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# Agile Under a Waterfall

Benjamin Day
benday.com

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# About Me

- Cambridge, MA
- Consultant, Coach, & Trainer
- Microsoft MVP for Visual Studio ALM
- Team Foundation Server,
  Software Testing, Scrum,
  Software Architecture
- Scrum.org Classes
  - Professional Scrum Developer (PSD)
  - Professional Scrum Foundations (PSF)
- www.benday.com, benday@benday.com, @benday

BDC Benjamin Day Consulting

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# Introductory Thoughts.

# What do I mean by “waterfall”?

- Waterfall = plan-driven
- Gaant charts
- Microsoft Project
- Start Dates & End Dates
- Phases

# What is Scrum Under a Waterfall?

- “Agile Under a Waterfall”
- Scrum + plan-driven
- Agile + plan-driven

- SUW

# Assumptions

- SUW exists
- Value of Agile / Scrum is…
  - Settled
  - A good thing

# Agile is popular.

“Water-Scrum-Fall Is The Reality Of Agile For Most Organizations Today”
by Dave West
Forrester Research
July 26, 2011

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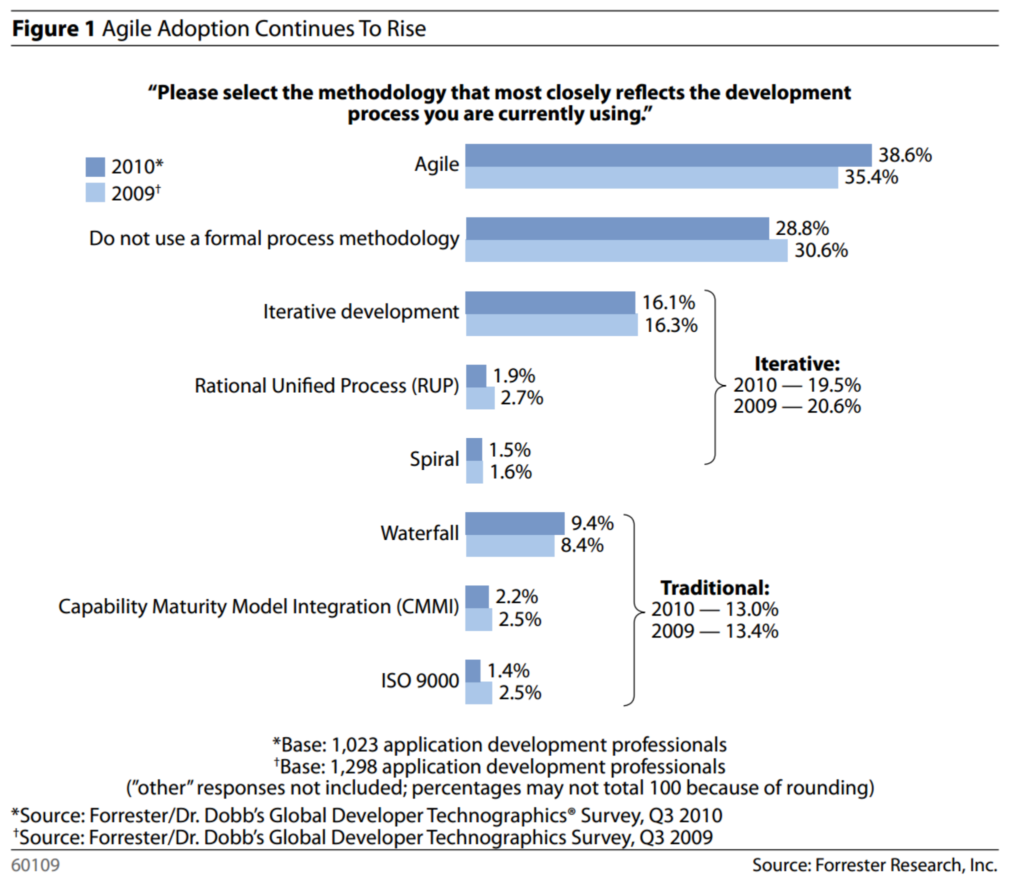


**Figure 1** Agile Adoption Continues To Rise

**“Please select the methodology that most closely reflects the development process you are currently using.”**

*Base: 1,023 application development professionals
†Base: 1,298 application development professionals
(“other” responses not included; percentages may not total 100 because of rounding)

*Source: Forrester/Dr. Dobb’s Global Developer Technographics® Survey, Q3 2010
†Source: Forrester/Dr. Dobb’s Global Developer Technographics Survey, Q3 2009

60109

Source: Forrester Research, Inc.

# Scrum is arguably the dominant Agile flavor.

"Water-Scrum-Fall Is The Reality Of Agile For Most Organizations Today"
by Dave West
Forrester Research
July 26, 2011

