

METRICS THAT MATTER

MOVING FROM EASY TO IMPACTFUL

EST **DOJO** 2017

— **AND CO** —

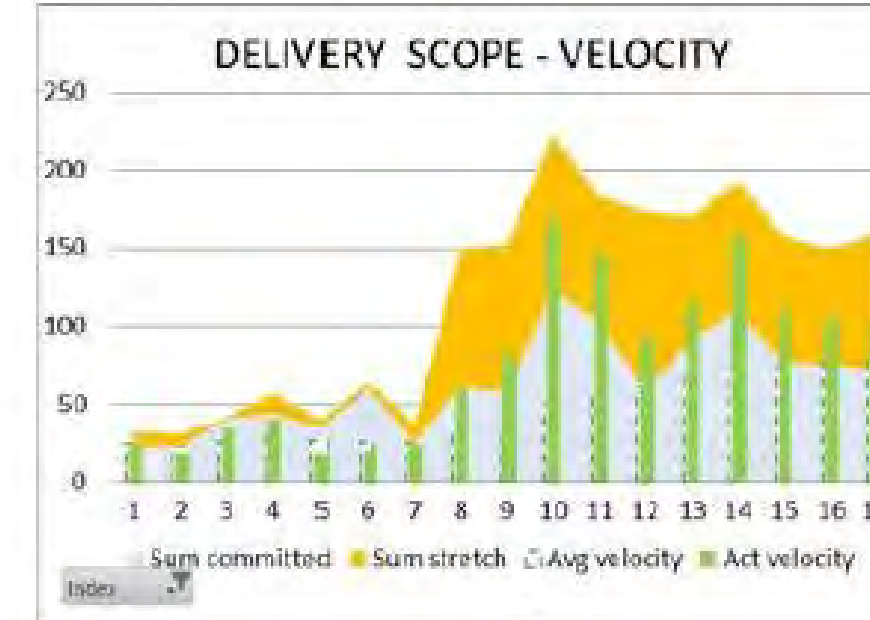
