Visual Studio LIVE! | Redmond
EXPERT SOLUTIONS FOR .NET DEVELOPERS

~~Develop~~ Deliver on Cadence, Release on Demand

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Yesterday's Knowledge; Tomorrow's Code!

Visual Studio LIVE! 25 YEARS OF CODING INNOVATION

About Me

- ✓ From Boise, Idaho, USA
- ✓ President of Accentient
- ✓ Microsoft MVP (Dev Technologies)
- ✓ Professional Scrum Developer
- ✓ Professional Scrum Trainer
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Microsoft
Professional Scrum Development with Microsoft Visual Studio 2012
Richard Hundhausen

Cadence \ ˈkā-dᵊn(t)s \

Cadence

A rhythmic sequence or
flow of sounds in language

Cadence

A rhythmic sequence or

flow of ~~sounds in language~~

value in the form of working software

More specifically …

Getting the team into a regular, comfortable, and sustainable development rhythm

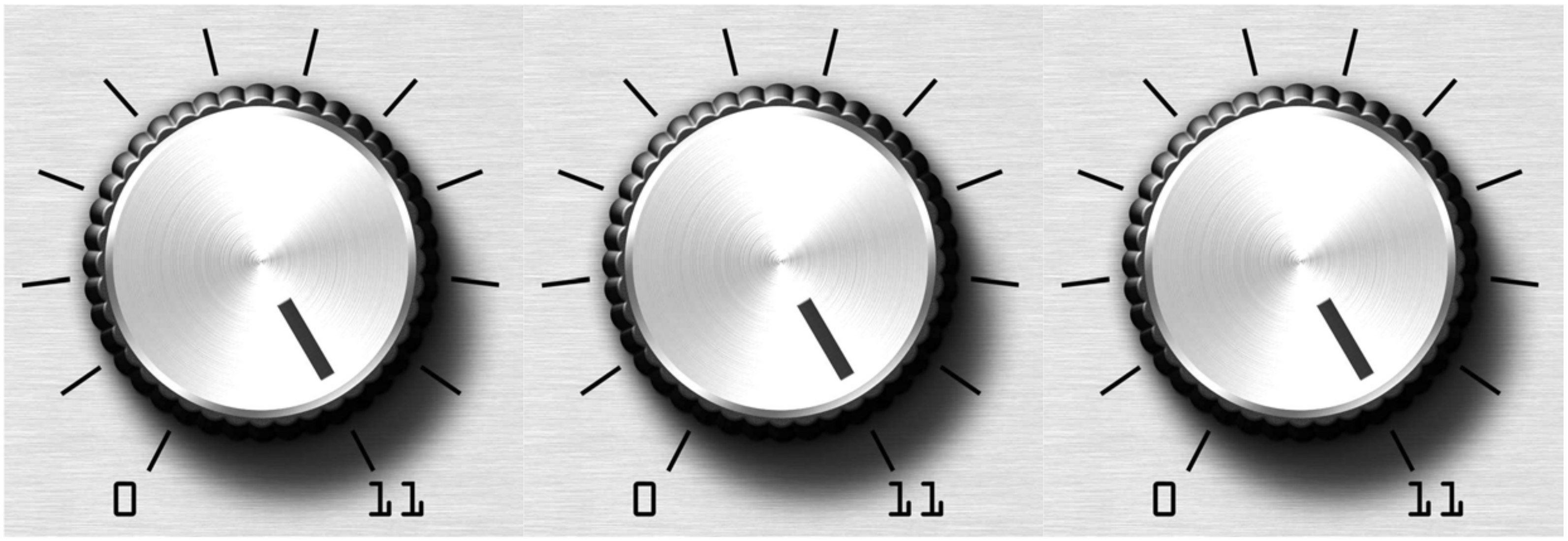
Why would we want this?

- ✓ Maximize value (in the form of working software)
- ✓ Manage variability
- ✓ Reduce risk
- ✓ Increase predictability
- ✓ Increase collaboration, creativity, morale

Unfortunately, many forces prevent cadence

I refer to them as *friction*

Friction falls into three categories …



PEOPLE

PROCESS

PRODUCTS

Let’s discuss a few of them …

People Frictions

Friction: Command and Control

Self-
Organization
Command
and Control

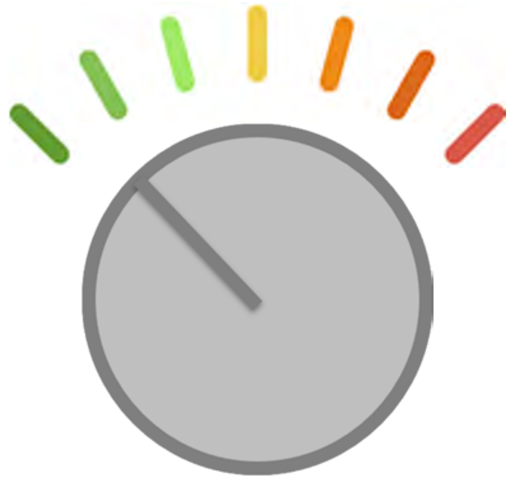
self-organizing == separating what/how == enabling creativity;
Management's job should be to optimize the system