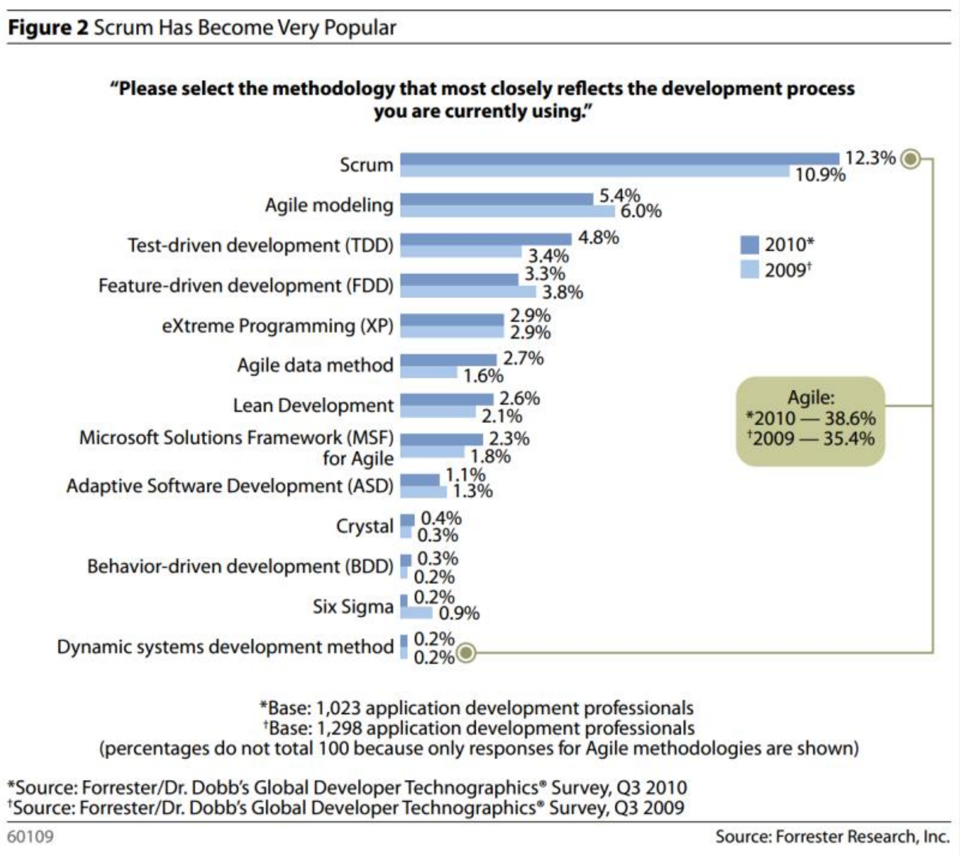


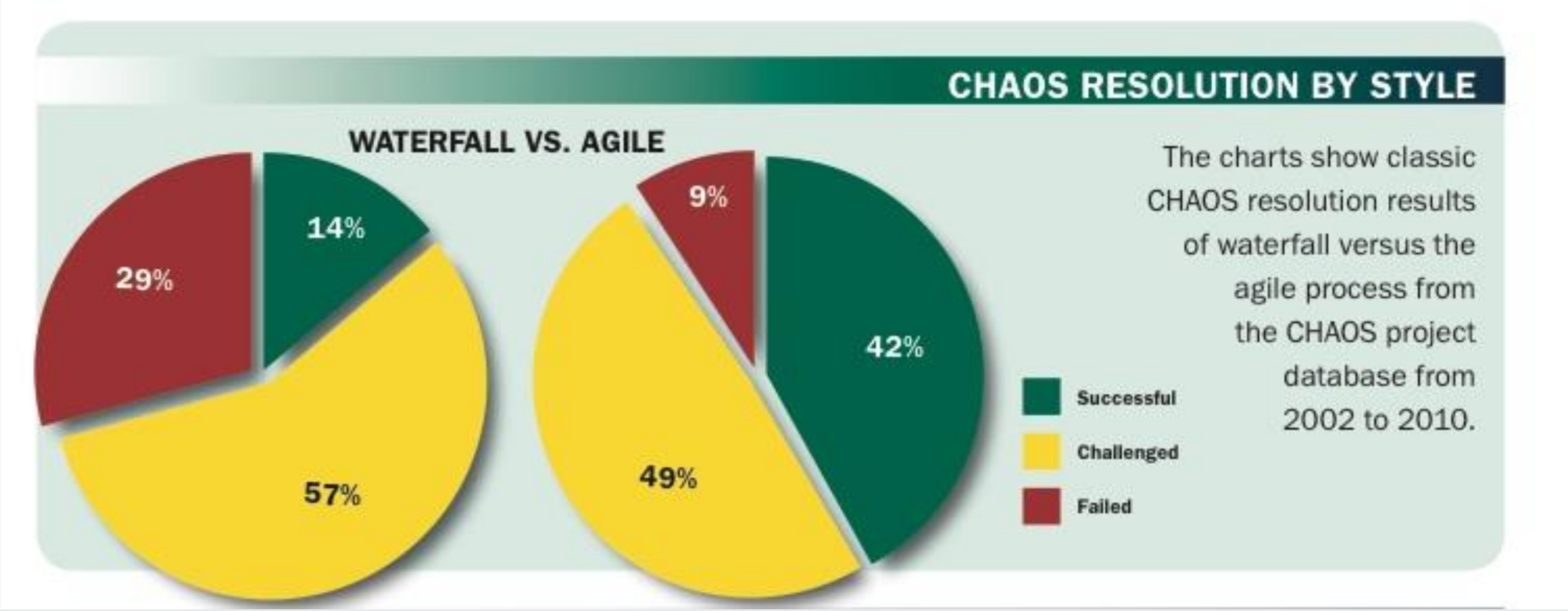
**Figure 2** Scrum Has Become Very Popular

*Base: 1,023 application development professionals
†Base: 1,298 application development professionals
(percentages do not total 100 because only responses for Agile methodologies are shown)

*Source: Forrester/Dr. Dobb's Global Developer Technographics® Survey, Q3 2010
†Source: Forrester/Dr. Dobb's Global Developer Technographics® Survey, Q3 2009

60109 Source: Forrester Research, Inc.

# Agile seems to get results.



CHAOS RESOLUTION BY STYLE

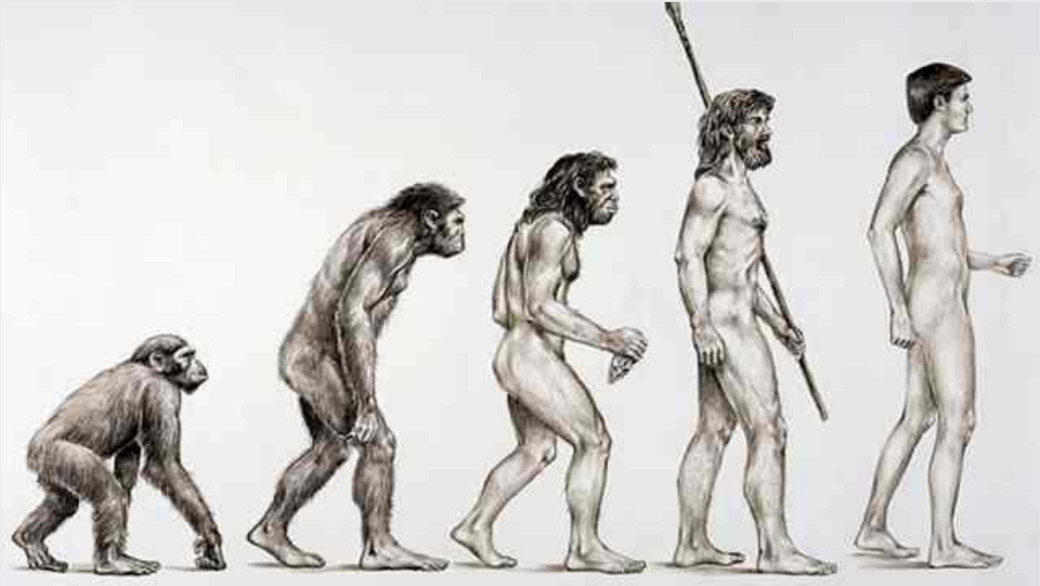
WATERFALL VS. AGILE

The charts show classic CHAOS resolution results of waterfall versus the agile process from the CHAOS project database from 2002 to 2010.