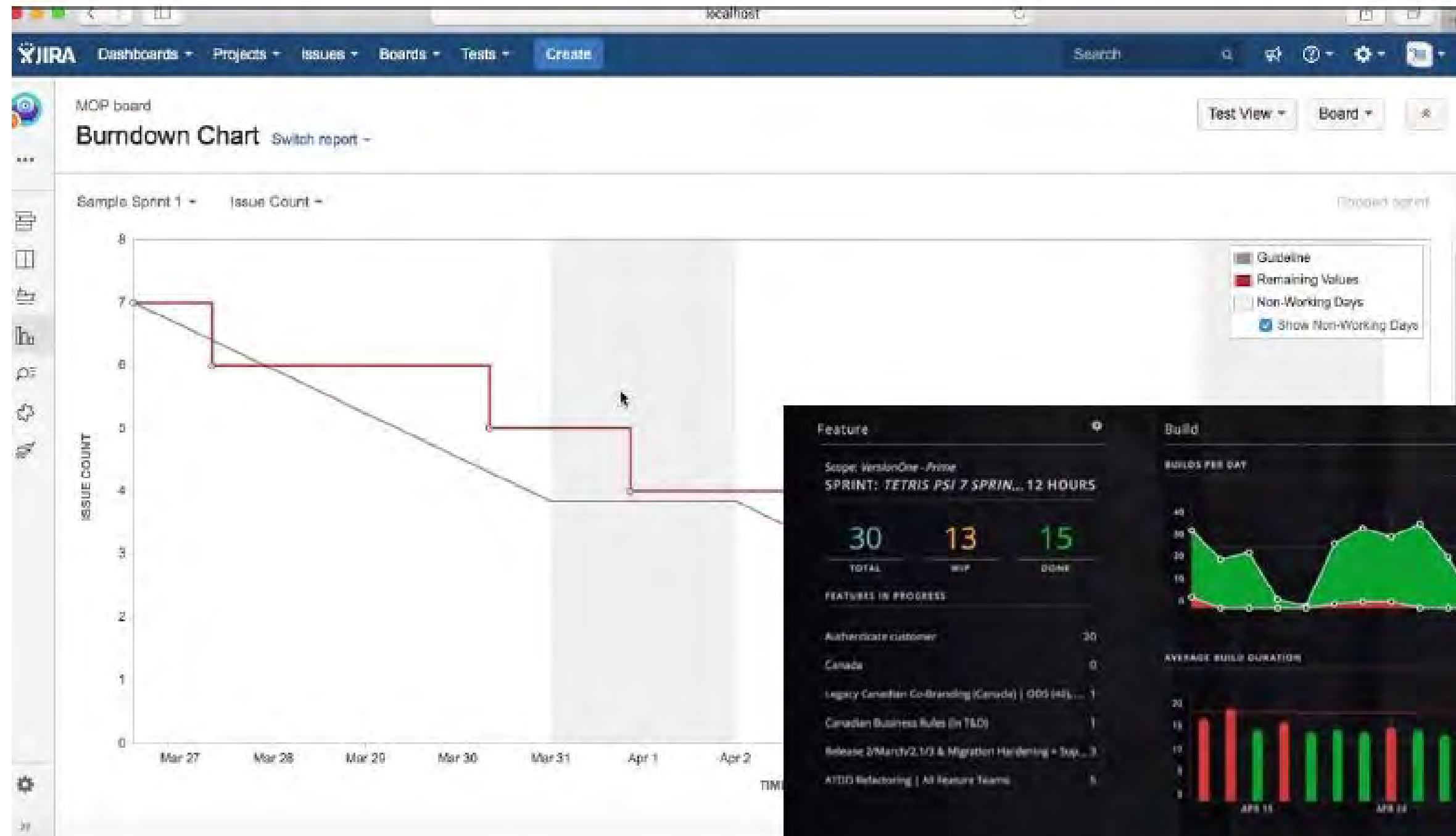
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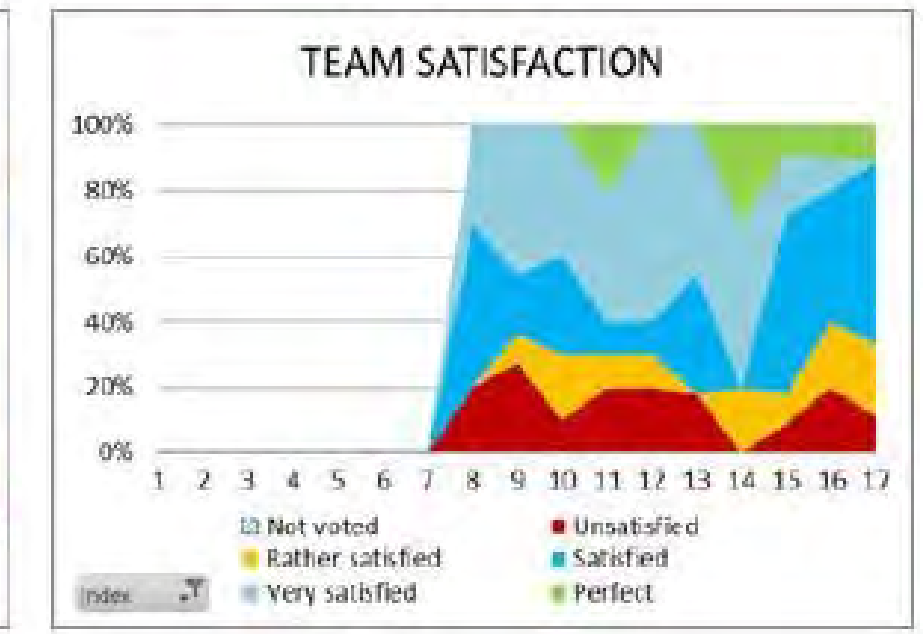
Joel.Tosi@dojoandco.com

