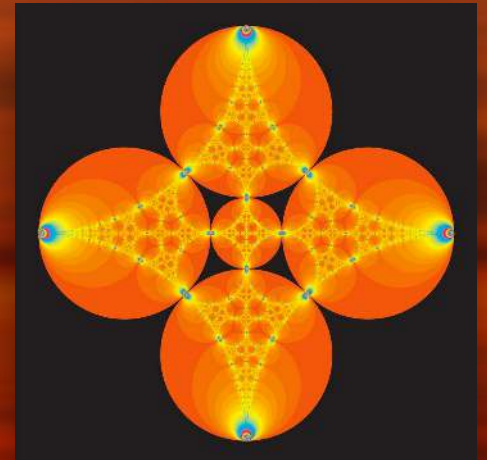# Scrum@Scale IV
Getting the Organization Ready

Moderator: Joel Riddle
Presenter: Jeff Sutherland

scruminc. *Who We Are*

Scrum Inc. is the Agile leadership company of Dr. Jeff Sutherland, co-creator of Scrum. We are based at the MIT Cambridge Innovation Center, MA.

CEO Jeff Sutherland helps companies achieve the full benefits of Scrum leading our comprehensive suite of support services and leadership training:
- Adapting the methodology to an ever-expanding set of industries, processes and business challenges Training (Scrum Master, Product Owner, Agile Leadership, online courses, etc.)
- Consulting (linking Scrum and business strategy, scaling Scrum)
- Coaching (hands-on support to Scrum teams)

Chief Content Officer JJ Sutherland maintains the Scrum framework by:
- Capturing and codifying evolving best practices (Scrum Guide)
- Conducting original research on organizational behavior
- Publishing (3 books) and productizing ScrumLab

President Scrum@Hardware Joe Justice leads our hardware consulting practice:
- Worldwide consulting at leading hardware companies
- 700-800% performance improvement in hardware development
- Builds 100 mpg cars in his garage with help from 500 people in 32 countries

We run our company using Scrum as the primary management framework, making us a living laboratory on the cutting edge of "Enterprise Scrum"

Find out more at www.scruminc.com.

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Joel Riddle - CSM -CSPO - Scrum Inc.

Joel is the Scrum Master for one of Scrum Inc.'s two teams and specializes in researching and codifying cutting edge Agile practices for Scrum and eXtreme Manufacturing.

Joel's background is in journalism. He cut his teeth at National Public Radio where he was responsible for the live, on-air production of NPR's flagship show, Morning Edition. Joel also spent three tours in Baghdad as NPR's bureau chief.

Organizations Have Different Approaches to Scaling

A	B	C
Large Defense Contractor	**Mid-size Software Company**	**Growing "Agile Native" Company**
Name Classified	**Autodesk**	**Spotify**

A — Large Defense Contractor

- Top-down agile transformation motivated by perceived external market pressure
- Company vision to halve the cost of projects

Key Context:
- Complex, integrated multi-year hardware/software projects
- Each project has <u>one</u> customer
- Reliability a key priority
- Must deliver to detailed contract requirements

B — Mid-size Software Company

- Opportunistic agile implementation triggered by acquisition of a small Scrum company
- Market leader Looking to stay ahead of competition

Key Context:
- Redeploying a legacy software product to cloud-based SaaS model
- Goal to increase pace of innovation
- Historically, releases a disruption for customers

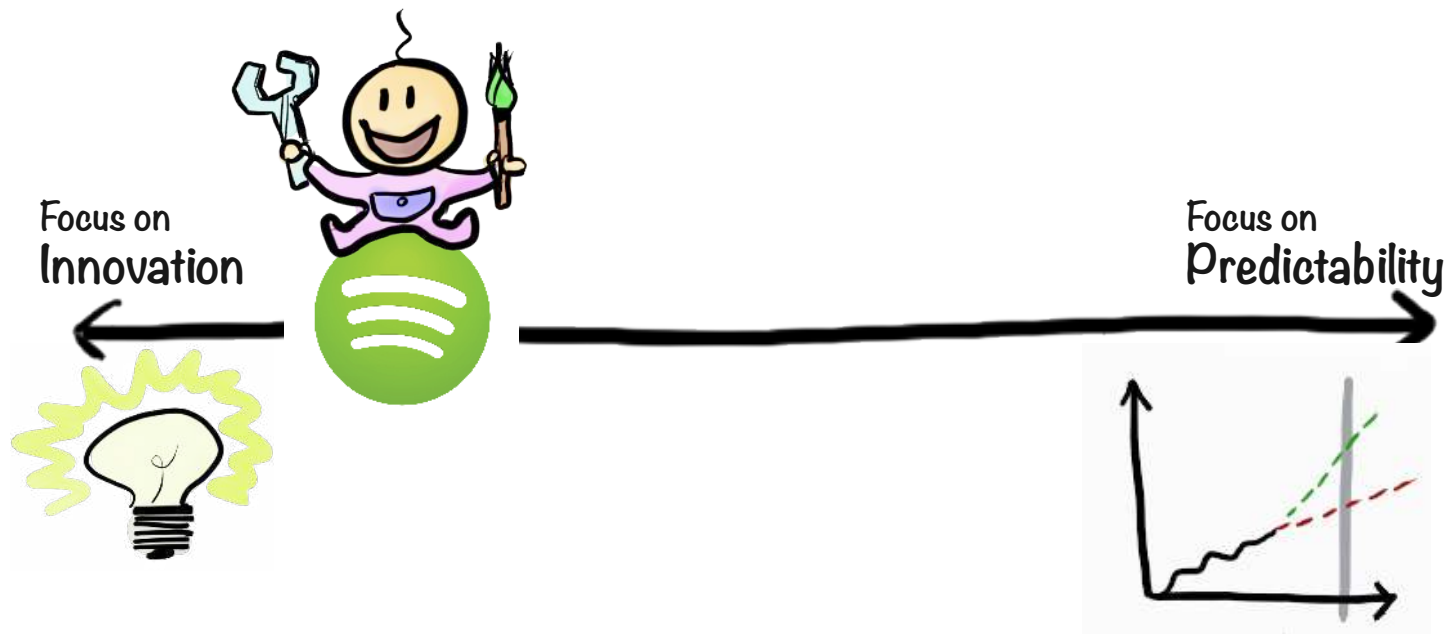## C — Growing "Agile Native" Company

- Disruptive technology innovator with successful product looking to scale to keep up with demand
- Leadership are steeped in agile principles

Key Context:
- Web/app-based product
- Product and company set up modularly
- Allows teams to work independently with minimal coordination
- Teams co-located

1

4

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100% predictability = 0% innovation

Focus on
Innovation

Focus on
Predictability

Value delivery **>** Plan fulfillment

Henrik Kniberg

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Strategic Objectives Determine Scaling Approach

Product
Innovation

Follow the Rules

Continuous Improvement

Process

Convergent Design
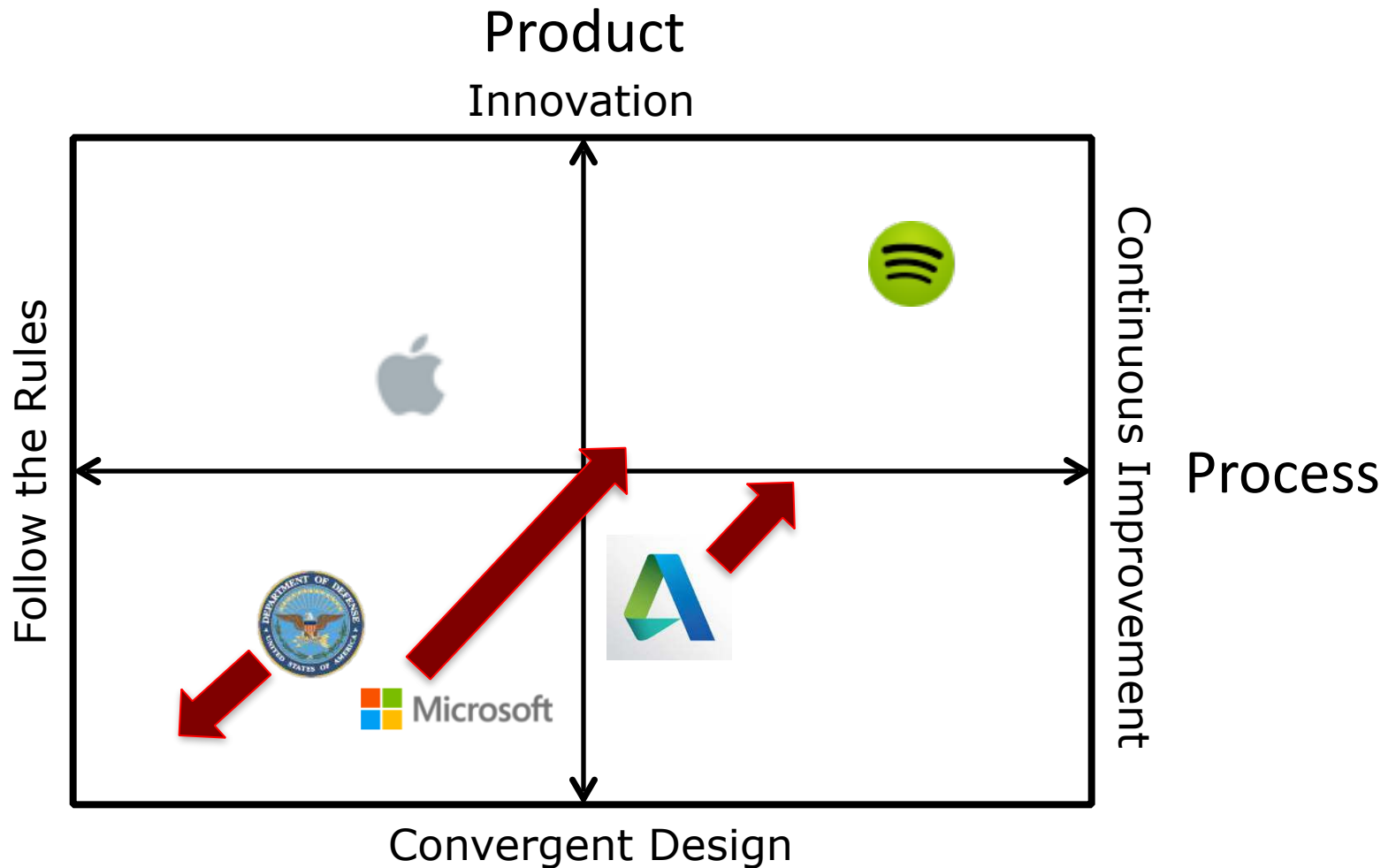
Adapted from Michael Cottmeyer

