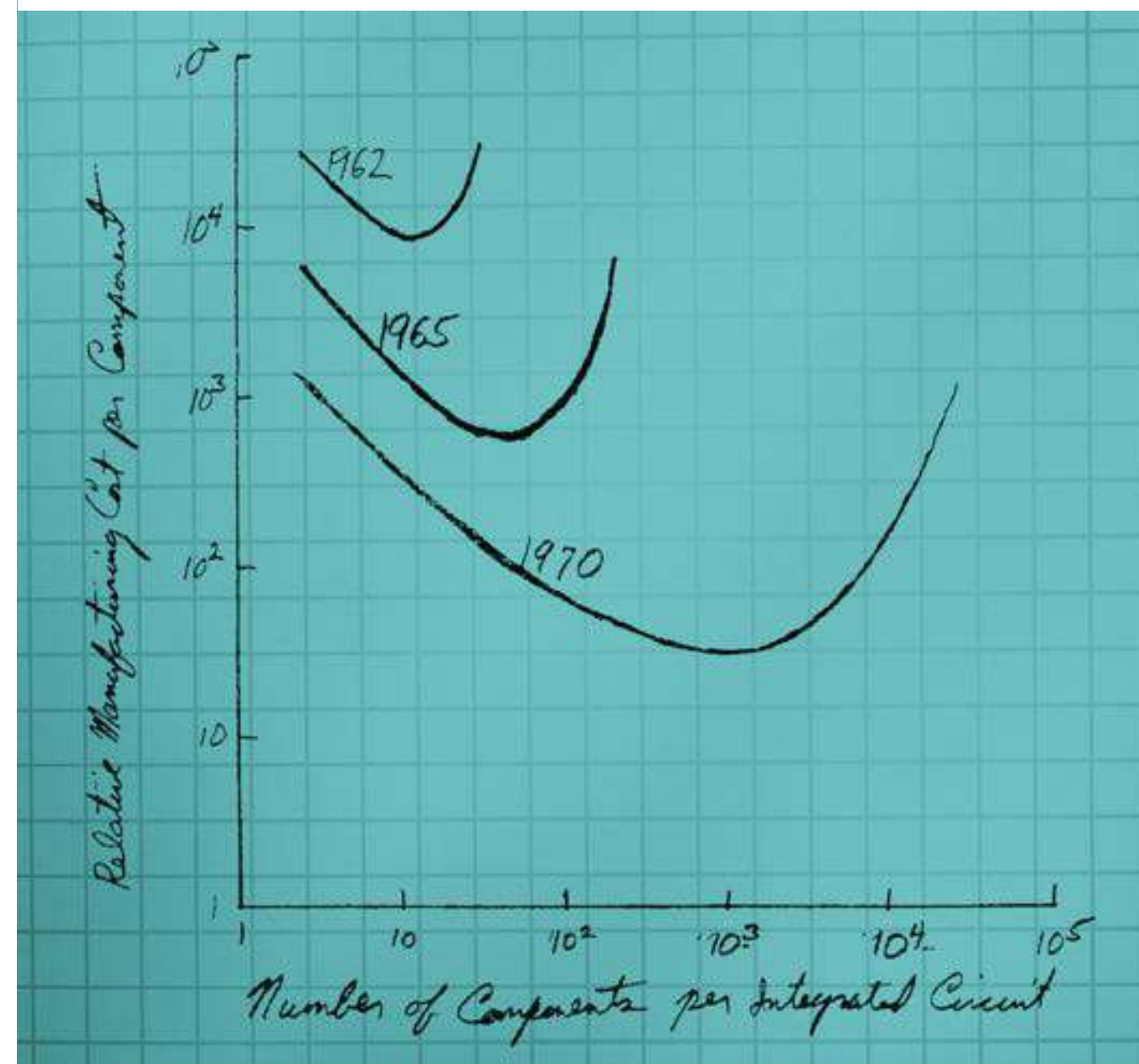
Lean tools (necessary for problem solving)

Scrum@Scale (critical for more than one team)



