

SCALING – YOU KEEP USING THAT WORD



Slides – <https://dojoandco.com/speaking>

ABOUT ME



Joel Tosi

- Last 9 years – make it easier for people to learn and do great work at orgs – Product → Tech → Process
- Wrote a book or two
- Past lives – Architect at Red Hat; Trading Platforms; Blah blah blah
- Get asked about scaling roughly 47 times a day

WHAT DO WE MEAN BY SCALING?
(and do we even mean the same thing)

WHY DO WE CARE?
(and is it even a problem)

WHAT ARE SOME OPTIONS?
(and are there tradeoffs)

What Does Scaling Mean?

WHAT DO YOU THINK OF?

Frameworks

Coordination

Complexity

Performance*

Spreading

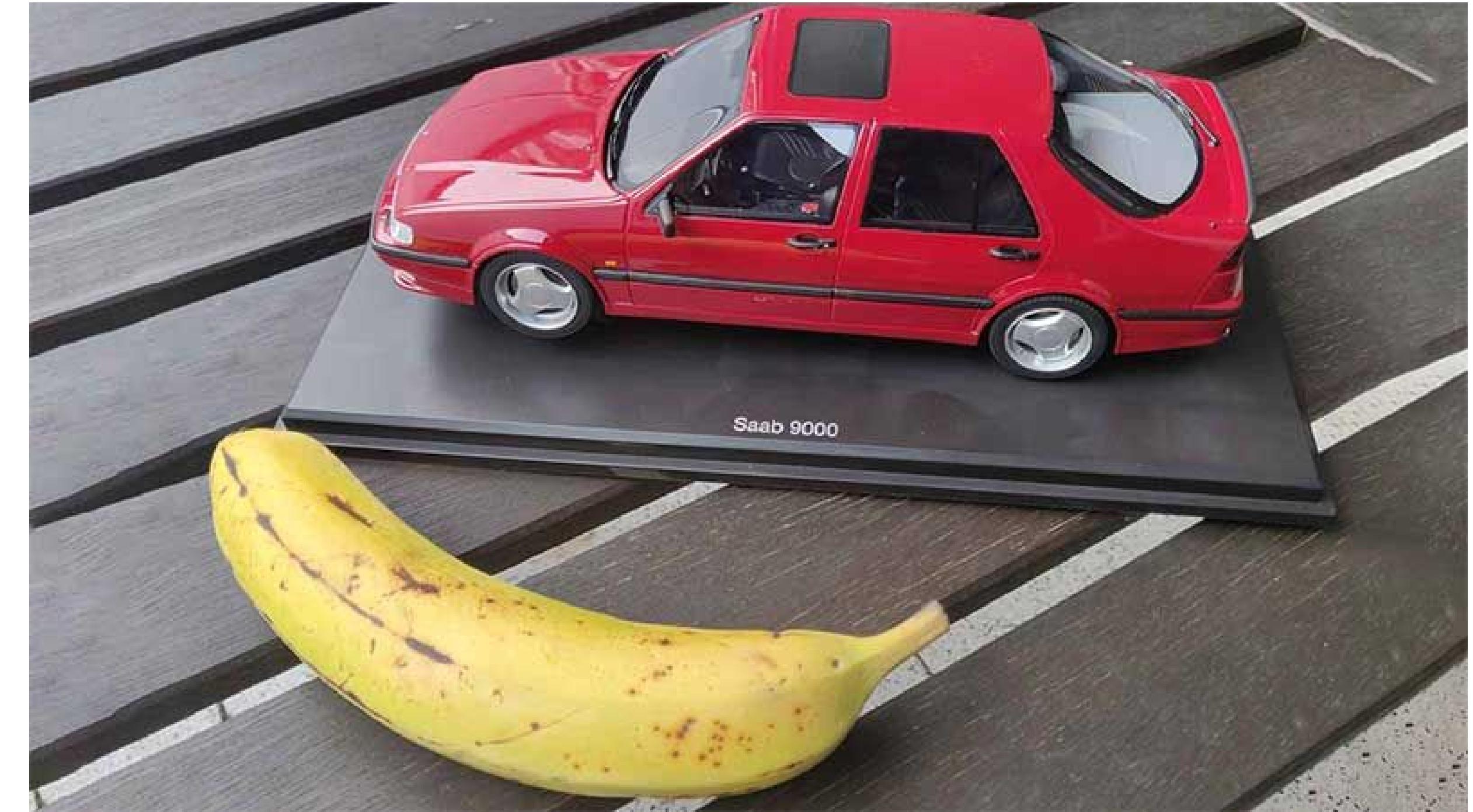


"Lego 10179 Millenium Falcon minifig scale." by STICK KIM is licensed under CC BY-ND 2.0

What Does Scaling Mean?

WHAT DO YOU THINK OF?

A possible definition – taking a model from one context and adjusting (enlarge / shrink) ,while maintaining properties, to better inspect in another context.

