



# Three Illusions in Software Delivery

*Joel Tosi*

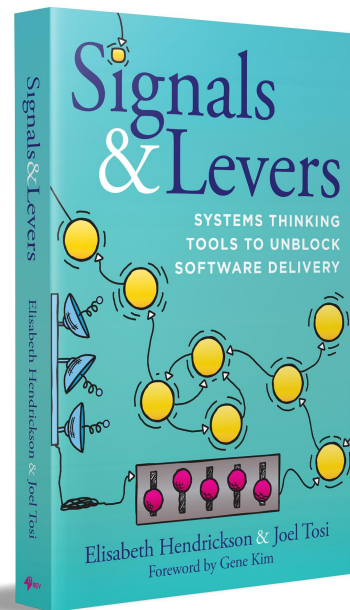
# About Us



Joel Tosi



Elisabeth Hendrickson

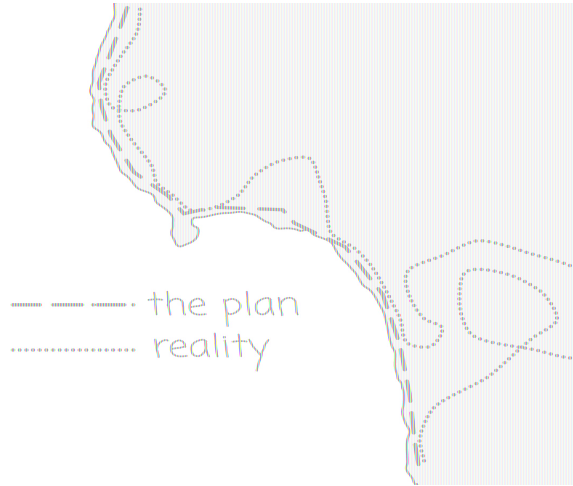


*forthcoming from  
IT Revolution, Sept 2026*

# Illusions...

...of Predictability

# Why Are Estimates So Hard?



How long would it take to hike  
the coast from San Francisco  
to Newport Beach, California?

“It is in the doing of the  
work that we discover the  
work that we must do.

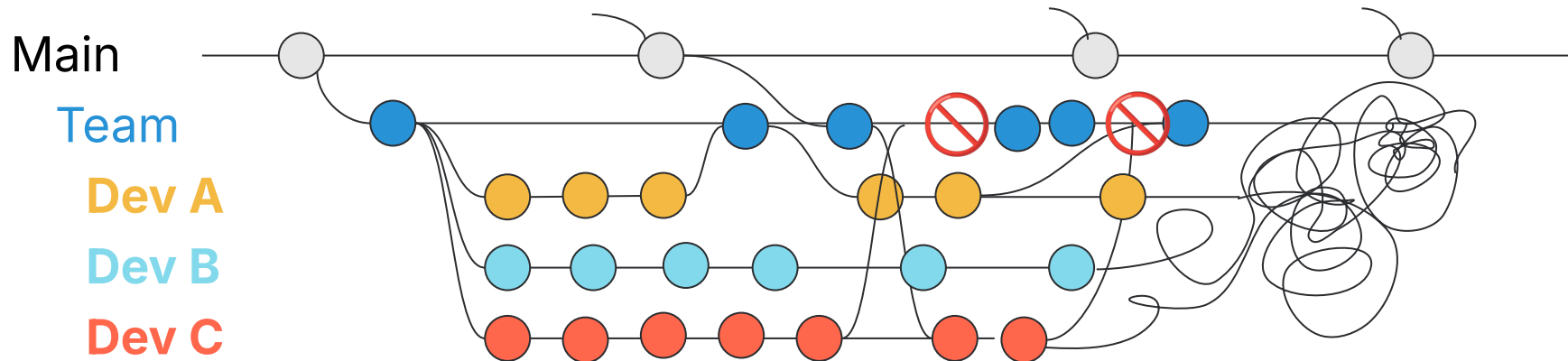
Doing exposes reality.”