Scrum: Moore's Law Applied

Transistors on a Chip



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

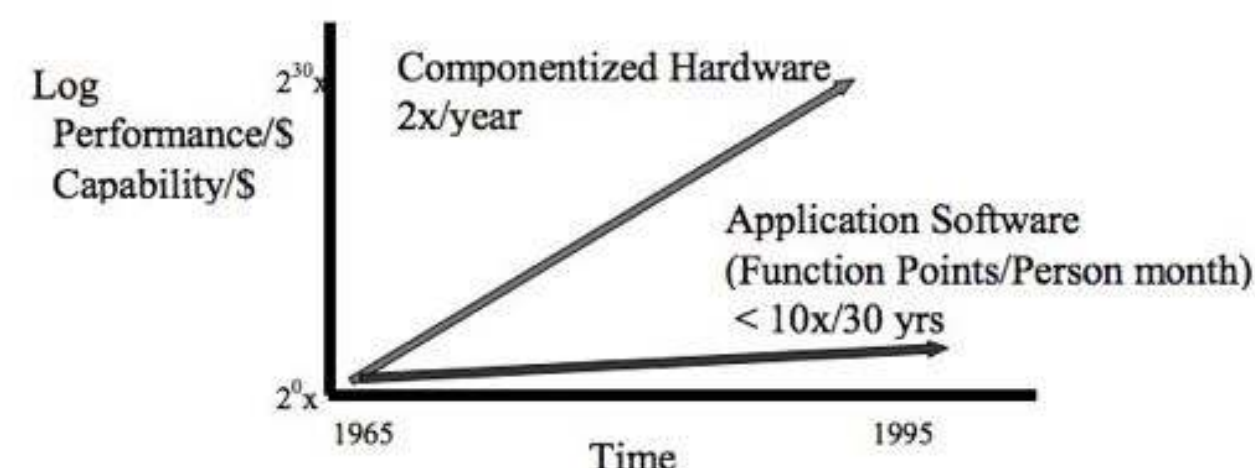
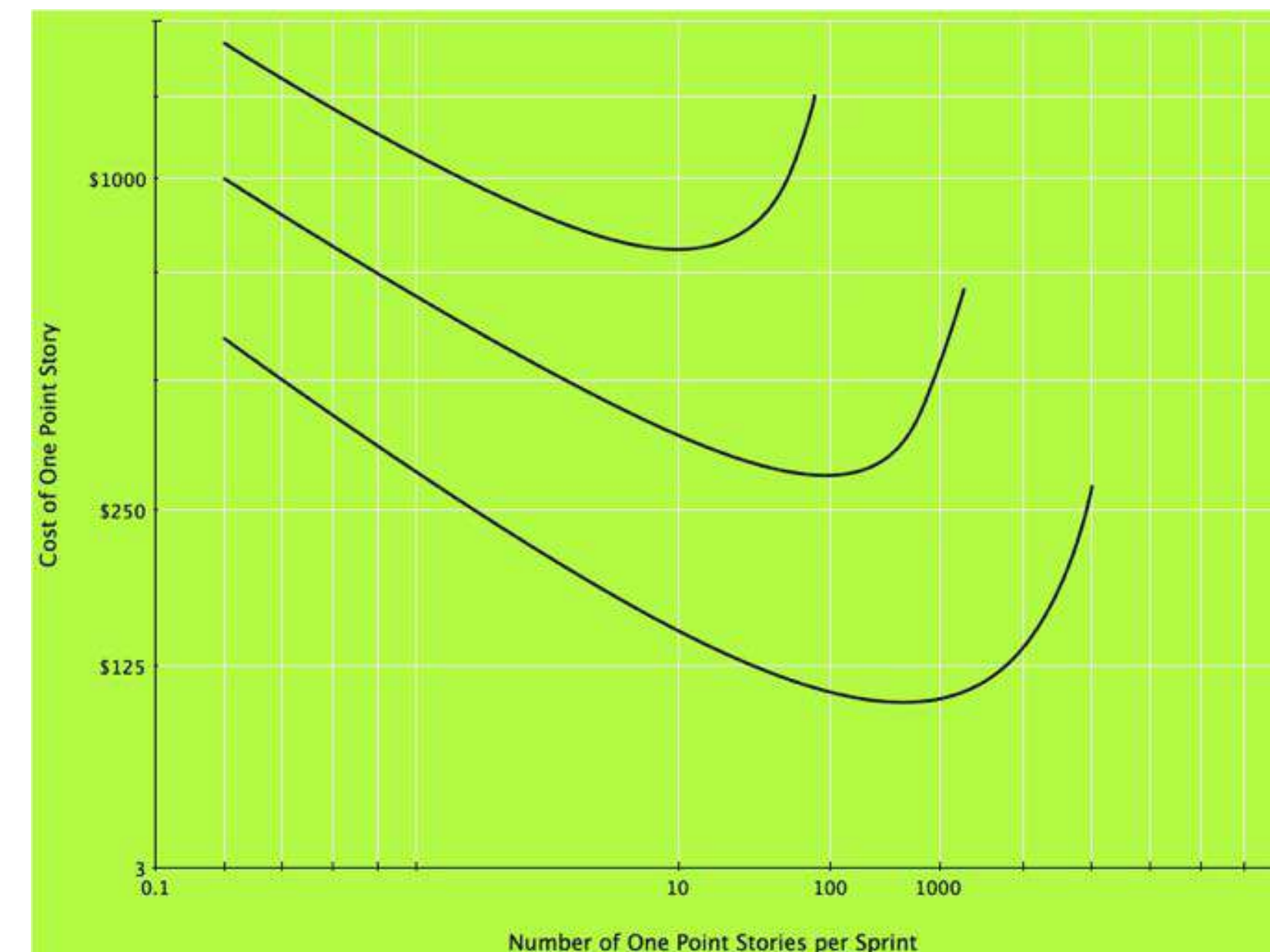


Figure 1: Hardware Price/Performance vs. Software Price Performance⁹

Stories in a Sprint



**Why I Love the OMG:
Emergence of a Business
Object Component Architecture**

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

Brook's Law Makes It Difficult To Scale

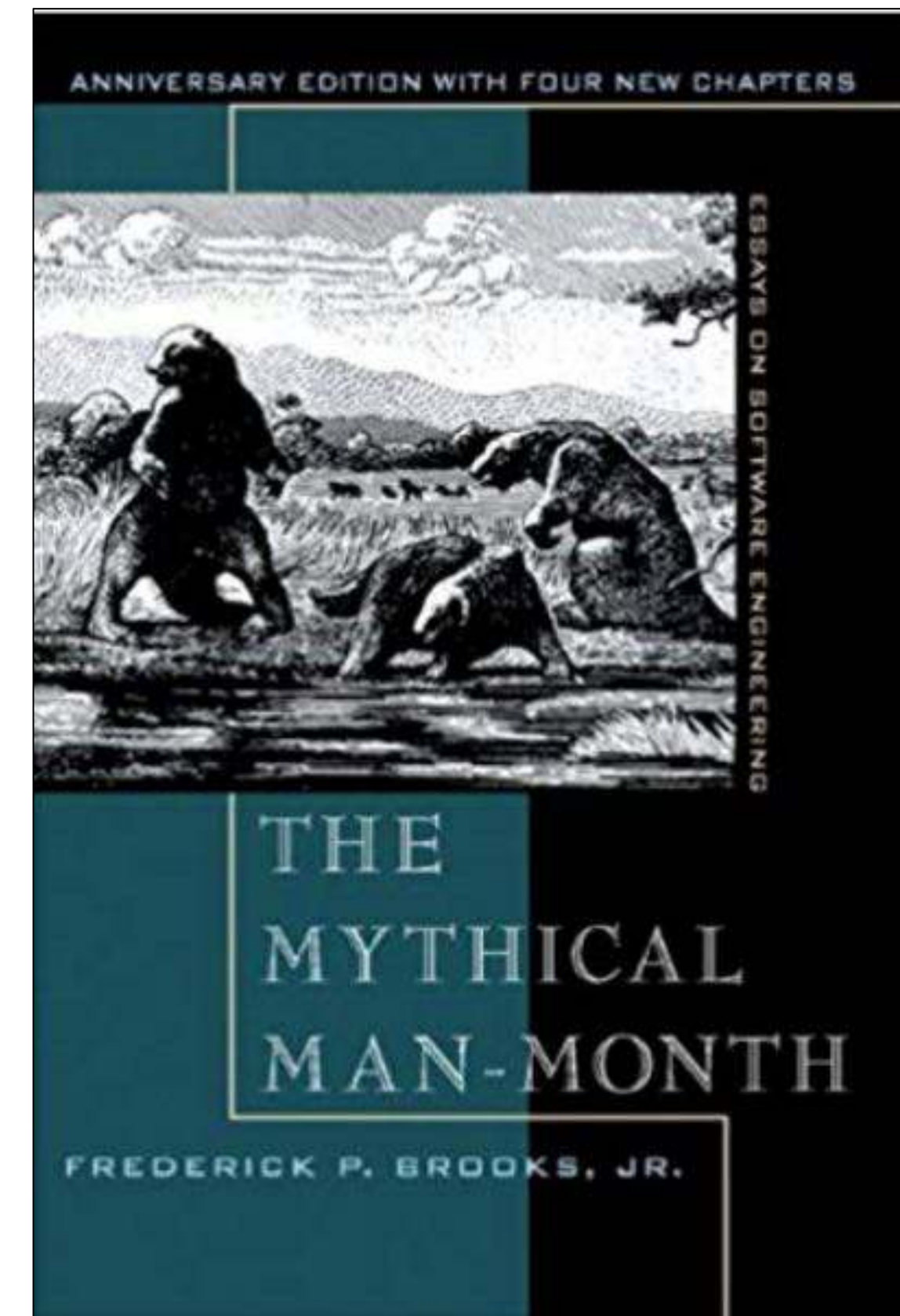
"Adding people to a late project makes it later." *Fred Brooks*