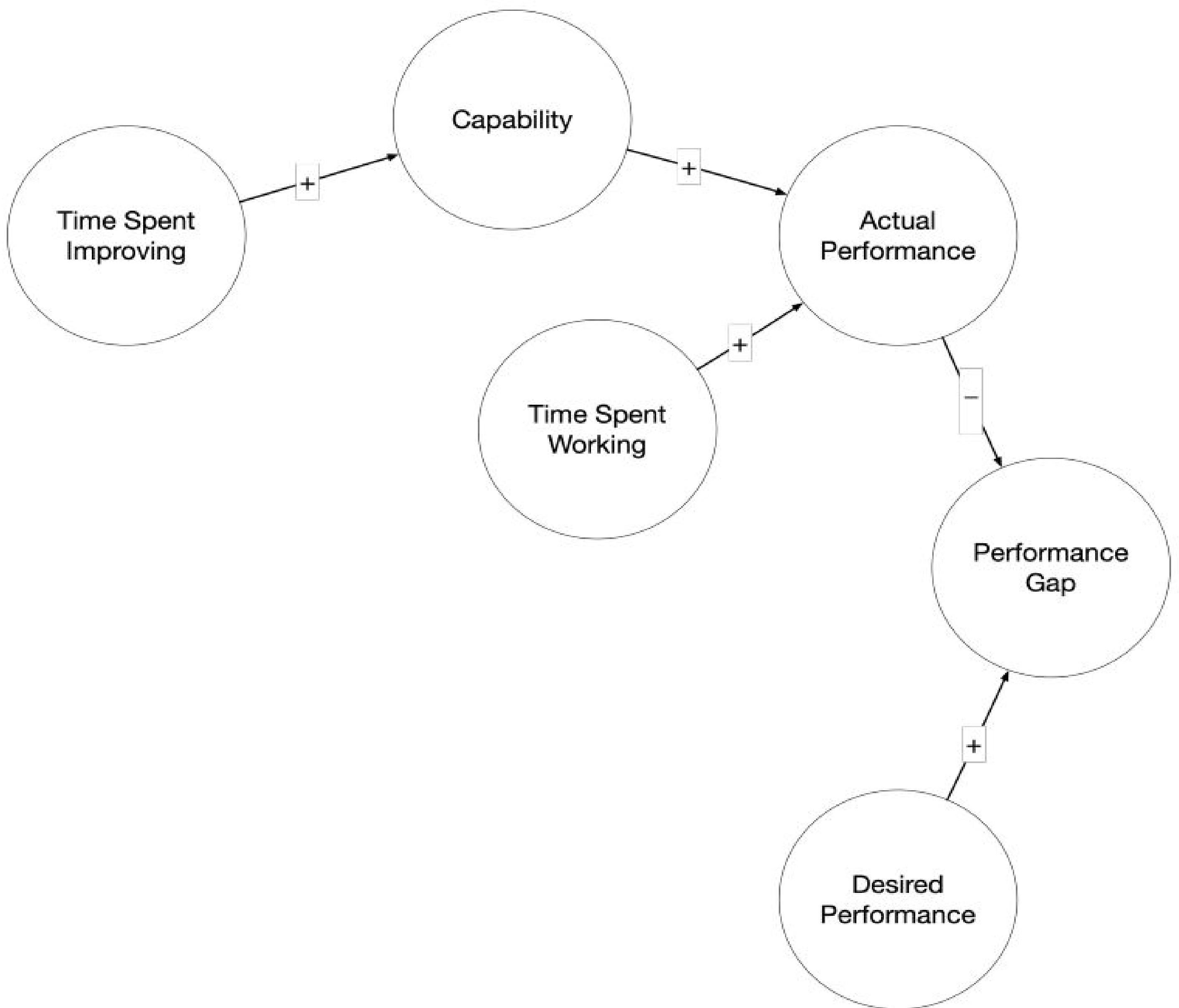


A COMMON EXPECTATION IS
EXPONENTIAL GROWTH WITH LITTLE
TO NO ADDITIONAL RESOURCE
(PEOPLE, TIME, MONEY)

WHAT A SILLY THOUGHT!

Causal Loops

“THE PHYSICS OF IMPROVEMENT”



http://web.mit.edu/nelsonr/www/Repennig=Sterman_CMR_su01_.pdf

What Does Scaling Mean?
DIFFERENT VECTORS

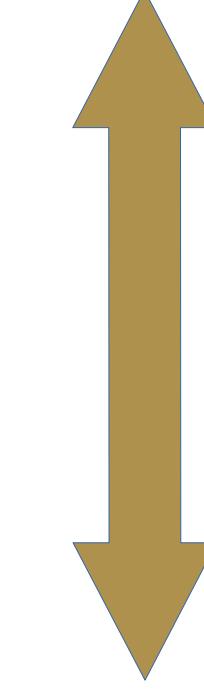
SCALING
PROCESS



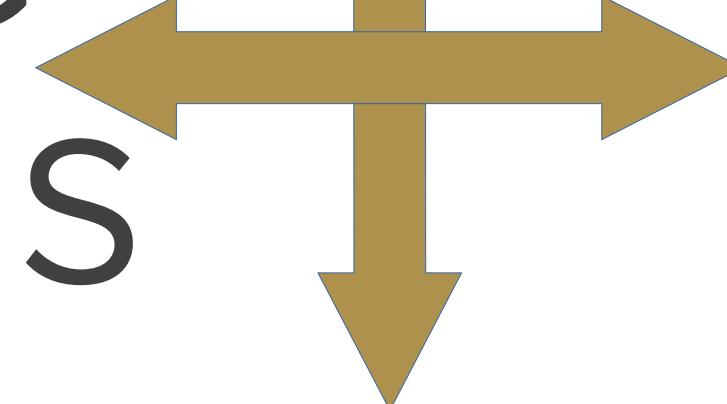
SCALING
TEAMS



SCALING
PRODUCTS



SCALING
PROJECTS



SCALING
TECHNOLOGY



What Does Scaling Mean?

SCALING PROJECTS – WHY?

Cost Accounting?

Our Project Management Needs
To Grow Because Of Teams

Accurate Planning?

Optimize Time?

Skill Constrained?

SCALING
PROJECTS



What Does Scaling Mean?

SCALING PROCESS – WHY?

Address Complexity?

Our Process Needs To Be
Adopted By All Teams

Consistency of Metrics?

Works in Tool Better?

Easier to Train?

SCALING
PROCESS



What Does Scaling Mean?

SCALING TEAMS – WHY?

Faster Delivery?

More Initiatives?

New Skills?

Justify Promotions?

**Our Teams Need To Grow
To Meet Demand**



What Does Scaling Mean?

SCALING TECHNOLOGY – WHY?

Higher Availability?

Higher Throughput?

Easier To Extend?

New Technology?

**Our Technology Needs To Grow
To Meet Product Needs**



What Does Scaling Mean?

SCALING PRODUCTS – WHY?

New Features?