The CHAOS Manifesto, Copyright 2011

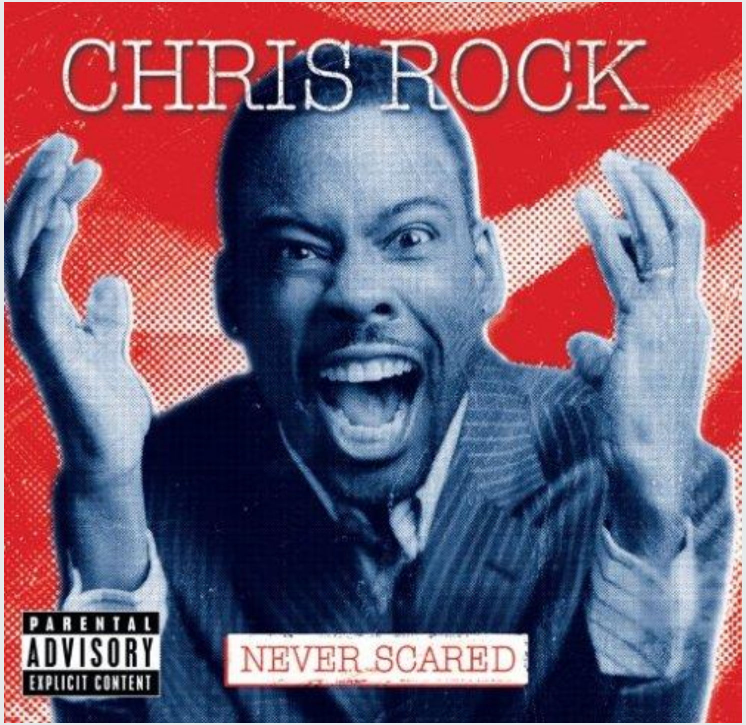
# My $0.02 on SUW

- It's a difficult place to be.
- It's a transitional form.



…and now a quote by a leading project management expert.

# "You can drive with your feet.  It doesn't mean it's a good idea." *



** - paraphrased*

# So what do you do if your company does SUW?

# Two options.

1. Quit in protest.  Get a new job.
2. Try to make it work.
   - Someone else is paying.
   - Make informed decisions.
   - Lead the transition.

# Goal for this talk

- Be practical
- Try to see both sides
- Acknowledge that change takes time

# Comparisons & Motivations.

# Waterfall vs. Scrum

| Waterfall | Scrum / Agile |
|---|---|
| Requirements docs | Just-in-time, informal requirements |
| Occasional “customer” involvement | Frequent “customer” involvement |
| Start-to-finish Project Plan | Product Backlog. Plan for Sprint.<br>Details are sketchy beyond that.<br>Priorities shift based on new data. |
| Tasks are assigned | Assigned tasks are a bottleneck |
| Potentially large team size | Teams of 3 – 9 people |
| Multiple phases, eventual delivery | Working software each Sprint / Iteration |
| Resistant to change | Change is expected |
| Contract says what we build, deliver | Contract is a lot closer to T&E |

# Why Waterfall?

- Comes naturally
- Feels good
  - We’ve got a plan.
  - We’ve got dates.
  - What could possibly go wrong?
- Helps managers manage
- Pin down what’s going to be built
- Minimize uncertainty

# Why Scrum / Agile?

- Embraces uncertainty
- Empirical
- “Forecast” rather than “commitment”
- Self-organization and estimation by the “do-ers”

# Who is Waterfall for?

Ever seen a company that is Agile at the top and Waterfall at the bottom?

Do managers trust their team?

What does the team think about the managers?

# Why Waterfall people think Agile-ists are nuts

- Sandal-wearing anarchists
- Their estimates are always wrong
- They’re always late
- They’re lazy
- The plan is flawless.
- Devs write crummy, buggy code

“Too complex to not plan.”

# Why Agile-ists think Waterfall people are nuts

- The plan is largely imposed
  - “Voluntold”
- What we told them was bogus.
  - Haven’t the foggiest clue
  - Just enough to make them go away
- Didn’t have anything real to estimate anyway

“Too complex to plan.”

Point of agreement #1:
Each thinks the
other side is wrong.

Point of agreement #2:
The work is complex.

# Making it work.

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# SUW is the grumpy marriage of two processes.

# Why SUW?

- Required by contract
- Required by law
- The Agile Experiment
- Just cuz.

# Leverage the strengths of each

- Scrum for day-to-day dev/test activities
- Detect problems with Sprints
- Focus on DoD & working software