SOME BACKGROUND



The dashboard provides a detailed overview of a feature build. Key sections include:

- Feature Summary:** Scope: VersionOne - Prime, SPRINT: TETRIS PSI 7 SPRIN... 12 HOURS. Metrics: 30 TOTAL, 13 WIP, 15 DONE.
- Builds:** 'BUILDS PER DAY' and 'AVERAGE BUILD DURATION' charts showing trends over several days.
- Quality:** 'STATIC ANALYSIS' shows 100.0% RULES COMPLIANCE and 3d TECHNICAL DEBT. 'UNIT TESTS' show 100.0% Success and 4,036 Tests. A large green gauge displays '95%' for 56,146 lines of code.
- Deploy:** A table listing deployment attempts for various environments (DEV6, DEV7, QA3, etc.) with dates and status indicators.
- Summary:** 'TOTAL COMMITS' (0, 251, 563) and 'CONTRIBUTORS' (0, 62, 89) for today, last, and last last.



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

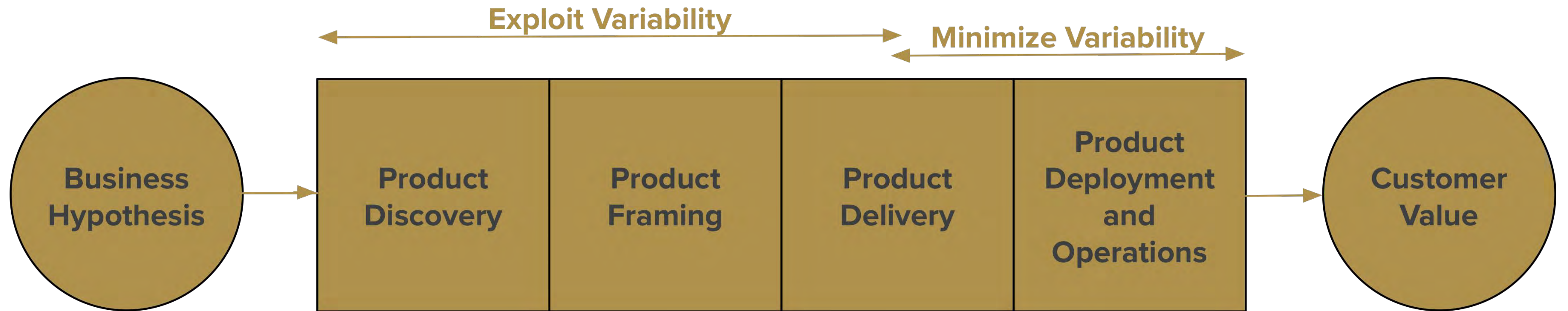
You can help guide better metrics

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?

DIRECTIONAL METRICS

Harder to Capture

Increase in Code Coverage

Percent Reduction in Defects

Cycle Time***

Other examples?