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

Proceedings of the 40th Hawaii International Conference on System Sciences - 2007



Distributed Scrum: Agile Project Management with Outsourced Development Teams

Jeff Sutherland, Ph.D.
Patientkeeper
Newton, MA, US
jeff.sutherland@computer.org

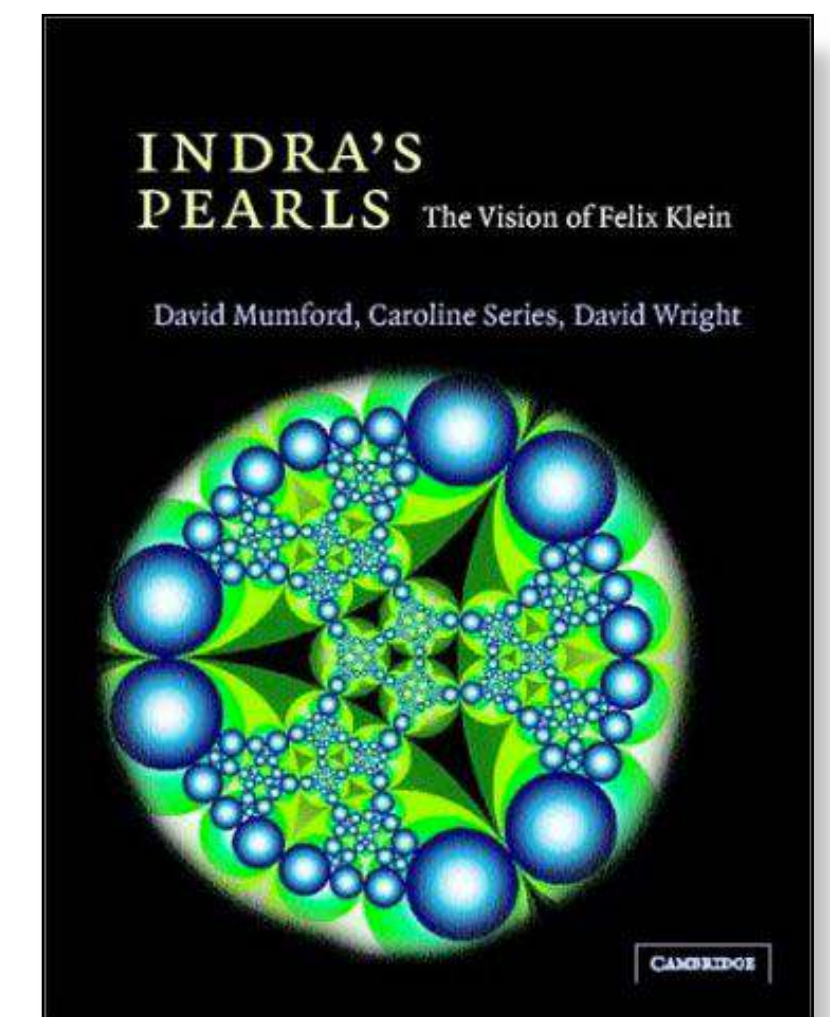
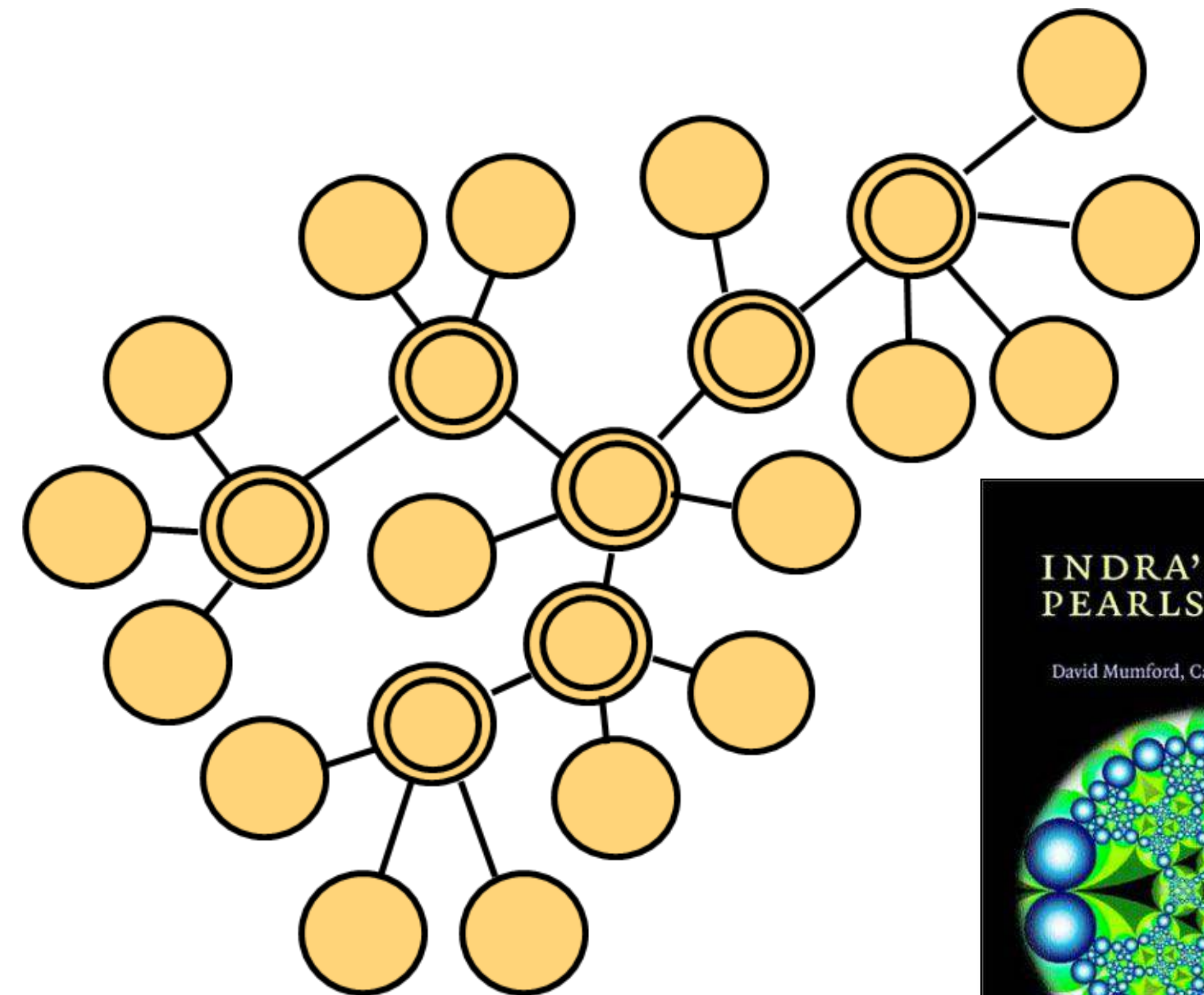
Anton Viktorov
StarSoft Dev. Labs
St. Petersburg, Russia
anton.viktorov@starsoftlabs.com

