METRICS THAT MATTER

MOVING FROM EASY TO IMPACTFUL

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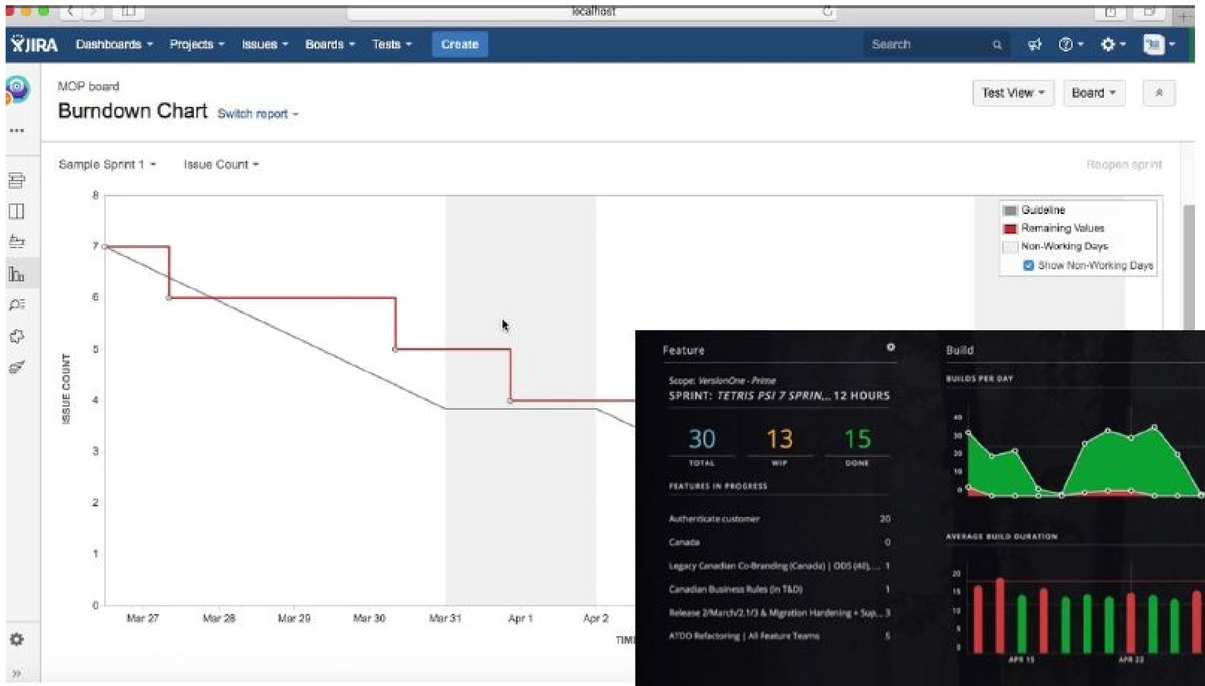
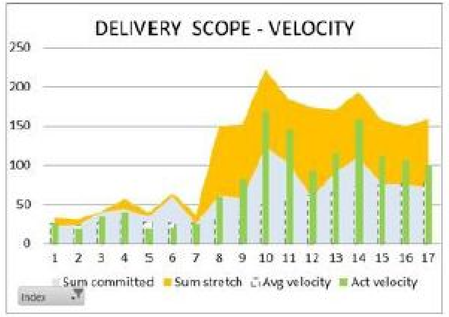
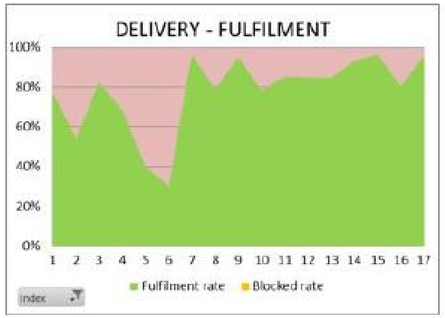
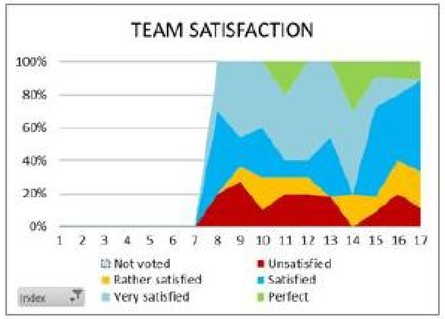
SPONSORS

SOME BACKGROUND









YOUR TAKEAWAY

You can’t ignore metrics

(Paraphrased) – People settle with measuring what they can when they don’t know how to measure what they should

You can help guide better metrics

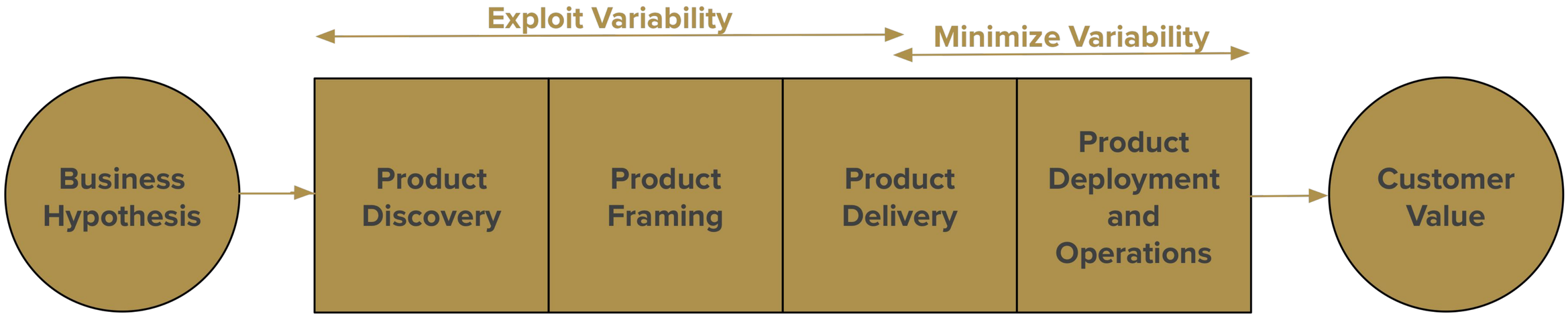
All organizations are perfectly designed to get the results they get