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Modularity Supports Different Implementation Paths

Start ●————●————●————●————●————●————● Current

Name Classified

Spotify

Autodesk

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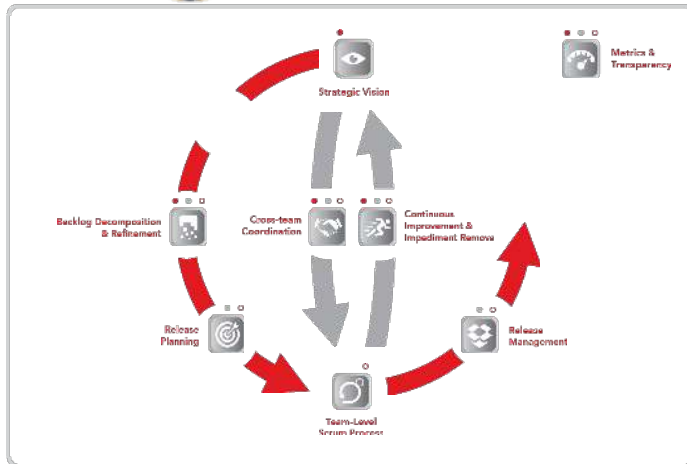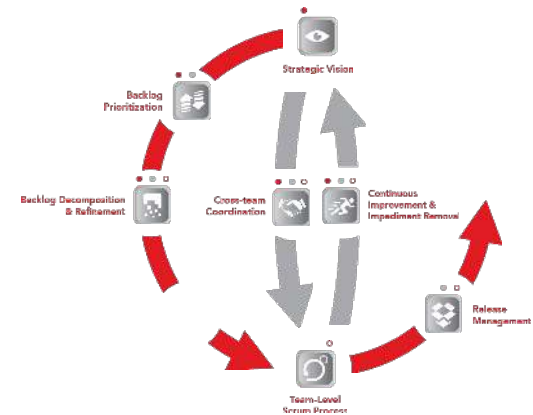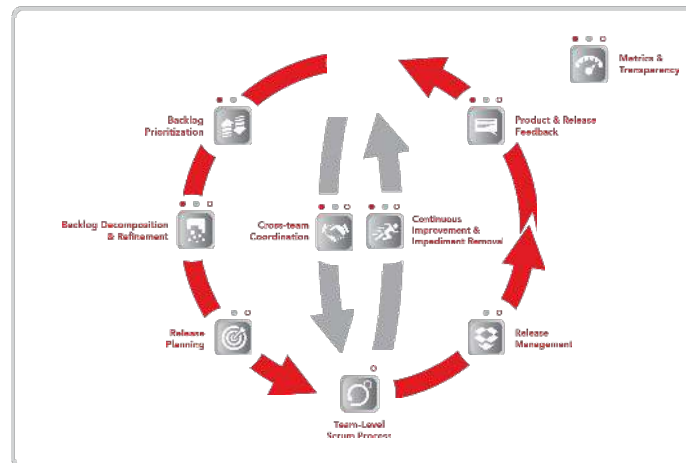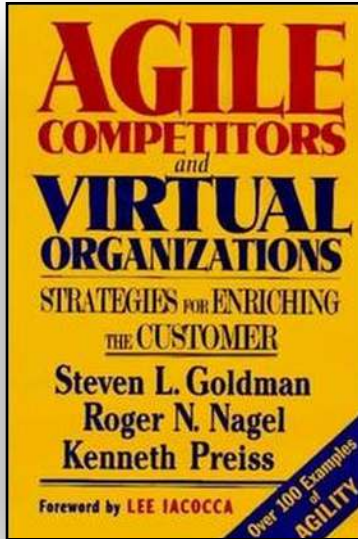
Agile = Lean + Customer Collaboration

Agile competition goes beyond lean manufacturing by permitting the customer, jointly with the vendor or provider, to determine what the product will be.

For agile competitors, the ability to individualize products comes at little or no increase in manufacturing cost. It does, however exact a cost: **It requires major changes in organization, management philosophy, and operations.**
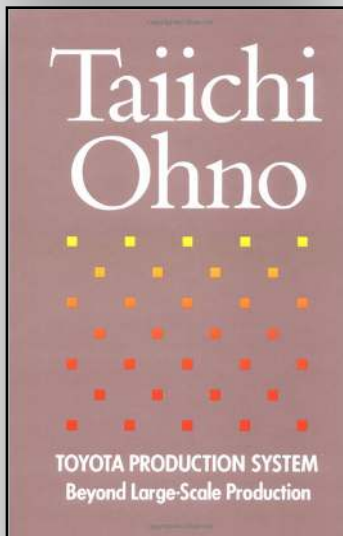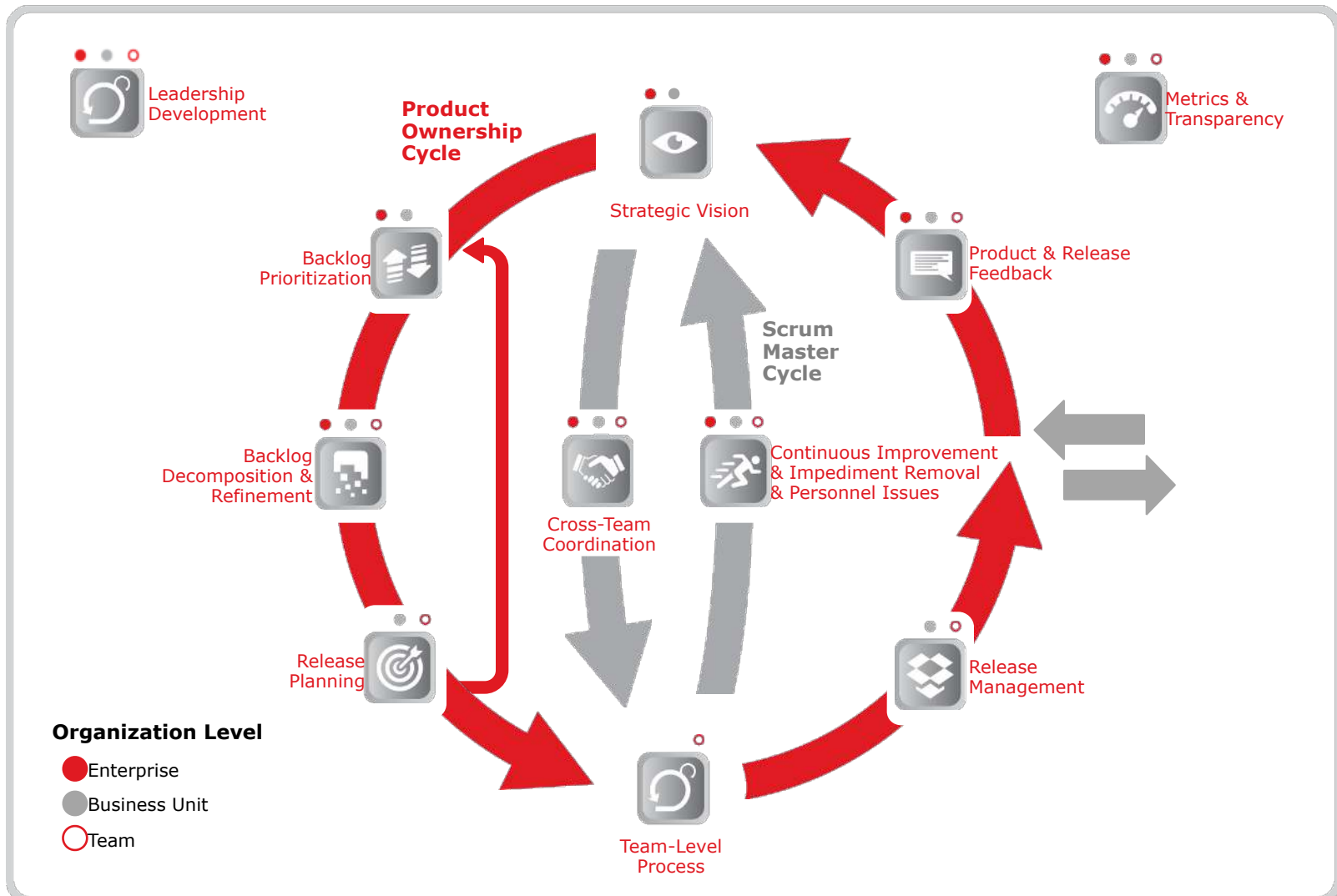
Leadership needs to change focus:
- **Eliminate waste**
- **Understand Value Stream Analysis**
- **Implement Single Piece Continuous Flow**