Jack Blount
SirsiDynix
Provo, UT, USA
jack@dynix.com

Nikolai Puntikov
StarSoft Dev. Labs
St. Petersburg, Russia
nick@starsoftlabs.com

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.



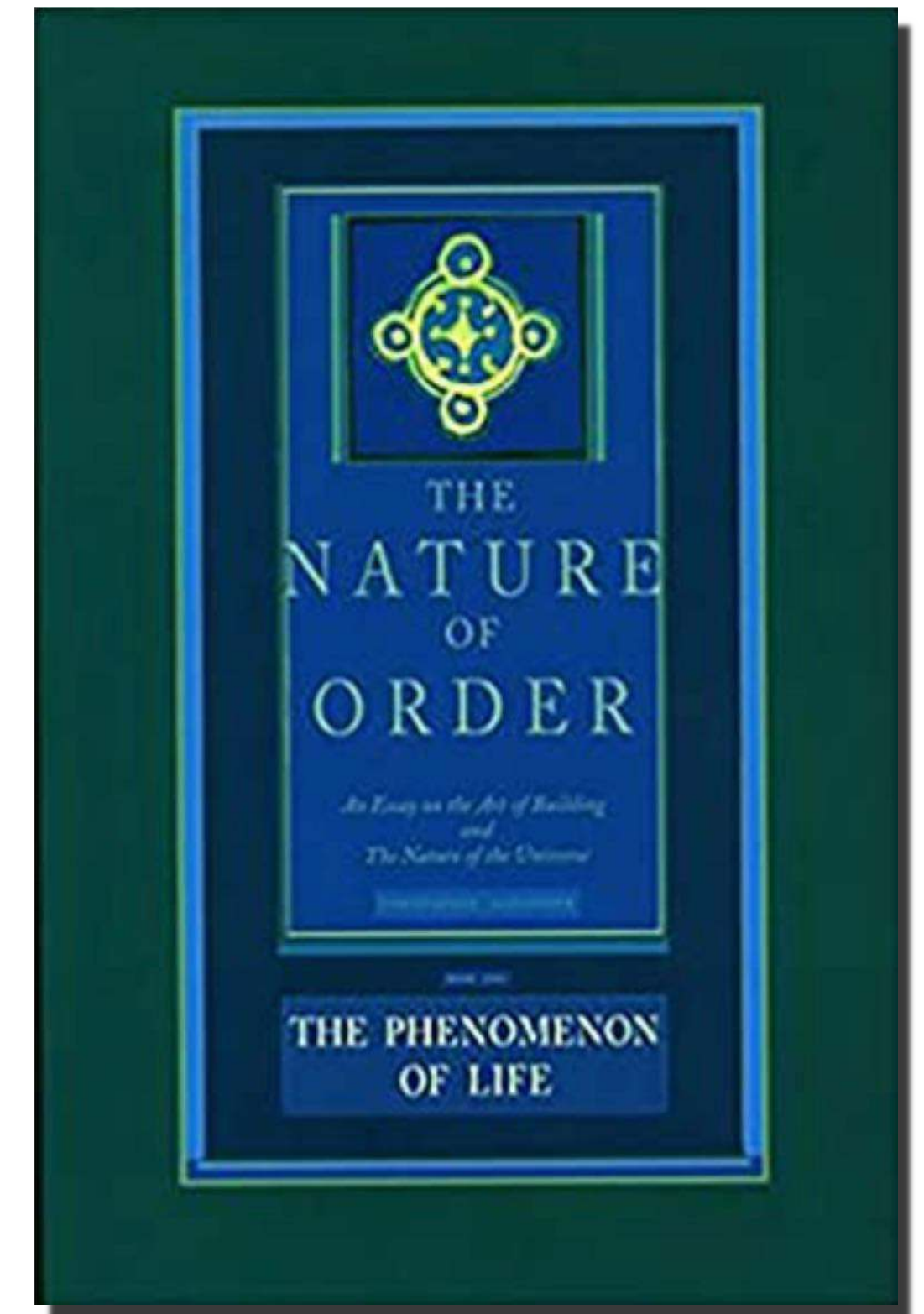
Patterns are Generative

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)

Alexander proposed several descriptors for this quality—‘beauty’, ‘alive’, ‘whole’, ‘comfortable’, ‘free’, ‘exact’, ‘egoless’, and ‘eternal’

