SPEED VS QUALITY CAN YOU HAVE BOTH?

Jitesh Gosai | Principal Tester
BBC | Product Group
iPlayer & Sounds

Quality Engineering Newsletter

https://qualityeng.substack.com/

@JiTGO
linkedin.com/in/jitgo

Quality

Speed

Why?

Quality → Acceptable

Speed →

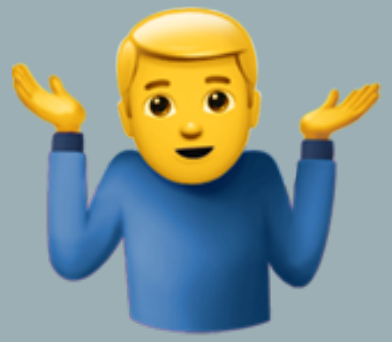
Work
Longer

Quality

Speed

When people

WORK HARD



Work is hard to do?

WORK HARD

Work Longer

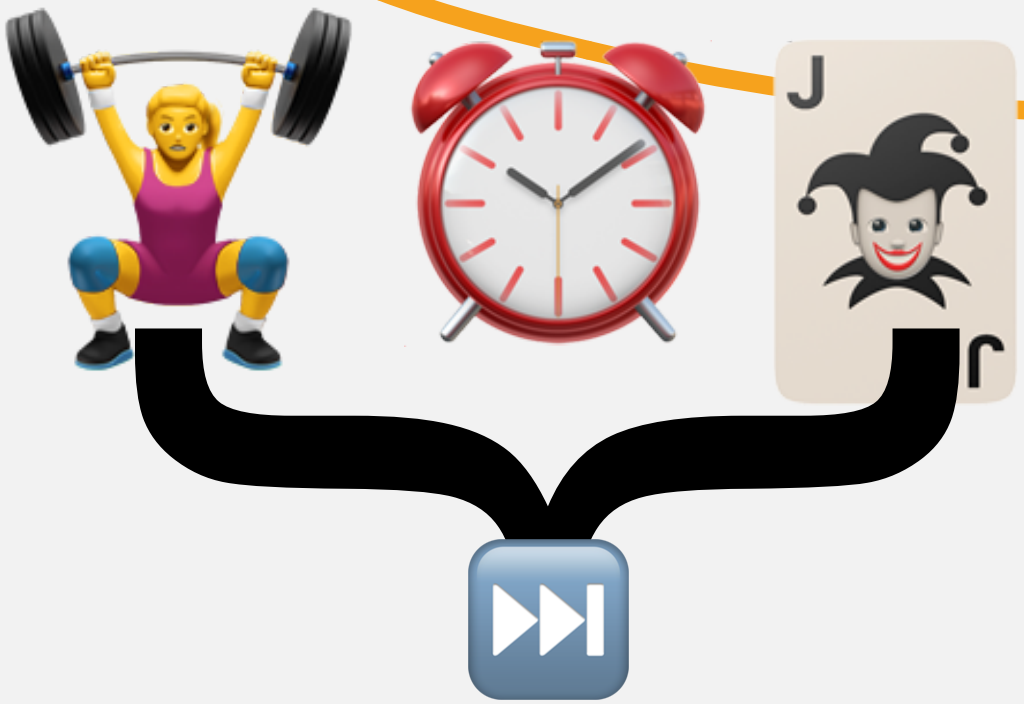
Shortcuts

Quality

Speed

When people
start to notice

Unacceptable
Quality drop



How do you close the quality gap?

Speed

Unacceptable
Quality drop

Quality

WORK HARD

Work is hard to do?

Quality is back up 😃

But you've sacrificed speed ☹️

Add a waiting for test column

Automate More UI Testing

Push testing towards the end

Want to learn more?

https://vimeo.com/456729130

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Opposite ends of the spectrum

Quality

Speed

Push testing towards the end

But is there a way we can have both?

SPEED VS QUALITY CAN YOU HAVE BOTH?