- Arthur W. Jones

ORIENTING

GROUPING

WHAT ARE WE DOING?



SIMPLE METRICS - ISOLATED

Easy to Count / Collect

- Number of Defects
- Number of Teams
- Velocity
- Other examples?

What is good about these metrics?

What does this information NOT tell us?

What action would this information drive us towards?

DIRECTIONAL METRICS – TIME / DEPTH

Harder to Capture

- Increase in Code Coverage
- Percent Reduction in Defects
- Cycle Time***
- Other examples?

What is good about these metrics?

What does this information NOT tell us?

What action would this information drive us towards?

‘When cycle times are long, innovation happens so late that it becomes imitation’

-Don Reinertsen

-Principles of Product Development Flow

IMPACTFUL / ECONOMIC METRICS

Require Intentionality

- Reduction of Cycle Time *for a delivery that mattered*
- Systemic Cost Reductions
- Stopping Bad Ideas
- Reducing Queues, Toil

What is good about these metrics?

What is required? What is next?

What action would this information drive us towards?

SEPARATING SIGNAL FROM NOISE

MOVING FROM
SIMPLE → DIRECTIONAL → IMPACTFUL
WILL REQUIRE NEW THINKING

PROCESS BEHAVIOR CHARTS

Named after Walter Shewart (also called Shewart charts), these are a statistical tool used to distinguish between variation in a measure due to common causes and variation due to special causes