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

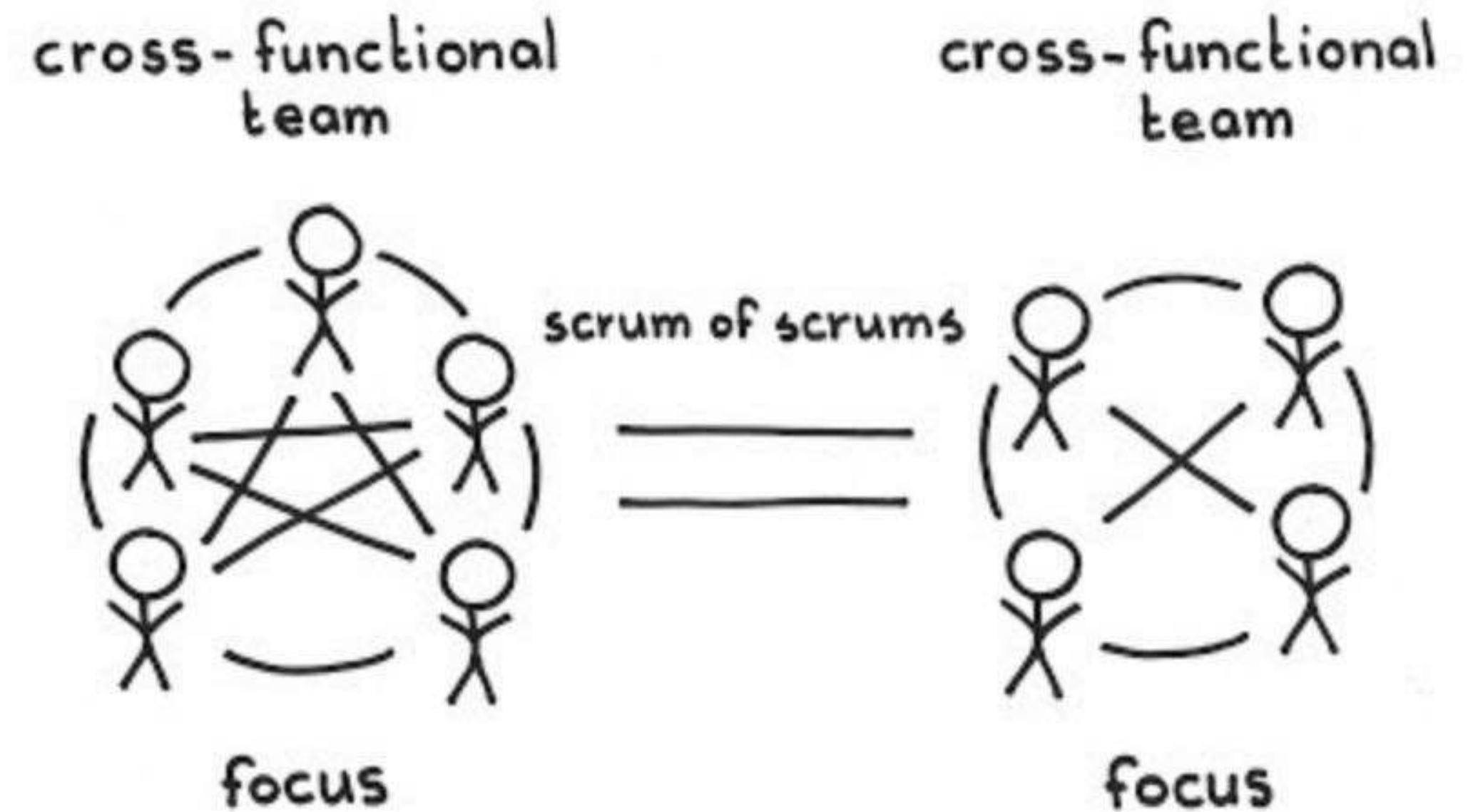


Mitosis – Splitting a Team

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.



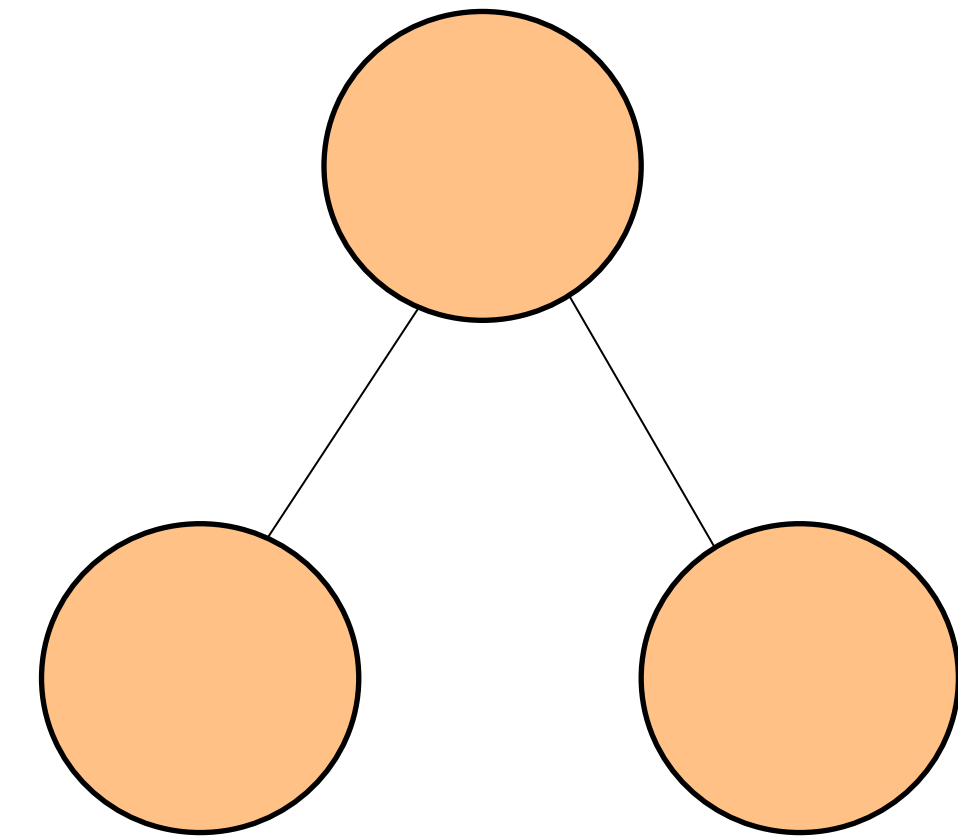
Pattern: Scrum of Scrums

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 Reviews](#) 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*.