– *Woody Zuill*

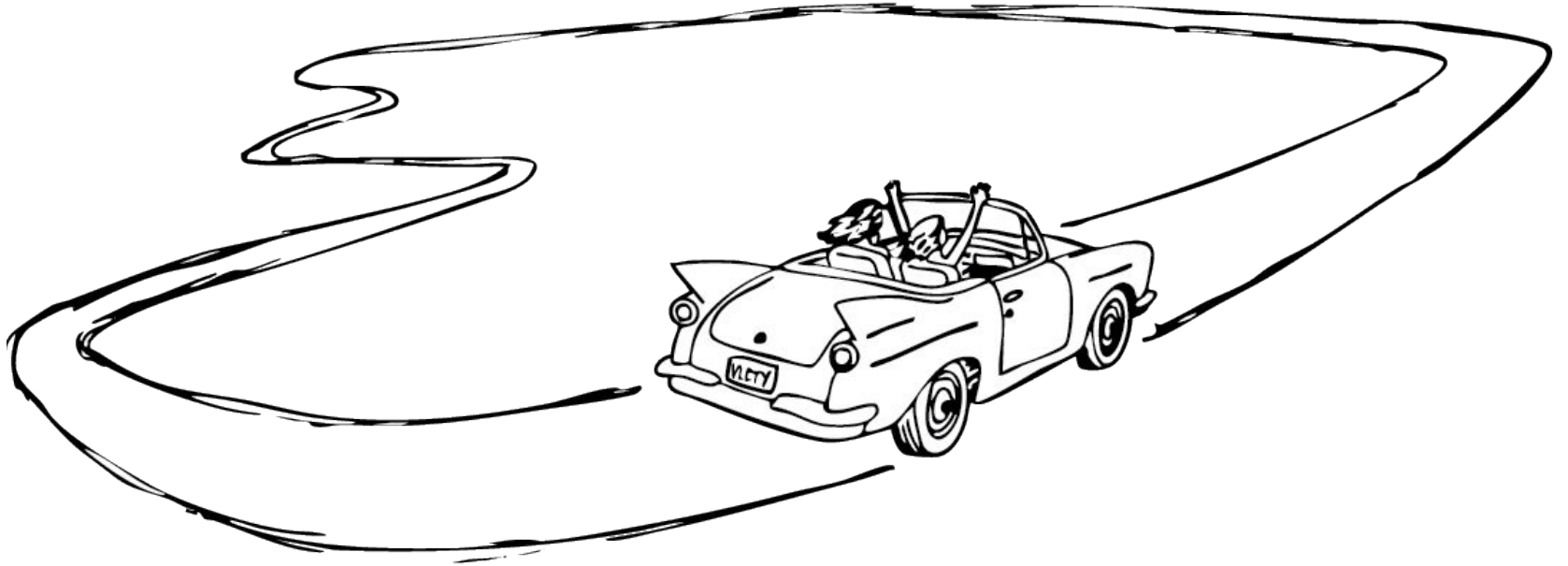


...of Progress

# It Seemed Like a Good Idea at the Time...

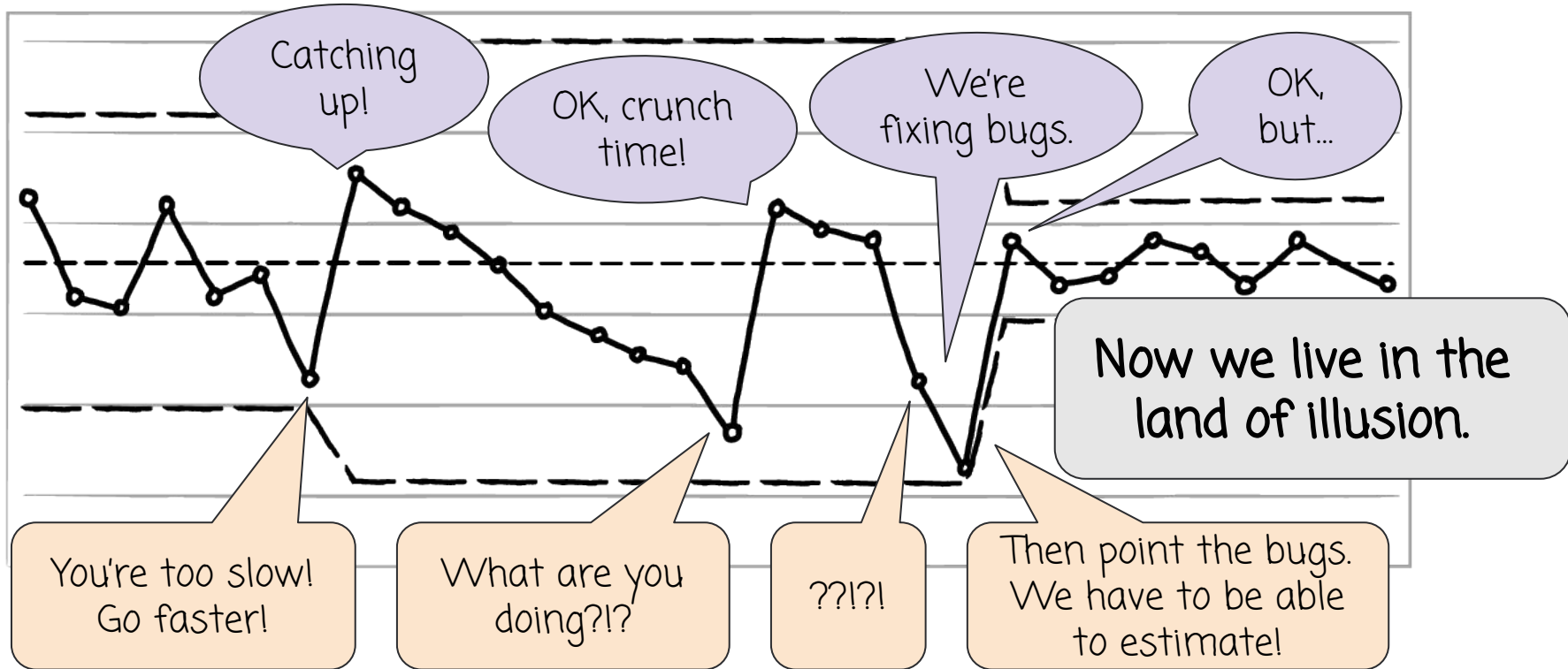


# Don't Confuse Activity for Progress



...of Control

# Project Pressures



It may look like a crisis,  
but it's only the end of an illusion.

*Jerry Weinberg, Secrets of Consulting*

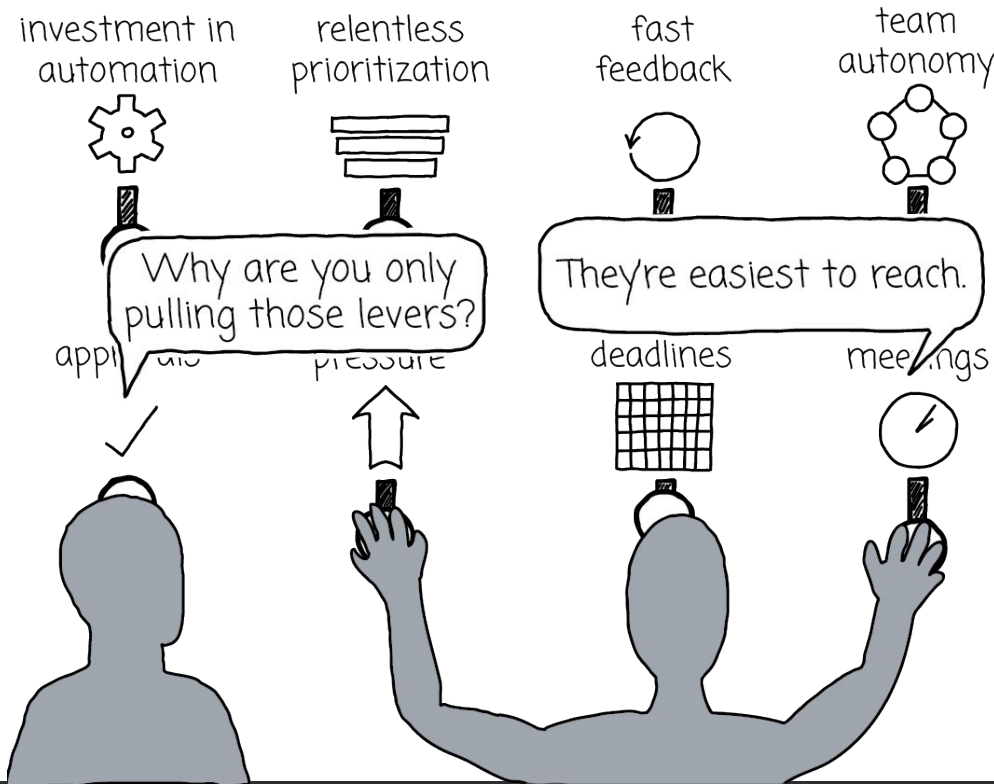
# Illusions Don't Travel Alone



The illusion of progress, illusion of predictability, and illusion of control usually travel together, reinforcing each other.