**'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

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

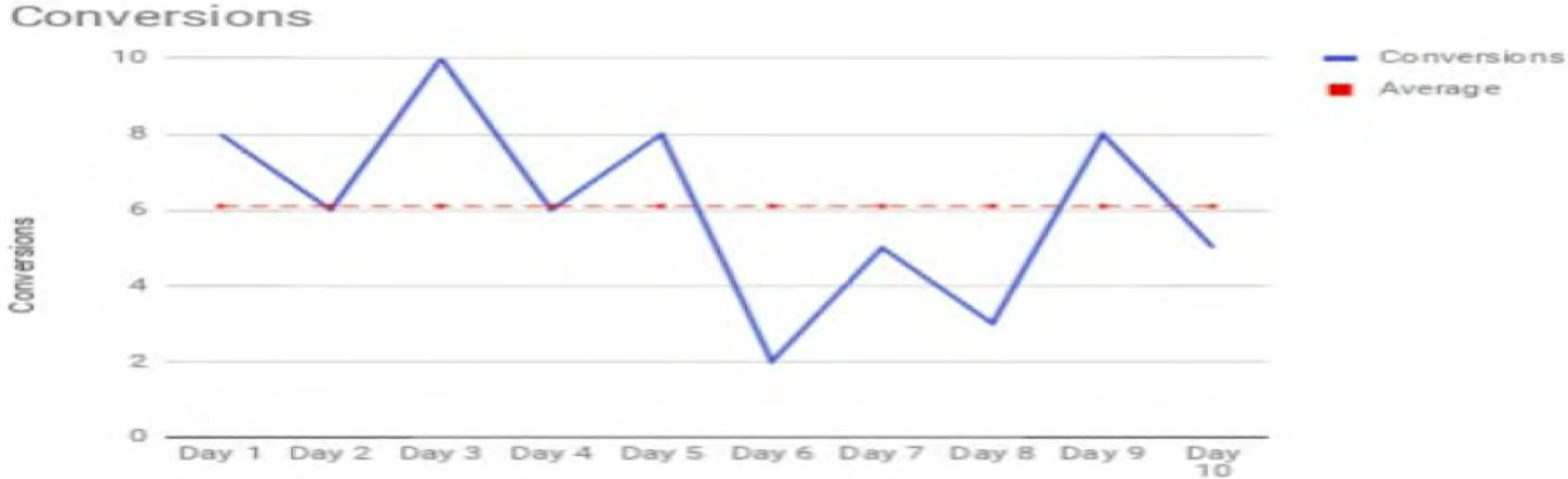
The way you deliver value is a system

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

YOUR GOAL – do not react to noise

AN EXAMPLE

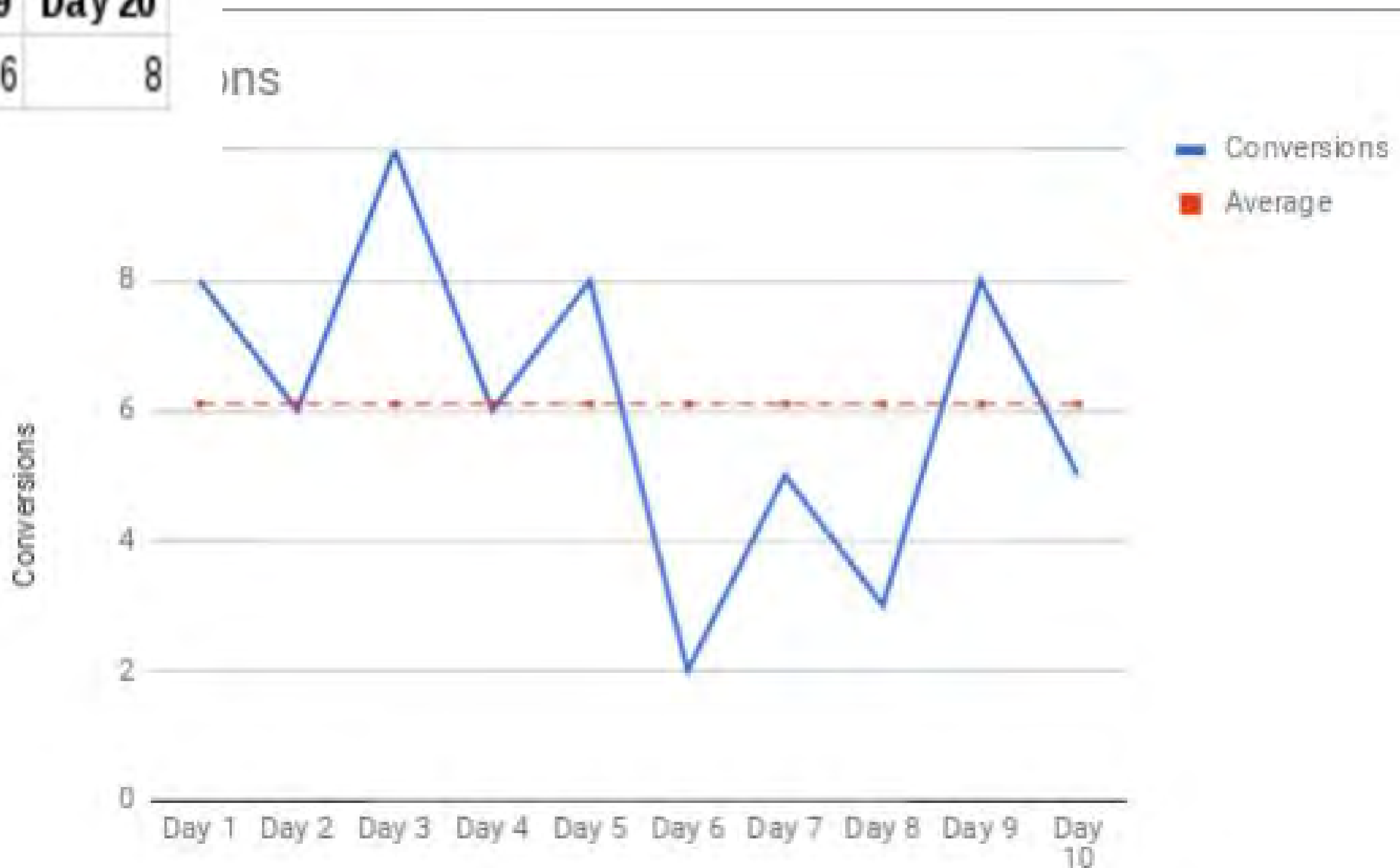
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Conversions	8	6	10	6	8	2	5	3	8	5