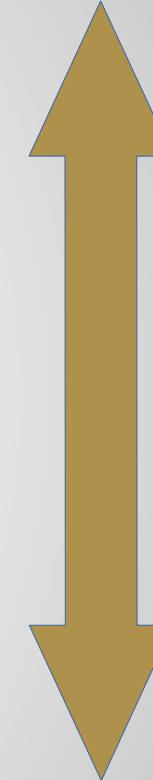
Our Business Has Identified
New Opportunities

New Audiences?

New Markets?

New Experiments?

SCALING
PRODUCTS



**BEFORE YOU WORRY ABOUT SCALING
MAKE SURE YOU AGREE ON YOUR
PROBLEM DOMAIN**

WHAT ARE SOME OPTIONS? *(and are there trade offs)*

What Does It Look Like?

WHAT GETS EMPHASIZED?



SCALING
PROJECTS



"Hamster wheel" by sualk61 is licensed under CC BY-NC-ND 2.0

What Does It Look Like?

WHAT GETS EMPHASIZED?



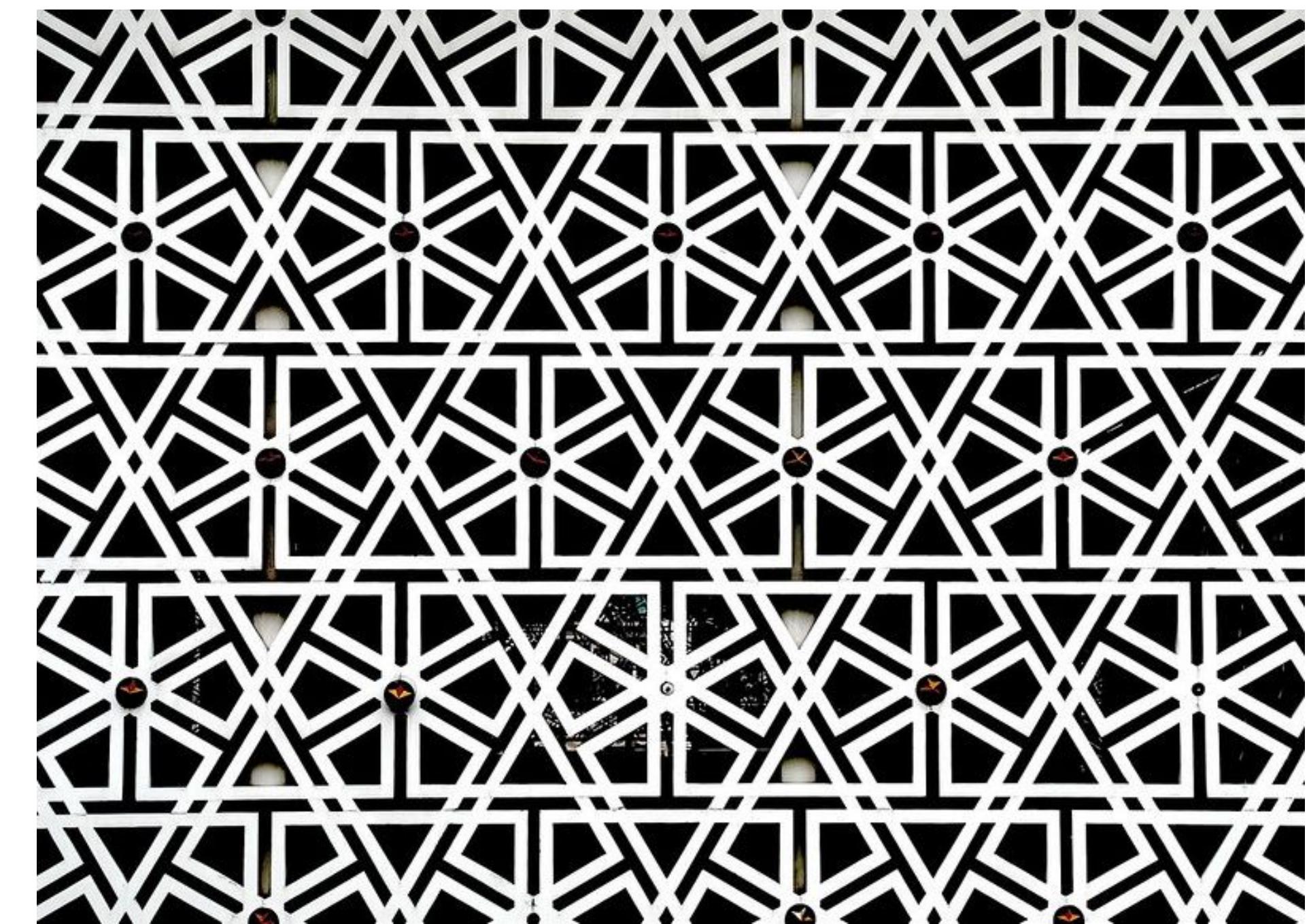
SCALING PROCESS



"Jennifer drawing ideas" by juhansonin is licensed under CC BY 2.0

What Does It Look Like?

WHAT GETS EMPHASIZED?