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Scrum@Scale starts with Leadership Development

Modular Framework for Scaling Scrum

Product Ownership Cycle

Leadership Development

Metrics & Transparency

Strategic Vision

Backlog Prioritization

Product & Release Feedback

Scrum Master Cycle

Backlog Decomposition & Refinement

Cross-Team Coordination

Continuous Improvement & Impediment Removal & Personnel Issues

Release Planning

Release Management

Organization Level
- Enterprise
- Business Unit
- Team

Team-Level Process

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Scrum at Scale Modules are Defined by their Goals, Inputs and Outputs

| **Goals**	Define what the module is intended to accomplish
Inputs	Describe the information or resources needed from other modules to accomplish those goals
Outputs	Outline what information or product this module generates that are needed by other modules

ANY specific practice that meets the module's required Goals, Inputs and Outputs will work with all of the other Scrum at Scale modules…This is "Contract-First Design."
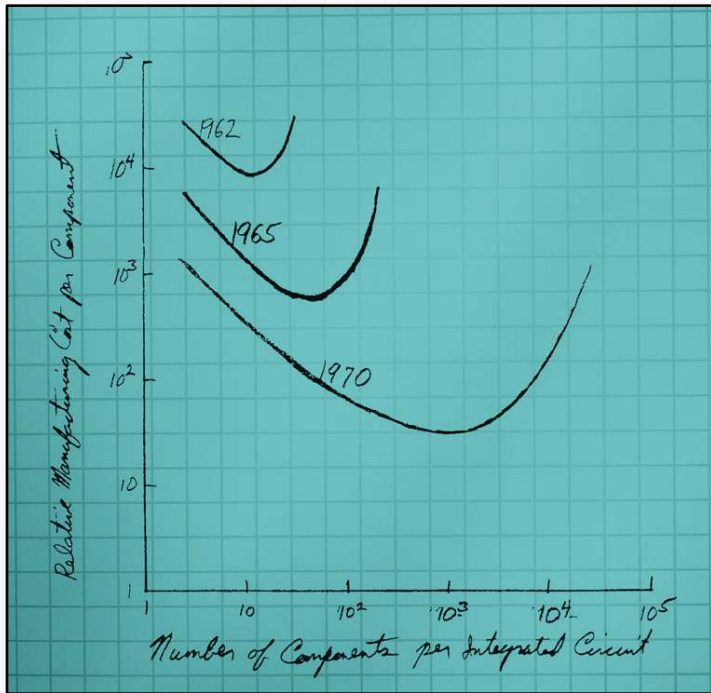
Required Inputs → Goals to be achieved → Outputs to other modules

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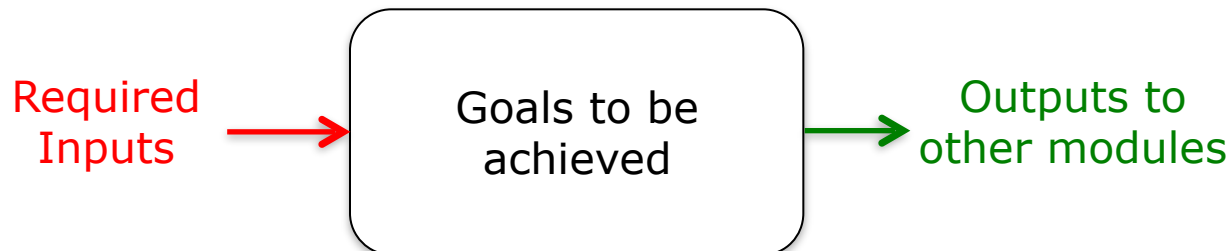
**As an Agile Leader, I need to Develop Agile Leadership Skills
to be effective**
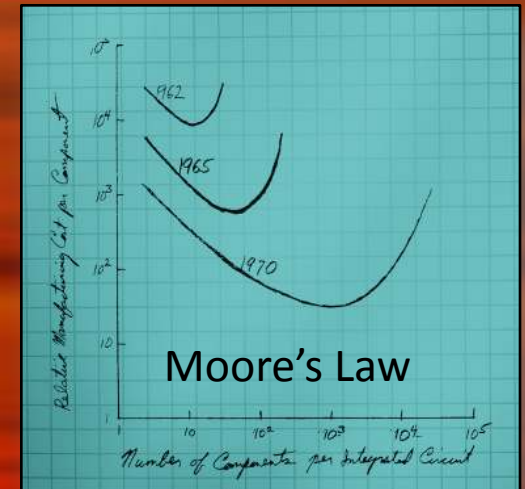
Moore's Law

Moore's Law Applied to Software

Transistors on a Chip
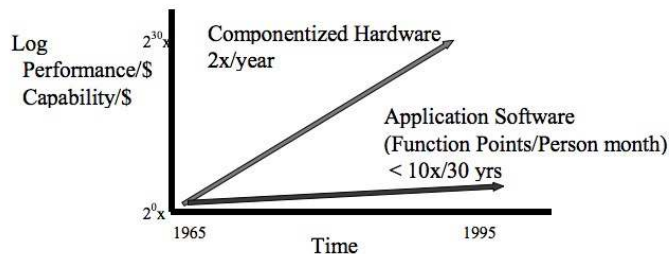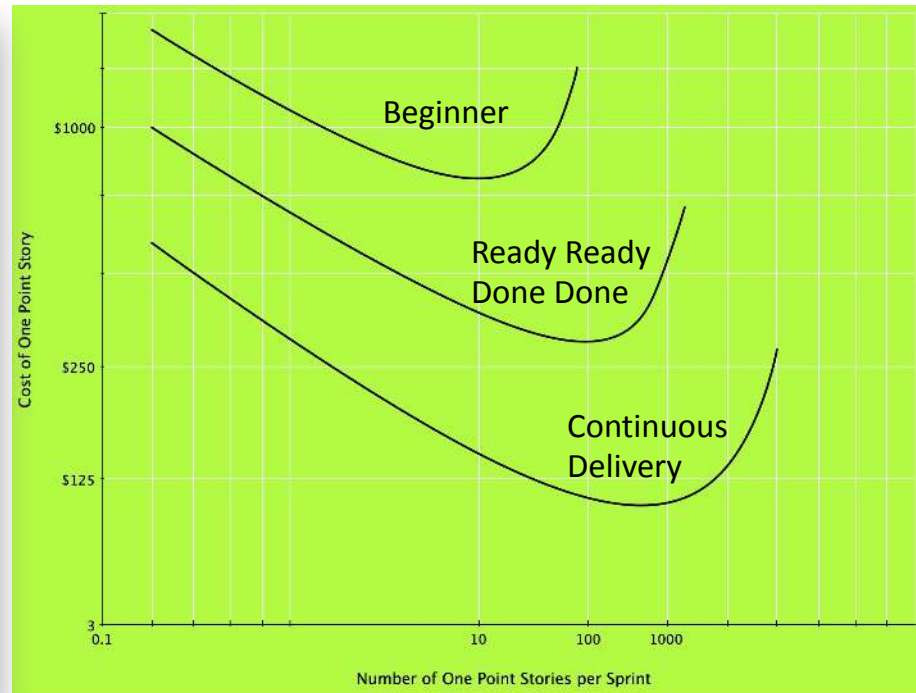

Stories in a Sprint

Figure 1: Hardware Price/Performance vs. Software Price Performance[9]

The emergence of a Business Object Component Architecture

Sutherland, J.