PROCESS BEHAVIOR CHART

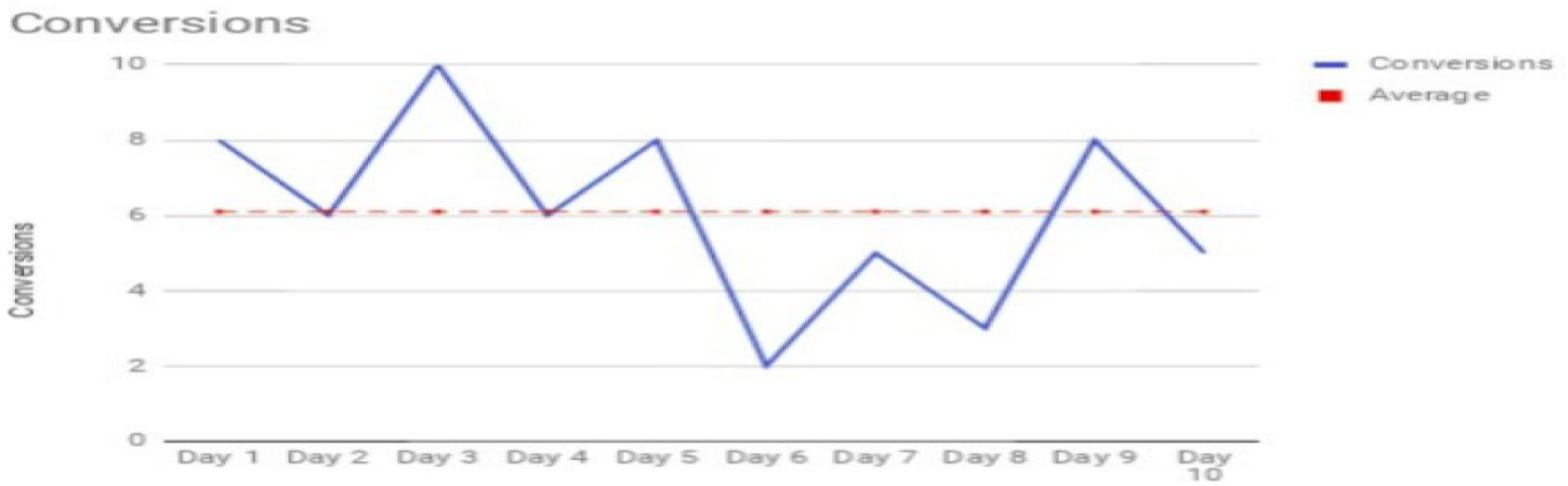
The way you deliver value is a system

If you do nothing, a stable system will continue to deliver within a given range

YOUR GOAL – do not react to noise

AN EXAMPLE

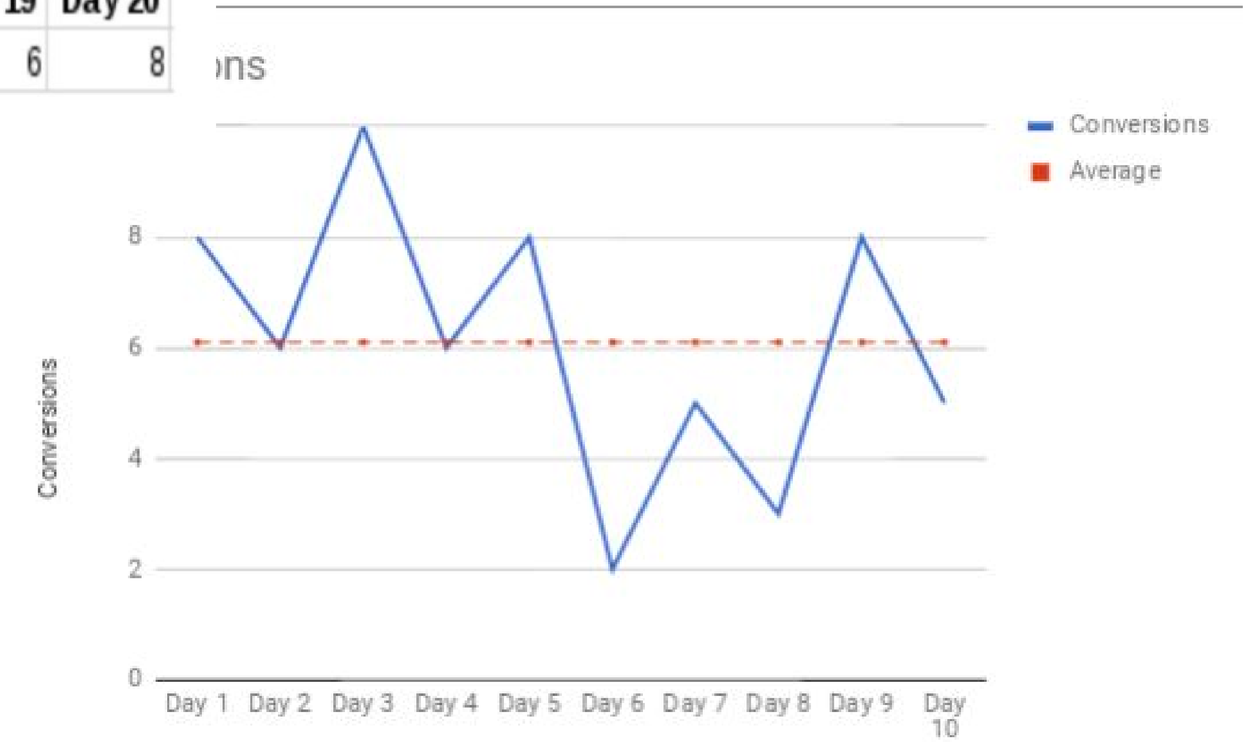
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Conversions	8	6	10	6	8	2	5	3	8	5



AN EXAMPLE

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Conversions	8	6	10	6	8	2	5	3	8	5

	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20
Conversions	14	4	11	9	12	2	8	5	6	8



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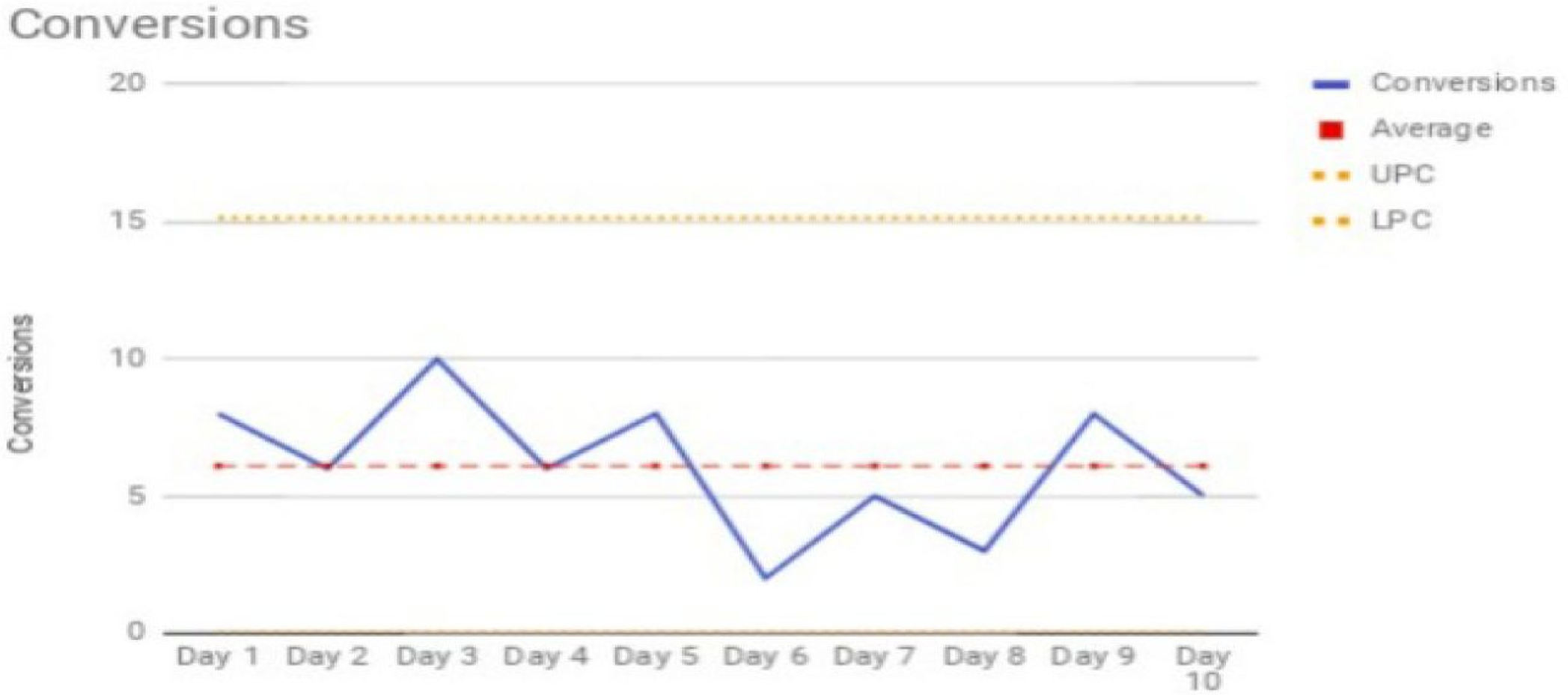