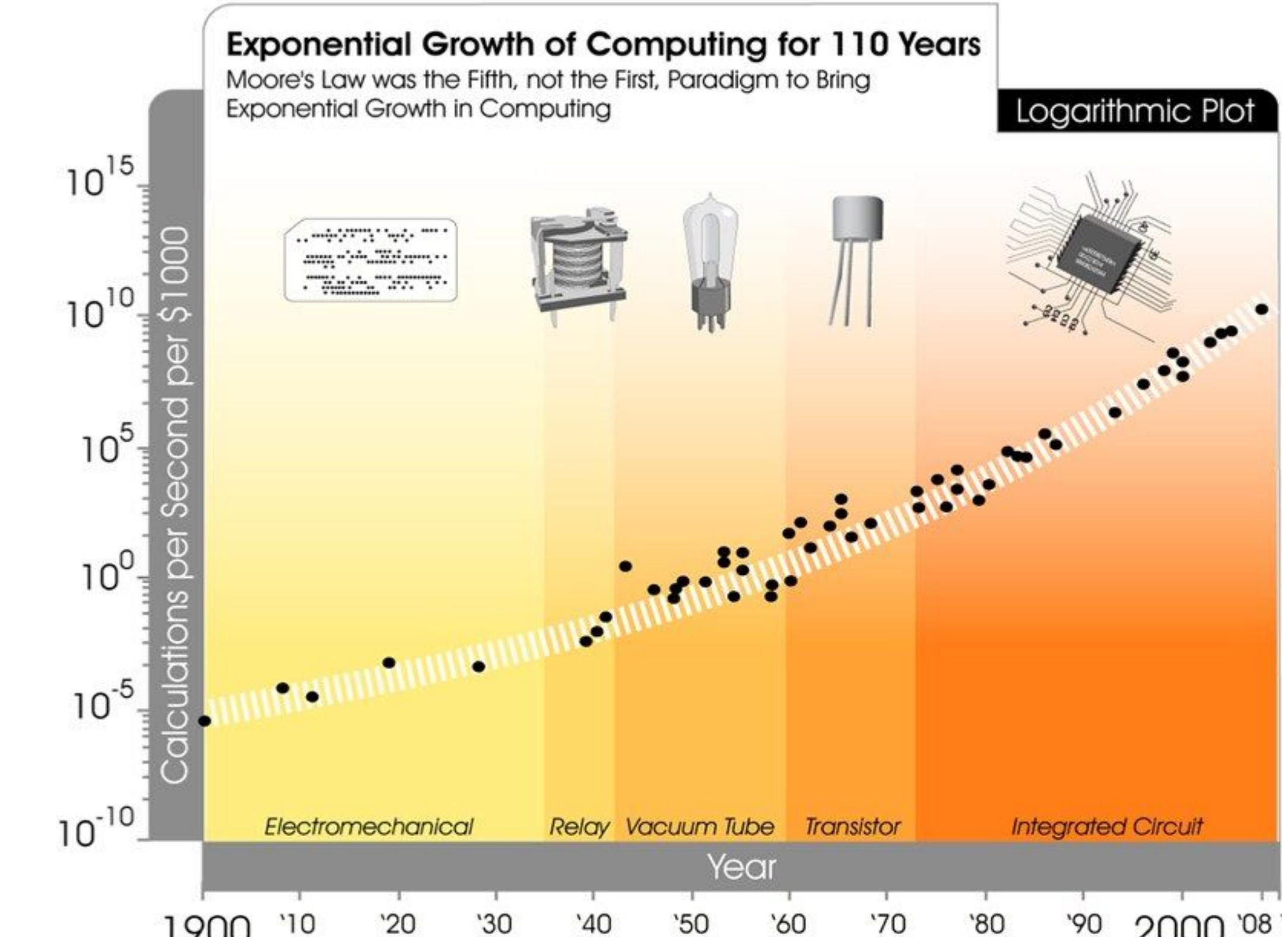


"Geometry at the National Mosque" by Swamibu is licensed under CC BY-NC 2.0

What Does It Look Like?

WHAT GETS EMPHASIZED?

SCALING
TECH



"Transcending Moore's Law" by jurvetson is licensed under CC BY 2.0

What Does It Look Like?

WHAT GETS EMPHASIZED?

SCALING
PRODUCTS

SCALING
PROJECTS

SCALING
PROCESS

SCALING
TEAMS

SCALING
TECH



"Apple Watch Sport and (PRODUCT) RED band" by LoKan Sardari is licensed under CC BY-NC-SA 2.0

WHAT ARE THINGS TO CONSIDER?

(and should we do it all at once?)

WHAT ARE YOU IN BUSINESS FOR?

(hint – only one of those matter)