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Jitesh Gosai

Principal Tester

iPLAYER

SOUNDS

Product Group

BBC

Inform, educate and entertain

Culture of Quality

Building quality in
at every levels

- Products
- Processes
- People

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Quality

Speed

WORK
WORK
WORK
Smarter

Improve our
Capability

Quality

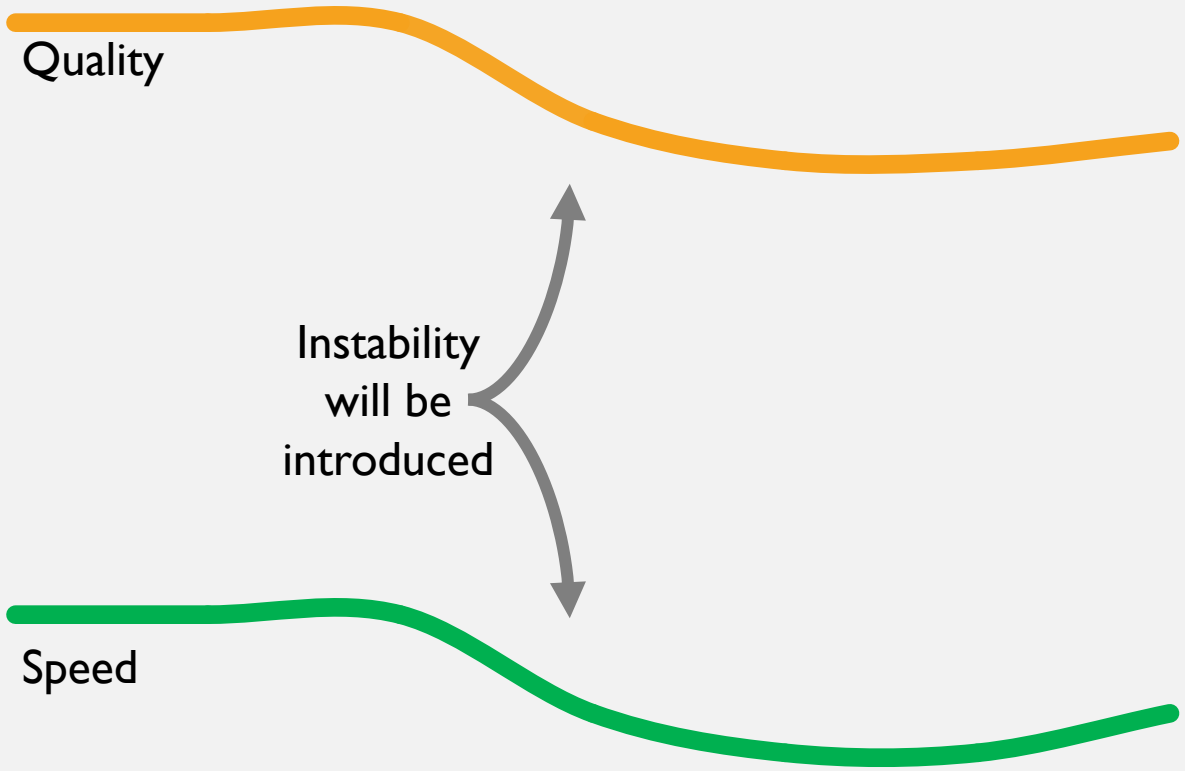
Instability can be introduced

Speed

WORK *smart*

Improve our **Capability**

Learn from **Failure**



WORK *smart*

Improve our **Capability**

Learn from **Failure**

Support from Leadership

Quality

Instability will be introduced

Quality will stabilise

Speed will increase

Speed

WORK *smart*

Improve our **Capability**

Learn from **Failure**

Support from Leadership

Don’t just take my word for it

WORK HARD

Nobody Ever Gets Credit for Fixing Problems that Never Happened:

Creating and Sustaining Process Improvement

Nelson P. Repenning
John D. Sterman

How much would your organization pay to develop manufacturing capability equal to Toyota's? How much would a world-class, six-sigma quality program be worth to your company? How about Harley-Davidson's ability to tap into the hearts and minds of its customers or Dell's ability to manage its supply chain? Most firms are working aggressively to develop these and similar capabilities through process improvement. The combined expenditure of U.S. companies on management consultants and training in 1997 was over $100 billion, and a sizeable fraction went towards efforts to develop operational capabilities matching those of the best firms in business. Whether it's an advanced manufacturing system or the ability to respond quickly to changing customer needs, the drive toward improvement has become a way of life in corporations today. There is only one problem. Despite these vast expenditures, and notwithstanding dramatic successes in a few companies, few efforts to implement such programs actually produce significant results.

Consider, for example, Total Quality Management (TQM). In the 1980s, spurred by the success of many Japanese firms, TQM was all the rage among U.S. firms. Consultants and business school faculty preached its virtues and managers made pilgrimages to companies with award-winning quality programs. By the mid-1990s, however, TQM was considered passé. Academics had moved on to other issues, TQM received rare mention in the popular business press, and articles that did mention it usually did so in a negative context. TQM

Work reported here was supported by the MIT Center for Innovation in Product Development under NSF Cooperative Agreement Number EEC-9529140. For more information on the research program that generated this article, visit <http://web.mit.edu/nelsonr/www/>.

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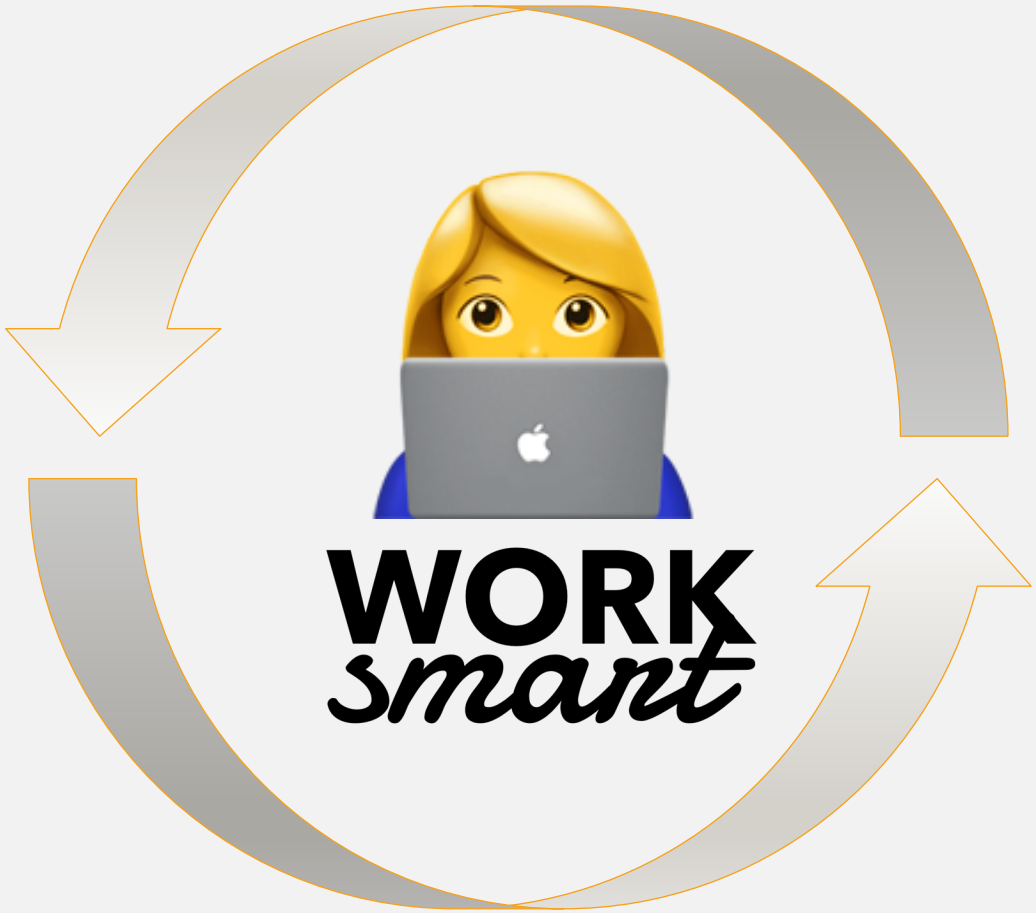
Default ways of working