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

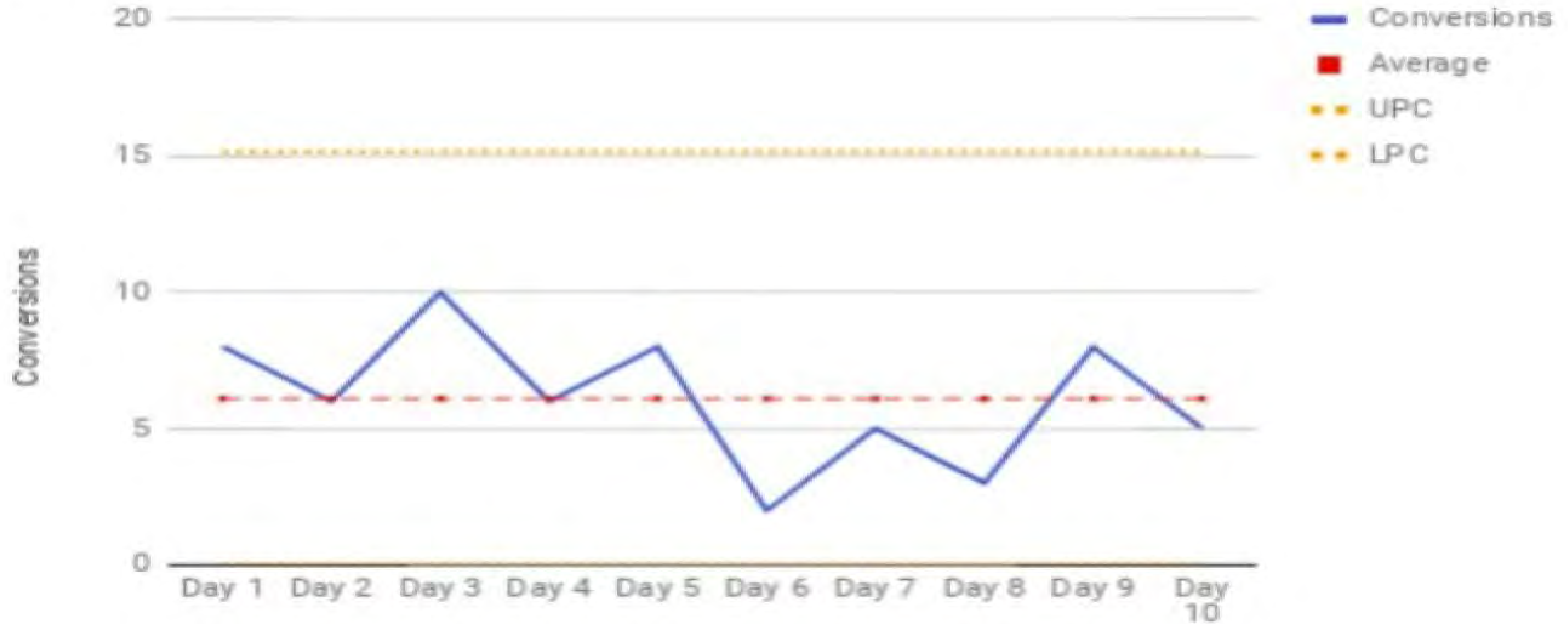
	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20
Conversions	14	4	11	9	12	2	8	5	6	8