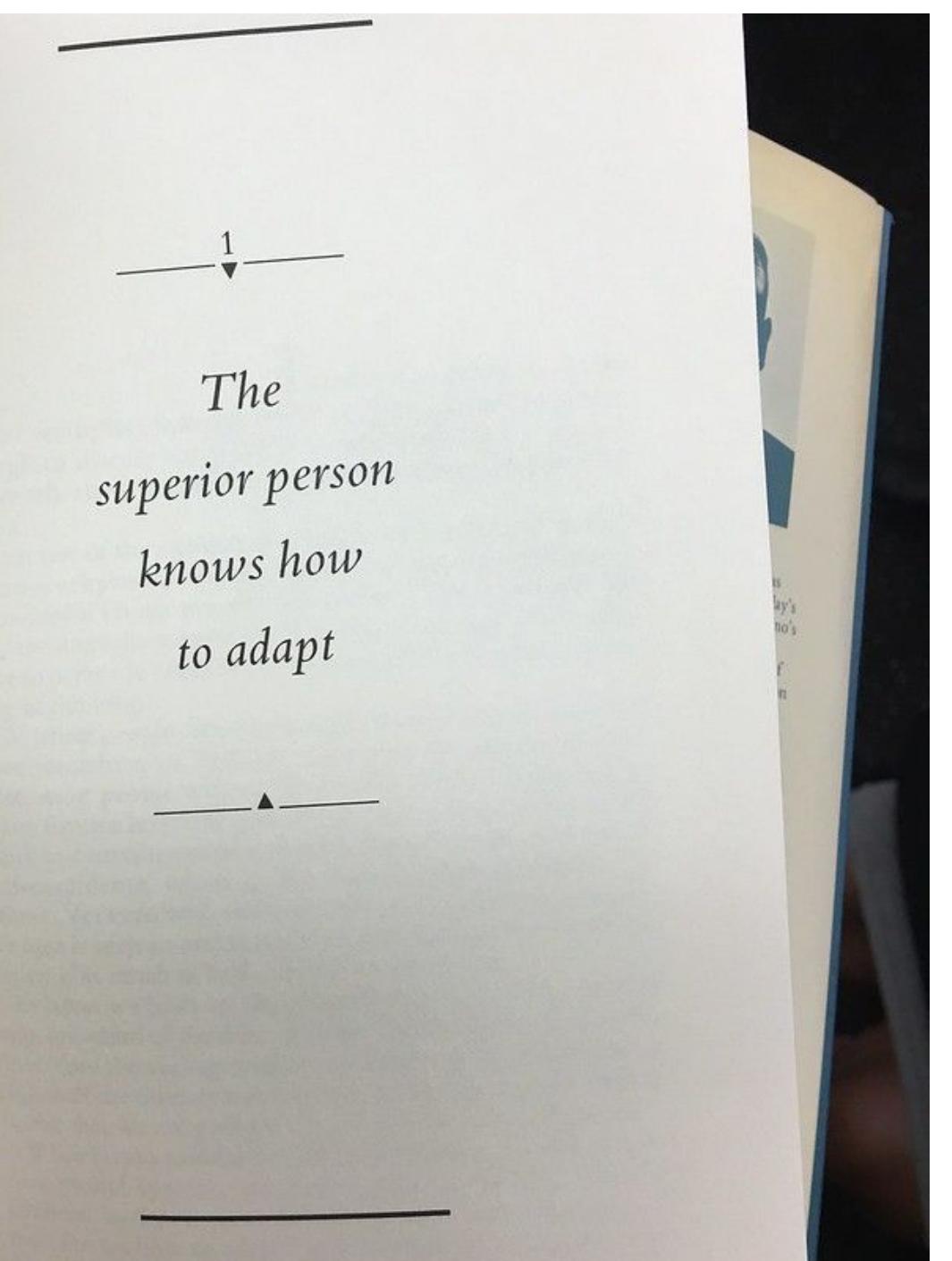
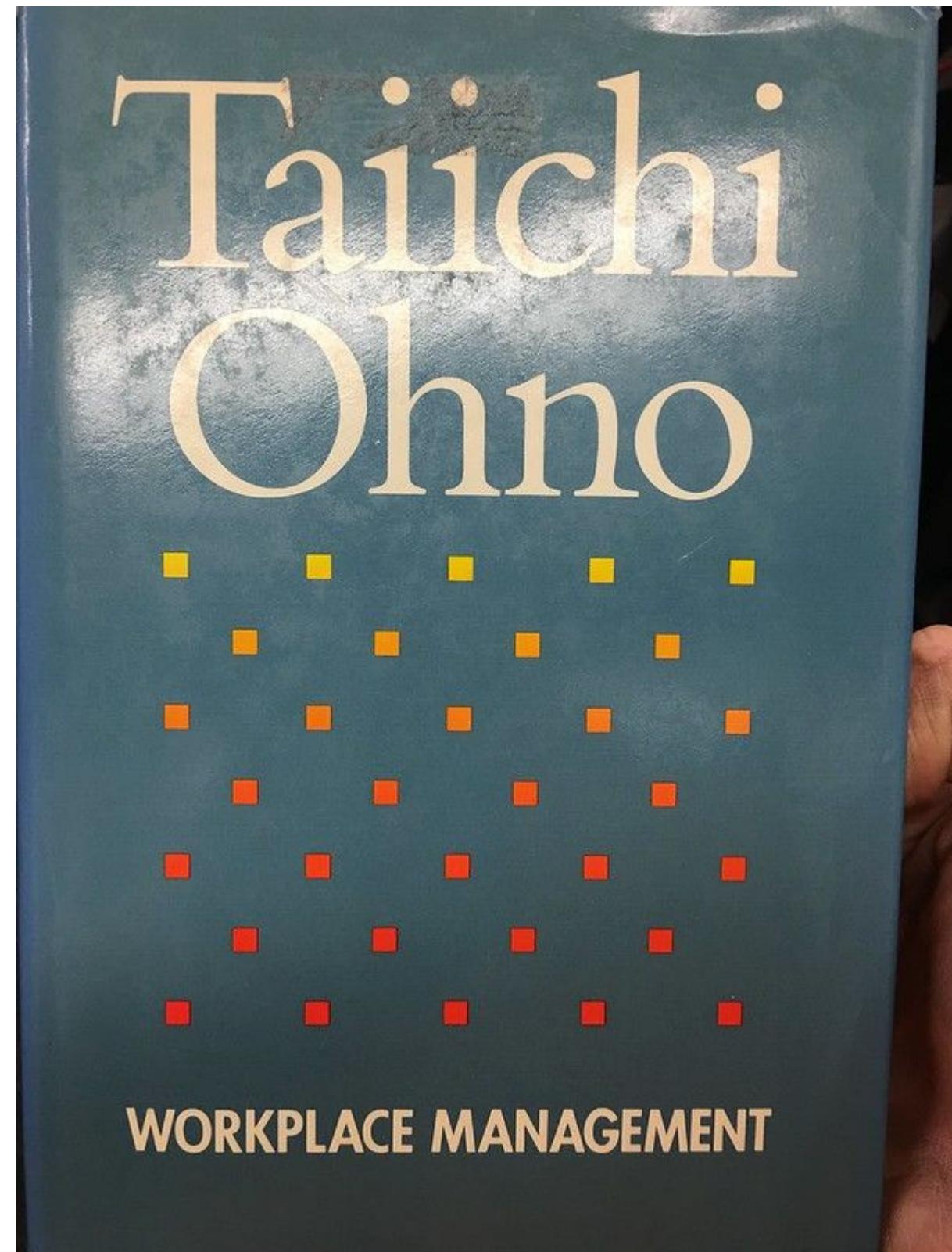
What To Consider?