It’s not all bad

WORK HARD

Helpful for handling those unpredictable events

WORK *smart*

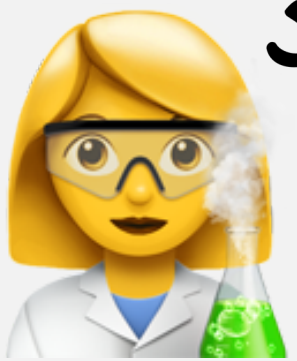
Complex processes can have a lower success rate

How do we work smarter?

Learning Mindset

WORK smarter

Improve our **Capability**



EXPERIMENTATION

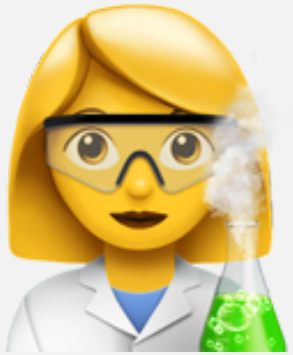
Flow OF WORK

How do we work smarter?

Psychological Safety

Support from Leadership

Showing **Fallibility**



EXPERIMENTATION

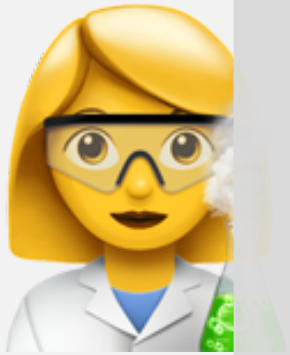
Positively **Framing** The work

Working across **Discipline Boundaries**

Learning From **Failure**

How do we work smarter?

Psychological Safety



EXPERIMENTA

Showing **Fallibility**

Positively **Framing** The work

Want to learn more?

Day 1 - Workshop
Room: West Bay
Time: 15:15 – 17:00

What does Speed and Quality mean?

Quality

Speed

DORA

DEVOPS RESEARCH & ASSESSMENT

What are the 4 key metrics?

Speed

Throughput

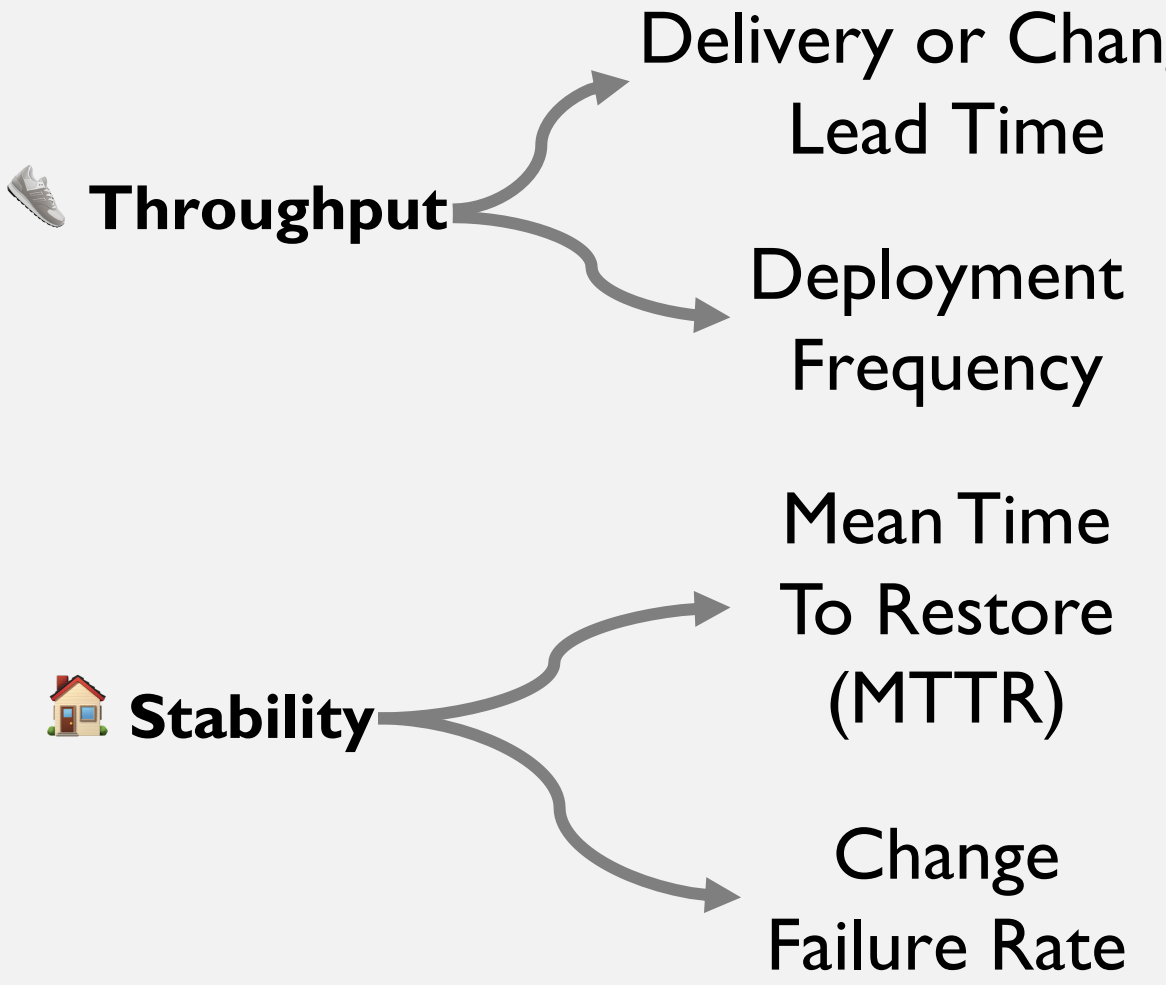
- Delivery or Change Lead Time
- Deployment Frequency