Enabling Technologies: Infrastructure for Collaborative Enterprises, 1999. (WET ICE '99) Proceedings. IEEE 8th International Workshops on
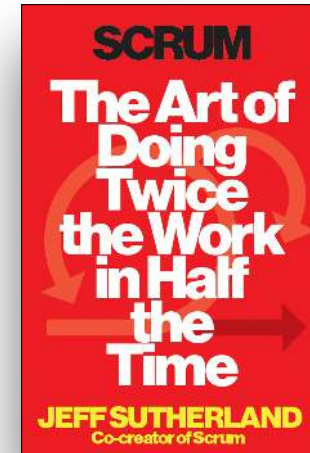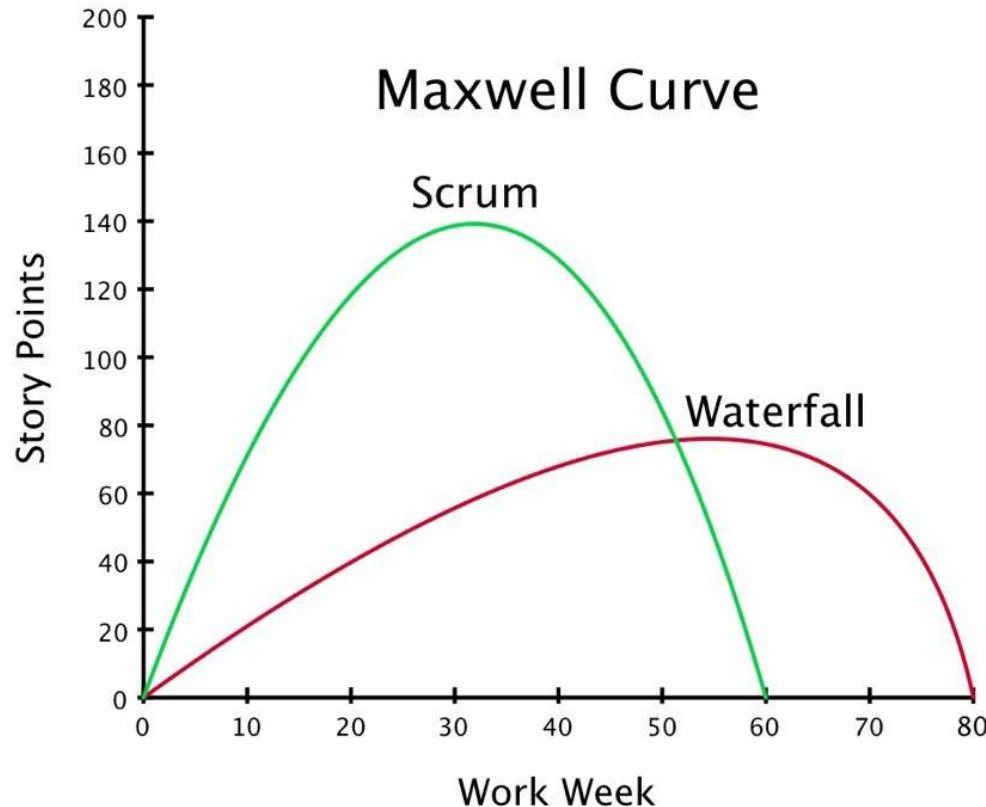
Year: 1999

Pages: 330 - 340, DOI: 10.1109/ENABL.1999.805223

Cited by: Patents (3)

IEEE Conference Publications

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Agile Leadership can Scale Twice the Work in Half the Time

Maxwell Curve

Scrum

Waterfall

Story Points / Work Week

SCRUM
The Art of Doing Twice the Work in Half the Time
JEFF SUTHERLAND Co-creator of Scrum

Take No Prisoners: How a Venture Capital Group Does Scrum
Sutherland, J. ; Altman, I.
Agile Conference, 2009. AGILE '09.
DOI: 10.1109/AGILE.2009.29
Publication Year: 2009 , Page(s): 350 - 355
Cited by: Papers (4)
IEEE CONFERENCE PUBLICATIONS

"Jeff Sutherland is the master of creating high-performing teams… If you don't get three times the results in one-third the time, you aren't doing it right!"
--Scott Maxwell, Founder & Senior Managing Director, OpenView Venture Partners

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Scaling Scrum Requires Leadership

John P. Kotter. Accelerate: Building Strategic Agility for a Faster Moving World. HBR Press 2014.

Leadership
(from executives, managers, and employees)

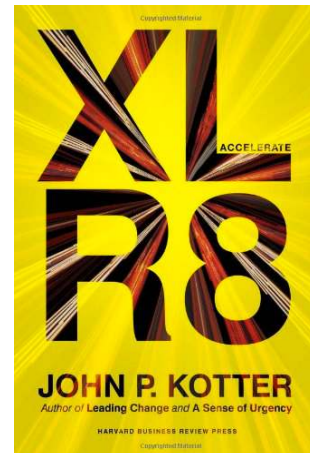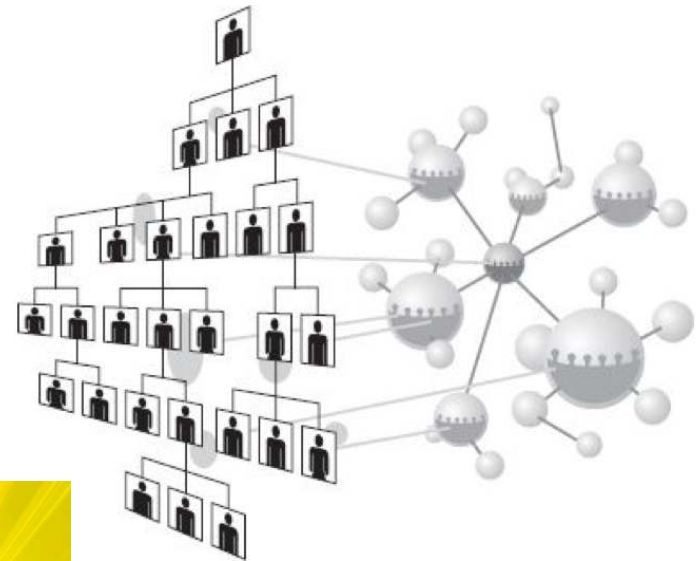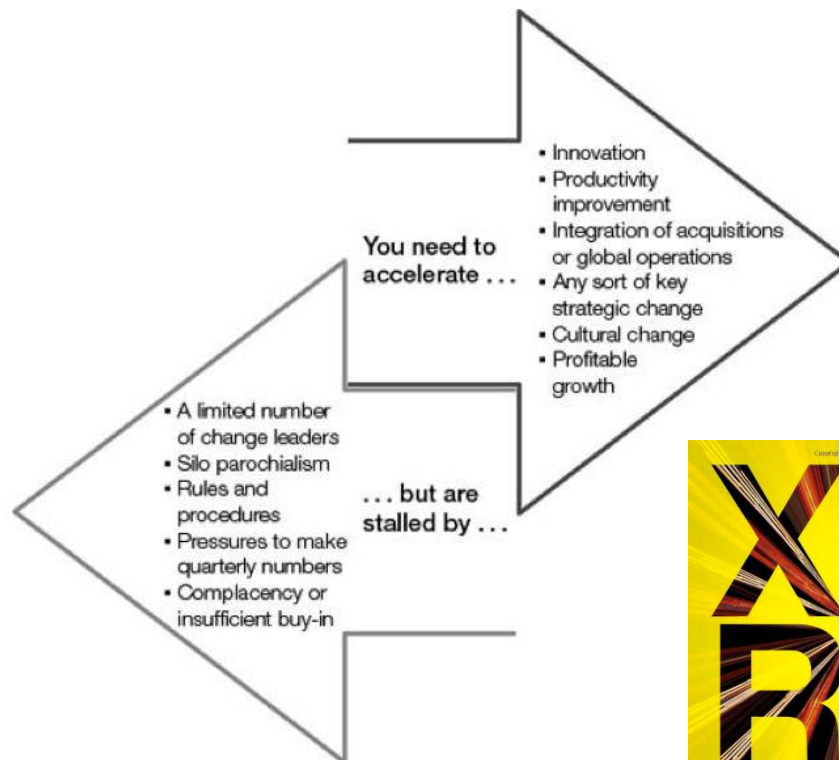|	
Innovative, energetic, and adaptive BUT chaotic *Twitter, most startups*	**Well run AND Innovative, energetic, and adaptive** *Apple, Google, Spotify*
Doomed *Bell South, Nortel, Myspace, Nokia*	**Well run BUT Bureaucratic and unable to change quickly** *Most large successful companies*

Management
(from executives, managers, and employees)

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Understanding Dual Operating Systems

John P. Kotter. Accelerate: Building Strategic Agility for a Faster Moving World. HBR Press 2014.

Acceleration stalled

You need to accelerate ...
- Innovation
- Productivity improvement
- Integration of acquisitions or global operations
- Any sort of key strategic change
- Cultural change
- Profitable growth

... but are stalled by ...
- A limited number of change leaders
- Silo parochialism
- Rules and procedures
- Pressures to make quarterly numbers
- Complacency or insufficient buy-in

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Moving from Windows API to Mac OS

1. Question

I'm a Windows (native, not .NET) programmer and I'd like to port an application to the Mac. Actually, I believe it will be more of a rewrite, as the original depends on many ActiveX controls.

As I have never used a Mac in my entire life, I'll need some guidance. O:-)

Thanks in advance

2. Answer

Cocoa [Mac framework] is a very different way of thinking then MFC and its kin [Windows framework]. You will do much, much better if you take the time to learn how Cocoa approaches things and adapt to its mindset rather than trying to find the quickest way to implement your current way of thinking in ObjC. It is possible to write MFC-style code for Mac, but you will always be fighting the framework if you do.