SCALING VECTORS

No One Gets It Right

Outcomes and Feedback

Learn and Adapt



"Taichi Ohno Workplace Management" by amol-sarva is licensed under CC BY-NC-SA 2.0

**WHAT MAY HAPPEN IF YOU
FOCUS ON LEARNING?
*(and less about following)***

LEARN -

WHAT CUSTOMERS NEED

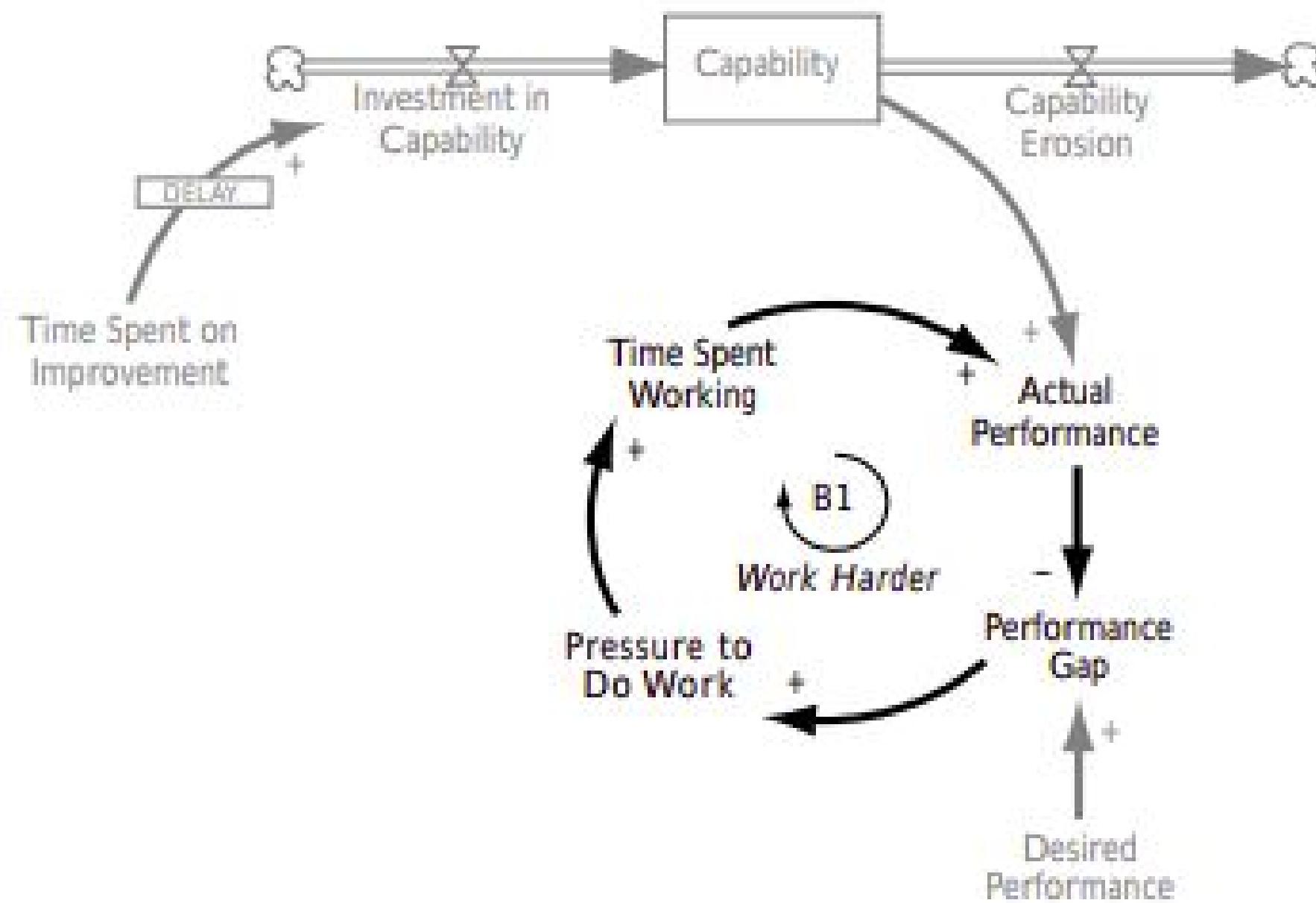
WHAT TEAMS NEED

HOW TO MAKE THE WORK EASY

HOW TO CONTINUOUSLY LEARN

And Customers Benefit EMPLOYEE EXPERIENCE IS EMPHASIZED

FIGURE 2. The Work Harder Balancing Loop



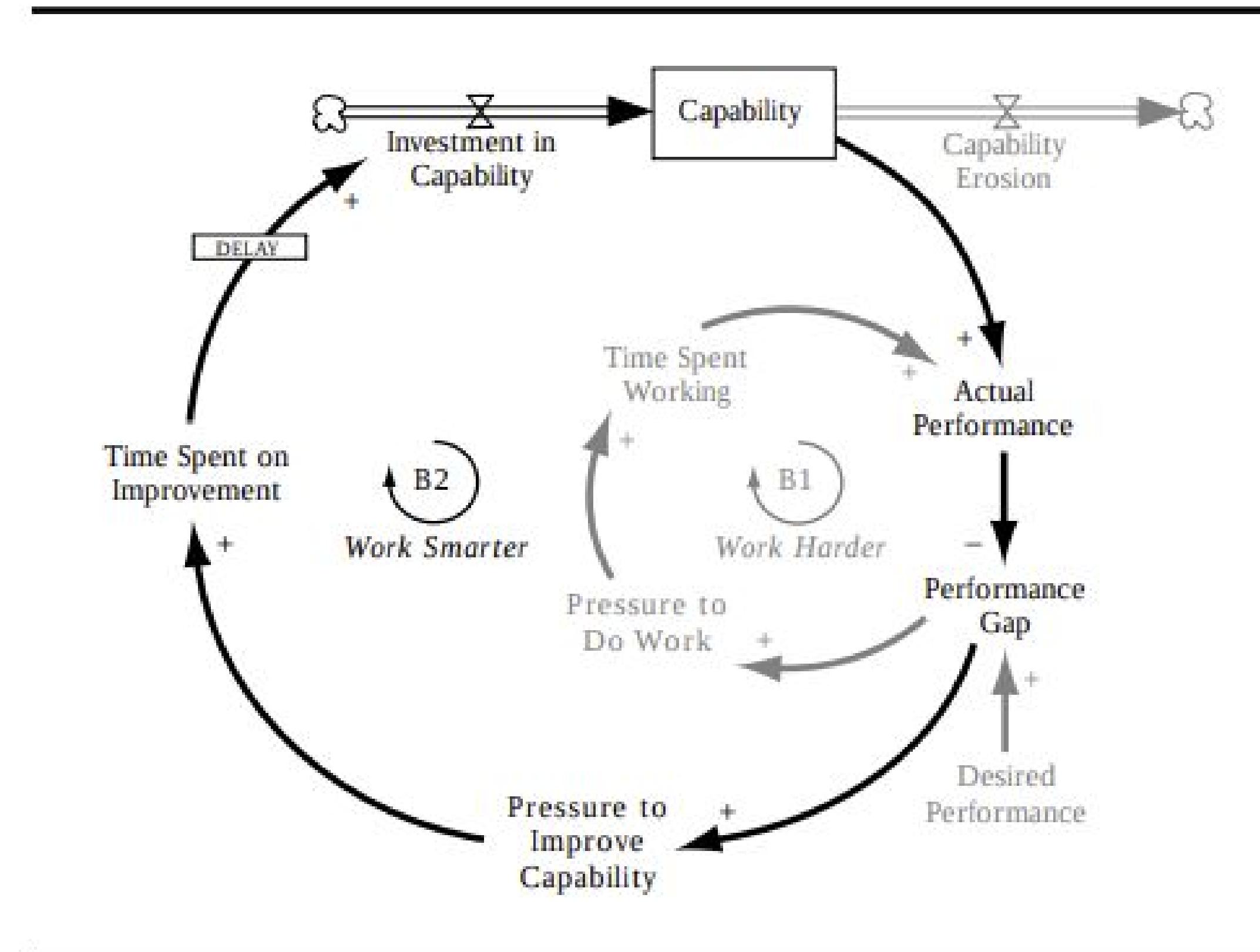
Note: The loop identifier, B1, indicates a negative (balancing) feedback. See J. Sterman, op. cit.