Quality

Stability

- Mean Time To Restore (MTTR)
- Change Failure Rate

Alternatively, as questions...



1. How **long** does it take you to go from code commit to running in production?

2. How **often** do you deploy **small batches** of code to production?

3. How long does it take for you to **restore** degraded end user service**?

4. What percentages of deployments result in degraded end user service?

** Anything that leaves your users unable fully or partly carry out a task that needs a subsequent change to the system to remedy

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WORK HARD

Work Longer

Shortcuts

Push testing towards the end

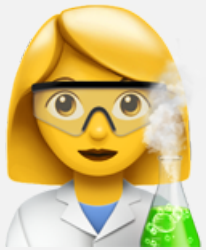
Throughput

- Delivery or Change Lead Time
- Deployment Frequency

Stability

- Mean Time To Restore (MTTR)
- Change Failure Rate

Improve our **Capability**



Learn from **Failure**

Support from Leadership

WORK *smart*

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Throughput

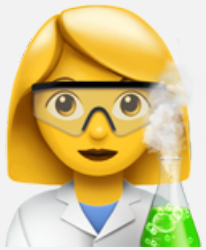
- Delivery or Change Lead Time
- Deployment Frequency

Stability

- Mean Time To Restore (MTTR)
- Change Failure Rate

Working Smarter with the 4 key metrics

Improve our **Capability**



Learn from **Failure**

Support from Leadership

Throughput

Delivery or Change Lead Time

Deployment Frequency

WORK *smart*

Stability

Mean Time To Restore (MTTR)

Change Failure Rate

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How do you get started?

Team

pushing to production
regularly, repeatably
and **consistently**

Throughput

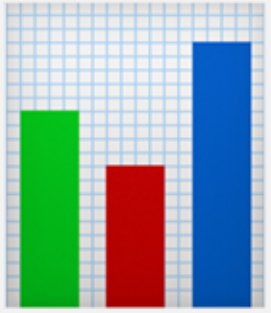
Deployment Frequency

2. How **often** do you deploy **small batches** of **code** to production?

To start *Keep it simple*

2. How **often** do you deploy **code** to production?

Code Deployment Frequency Trends



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How do you get started?

Team

pushing to production
regularly, repeatably
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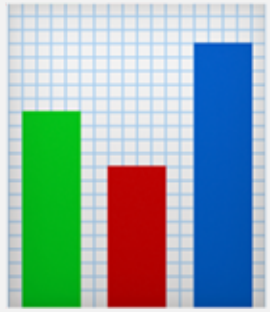
2. How **often** do you deploy **code** to production?



Code Deployment Frequency Trends

WORK *smart*

How do you get started?

Theory of Constraints

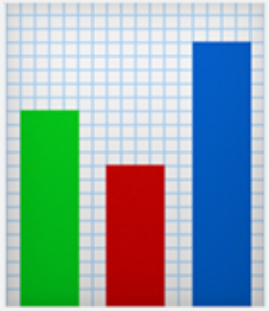
5. Do not allow **INERTIA** to cause a system constraint

1. **IDENTIFY** the systems constraint

2. Decide how to **EXPLIOT** the systems constraint

3. **SUBORDINATE** everything to decision 2

4. **ELEVATE** the systems constraint

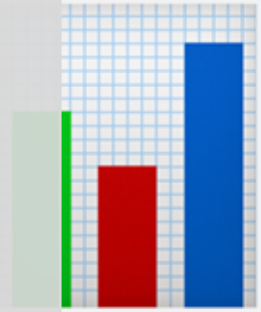


Code Deployment Frequency Trends

Theory of Constraints

Want to learn more?

Day 2 - Activity
Location: Table 1
Time: 11:05–11:35 & 11:45–12:15



Code
Deployment
Frequency
Trends

1. **IDENTIFY** the systems constraint

2. Decide how to **EXPLIOT** the systems constraint

How do you get started?

Theory of Constraints

5. Do not allow **INERTIA** to cause a system constraint

1. **IDENTIFY** the systems constraint

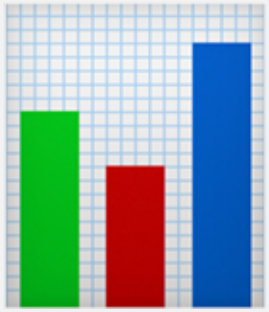
By making most of what you have

2. Decide how to **EXPLIOT** the systems constraint

3. **SUBORDINATE** everything to decision 2

Optimise the flow of work into the constraint

4. **ELEVATE** the systems constraint



Code Deployment Frequency Trends

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How do you get started?

Theory of Constraints

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How do you get started?