- Waterfall for multi-team coordination
- Waterfall for release planning

# Differences for Scrum / Agile

**Same**

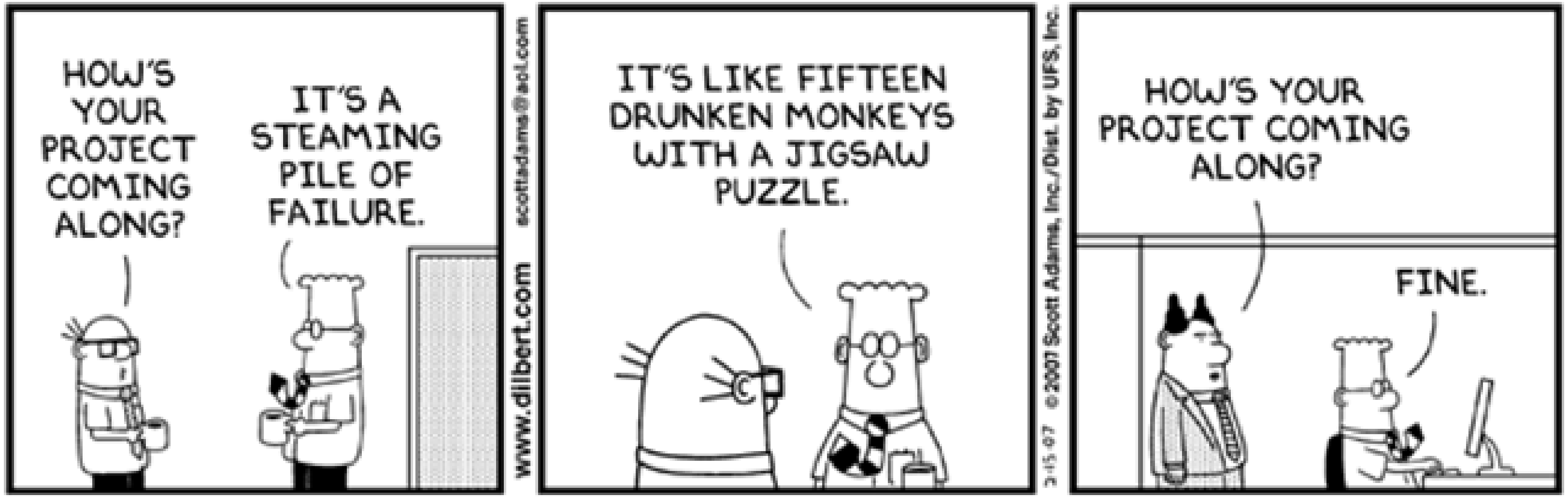
- Focus on ‘Definition of Done’
- Daily Scrum
- Sprint Burndown
- Sprint Review
- Retrospective

**Changed**

- Backlog = Project Plan
- Less emphasis on Backlog Grooming & Sprint planning
- Less negotiation during Sprint

# Some of the risks of SUW.

# Impedance mismatch leads to poor communication.


HOW'S YOUR PROJECT COMING ALONG?
IT'S A STEAMING PILE OF FAILURE.
scottadams@aol.com
www.dilbert.com
IT'S LIKE FIFTEEN DRUNKEN MONKEYS WITH A JIGSAW PUZZLE.
3-15-07 © 2007 Scott Adams, Inc./Dist. by UFS, Inc.
HOW'S YOUR PROJECT COMING ALONG?
FINE.

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# Lack of trust & transparency.

# Culture of fear.

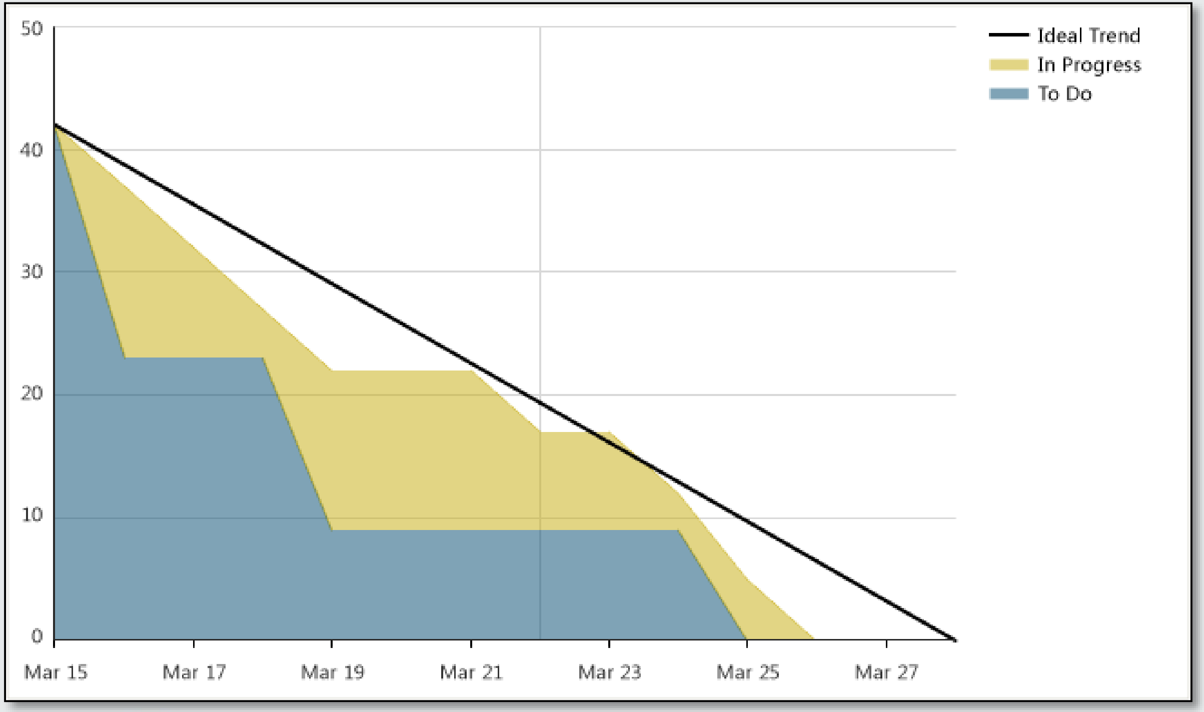
# A complete detachment from reality.

# Everything is going great until it isn’t.

# It’s two sets of books.

# Using metrics for evil.

# For example,
# Using the Burndown for Evil



A lot of orgs are obsessed with individual performance.

“Show it to me when it’s done.”

# So, uhhh…how do you make it work?

# Five tips.

1. Think positive.
2. Come to terms with uncertainty.
3. Fear is everywhere.
4. Avoid ‘earned value’.
5. Avoid keeping two sets of books.

# #1.
# Think positive.

People get weird when their org starts thinking about getting more Agile.

One problem is requiring people to think.

Another major problem is the human *fear of loss.*

Focus on
what you *gain*
rather than
what you *lose*.

# Focus on ‘Done Software’.

We’re going to get
done software more often.

You do have to get past change being a bug.

It’s a chance to adapt.
You get ‘done’ software and if you don’t like it, you can change it.

