Solving the Scenarios
We Struggle to Measure
“So, about those agile metrics I asked from you...”
“It is wrong to suppose that if you can’t measure it, you can’t manage it -- a costly myth.”

A framework for “Prosperous Metrics”

Improvement Metrics

Success Metric

“Measure Up”

To Test:
What decision?
When no longer useful?

Systems Focused
Likely need just one
Long-term
“How can we show people are more productive?”
Productivity is a qualitative trap...

... and quantitatively easy to grasp.

Yet, maddeningly invisible and (perceivably) inefficient.

(for knowledge work, like software development)
“To make knowledge work productive will be the great management task of this century.”
Any measure we use in the name of productivity must be a proxy to what really matters: *effectiveness.*

*as it relates to process, not product.*
Measuring Successful Effectiveness

LEAD TIME
Measuring Improved Effectiveness

What decisions?
Where is the delay?
What does our delay cost?
Are we focusing on the delay?

What conditions?
When the constraint changes.

Cycle Time

Lead Time = Cycle time * WIP (Little’s Law)
Measuring Improved Effectiveness

Time to Fix Build

What decisions?
- Are we going too fast?
- Is this sustainable?
- What is our “normal state”?

What conditions?
- Until it’s no longer useful. E.g., fix in next working hour
Measuring **Improved Effectiveness**

**Done**

**Forecast**

**Forecast Delta**

**What decisions?**
- Are we predictable?
- How much disruption occurs?
- Are we too optimistic?

**What conditions?**

Until it’s no longer useful. The value is in the picture…
Measuring Improved Effectiveness

What decisions?
Do we have a closed loop?
What is our system of work?
Are sprints valuable?

What conditions?
Until it’s no longer useful. The value is in the picture…
Fixed date, Fixed scope

Need help slicing

Let’s chat with PO

Winning
“How do I know quality is improving?”
Hard on systems.

Soft on people.
Quality is rich in qualitative info.

Your story reveals quantitative needs.
Measuring Successful Quality

FIRST TIME YIELD

\[
\frac{\text{Units Produced} - \text{Units Defective}}{\text{Units Produced}}
\]

\[
\text{FTYa} \times \text{FTYb} \ldots \times \text{FTYn} = \text{FTYall}
\]
Measuring Improved Quality

Ratio of features vs technical risk

What decisions?
- Is this sustainable (cost)?
- What needs to change?
- What does the trend tell us?

What conditions?
Team tells us they have time/space needed to maintain.
Measuring Improved Quality

Automated Test Coverage

What decisions?
What is gained by improving?
What would increase trust?

What conditions?

Our teams tell us they don’t fear refactoring code.
The work to improve outweighs the perceived benefit.
"How can I see if transformation is happening?"
It will be better.

It will be different.

Change

Transform
The key to “measuring” transformation is seeing the difference.
Measuring Successful Transformation

USE A PICTURE

HOW?!
Transformation Sliders

Description A

Numbers are most important for transformation

Description B

A visual method is preferred for transformation

Are we here?
**Example: Scrum Guide**

<table>
<thead>
<tr>
<th>Backlog items are scoped and solutioned for team.</th>
<th>No one tells team how to create slices of releasable functionality.</th>
</tr>
</thead>
</table>

| Team members work according to functional silo or sub-team. | No sub-teams, regardless of domain like testing or analysis. |
Example: Agile Transformation

Performance reviews emphasize the individual; discussion is annual.  
Performance reviews emphasize the team; discussion is ongoing.

Managers intent upon creating a highly participative team.
Want the whole Scrum Guide in slider format?

Measuring Improved Transformation

Let the picture guide you

HOW?!
### Force-Field Analysis

**Describe the desired state**

<table>
<thead>
<tr>
<th>What is supporting?</th>
<th>What is working against?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thing</td>
<td>Thing</td>
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<td></td>
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<td>Thing</td>
</tr>
</tbody>
</table>

**Questions:**

- What could we do to increase support?
- What would help this be less of a block?
MUST BE QUANTITATIVE
Zach's Experimental Environment Metric

\[
\frac{\#ppl(\#ppl - 1)}{2} \quad \frac{\#teams}{1 + \text{Depend.}}
\]

Avg Rel Items
\[
\frac{\# \text{Rel Items Done}}{\text{Median Safety}}
\]
(a # from 1 to 5)

\(\leq 150\)
(Dunbar's Number)
1. Measure Up
2. Success Metric
3. Improvement Metrics
LEAD TIME

- Cycle Time
- Time to fix build
- Forecast delta

null:0:1

FTY (First Time Yield)

Be Qualitative First!
Ratio: Feature - Defect
Auto Test Coverage
“the perceived benefit”

Productivity (i.e., Effectiveness!)

Transformation

PAINT A PICTURE, TELL A STORY
Your picture will guide the way!
THANK YOU!
Enjoy the rest of the show!

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