Theory of Constraints

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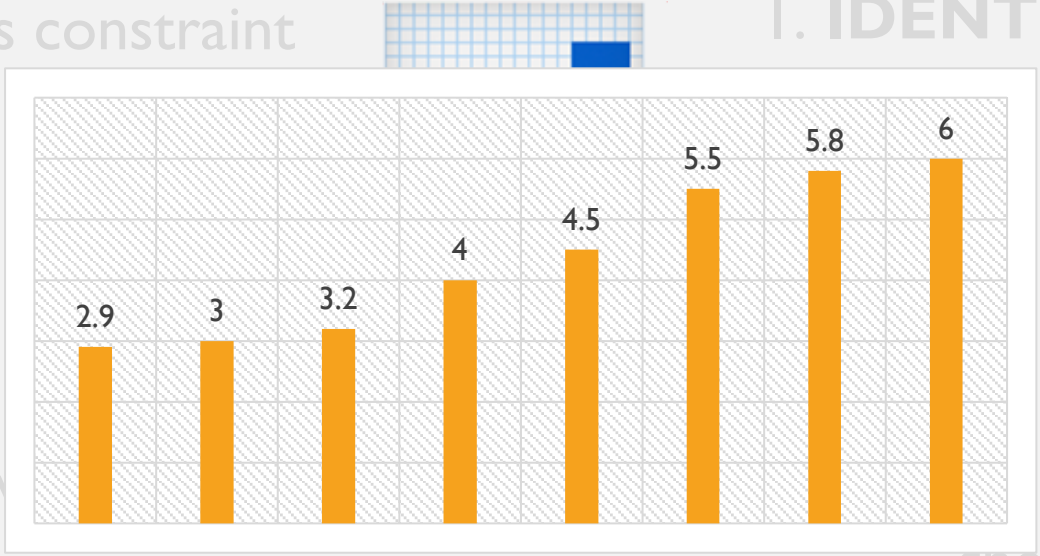
…ide how to **EXPLIOT** the systems constraint

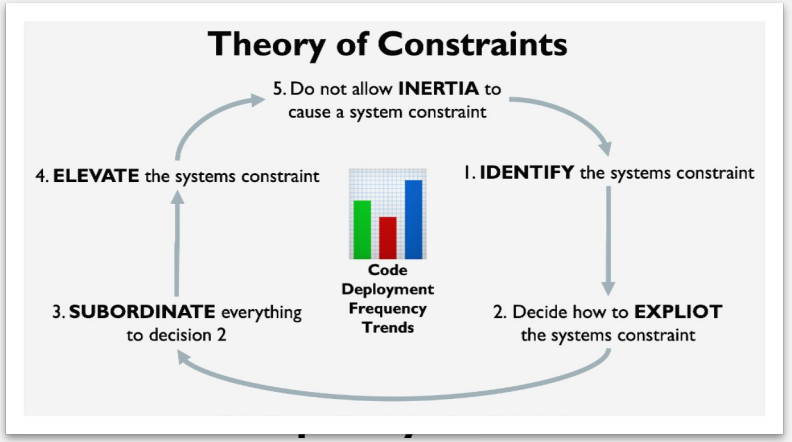


Are we now working smarter?