From https://web.mit.edu/nelsonr/www/Repennin=Sterman_CMR_su01_.pdf

"Supervisors never had time to make improvements or do preventative maintenance on their lines . . . they had to spend all their time just trying to keep the line going, but this meant it was always in a state of flux, which, in turn, caused them to want to hold lots of protective inventory, because everything was so unpredictable. A quality problem might not be discovered until we had produced a pile of defective parts. This of course meant we didn't have time to figure out why the problem happened in the first place, since we were now really behind our production schedule. It was a kind of snowball effect that just kept getting worse."

And Customers Benefit
EMPLOYEE EXPERIENCE IS EMPHASIZED

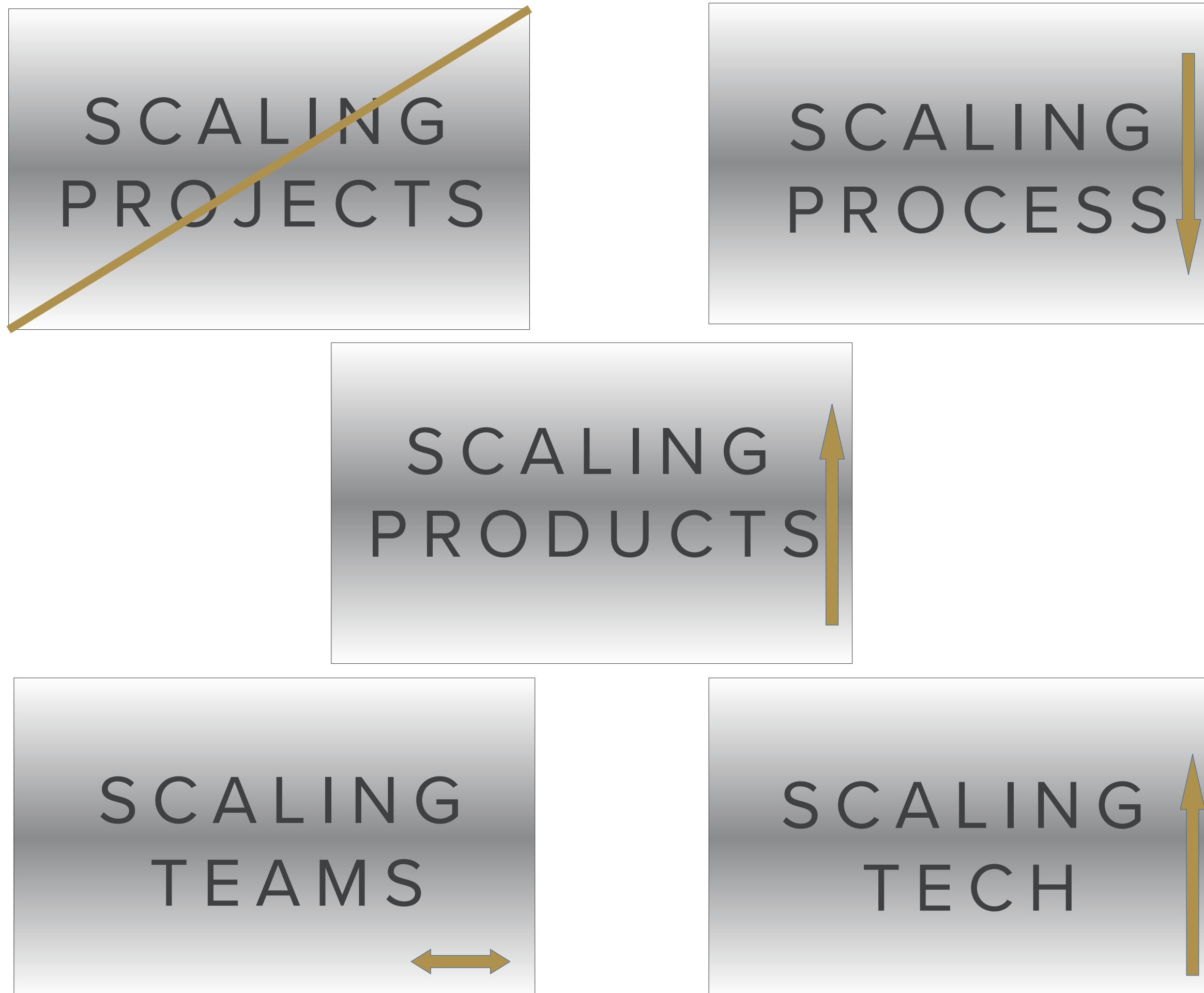
FIGURE 3. The *Work Smarter* Balancing Loop



From https://web.mit.edu/nelsonr/www/Repennin=Sterman_CMR_su01_.pdf

What Does It Look Like?