Friction: Component Teams

Feature Teams
Component Teams

Cross-functional, cross-component teams that can complete an end-to-end customer feature

Friction: QA or DevOps Teams



Cross-functional Development Team

QA or DevOps Teams

Only the Dev Team does the work, regardless of domains that need to be addressed: testing, operations, architecture, business analysis

Friction: Working as Individuals

Working as a team

Working as individuals

Mobbing > Swarming > Pairing > 1 person/task > 1 person/story

Friction: Specialists

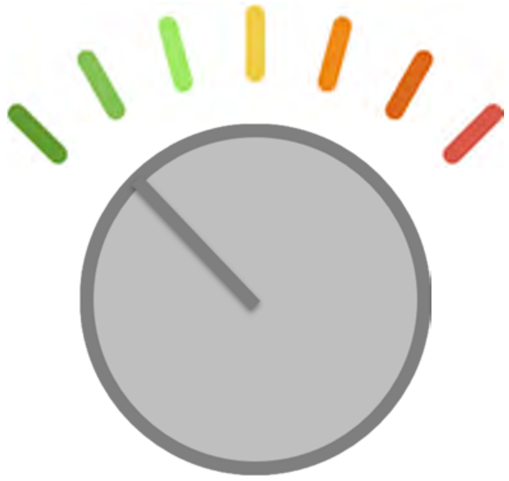
T-Shaped

Specialists

Generalists with expertise in certain skillsets
(or at least no allergies to doing other kinds of work)

Friction: Adhoc Team Formation

Long-lived Teams



Adhoc Team Formation

Team members are 100% dedicated to one (and only one) team and the team remains unchanged for the sake of stability

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Friction: Dislocated Teams

Collocated Teams

Dislocated Teams

Each team is collocated in the same room to maximize learning, focus, and the shared responsibility for team outcome

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Process Frictions

Friction: Obfuscated Work

Visualize Work and Progress

Obfuscated Work (and Progress)

Kanban board, Taskboard, Burndown, Burnup, SpecMap

Friction: Multitasking

Focus

Multitasking

Multitasking damages the brain (2009 Stanford study)
Slow down and get more "Done"

Friction: Multiple Projects

Sprints

Multiple Projects

Shift from *project* to *product* thinking and then projects simply become batches of related work delivered over sprints