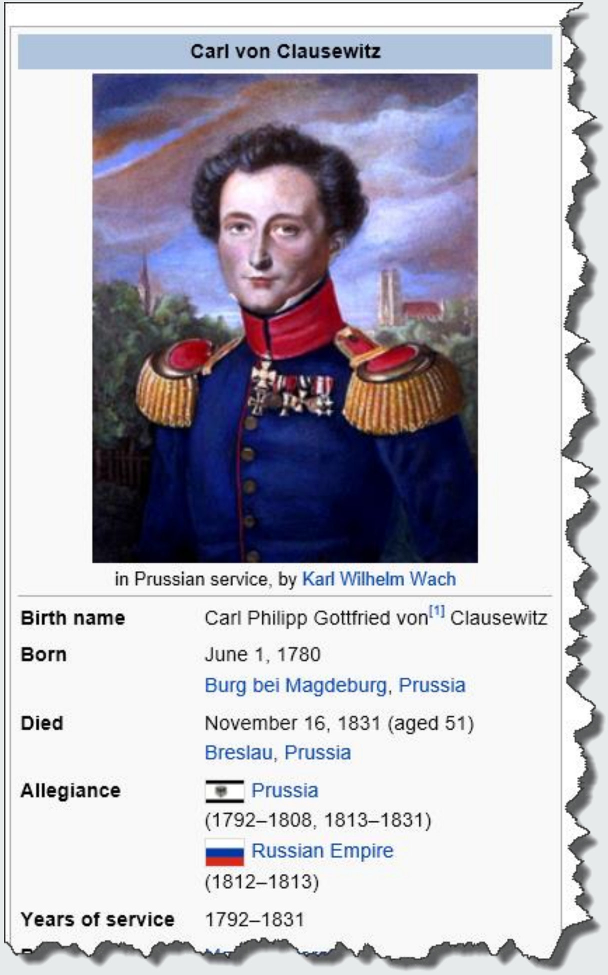
It’s *not* “rework.”

It’s improving existing features to better meet the needs of the stakeholders.

Use the sprint boundaries as a way to take stock of where you are.

*“Strategy is the use of the engagement for the purpose of the war.”*

from “On War”
by Carl Phillip Gottfried von Clausewitz



**Carl von Clausewitz**

in Prussian service, by Karl Wilhelm Wach

| | |
|---|---|
| **Birth name** | Carl Philipp Gottfried von[1] Clausewitz |
| **Born** | June 1, 1780<br>Burg bei Magdeburg, Prussia |
| **Died** | November 16, 1831 (aged 51)<br>Breslau, Prussia |
| **Allegiance** | Prussia<br>(1792–1808, 1813–1831)<br>Russian Empire<br>(1812–1813) |
| **Years of service** | 1792–1831 |

#2.

## Come to terms with uncertainty.

# Software is not a ‘sure thing.’

Wishing does not make it so.

Gripping tighter also does not make it so.

Software always gets more complex once you start.

Change is going to happen.

Making your teams spend extra time on ‘more accurate accurate planning’ is (probably) wasteful.

Get to good enough and then stop.

# #3.
# Fear is everywhere.

Your developers are afraid of you.

Your middle managers are afraid of you *and* your developers.

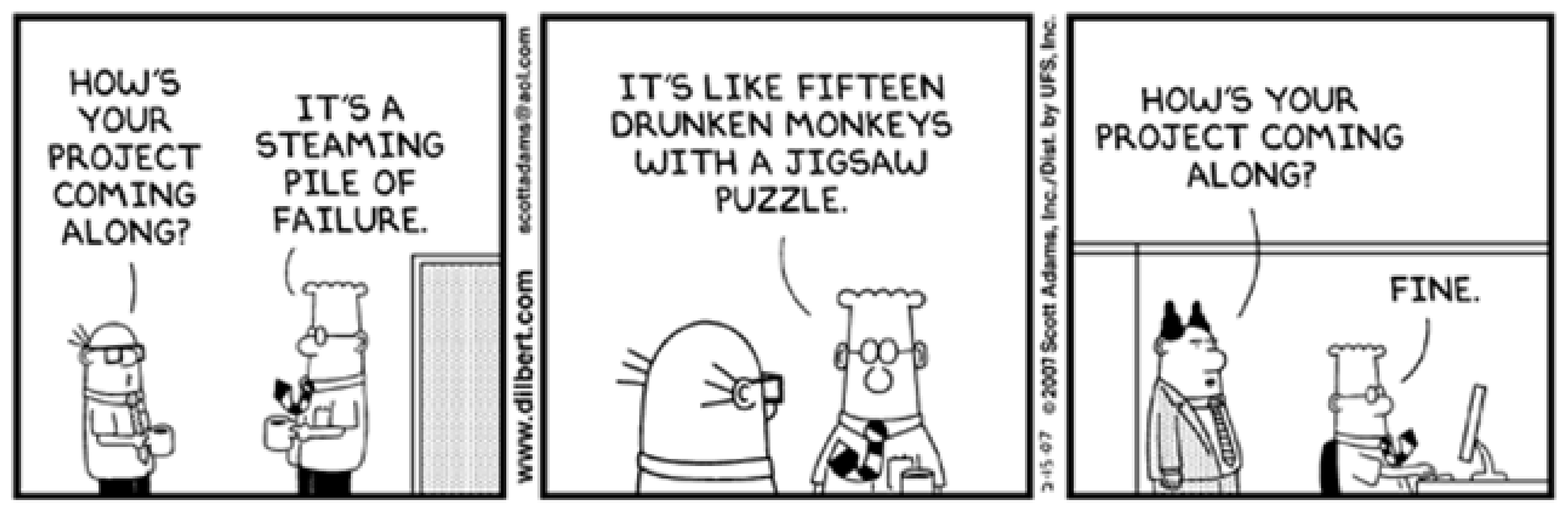
Remember that your developers were picked on and bullied.

# If you make them nervous…

…they know what you want to hear…

…and they’ll tell it to you.

(Unfortunately, it’s not true.)

HOW'S YOUR PROJECT COMING ALONG?
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IT'S LIKE FIFTEEN DRUNKEN MONKEYS WITH A JIGSAW PUZZLE.
3-15-07 © 2007 Scott Adams, Inc./Dist. by UFS, Inc.
HOW'S YOUR PROJECT COMING ALONG?
FINE.

You need to try to create trust.

You need to make it ok to be “wrong”.