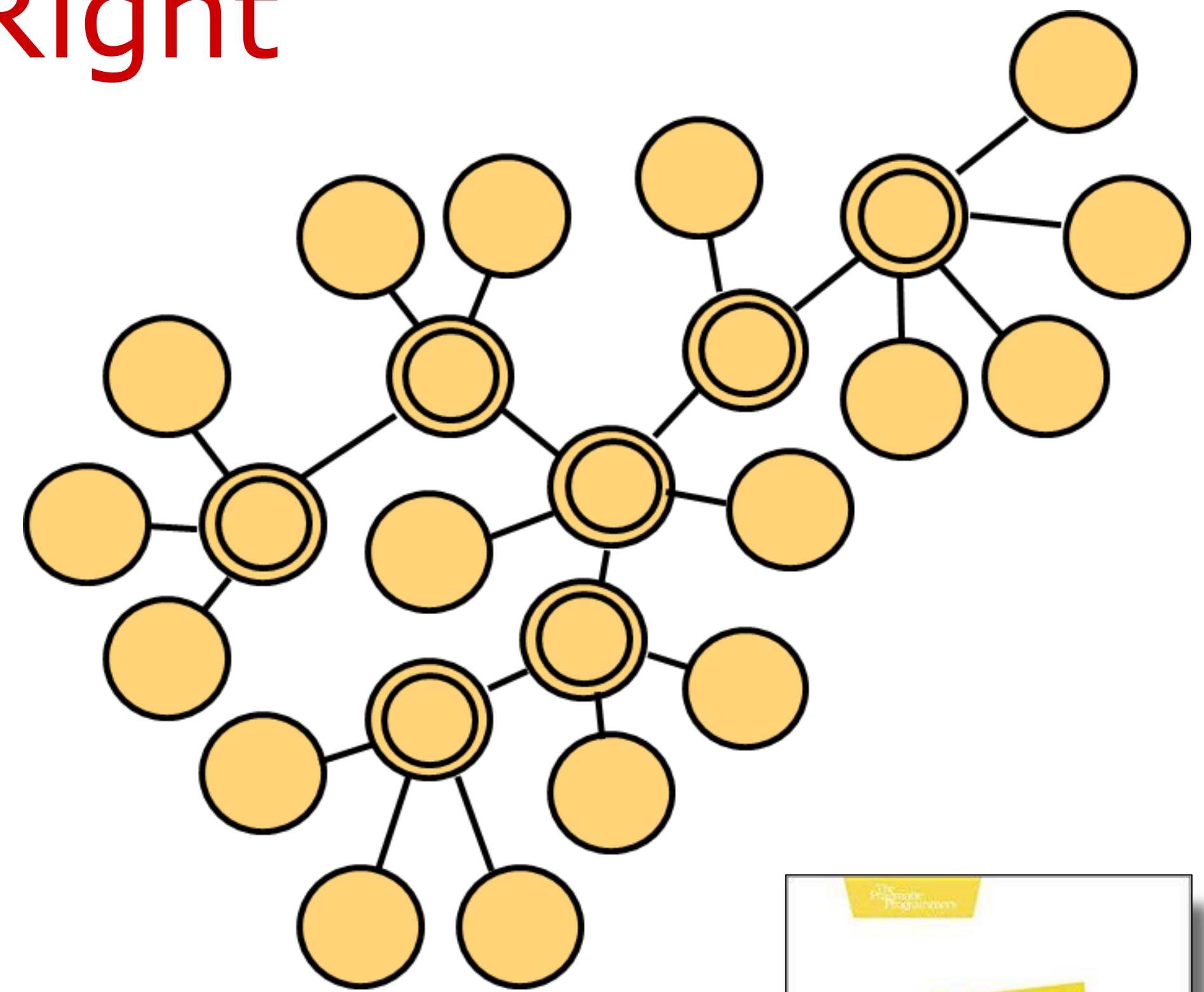
Scrum of Scrums Done Right

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](#).”



The first 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**.