You would be amazed how fast Objective-C can be to code once you understand the patterns. It really can be stunning compared to C++ in my experience…

General Electric Implements Dual Operating Systems

- Building a Software Start-Up Inside GE, Brad Power, Harvard Business Review, JANUARY 29, 2015
    - $1B investment in Silicon Valley startup in 2011
    - Revenue over $1B by 2014
    - https://hbr.org/2015/01/building-a-software-start-up-inside-ge

- How GE Applies Lean Startup Practices, HBR, Brad Power, APRIL 23, 2014
    - Fastworks uses lean startup principles and cross-functional teams
    - ***CEO helps teams sidestep corporate bureaucracy***
    - ***https://hbr.org/2014/04/how-ge-applies-lean-startup-practices/***

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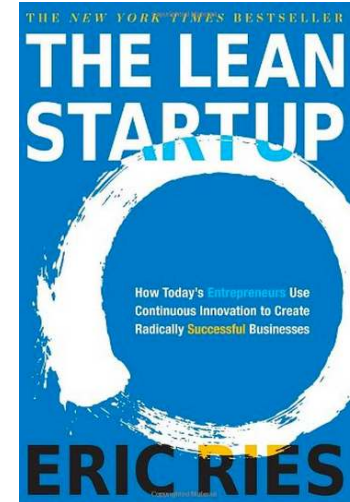
FrAgile

CEO refuses to crush corporate bureaucracy

- Traditional management hierarchy creates project teams
- "Scaling frameworks" are often used to provide scaffolding for the legacy organization until it can evolve
- **This is a translation layer that provides insulation and must ultimately be removed to get high performanc**e
- Bureaucracy or changes in management often cripple and/or destroy agile implementation

Fragile

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Leadership Must Move Towards a Generative Organization
Continuum of Safety Cultures - Ron Westrum
More to Less Accident Prone in Aviation and Healthcare

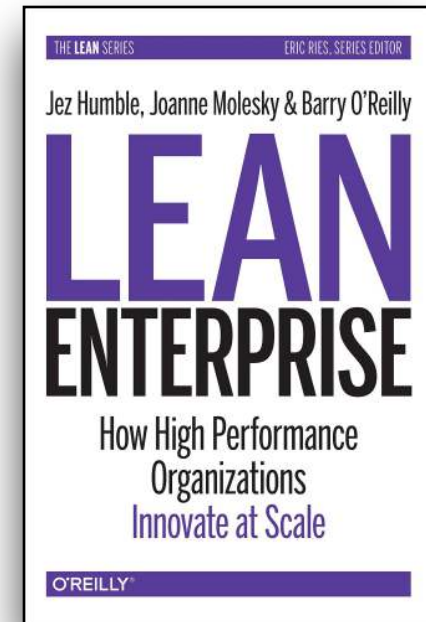- **Pathological Organization**
  - People hoard information or withhold it for political reasons or distort it to make themselves look better.
  - Large amounts of fear and threat
  - Look for scapegoat

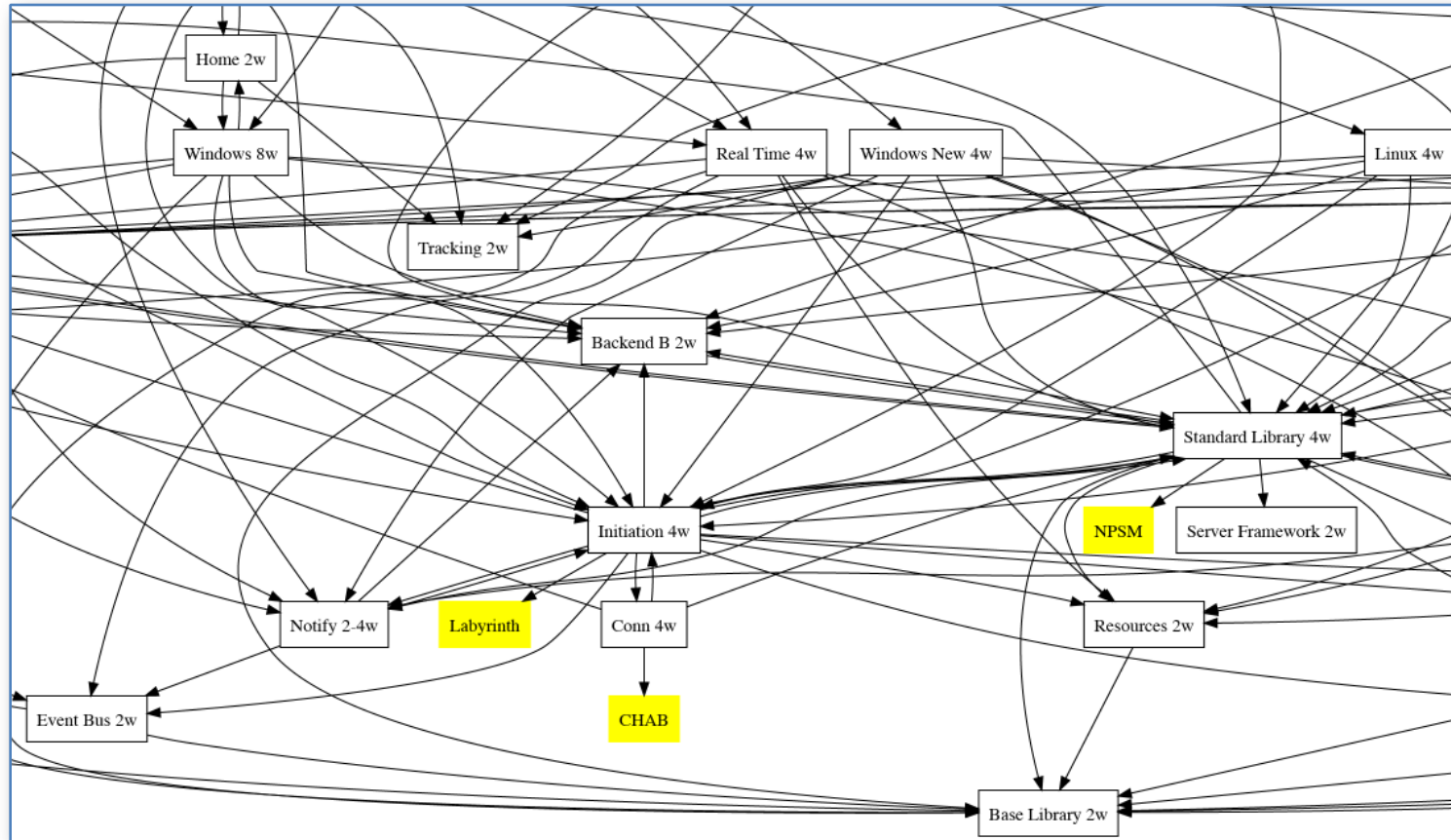- **Bureaucratic Organization**
  - Protect departments, maintain turf
  - Insist on rules, do things by the book
  - Seek justice

- **Generative Organization**
  - Focus on the mission
  - Everything subordinated to good performance
  - Look for basic problems in the system

THE LEAN SERIES   ERIC RIES, SERIES EDITOR

Jez Humble, Joanne Molesky & Barry O'Reilly

LEAN ENTERPRISE

How High Performance Organizations Innovate at Scale

O'REILLY®

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# Generative Organization Can Deal With Organizational Debt

Agile Enterprise Metrics - 2015 48th Hawaii International Conference on System Sciences
Daniel R Greening, Senex Rex
dan@senexrex.com

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Compliance Must Drive Agility

- It is impossible to get appraised at Agile CMMI Level 5 with a waterfall auditor.

- ***It is impossible to be Agile without an Agile SDLC and trained Agile auditors.***

- Most large companies have internal acquired organizations that are Agile. They can provide a starting point for Agile SDLC development by showing how to remove all waterfall artifacts and substitute Agile artifacts.

- Two operating systems mean two different management styles and reporting structures.

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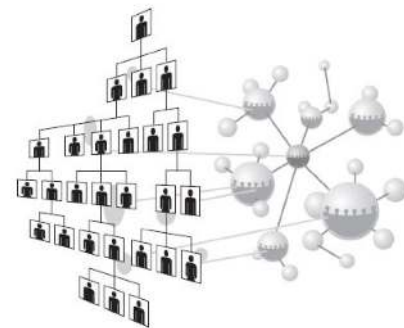
Agile
CEO changes management roles

- Management coaches the teams to self-organize and self-manage. Managers become leaders.

- Teams self-form against a prioritized backlog. Are the teams organized to maximize production?

- Leaders create virtual teams that drive communities of practice across company.