Data With Process Control Limits Applied. UPC - Upper Process Control, LPC - Lower Process Control. NOTE - Since the LPC is actually -3, we use 0 since a negative is not possible

KEY TAKEAWAYS

Be intentional with what you are measuring

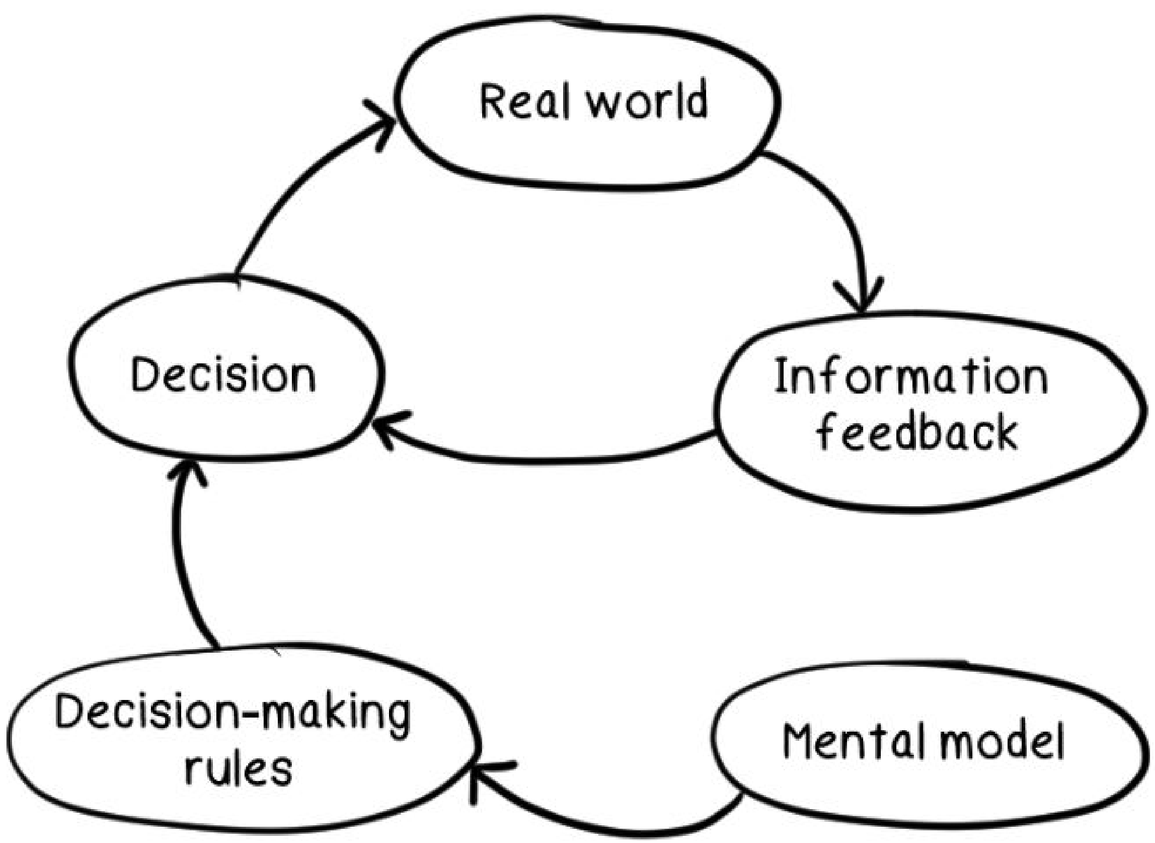
Know if your changes are making a difference