# Unintended Consequences

# Why Best Intentions Backfire



Many of the levers that look like they'll control outcomes just shift risk around  
...or, worse, hide it.

# Irony Abounds in a Backfiring System

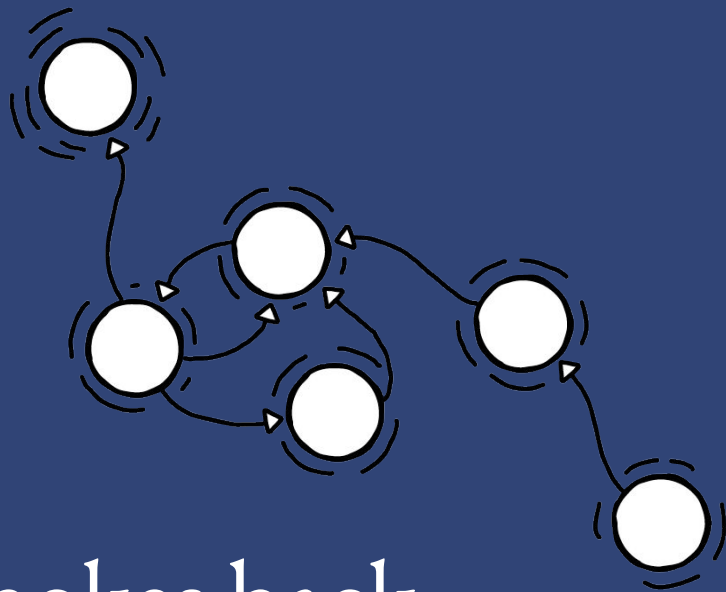
- Coordination meetings intended to keep a schedule in check reduce work time so the team has a harder time meeting the schedule.
- An open plan office was supposed to increase collaboration but everyone wears noise cancelling headphones and avoids talking.
- Meeting-free Fridays become the only day of the week when everyone is available to meet.