	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
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Conversions



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

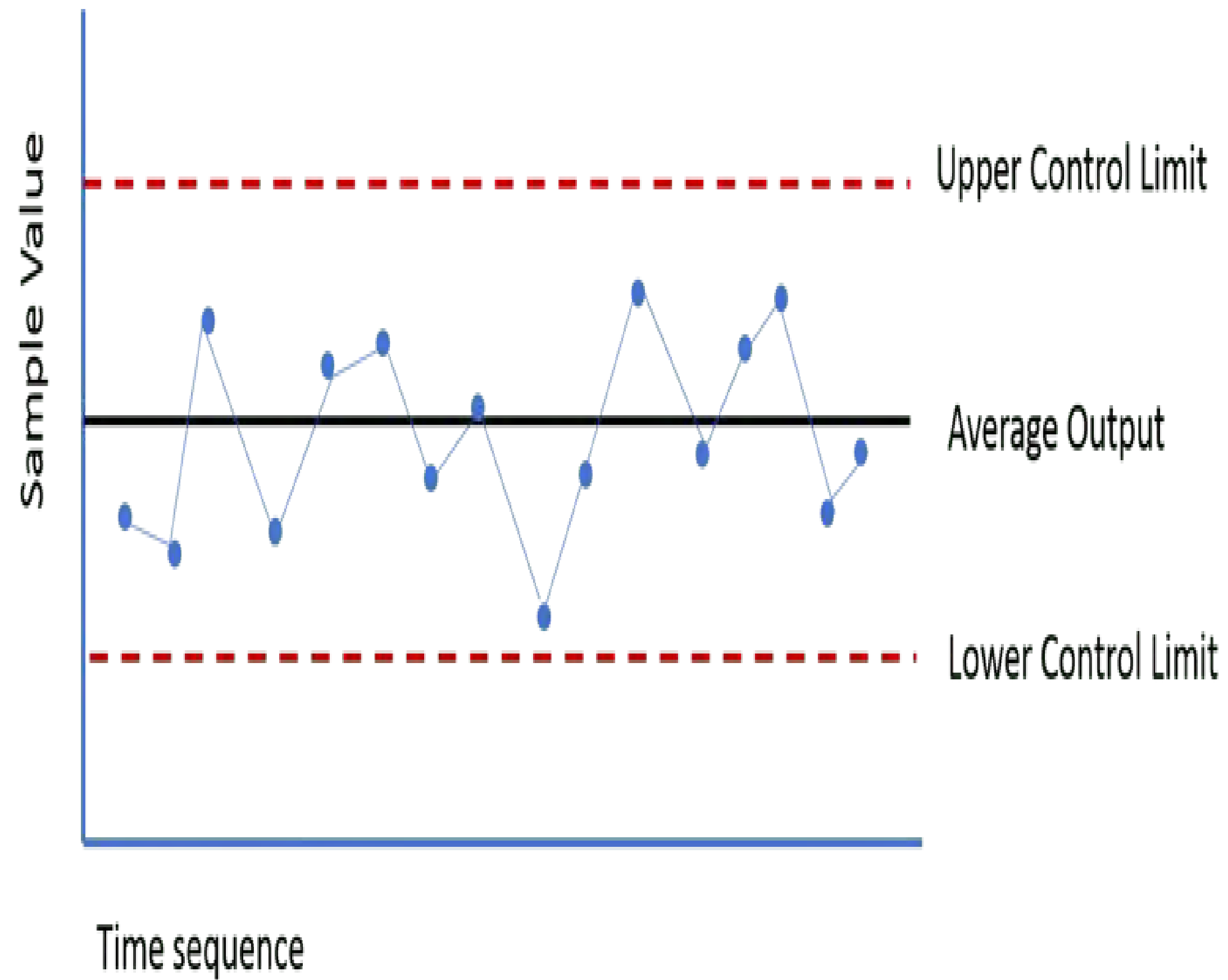
Know if your changes are making a difference