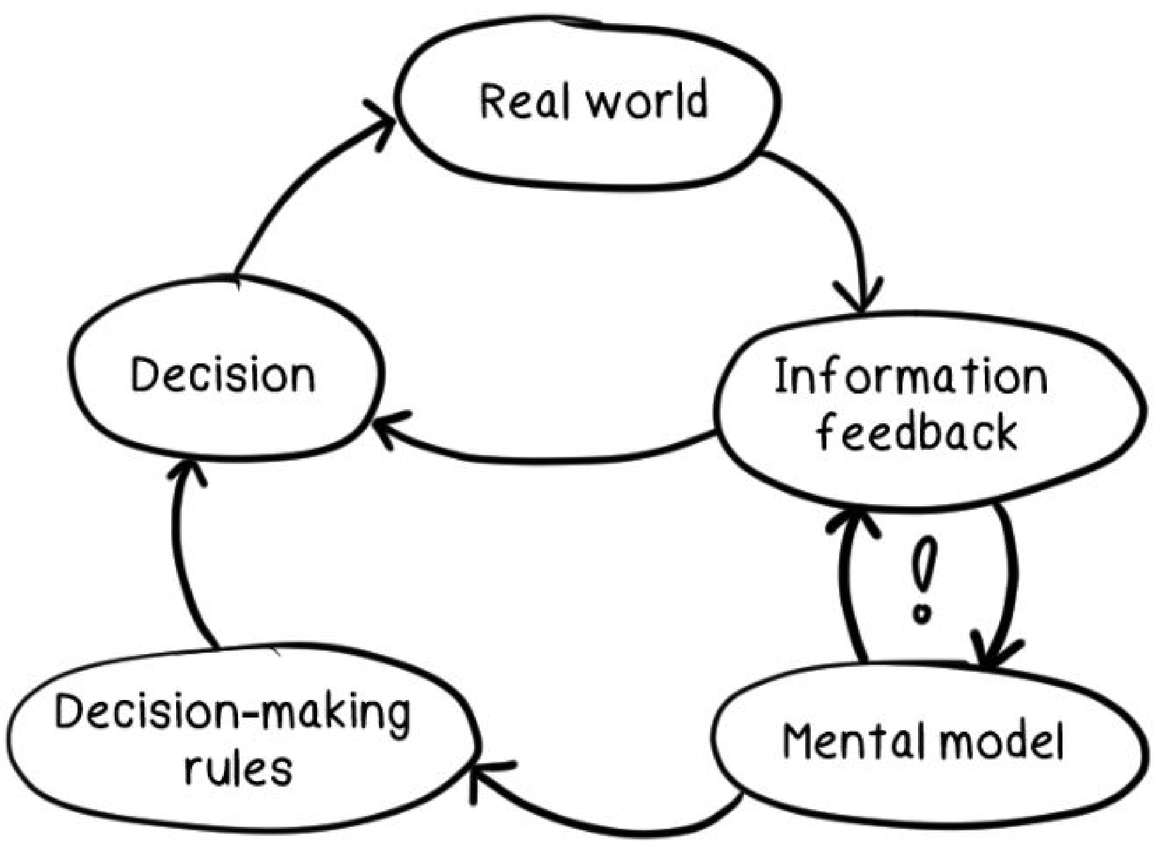
More frequent data points can make this easier

Product / Process / Tech

DOUBLE LOOP LEARNING

ARE OUR MEASUREMENTS REINFORCING OUR BIAS?

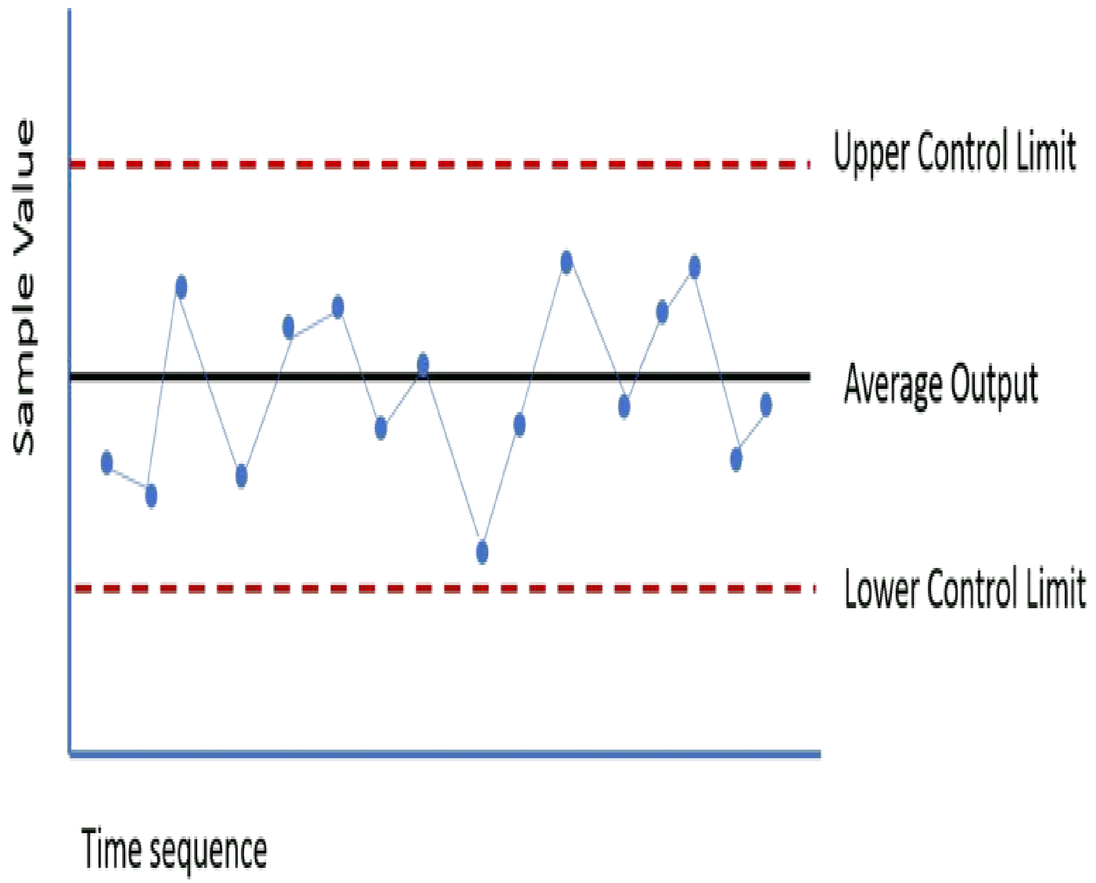




How do we do it faster vs Should we be doing it at all?