WHAT GETS EMPHASIZED?



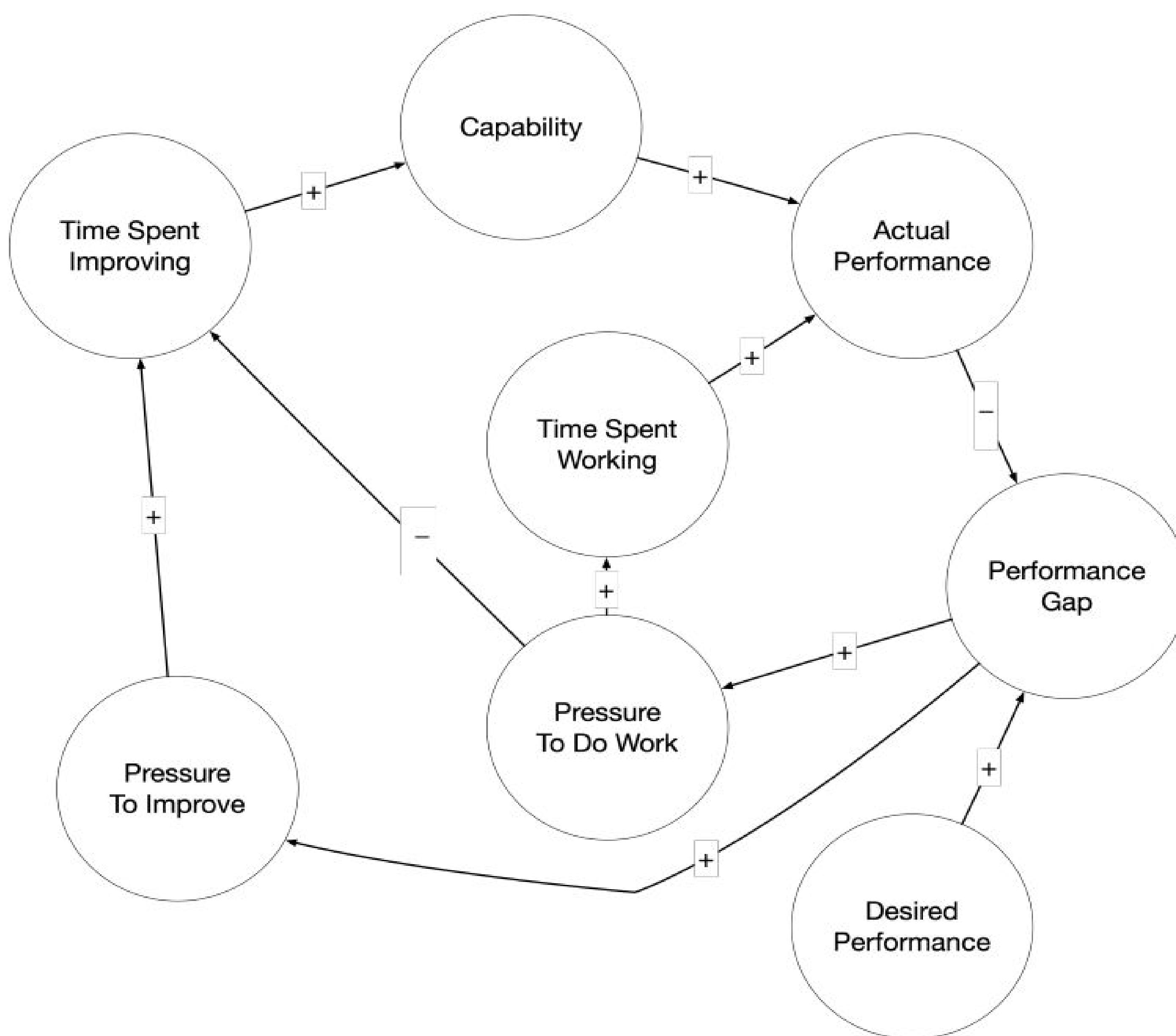
LEARNING
FOCUSED



"Learning by Doing" by BrianCSmith is licensed under CC BY-NC-ND 2.0

Causal Loops

"REINVESTMENT"



http://web.mit.edu/nelsonr/www/Repennig=Sterman_CMR_su01_.pdf

What Does It Look Like?
'SCALING' LEARNING

LEARNING
FOCUSED

This is 'Labor Intensive'

Linear Growth Options

- Enablers and Platforms
- Learn from Teams
- Not all the teams

Exponential Growth

- Growing Internally Coaches
- Social Learning



"Growth - Thank you!" by susivinh is licensed under CC BY-ND 2.0

Those Closest To The Work Feel The Friction

LISTEN

The people closest to the work know their challenges

Listen to them

Firefighting isn't helping

Escalating isn't helping



"Workshop Value Stream Mapping de Mary Poppendieck." by Improve It is licensed under CC BY-SA 2.0



Learn

GREAT WAYS TO LEARN

Trying Multiple Options
Ensemble Working Style

Curious Team
Reserving Judgment

Always in Context

LET'S NOT CONFUSE...

ACTIVITY FOR PROGRESS

MOVING WITH GOING
SOMEWHERE

SCALING FOR BETTER

IN CLOSING



Words Matter

THEY ALWAYS HAVE

'They / There / Then' vs 'Us/ Here / Now'

'The Business'

'Resources'

Certainty vs Experimentation

Budget vs Impact

SCALING

"Suntory Smart Boss" by mdid is licensed under CC BY 2.0

Before You Worry About Scaling

WHAT IS THE ACTUAL CHALLENGE AND INTENT?

Understand the context

What are the options and trade offs?

Maybe scaling isn't the problem

**'IT IS IN THE DOING OF THE WORK THAT WE DISCOVER
THE WORK TO DO'**

- Woody Zuill

SCALING – YOU KEEP USING THAT WORD



Slides - <https://dojoandco.com/speaking>