More frequent data points can make this easier

Product / Process / Tech

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

COGNITIVE LOAD

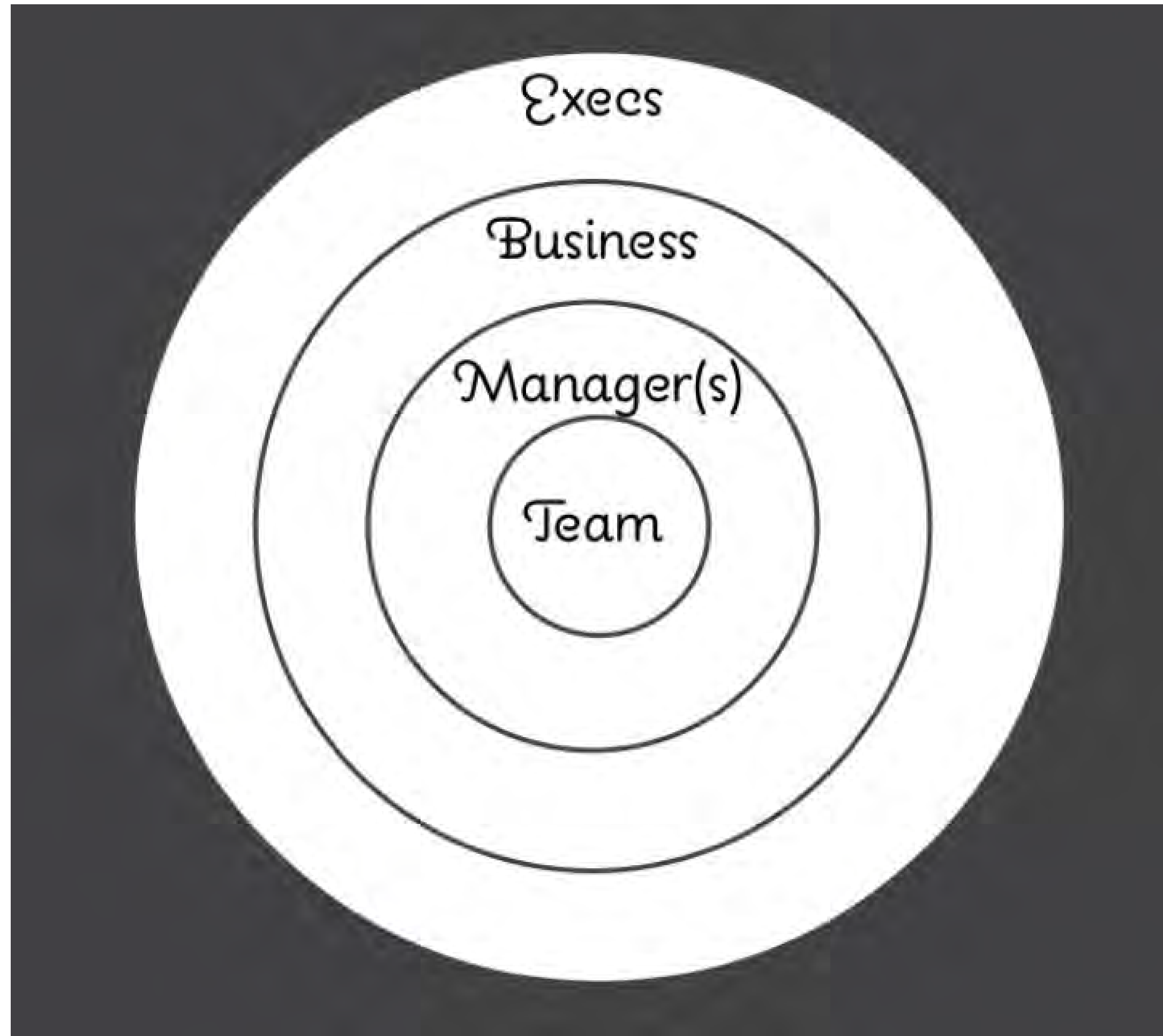
How many contexts are your teams grappling with?