KNOW YOUR ACTUAL PROBLEM

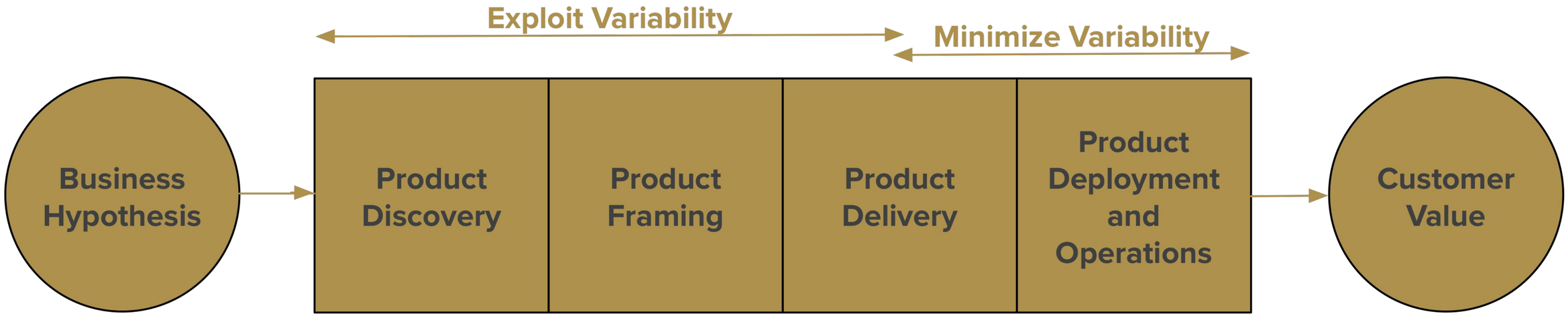
PREDICTABILITY VS VARIABILITY



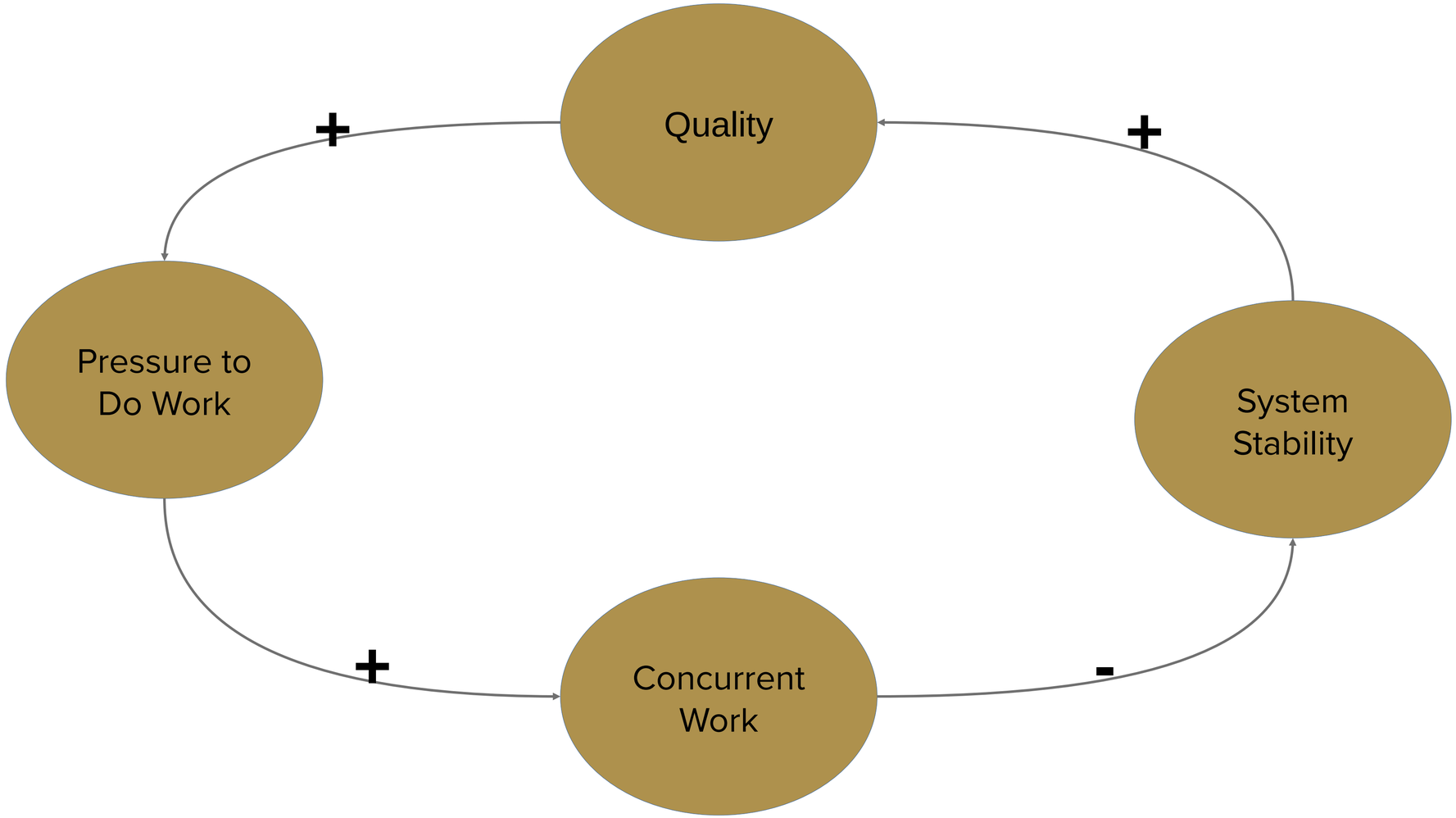
https://blog.kainexus.com/improvement-disciplines/lean/control-charts/an-introduction-to-process-control-charts

- Many organizations want more predictability – but don't monitor variability
  - In test setup, execution, results
  - In data setup, access
  - In environment setup
  - In dependency availability
- This leads to large queue times

WHAT ARE WE DOING?