- Leadership refactors the organization

Managers become leaders ⟶

Sustainable

Teams self-manage

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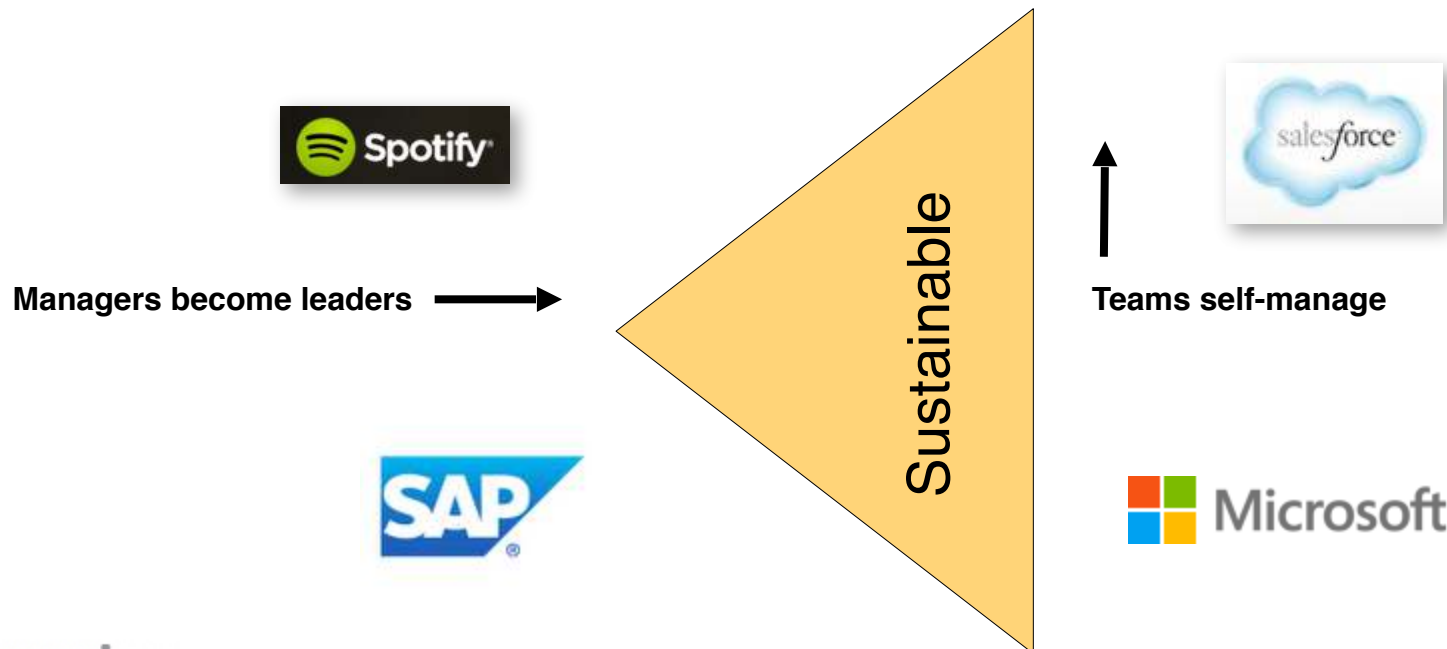
Managers Become Leaders

- Provide **challenging goals** for the teams
- Create a **business plan that works**
    - Eliminate organizational debt
    - Provide all resources the teams need
- Identify and **remove impediments** for the teams
    - Know velocity of teams
    - Remove waste - eliminate technical debt
- **Hold Product Owners accountable** for value delivered per point
- **Hold Scrum Masters accountable** for process improvement and team happiness

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Anti-Fragile
The Leading Edge of Organizational Development
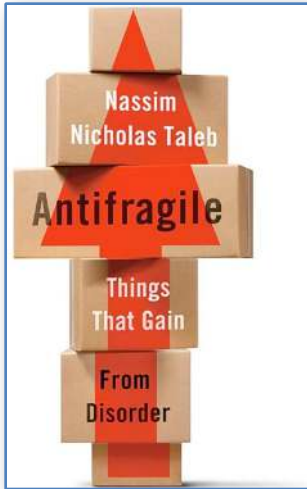
- Hierarchy still exists but becomes competency based and enabling
- Teams self-organize product direction and refactor the organization
- Leadership supports wherever their skills are needed
- Swarming makes organization stronger under stress

Teams drive strategy ➡

Anti-fragile

Company is customer facing

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# Evolution of Organizations

- The future of organizations is smaller organizations (50-150) federated into larger consortiums.

- Each organization has its own management and financial structure.

- Corporate headquarters becomes a small group rolling up financials and working with stakeholders and investors.

- Leadership of federated organizations is lean and executes agile practices.

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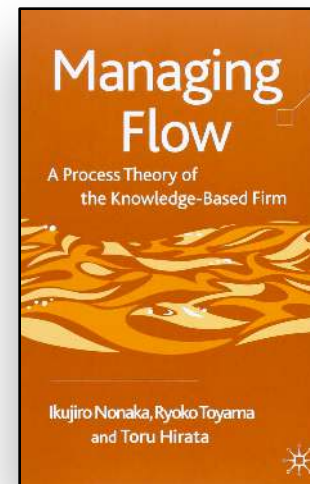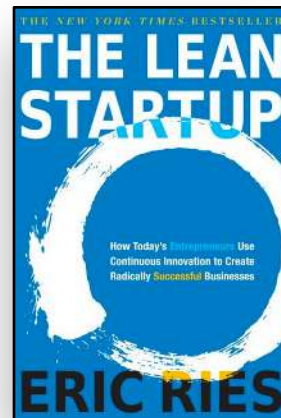
The Secret of Agile Performance

- Scale down not up (increase velocity)
  - 8 Borland developers produced more and better code than 400 Microsoft developers.
  - HP split because conflicting business strategies prevented alignment.
- Scale out not up (flatten the organization)
  - eXtreme Manufacturing strategy is to replicate autonomous teams each of which can independently build a car from a common design in replicated shipping containers.
- Scale in not out (align around vision)
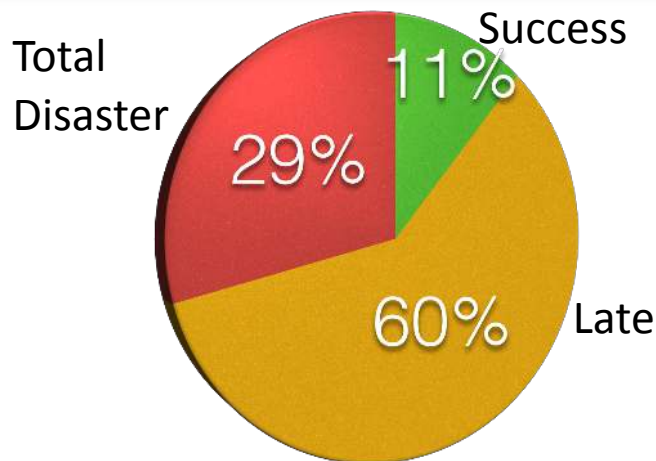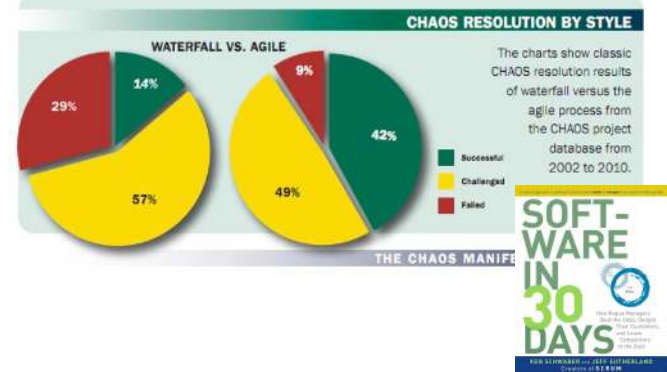 - Create global backlog and self-organize teams around that global vision.

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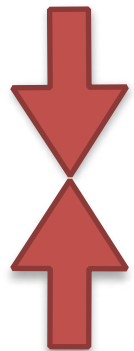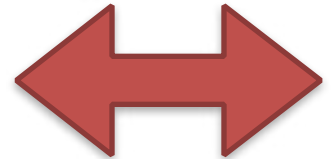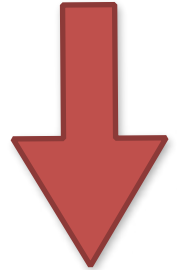
As a Agile Leader, I need to Implement a
Leadership Action Team
to Sustainably Scale Agility

61% of "Agile" Projects are Agile in Name Only
Chaos Report 2015, Standish Group International, Inc.

SIZE	METHOD	SUCCESSFUL	CHALLENGED	FAILED
All Size Projects	Agile	39%	52%	9%
	Waterfall	11%	60%	29%
Large Size Projects	Agile	18%	59%	23%
	Waterfall	3%	55%	42%
Medium Size Projects	Agile	27%	62%	11%
	Waterfall	7%	68%	25%
Small Size Projects	Agile	58%	38%	4%
	Waterfall	44%	45%	11%

Previously Published Data 2002-2010

CHAOS RESOLUTION BY STYLE. WATERFALL VS. AGILE. The charts show classic CHAOS resolution results of waterfall versus the agile process from the CHAOS project database from 2002 to 2010.