# How to Intervene

# The Rule of Systems

You poke the system...

...and the system pokes back.



# What is a System?

A **system** is a set of interrelated parts that does something.

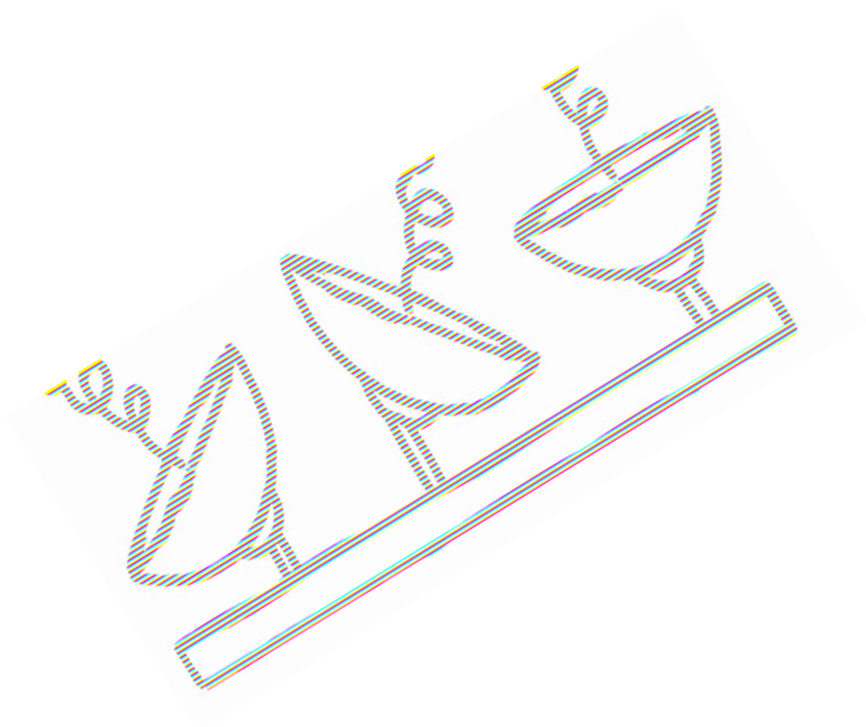
1. **The whole is indivisible.** Behavior emerges from the relationship between the parts. Divide any system and none of the parts will have the same behavior or properties as the original system.
2. **Parts are interdependent.** If the behavior or properties of one part change, that change will affect other parts (often in unpredictable ways).
3. **Systems are fractal.** A part can be a subsystem composed of interrelated parts. It's systems all the way up and down.

# Signals

A **signal** is an observable characteristic or attribute of the system that tells you something about the way the system works.

Signals can be quantitative (lead time, cycle time, velocity, defect counts) or qualitative (quality, morale).

You are surrounded by signals.



# Common Signals from Illusions (Non-Dashboard Edition)

'It's done but...'

Activity Focus

Powerpoint 'Demos'

Shipping vs Impacting

'Estimate Better'

Read The Docs

Tampering

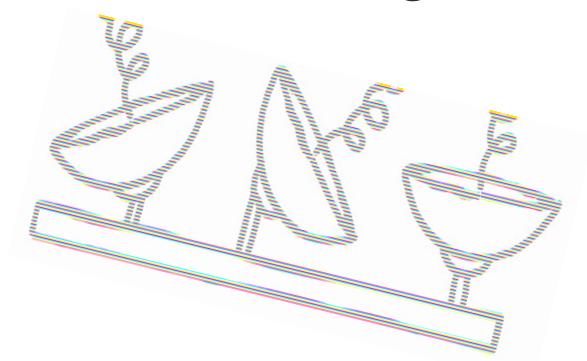
Re-defining

Meetings!