A VICIOUS CYCLE



```
for (int i = 0; i < value.length; i++) {
    if (i == 0) {
        value[i] = bean.getEmployeeI();
    } else if (i == 1) {
        value[i] = bean.getEmployeeLastName();
    } else if (i == 2) {
        value[i] = activity.getStartDivision();
    } else if (i == 3) {
        value[i] = activity.getStartSubDivision();
    } else if (i == 4) {
        value[i] = activity.getDistrict();
    } else if (i == 5) {
        value[i] = activity.getSubDistrict();
    } else if (i == 6) {
        value[i] = activity.getCraft();
    } else if (i == 7) {
        value[i] =
                null != activity.getCertificationTS() ? sm.format(activity.getCertificationTS()) : "";
    } else if (i == 8) {
        value[i] = activity.getJobI();
    } else if (i == 9) {
        value[i] = null != activity.getPriorTimeOff() ? activity.getPriorTimeOff().toString() : "";
    } else if (i == 10) {
        BigDecimal bd = activity.getStartQ();
        value[i] = bd.toString();
    } else if (i == 11) {
        value[i] =
                null != activity.getActivityStartTime() ? sm.format(activity.getActivityStartTime())
                        : "";
    } else if (i == 12) {
        value[i] =
                null != activity.getActivityEndTime() ? sm.format(activity.getActivityEndTime()) : "";
    } else if (i == 13) {
        value[i] = activity.getActivityComments();
    } else if (i == 14) {
        BigDecimal bd = activity.getTtodHours();
        value[i] = bd.toString();
    } else if (i == 15) {
        BigDecimal bd = activity.getTourHours();
        value[i] = bd.toString();
    }
}
```

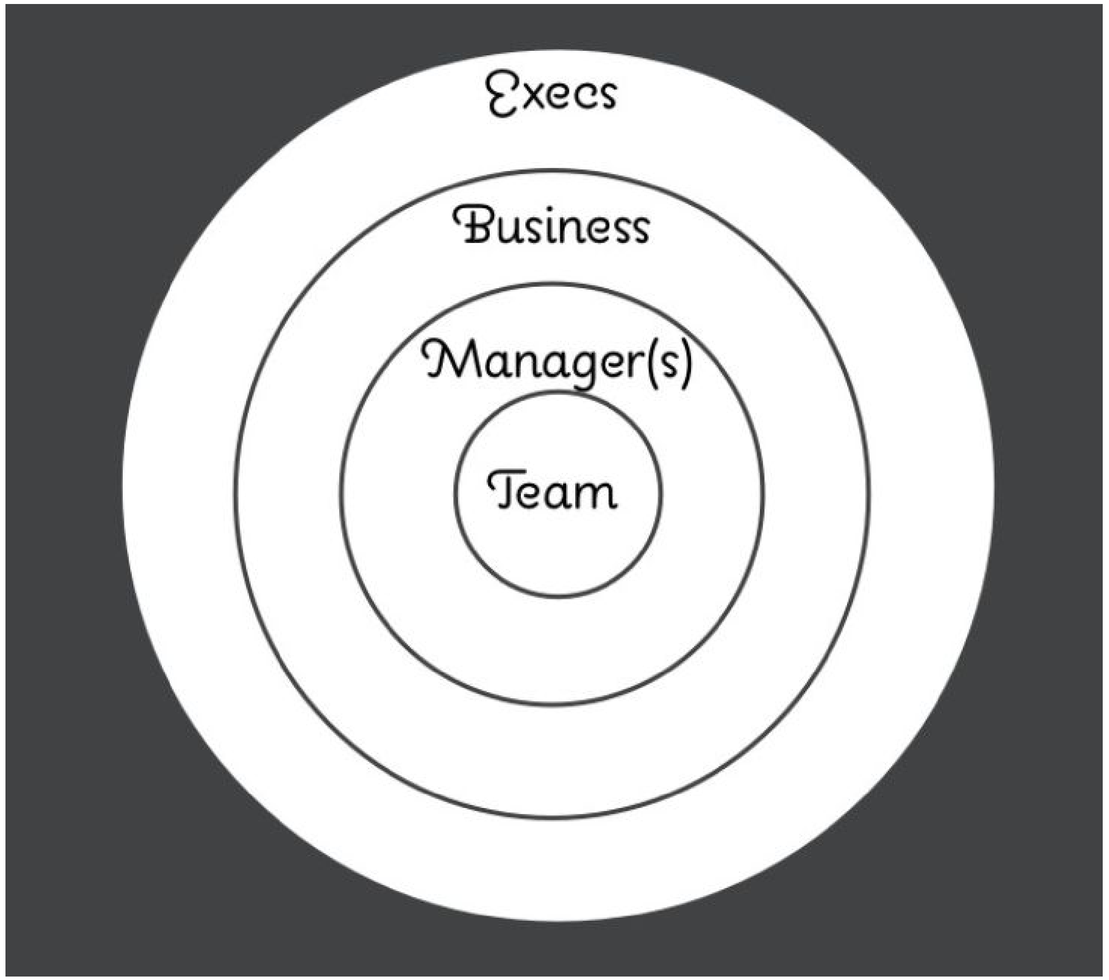
COGNITIVE LOAD

How many contexts are your teams grappling with?