SOFTWARE IN 30 DAYS

Total Disaster 29% — Success 11% — Late 60%

Waterfall 2011-2015 Data

Agile 39% — Agile in Name Only 52% — 9%
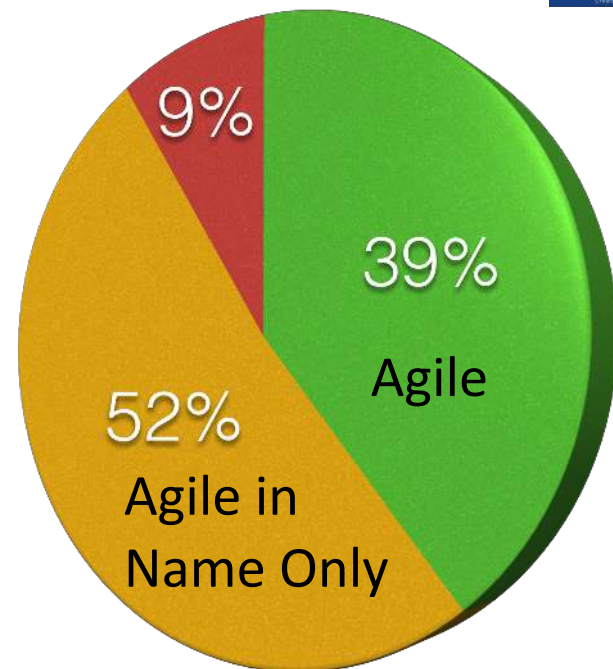
Agile 2011-2015 Data

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0. Leadership Action Team

Module Goals:

- Align the development of the entire organization along a shared and transparent organizational transformation strategy
- Manage the high level transformation process based on a prioritized organizational transformation backlog with a primary focus on removing waste
- Continuously monitor velocity while identifying and removing impediments that block team performance
- Support the PO and SM cycle of the Scrum@Scale model through mentoring, coaching, challenging, and evolving the organization

Vision & goals regarding organizational culture, structure, values, norms etc.

Business Strategy and market trends

Other organizational development initiatives

Other organizational metrics to provide transparency

Organizational transformation strategy

Identified impediments

0. Leadership Action Team

Up-to-date Executive Action Backlog

Feedback on interventions

Measures and interventions to remove waste and improve performance

Information on transformation status and process in the organization

Status of organizational development
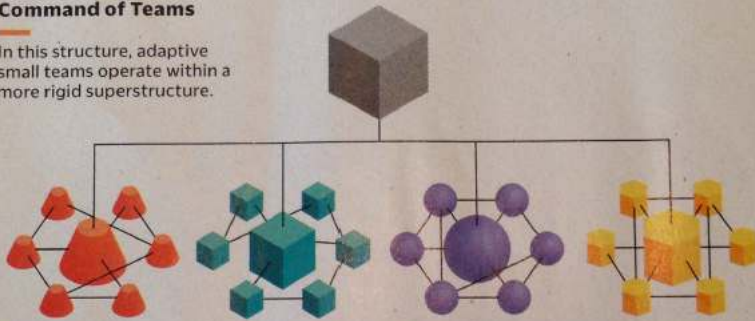
Output
Input

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Command

In this traditional top-down structure, the connections that matter are the ones between workers and their managers.
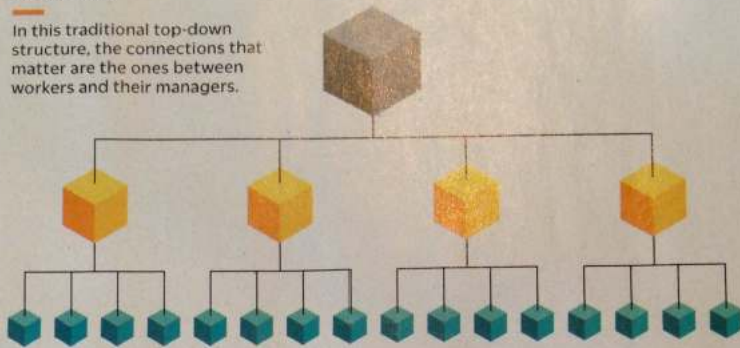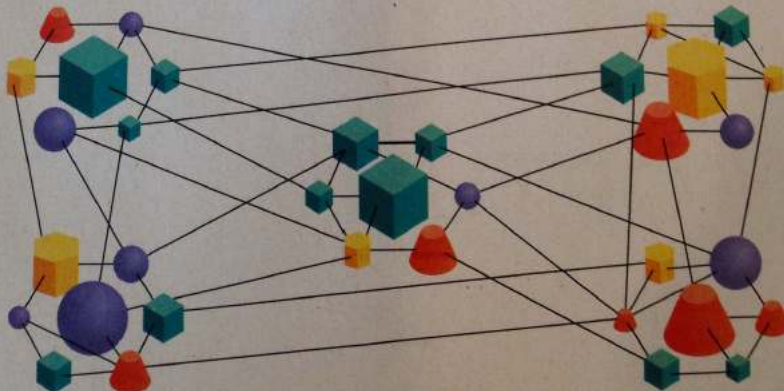
Command of Teams

In this structure, adaptive small teams operate within a more rigid superstructure.

Team of Teams

The relationships among teams should resemble the closeness among individuals on those teams.

Your structure is your strategy!

"In addition to being a fascinating and colorful read, this book is an indispensable guide to organizational change." —**WALTER ISAACSON**, *from the foreword*
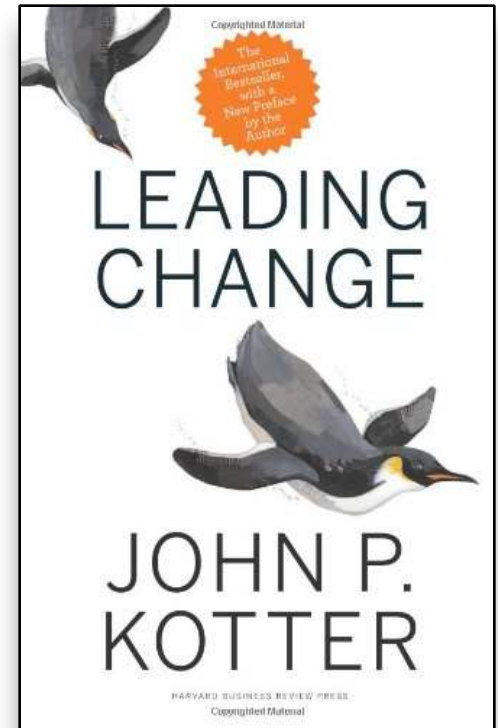
TEAM
— OF —
TEAMS