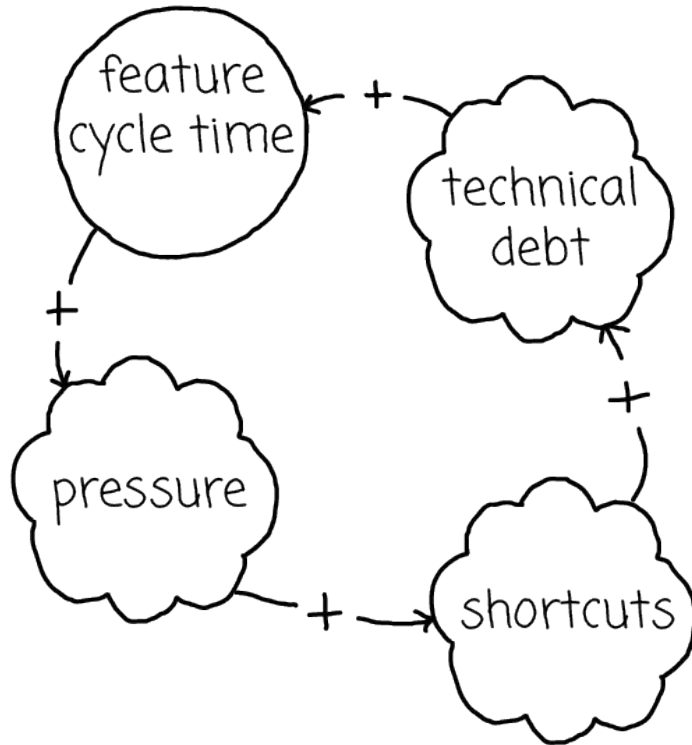
Review Boards

Freezes

Best Practices



# Seeing Systemic Influences with Causal Models



qualitative  
attribute

quantifiable  
attribute

— + —→  
same direction

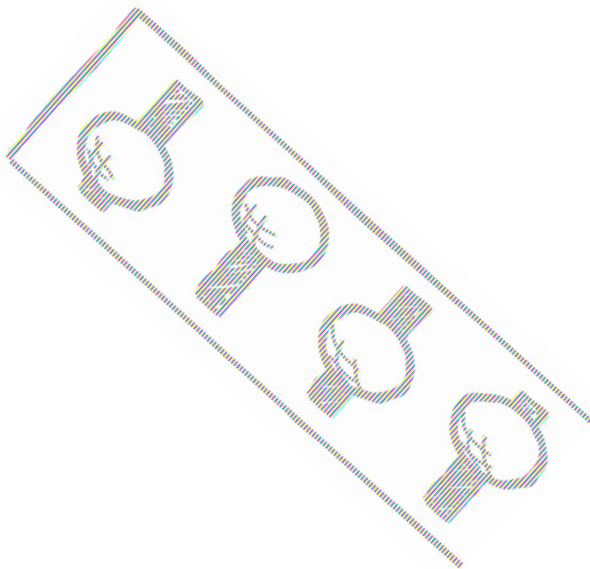
— - —→  
opposite direction

— ? —→  
possible decision

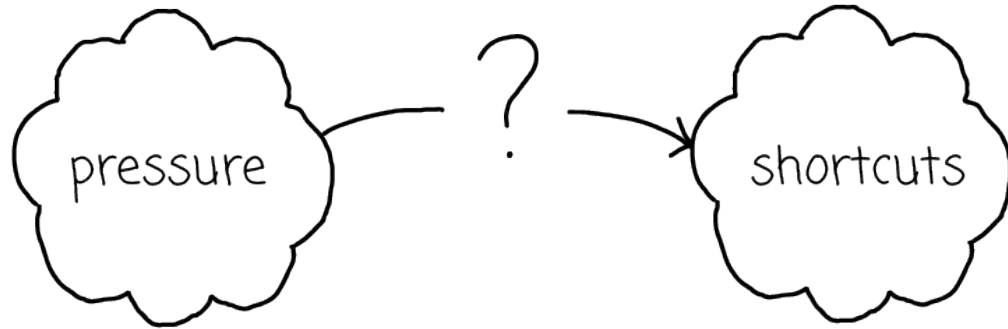
# Levers

A **lever** is a choice that causes a shift in the system.

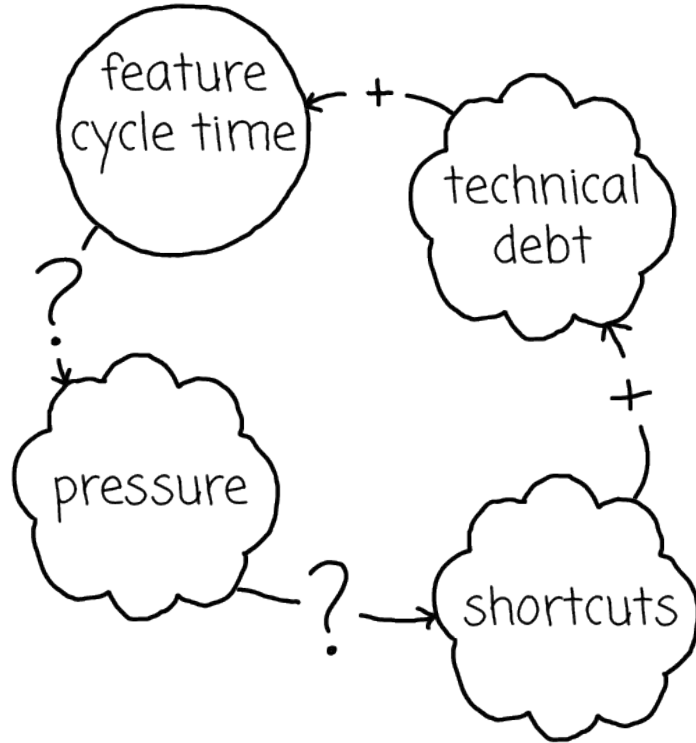
If you do something and the system does not appear to change at all, either you're not looking at the right signals, or the choice you made wasn't actually a lever.