Friction: Develop By Layers

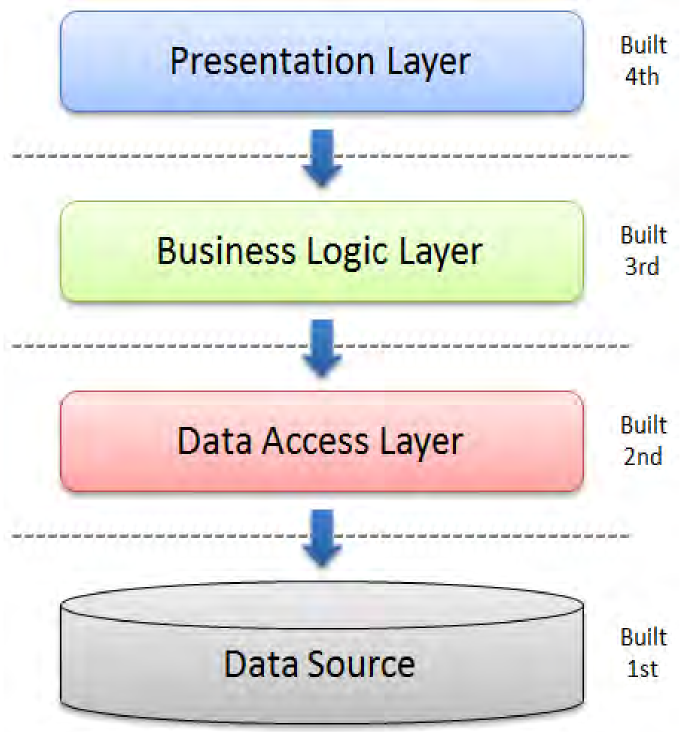
Thin-Slicing

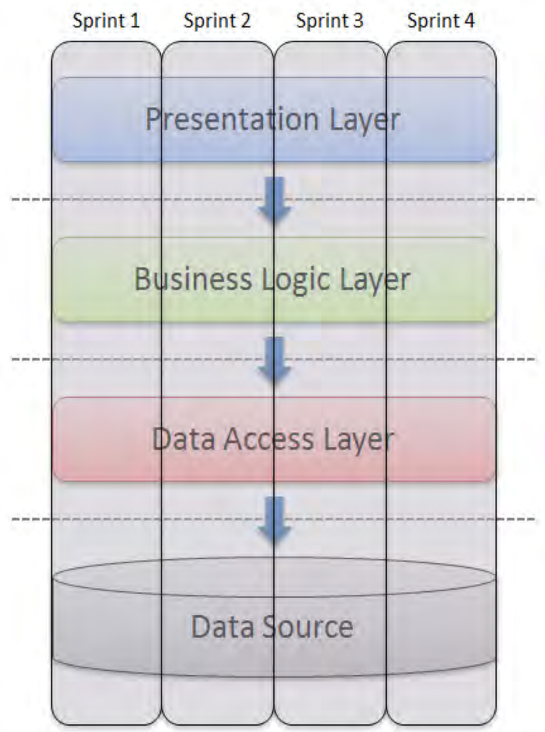
Develop by Layers

Develop the simplest possible functional, usable, end-to-end slice of functionality in order to obtain feedback

Thin-Slicing Example

- ✓ Layers = delayed value
- ✓ Slices = value every Sprint





Friction: Done is Subjective

Definition of "Done"

Done is Subjective

Defined by the Dev Team as a shared understanding of what "Done" is for all work in the product – for transparency

Friction: Dependencies

Make them transparent, remove them

Dependencies

Dependencies can be people, domain, technology, or software related; *external* dependencies are especially risky

Friction: Team Decides *What*

Stakeholder feedback

Team decides *what* to work on

Software development is complex, invisible work; we must work in small batches with regular feedback to be successful

Friction: Discontinuous Integration

Continuous Integration

Discontinuous Integration

Integrate your code with others several times a day; each push verified by automated build and tests == immediate feedback

Friction: Code Reviews

**Pairing,
Swarming,
Mobbing**

Code Reviews

Pairing, swarming, and mobbing increases learning and quality while increasing flow and reducing risk (by limiting WIP)

Product Frictions

Friction: Private Repositories

Collective Code Ownership

Private Repositories

The Development Team collectively owns everything, including the code;
All team members should have equal access to all repositories

Friction: Pull Requests

Pairing, Swarming, Mobbing + CI

Pull Requests

Pull Requests and other quality gates impede flow; Working as a team with immediate/automated feedback reduces friction

Friction: Working in Branches

Trunk-Based Development

Working in Branches

Shared branches off main/master/trunk are bad at any cadence;
www.trunkbaseddevelopment.com

Friction: Manual Deployments

Automated Deployments (RM)

Manual Deployments

A service that fully automates the testing and delivery of software in multiple environments all the way to production

Friction: Manual Testing

Automated Testing

Manual Testing

Manual testing doesn’t scale, especially during regression; Automated API testing > automated UI testing

Friction: User Acceptance Testing

Acceptance Testing

User Acceptance Testing

External dependencies, such as users/customers running tests, are a risk; Only the Dev Team does the work and can say if it's "Done"

Friction: Code Deployment

LaunchDarkly

Feature Release

Code Deployment

Use feature flags to deploy releases on demand and enable canary releases, A/B testing, and even Hypothesis-Driven Development

And now for a bonus friction …

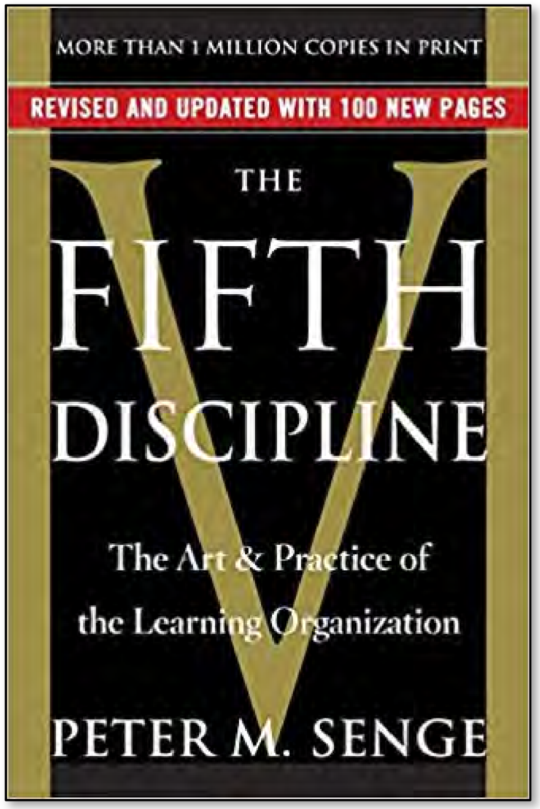
Friction: Local Optimization

Global Optimization (Systems Thinking)