Source: Sutherland and Coplien (2019) A Scrum Book: The Spirit of the Game

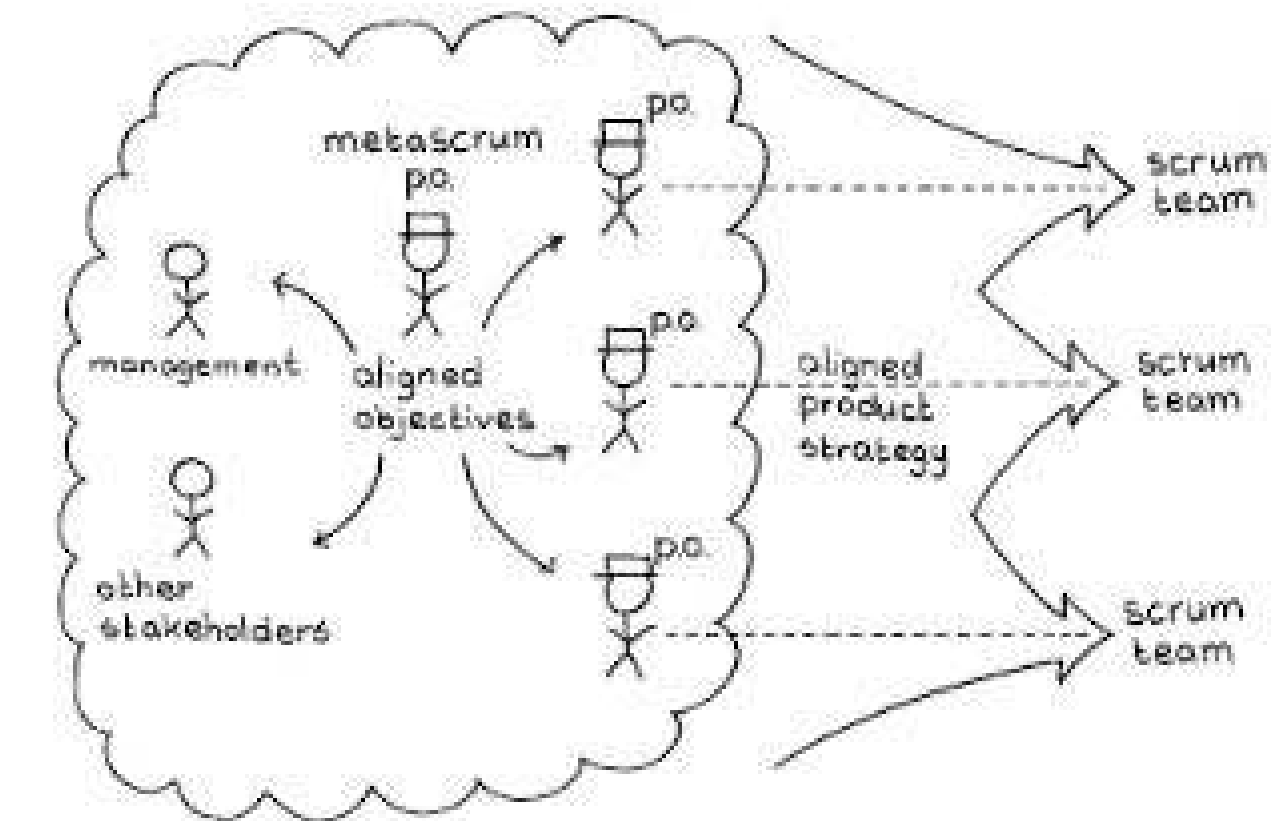
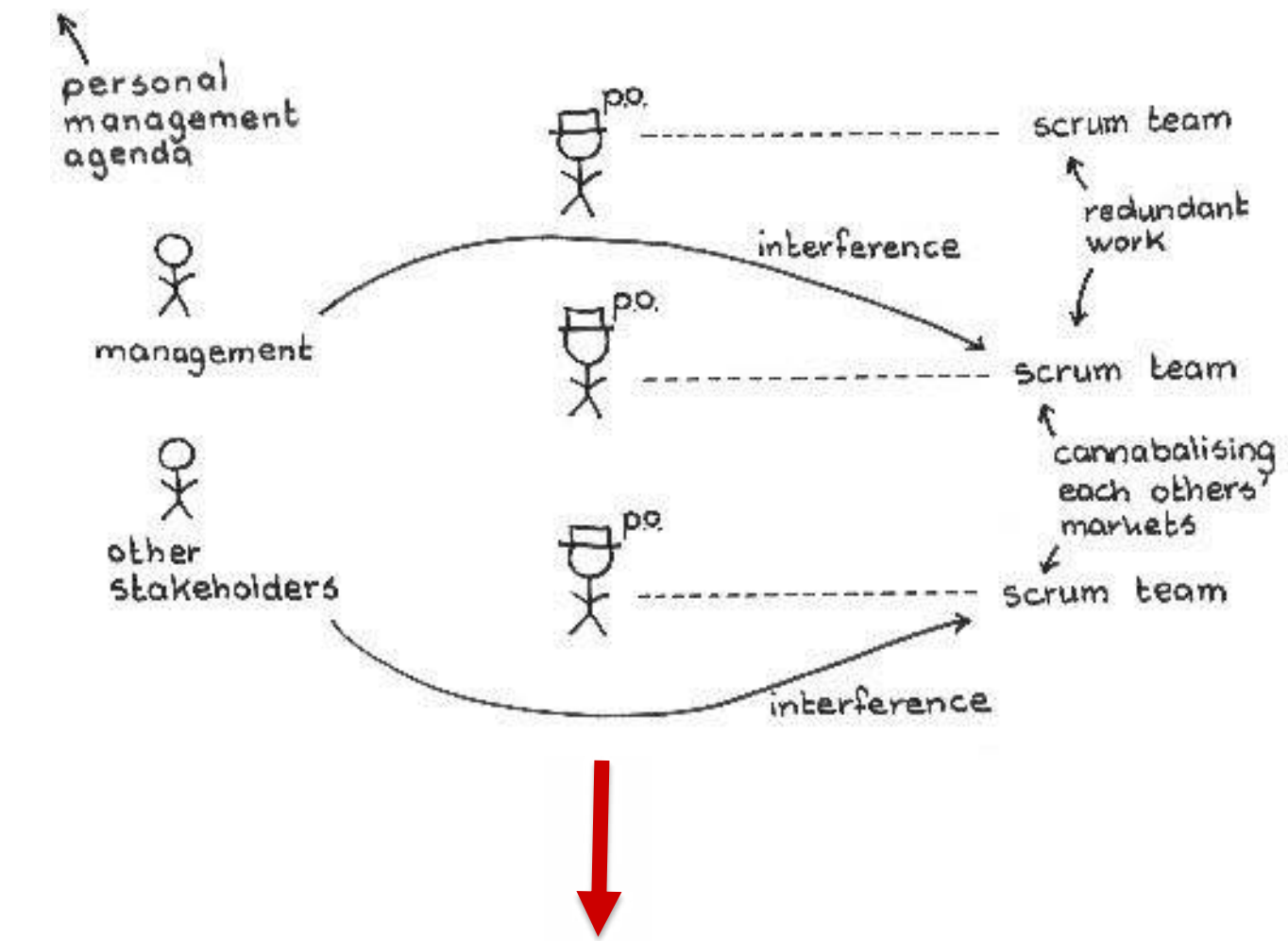


Metascrum

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 METASCRUM as a forum where the entire enterprise can align behind the *Product Owners'* backlogs at every level of Scrum in the organization.