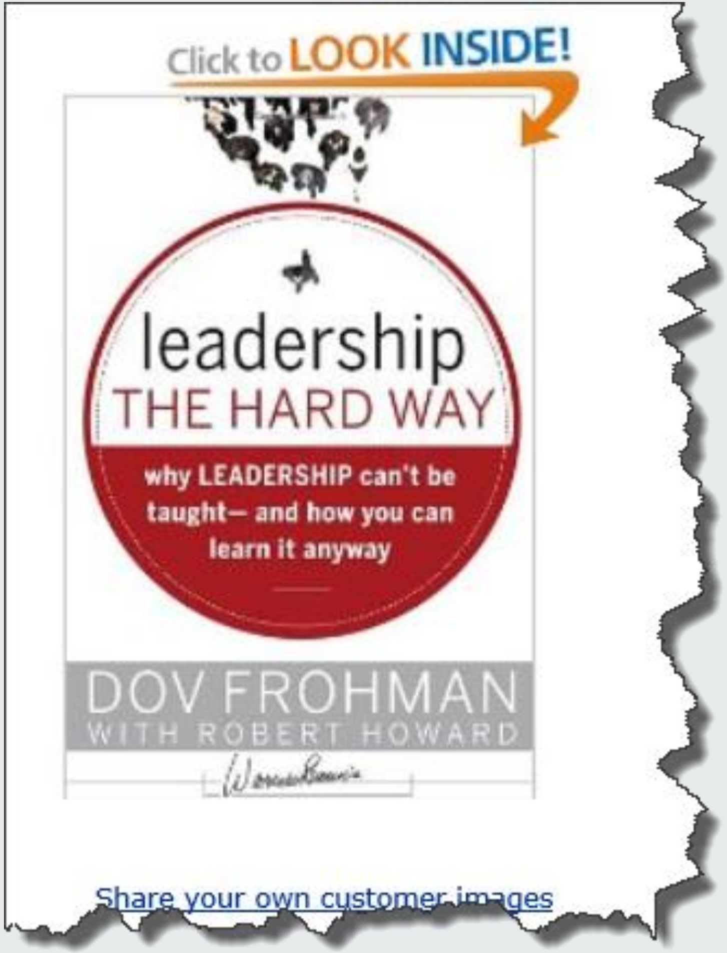
You need to make it ok for your teams to tell you that *you* are wrong.

*“The goal of a leader should be to maximize resistance—in the sense of encouraging disagreement and dissent.*

…

***If you aren’t even aware that the people in the organization disagree with you, then you are in trouble.****”*

*Leadership The Hard Way*
*by Dov Frohman & Robert Howard*



Click to LOOK INSIDE!

leadership
THE HARD WAY

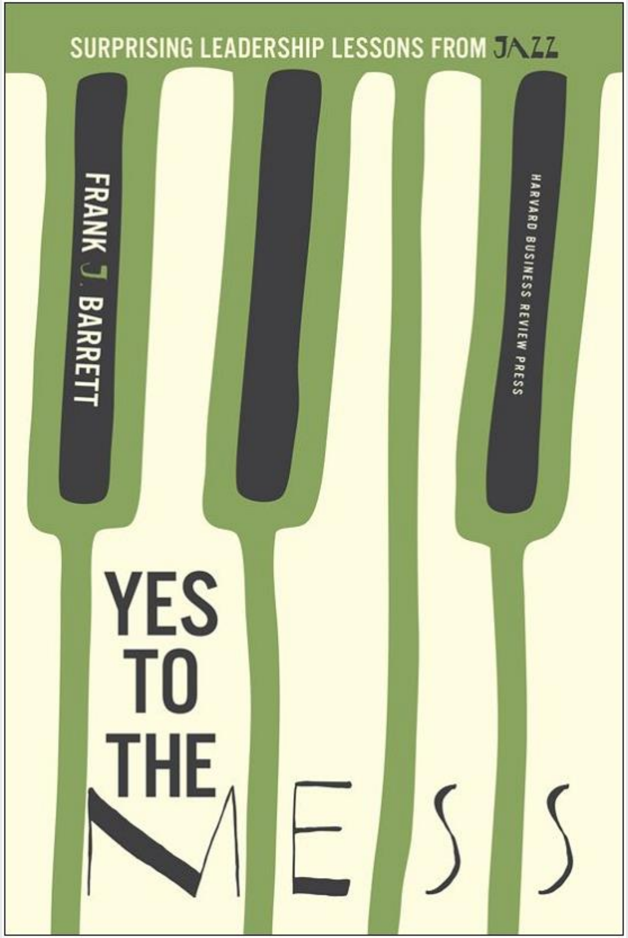
why LEADERSHIP can't be taught— and how you can learn it anyway

DOV FROHMAN
WITH ROBERT HOWARD

Share your own customer images

*"Too often in organizations leaders think that if they get the three R's clear—rules, roles, and responsibilities—innovation will logically follow. More often than not, results go 180 degrees in the opposite direction."*

"Yes To The Mess:
Surprising Leadership Lessons from Jazz"
by Frank J. Barrett
Harvard Business Review Press


SURPRISING LEADERSHIP LESSONS FROM JAZZ
FRANK J. BARRETT
HARVARD BUSINESS REVIEW PRESS
YES TO THE MESS

They’re terrified of being wrong.

They don’t understand your motivations.

When you say that you "need all this by X date"…

…they believe you.

*"…research shows that the biggest obstacle to creating the psychological safety that allows people to learn from mistakes is a hierarchy. When those with status are distant or intimidating, those beneath them are more likely to save face by hiding or ignoring errors."*

"Yes To The Mess:
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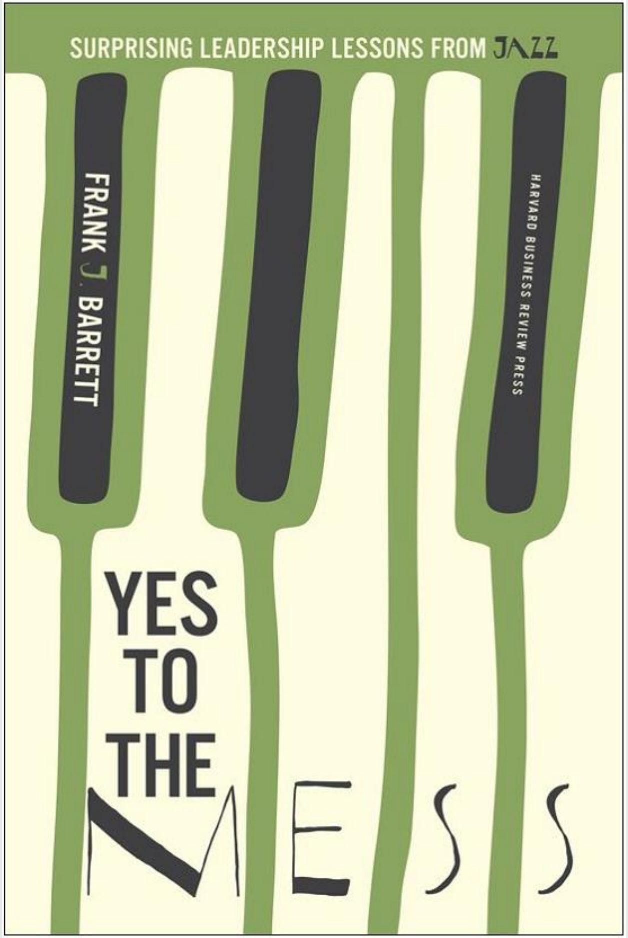
SURPRISING LEADERSHIP LESSONS FROM JAZZ
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YES TO THE MESS