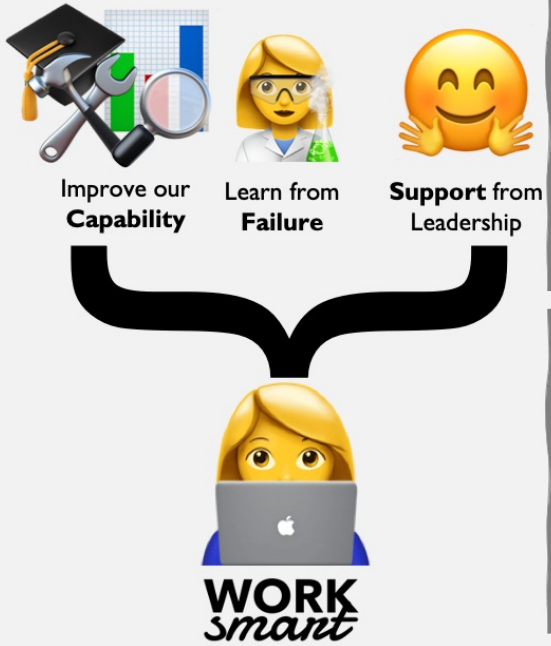
Team

pushing to production

regularly, repeatably and **consistently**



Throughput → Deployment Frequency



Throughput
- Delivery or Change Lead Time
- Deployment Frequency

Stability
- Mean Time To Recovery (MTTR)
- Change Failure Rate

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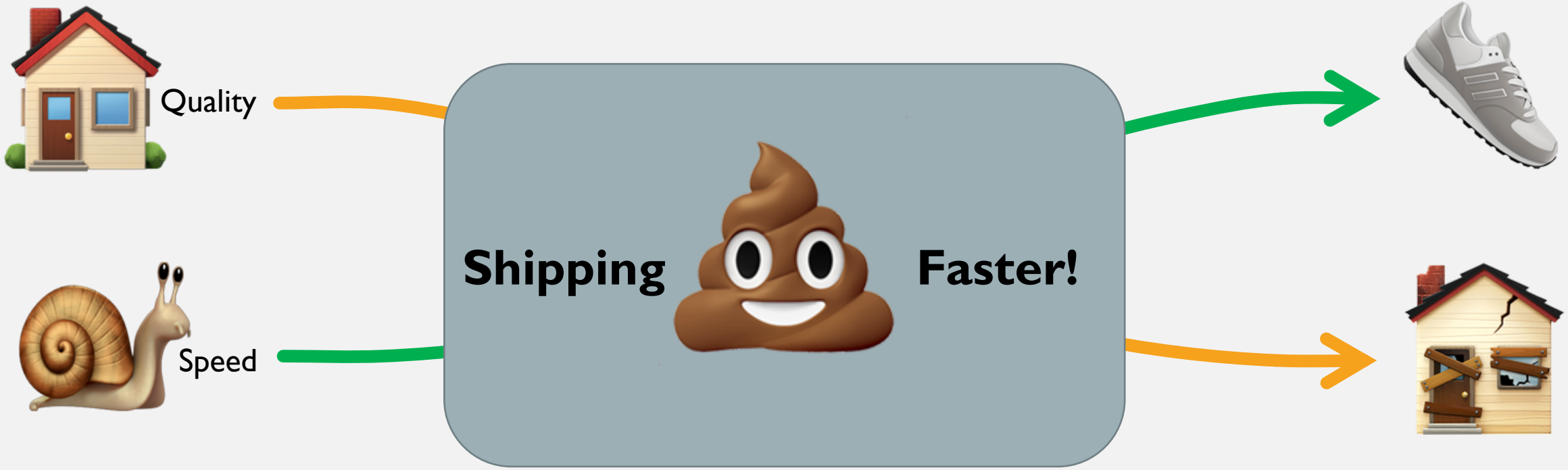
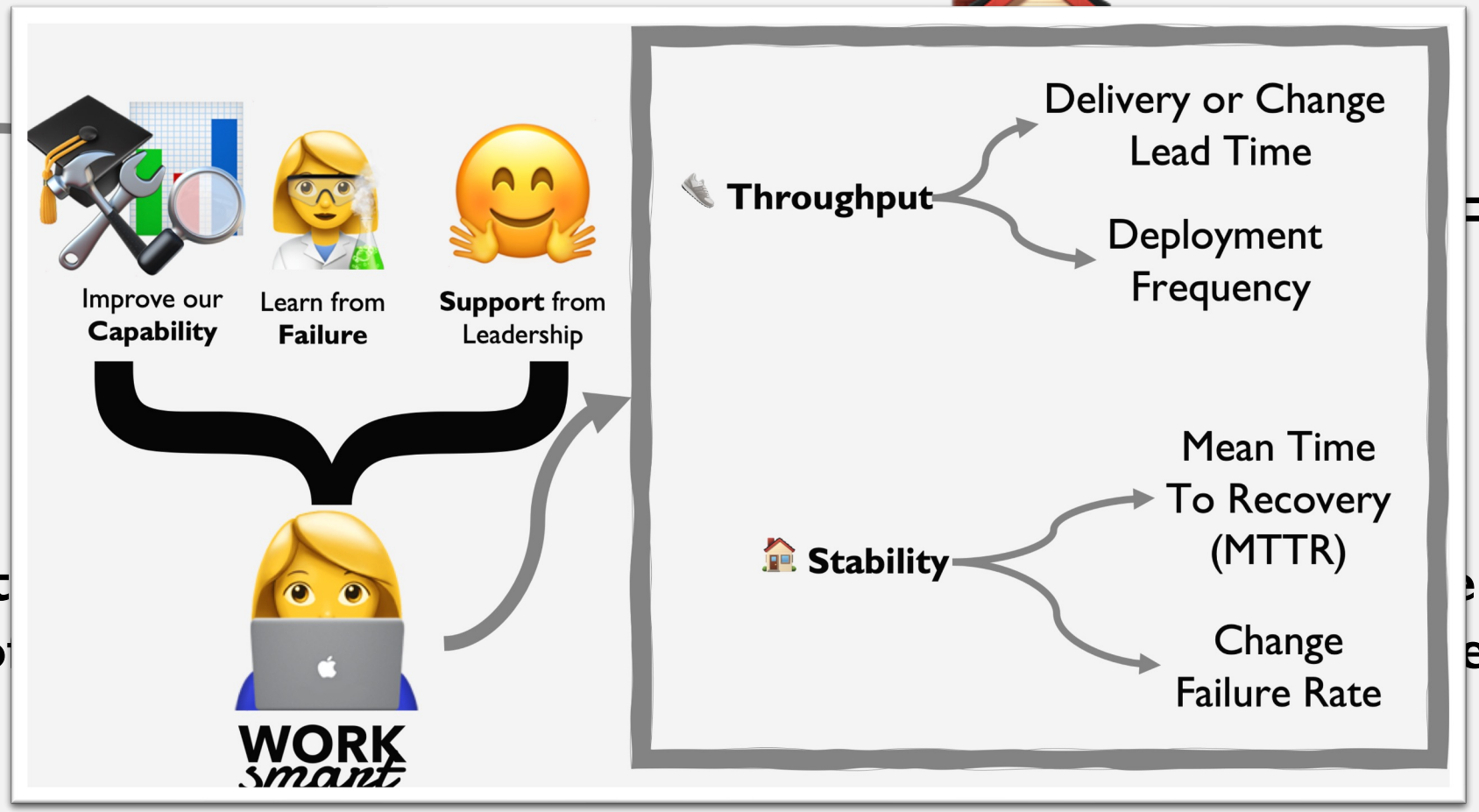
Are we now working smarter?



Metrics in tension

Throughput



Change
Failure Rate

2. How **oft** **eployments**
batches o **er service****?

** Anything that leaves your users unable fully or partly carry out a task that needs a subsequent change to the system to remedy

What is working harder and working smarter?