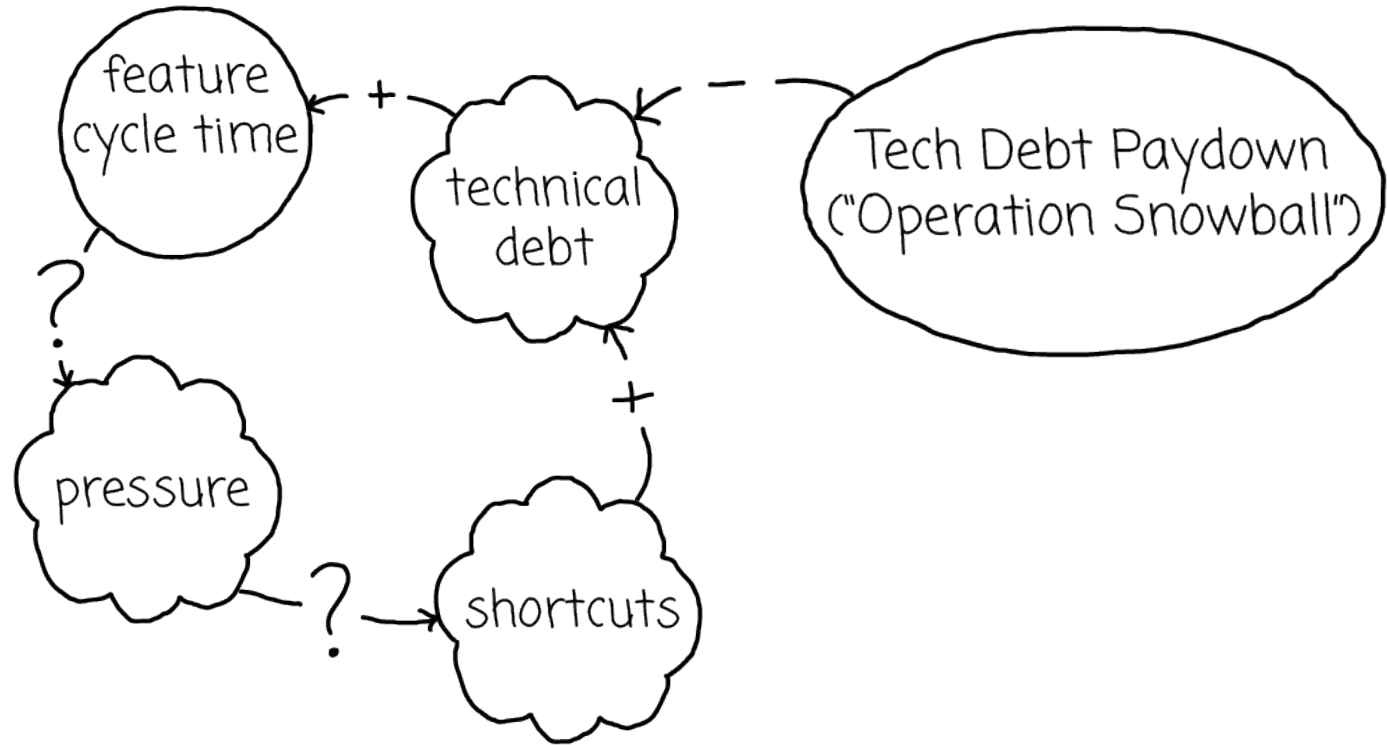
# Lever 1: Identify Where You Have a Choice...