You have a priority in your head. Share that vision.

# #4.
# Avoid ‘earned value’.

*“I’m 72.6% done with my task.”*

…and now a quote by a leading project management expert.

*“[Earned value] is the path to the dark side.  [Earned value] leads to [technical debt]. [Technical debt] leads to [maintainability problems]. [Maintainability problems] lead to suffering.”*

Yoda, Star Wars: Episode 1

# Focus on your Definition of Done.

It’s done or it isn’t.
Done software only.

(Oh…and force your team to write unit tests.)

# #5.
# Avoid keeping two sets of books.

A shared reality is essential.

Try to avoid the overhead of communicating between the two visions.

# Tip: Try Team Foundation Server + Microsoft Project Server

# Team Foundation Server & Visual Studio

- One stop shop for your devs
- Great tools for running an Agile / Scrum project.
- Integrated with source control
- Automated build system
- QA testing tools for managing / tracking test suites and test progress
- Feedback capture
- Lightweight requirements

# Microsoft Project Server

- Plug-in to SharePoint

- Accessed via:
  - Web interface
  - Microsoft Project

- Enterprise project management
  - Tasks
  - Portfolios of projects
  - Timesheets
  - Resources
  - Approval workflows

# TFS & MPS Integration

- Bi-directional sync
- TFS data to/from Enterprise Project Plans

# TFS + Project Server Scenarios

- Track progress across many teams for a large effort
  - Think enterprise "roll-up"
- Requirements in Project Server → Details created in TFS by the teams
  - Project Server can approximate your "Product Backlog"
- Modifications have an optional approval workflow
  - Keeps Waterfall-centric managers in the loop

Big win:
Both groups stay in their preferred tools.

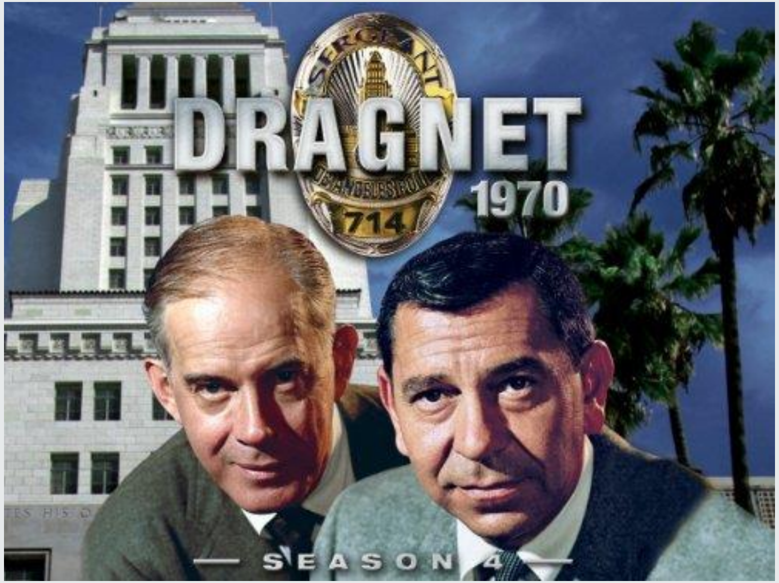
Big win:
Synchronization happens automatically.

# "Just the facts, ma'am."

- TFS captures data without judgment

- Is it in source control?
- Does the build work?
- Do the tests pass?
- What's the bug count?
- What's the history on that work item?

- Published to Project Server without judgment



Transparency & honesty
is crucial for trust in SUW.

# Five tips.

1. Think positive.
2. Come to terms with uncertainty.
3. Fear is everywhere.
4. Avoid ‘earned value’.
5. Avoid keeping two sets of books.

# …in closing.

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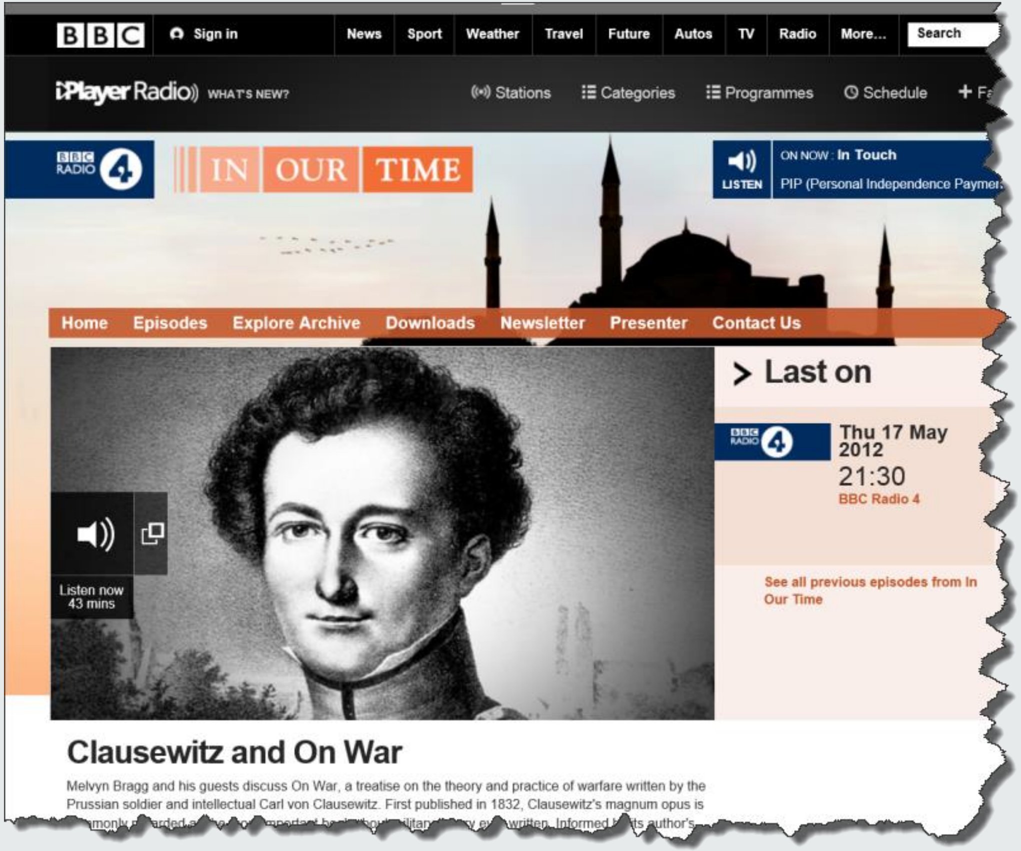
# Quick overview on Clausewitz.