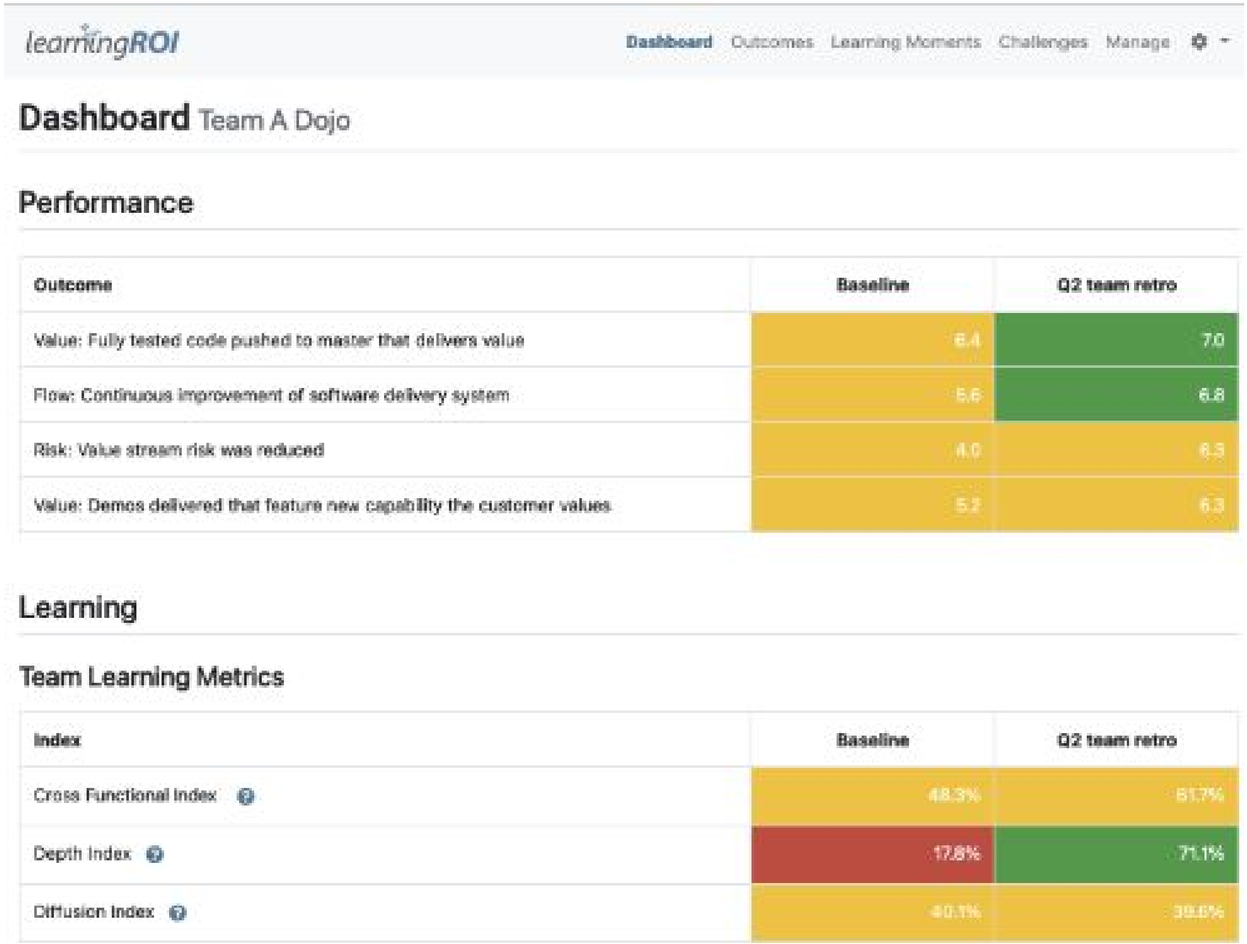
You can see it in code, data, testing, environments

Reducing cognitive load simplifies...much

INFORMATION LEAD TIME



SUPPORTING SOCIAL LEARNING



learningROI

Dashboard Outcomes Learning Moments Challenges Manage

Dashboard Team A Dojo

Performance

Outcome	Baseline	Q2 team retro
Value: Fully tested code pushed to master that delivers value	6.4	7.0
Flow: Continuous improvement of software delivery system	5.6	6.8
Risk: Value stream risk was reduced	4.0	6.3
Value: Demos delivered that feature new capability the customer values	5.2	6.3

Learning

Team Learning Metrics

Index	Baseline	Q2 team retro
Cross Functional Index	48.3%	61.7%
Depth Index	17.8%	71.1%
Diffusion Index	40.1%	39.6%

LearningROI – Copyright Mark Decker

THESE (AND OTHERS) WILL HAVE A LARGER IMPACT ON YOUR ORGANIZATION

RECOMMENDED READING

Measures of Success: React Less, Lead Better, Improve More – Mark Graban

Understanding Variation – The Key To Managing Chaos – Donald J. Wheeler

Principles of Product Development Flow – Donald G. Reinertsen

RECAP

Help get better metrics – understand where you are and how you can improve

The group that will be interpreting the data – do they see the same reality?

- **Do your changes matter?**
- **Are you learning?**

WHAT QUESTIONS DO YOU HAVE?

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