## ...Then Make Different Choices



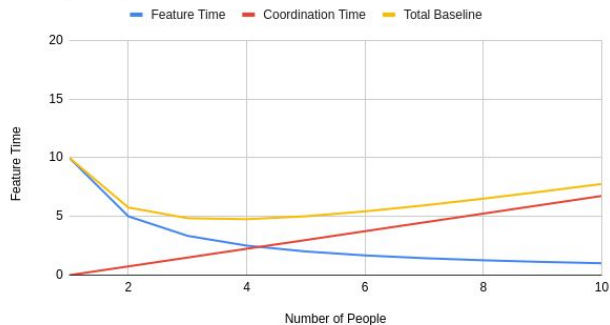
## Lever 2: Add a Counterbalancing Influence



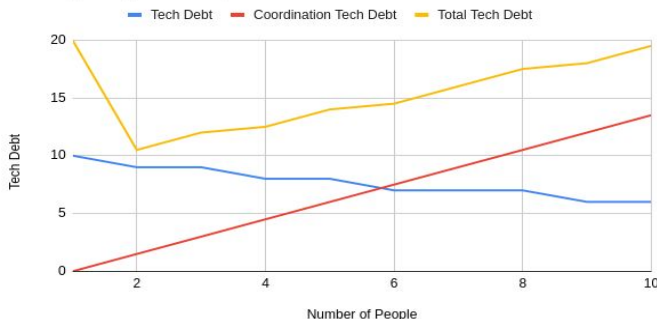
# Context and Variability

# See What Is Appropriate In Your Context

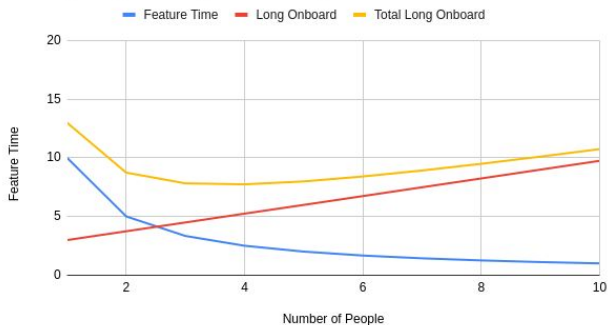
Adding People Baseline



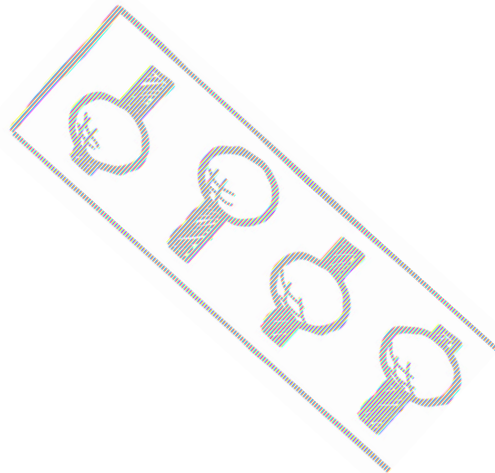
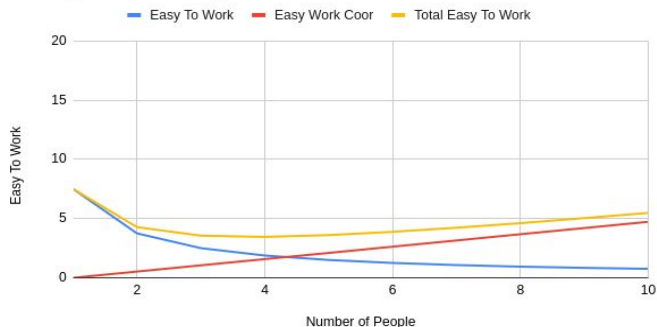
Adding People - Complex Code