NEW RULES OF ENGAGEMENT
FOR A COMPLEX WORLD

GENERAL STANLEY
McCHRYSTAL
U.S. Army, Retired

with Tantum Collins, David Silverman, and Chris Fussell

31

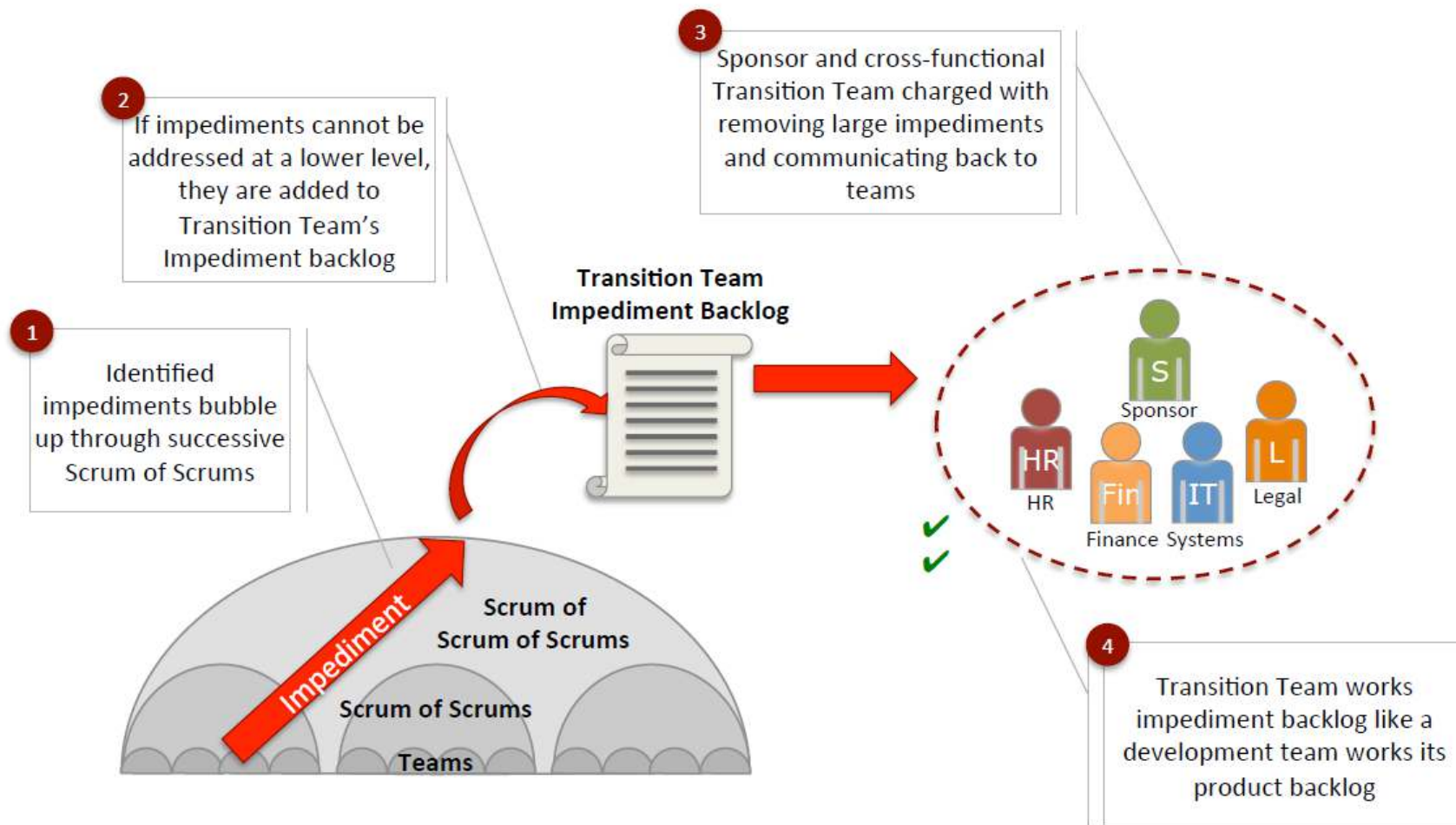Goodbye Org Chart. Fast Company Jun 2015

Leadership Needs to Lead!

- Executive Action Team needs to be permanent and aggressively deal with company impediments

- Scrum needs executive support for continuous improvement to be sustainable.

- Sometimes called Agile Transition Team or Strategy Scrum Team.

- Can be operationalized as Meta-Scrum, a joint team of Leadership, Product Owners, Scrum Masters and anyone else needed to drive the company to Done.

- Meets regularly, at least every sprint cycle. Steve Jobs had such a meeting every two weeks at Apple.

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How the Executive Action Team Works

2 If impediments cannot be addressed at a lower level, they are added to Transition Team's Impediment backlog

3 Sponsor and cross-functional Transition Team charged with removing large impediments and communicating back to teams

Transition Team Impediment Backlog

1 Identified impediments bubble up through successive Scrum of Scrums

Impediment

Scrum of Scrum of Scrums

Scrum of Scrums

Teams

HR
HR

Sponsor
S

Fin
Finance

IT
Systems

Legal
L

4 Transition Team works impediment backlog like a development team works its product backlog

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The Meta Scrum:
Leadership Action in Scaled Scrum

- A gathering of Key Stakeholders, Leadership, and Product Owners

- Run by Chief Product Owner

- The forum for stakeholders to express preferences and remove blocks (they should not try to alter product vision between Meta Scrums)

- Can be held at regular intervals or on an ad-hoc basis

- Allows teams to progress efficiently down a single work path

Sprint/Time

Meta Scrum

Aligned Product Backlog

Leadership   Stakeholders   Product Owners
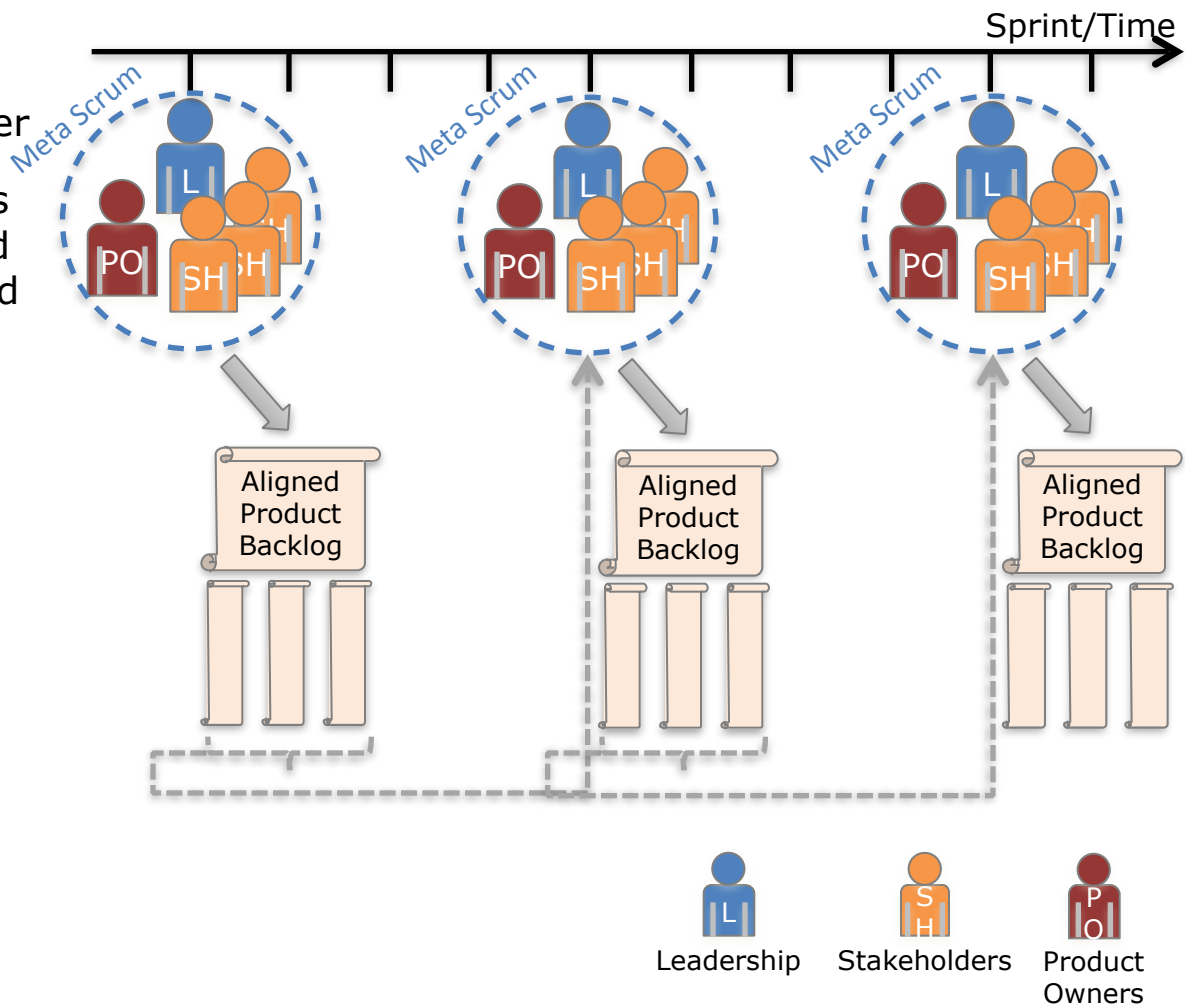
Leadership Action Team Crushes Impediments

- Too many projects in pipeline (Context Switching)
- Everything is top priority
- Pressure to get things done delays projects and reduces quality
- Lack of understanding of Scrum
- Fear of exposure or change in responsibilities
- No continuous integration or automated testing
- ***Coachs/ScumMasters not surfacing impediments***
- ***Management not focused on removing waste***

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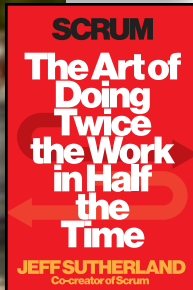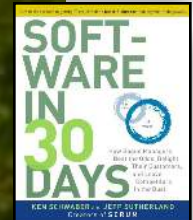# A Few Things That Will Need to Change

- Reporting - measure production not hours
- Recruiting strategy - hire for teams
- Job descriptions - focus on team contribution
- Incentive plans - reward team performance
- Performance appraisals - get rid of them
- Space for teams - collocation works best

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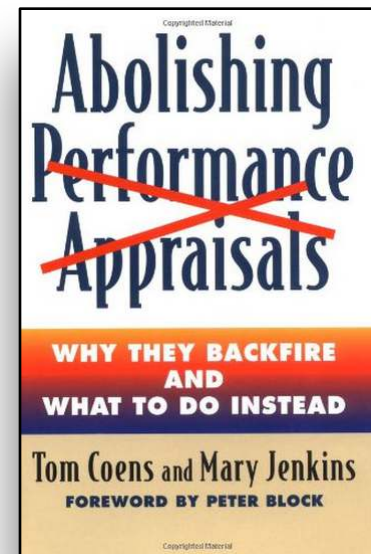
Deploy Aggressive Scrum!

The faster you go, the more resistance you get!

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Getting Ready to Scale the Organization

- Organizations around the world are at a fevered pitch to Scale Scrum. Scrum scaled for the first time at IDX Systems in 1996. One of the key components to IDX's success was the fact that the scaling initiative came from leadership.

- Leadership was able to set the enterprise's expectations, creating a consistent vision for the teams to execute.

- This is the logic behind the Leadership Action Team in our Scrum@Scale framework. The first thing to be done when scaling Scrum is to scrum leadership.

- **Join us on Wednesday June 24th for a webinar on the Leadership Action Team**, or attend our two-day class in Boston, Palo Alto, or Stockholm for a complete look at Scrum@Scale framework.

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