WORK HARD

Work Longer

Shortcuts

Push testing towards the end

Improve our **Capability**

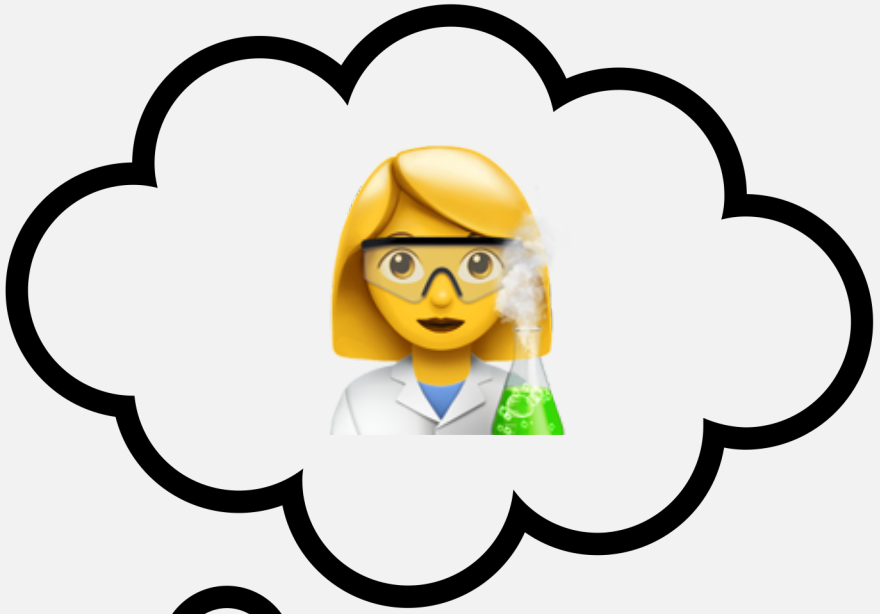
Experimentation

Support from Leadership

WORK smart

Execution mindset to a learning mindset

Execution Mindset



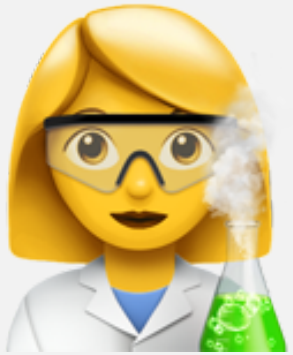
Learning Mindset

WORK smart

Learning mindset via experimentation

Psychological Safety

Working across Discipline Boundaries



EXPERIMENTATION

Showing Fallibility

Positively Framing The work

Learning From Failure

From Speed Vs Quality to Speed & Quality

Stop viewing as

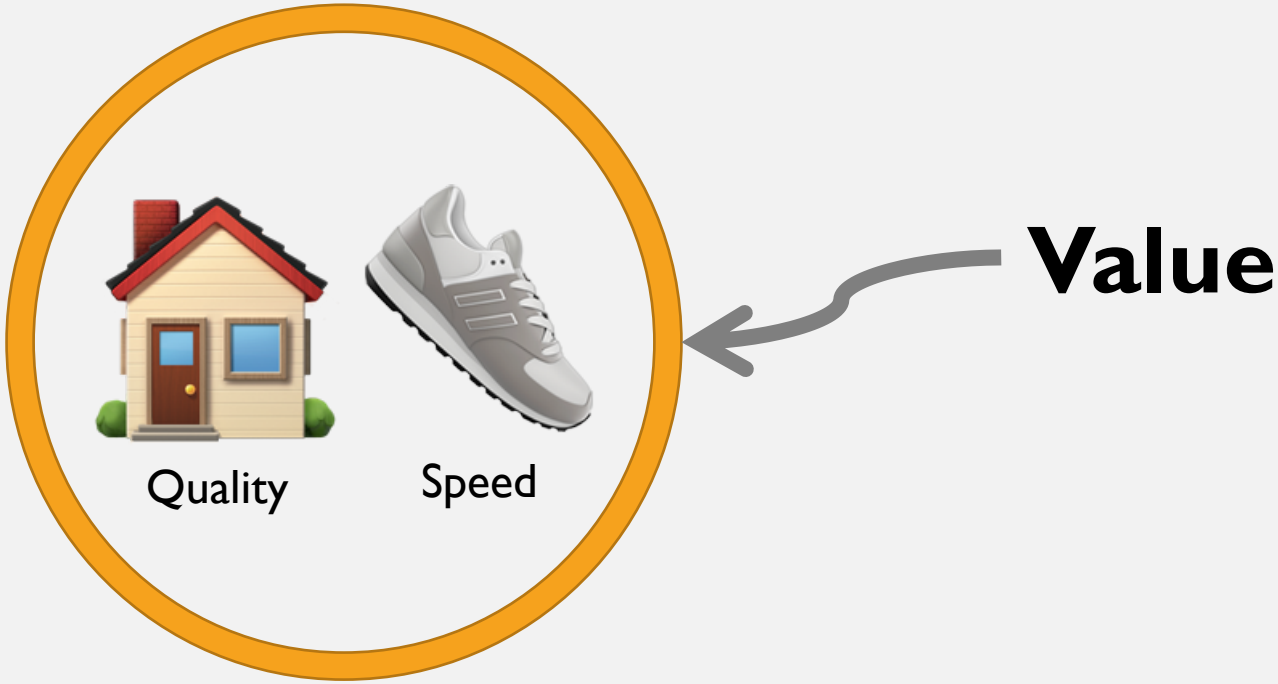
Opposite ends of the spectrum

Quality

Speed

Start viewing as

Two sides of the same coin



Value

Use the 4 key metrics to build a common understanding of Speed & Quality

Speed

Throughput

- Delivery or Change Lead Time
- Deployment Frequency

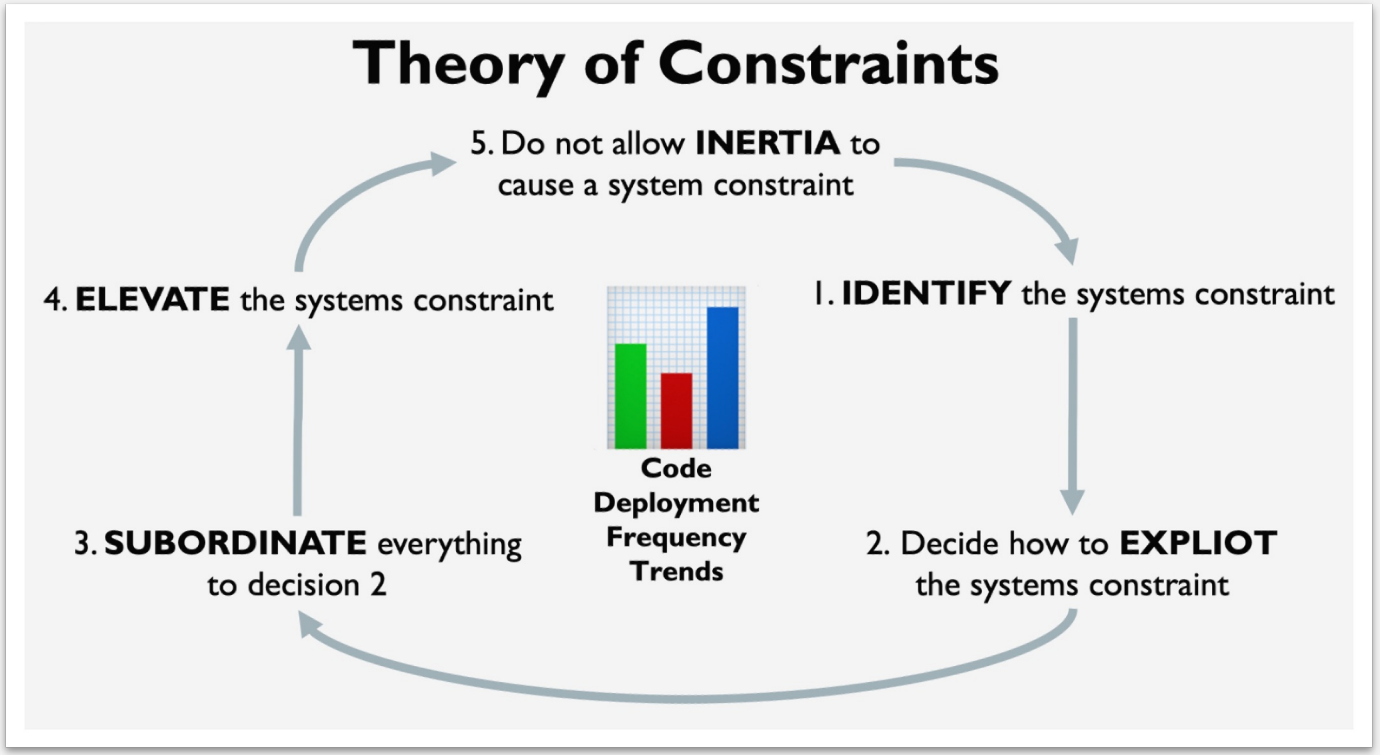
Quality

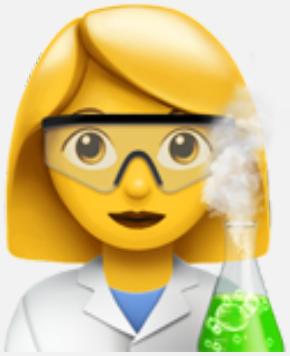
Stability

- Mean Time To Restore (MTTR)
- Change Failure Rate

How to get started

WORK *smart*





Experimentation

Metrics in tension

Deployment Frequency
Throughput

&

Change Failure Rate
Stability

SPEED VS QUALITY
CAN YOU HAVE BOTH?

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WORK HARD

Frames it as

Quality Vs. Speed

Yes

WORK Continuous IMPROVEMENT

Frames it as