Adding People - Long Onboarding Process



Adding People - Easy To Work



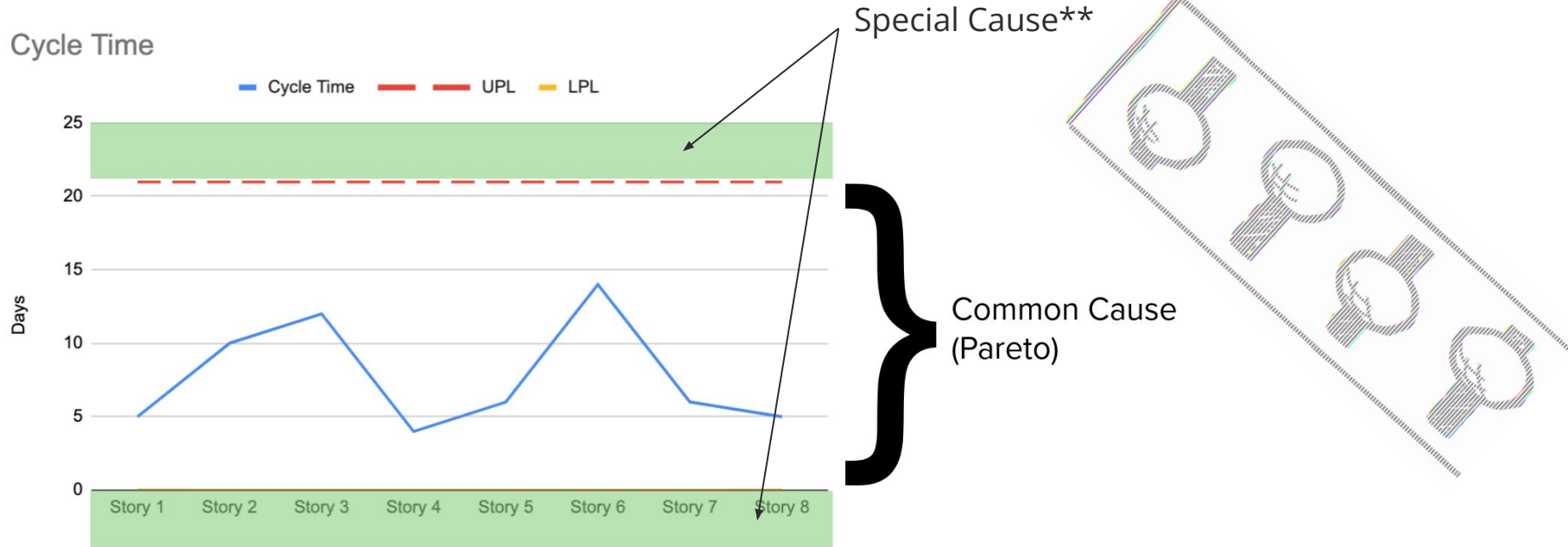
# There Are No Best Practices



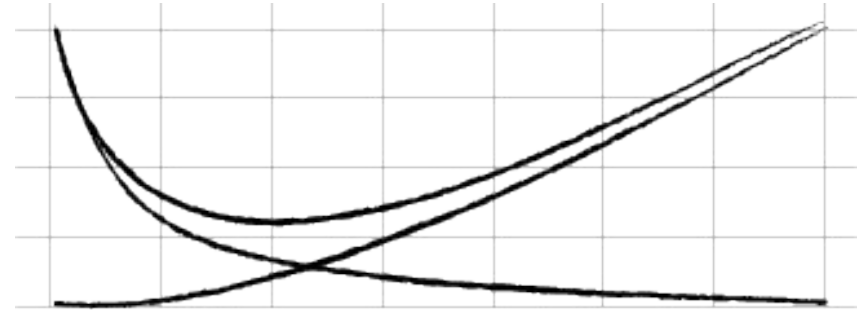
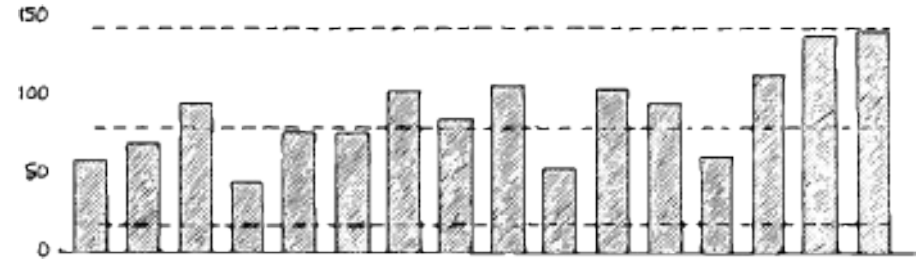
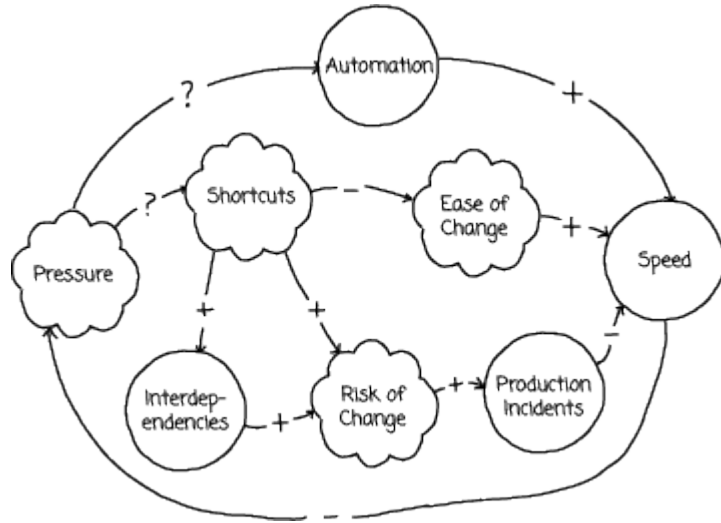
The orange line is the overall score. Above zero, Signal outweighs Noise; below zero, Noise outweighs Signal. Dashed lines show the two components. Blindspots are not yet modeled.

From - <https://sim.signalsandlevers.com/scenarios/testing-pyramid>

# Avoid Tampering



# Use Systems Thinking Collectively



# Summary

Act where the pain is caused...  
...not where it is observed.

# What Questions Do You Have?

# 3 Illusions in Software Delivery

## Thank You!

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