Local Optimization

Local Optimization is making the "best" decision from the viewpoint of a person, team, or department, rather than a global optimization for the systems-level goal (e.g. *deliver value fast with high quality and high morale*)

Good books to read …

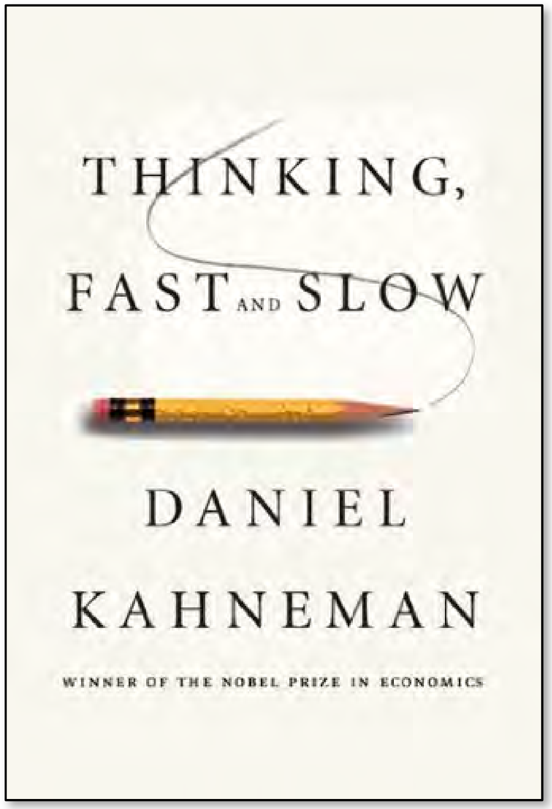

MORE THAN 1 MILLION COPIES IN PRINT

REVISED AND UPDATED WITH 100 NEW PAGES

THE FIFTH DISCIPLINE

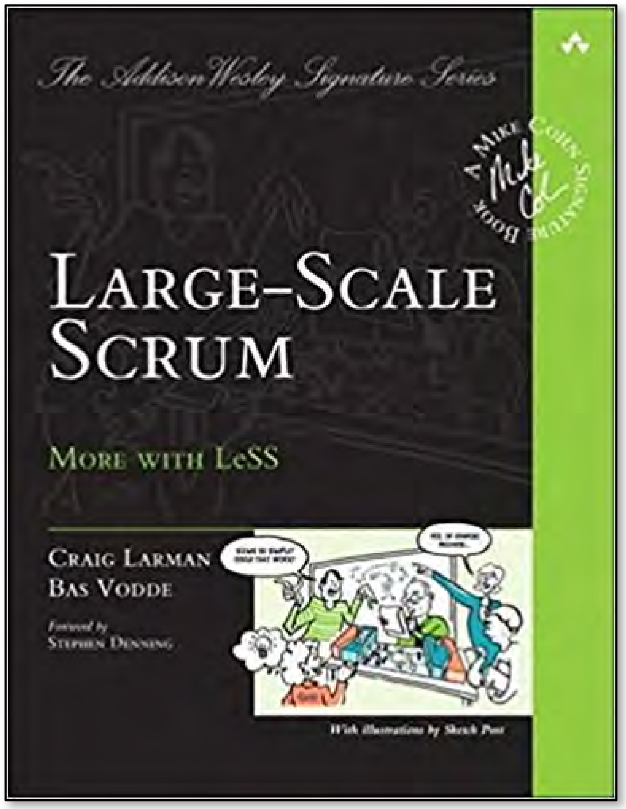
The Art & Practice of the Learning Organization

PETER M. SENGE


THINKING, FAST AND SLOW

DANIEL KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS


The Addison Wesley Signature Series

A Mike Cohn Signature Book

LARGE-SCALE SCRUM

MORE WITH LeSS

CRAIG LARMAN
BAS VODDE

Foreword by
STEPHEN DENNING

With illustrations by Sketch Post

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Done();

(thank you)

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