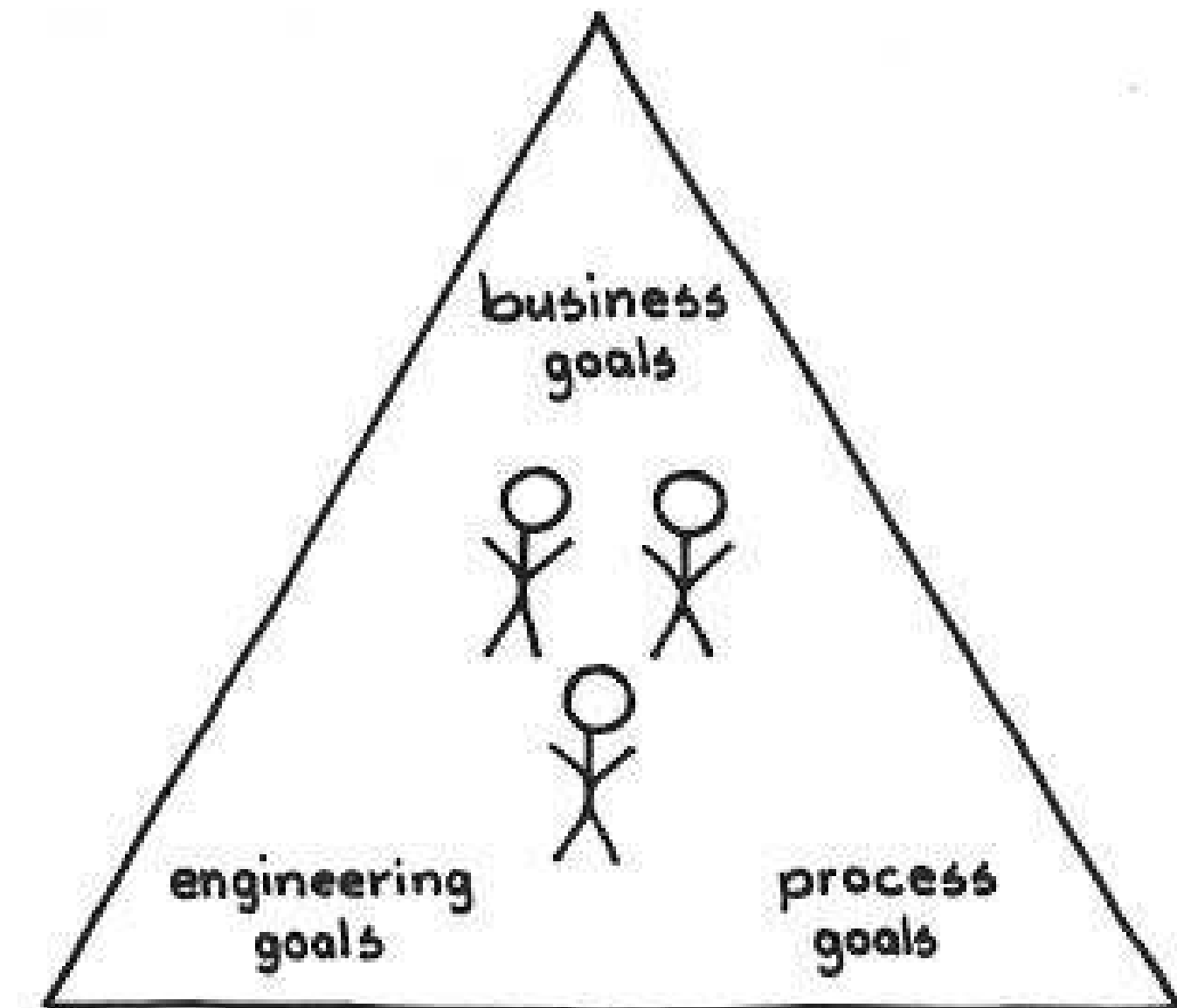


A Scrum Team: Executive Action Team

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

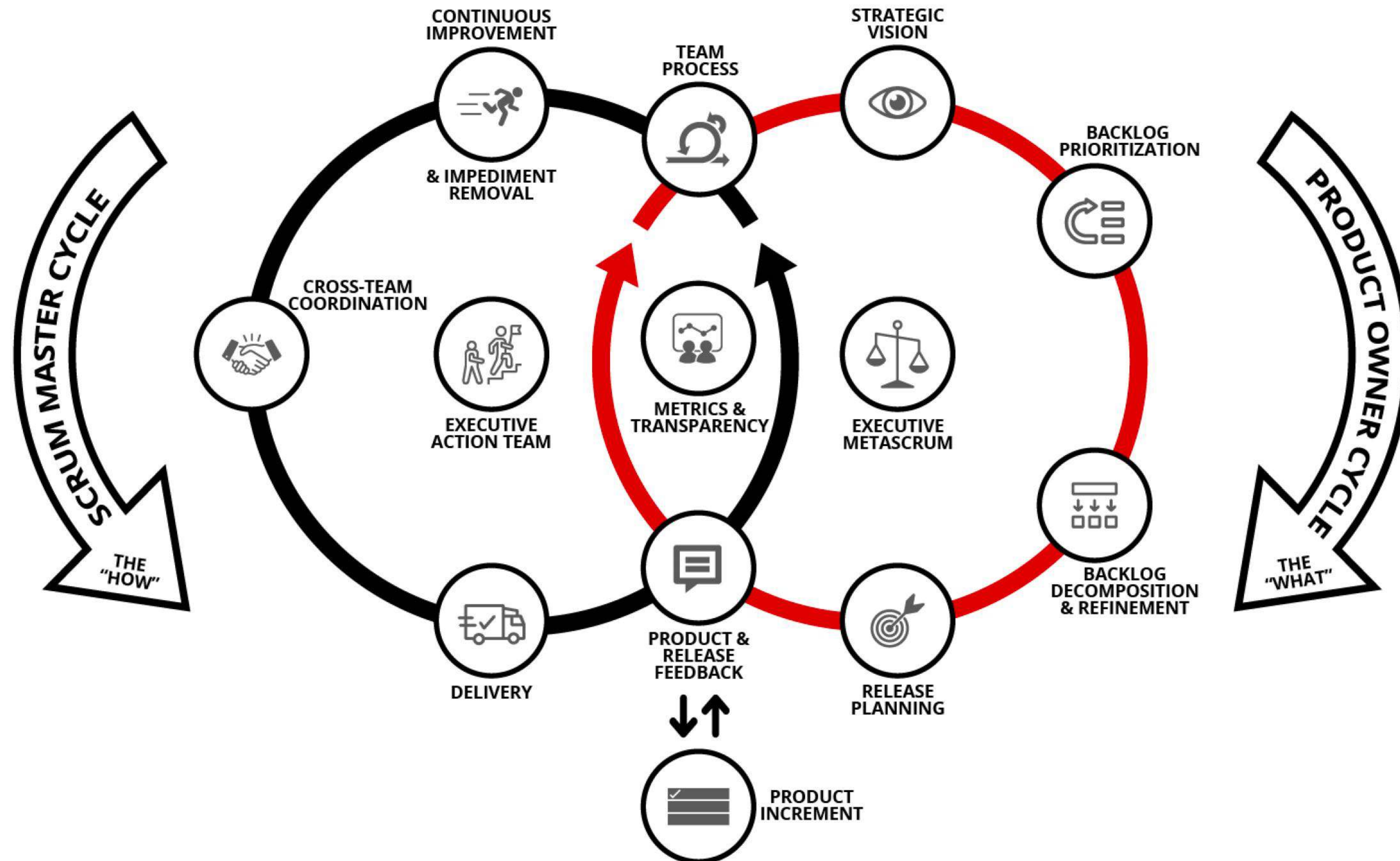
Mitosis
Scrum Team
Scrum of Scrums
Product Owner Team
MetaScrum
Executive Action Team

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**