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

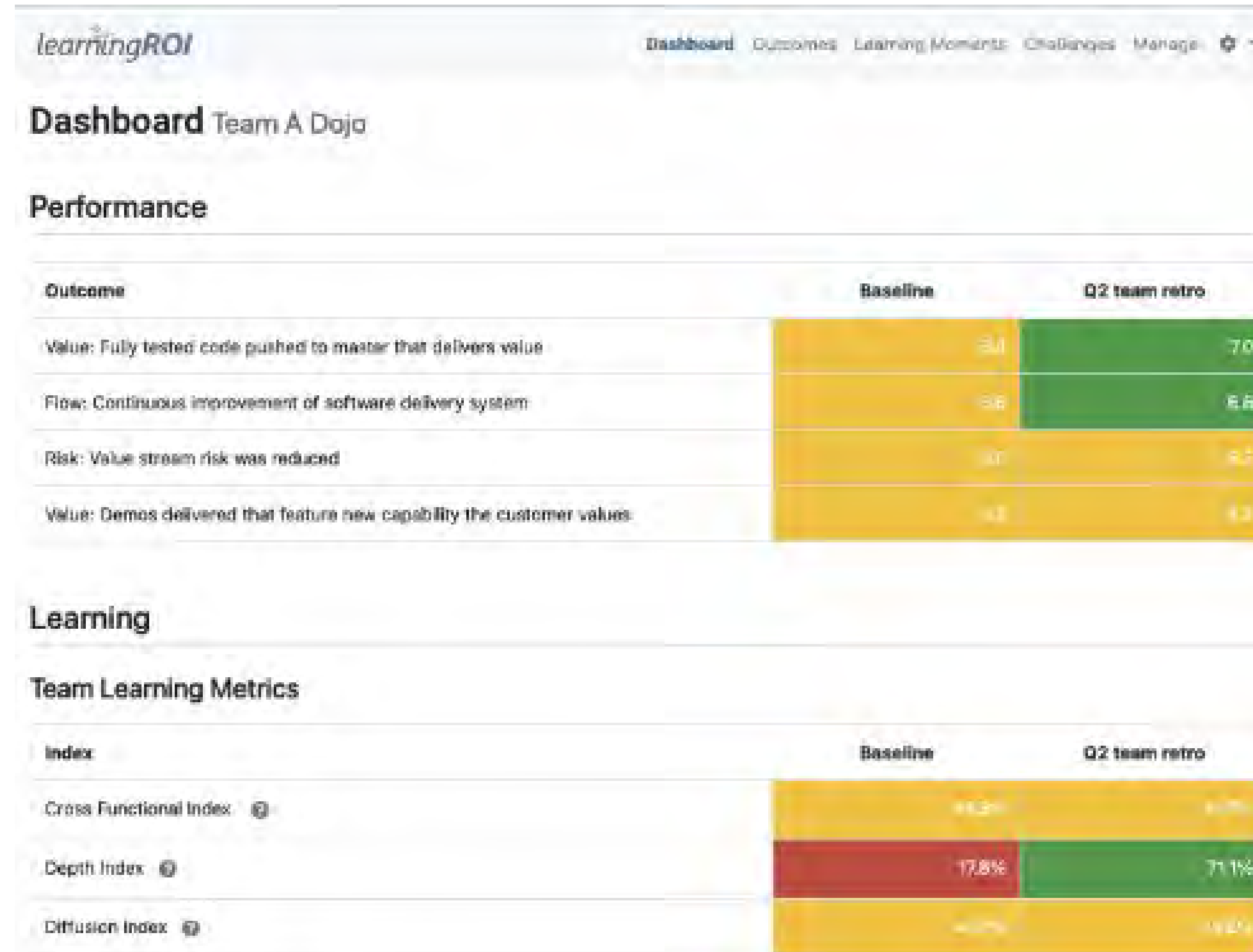
Reducing cognitive load simplifies...much

```
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();
    }
}
```

INFORMATION LEAD TIME



SUPPORTING SOCIAL LEARNING



LearningROI – Copyright Mark Decker

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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