Quality & Speed

WORK HARD

How ARE YOU working TOWARDS

Continuous IMPROVEMENT

Further reading

- 📄 **Nobody ever gets credit for fixing problems that never happened:**
  https://journals.sagepub.com/doi/pdf/10.2307/41166101
  I highly recommend reading this paper 🤩

- 🎥 Faster delivering teams: Kill the test column
  https://vimeo.com/456729130

📝 Speed Vs Quality: Can you have both:

- https://www.jitgo.uk/speed-vs-quality-can-you-have-both/
  Short blog post on speed and quality

📚 Creating a **learning environment**

- Teaming - https://www.amazon.co.uk/Teaming-Organizations-Innovate-Compete-Knowledge/dp/078797093X
- 🎥 How we failed at [illegible] stability OR how to create learning environments https://vimeo.com/637869438

👩‍🔧 Techniques for **prioritising** and finding high impact/low effort:

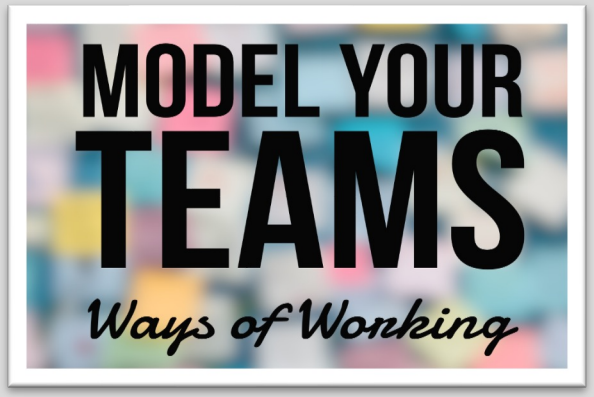
- Crazy 8's: https://designsprintkit.withgoogle.com/methodology/phase3-sketch/crazy-8s
- Impact Effort Matrix: [illegible]/impact-effort-matrix/

Q&A

Day 2 – Ask Me Anything
Location: Lobby
Time: 14:00 – 15:00

Workshops

Day 1 - Workshop
Room: West Bay
Time: 15:15 – 17:00



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SPEED VS QUALITY CAN YOU HAVE BOTH?

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https://bit.ly/svq-mot-2023

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