"In Our Time"
BBC Radio 4
May 17, 2012

http://www.bbc.co.uk/programmes/b01hl293



Thu 17 May 2012
21:30
BBC Radio 4

## Clausewitz and On War

Melvyn Bragg and his guests discuss On War, a treatise on the theory and practice of warfare written by the Prussian soldier and intellectual Carl von Clausewitz. First published in 1832, Clausewitz's magnum opus is monly regarded as the most important book about military theory ever written. Informed by its author's

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# The emotional overhead of discussing scope and other issues.

"Negotiating with Emotion"
by Kimberlyn Leary, et al.
Harvard Business Review
January 2013

HBR.ORG

Harvard Business Review

JANUARY–FEBRUARY 2013
REPRINT R1301G

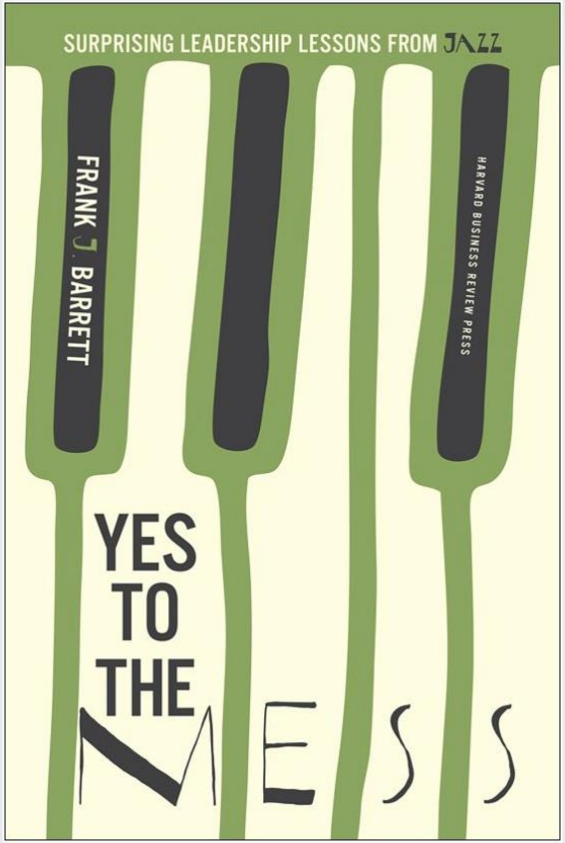
Negotiating with Emotion

**High-stakes deal making is fraught with feeling. Should we really ignore that?** ***by Kimberlyn Leary, Julianna Pillemer, and Michael Wheeler***

# Some thoughts on letting go.

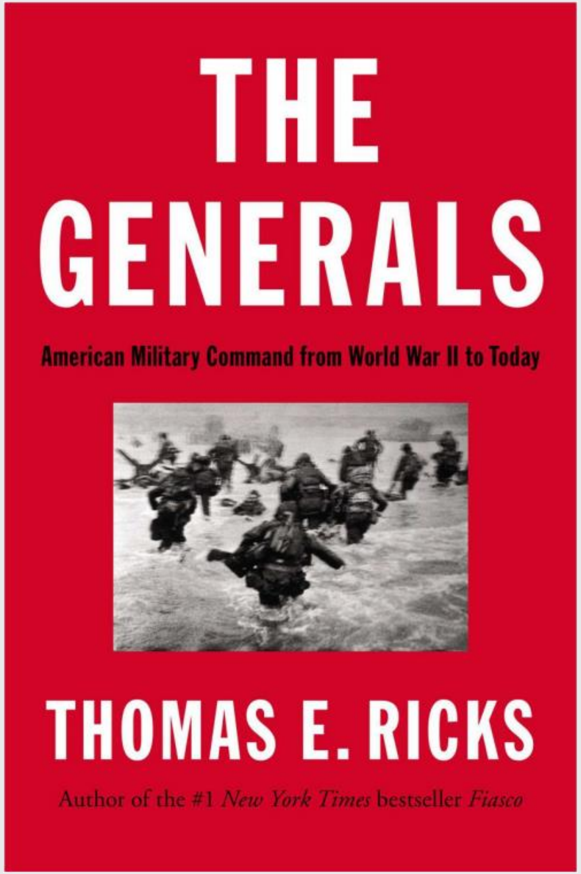
"Yes To The Mess: Surprising Leadership Lessons from Jazz"

by Frank J. Barrett
Harvard Business Review Press


SURPRISING LEADERSHIP LESSONS FROM JAZZ
FRANK J. BARRETT
HARVARD BUSINESS REVIEW PRESS
YES TO THE MESS

# On leadership style, communication, and failures.

“The Generals: American Military Command from World War II to Today”
by Thomas E. Ricks


THE GENERALS
American Military Command from World War II to Today
THOMAS E. RICKS
Author of the #1 *New York Times* bestseller *Fiasco*

# Summary

- SUW can be awkward
- There can be trust problems
- Use Scrum/Agile to detect problems

- TFS & Project Server helps
  Project Management Impedance Mismatch

- Transparency is the key

# Any last questions?

# Thank you.

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