What’s the Story About Agile Data

How Agile lost the data war, and what we need to do about it
@t_magennis or troy.magennis@focusedobjective.com
Dirty Data
Done Dirt Cheap

My Album
Nah, But I am from Australia like AC/DC
TROY MAGENNIS

Turn the Data Around!

A TRUE STORY OF TURNING FOLLOWERS INTO LEADERS

The best how-to manual any leader has ever written. For turning and driving flawless execution.

FORTUNE

My Book
Nah, but I did work on Navy electronics equipment

Apologies to: L. David Marquet
Use Data Safely
Experiment Using Data
Make Data Awesome
Chart Data Continuously

My Circular Quadrant
Nah, but I am a consultant
Apologies to: Joshua Kerievsky
I’m really just known for **SPREADSHEETS**
Let’s start with something we all agree about

#NoEstimates
How about...

#NoAbsolutes

#Experiments

#DataOrItDidn’tHappen
Data is beautiful

Data is a people problem

Price we pay for Predictability

How we got Forecasting wrong

Story points vs Throughput throwdown

Devastating Impact of Dependencies

Teams could/should be larger
Boring -> Beautiful -> Action

https://commons.wikimedia.org/wiki/File:Campfire_Pinecone.png
Attribution: Emeldil at English Wikipedia
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Agile Community Call to Action

Having the **data** isn’t enough. You have to tell the **story** that leads to the right **action**.
Data is a People Problem
“We learn from history, that we do not learn from history.”

Friedrich Hegel
We are drawn to details that confirm our own existing beliefs.
Use historical data alone and we might be wrong due to context.

Use experience alone and we might be wrong due to cognitive bias.
ALWAYS

Data + Conversation
Fastest way to get crappy data is to embarrass people.
## 10 BUGS - Aliases and Dev Team Members that have worked on 10 bugs or more

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<td>Greg</td>
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<tr>
<td>Justin</td>
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Fastest way to destroy the utility of historical data is to make people unsafe.
I’ve felt ignored or excluded, not due to my ability, but due to “who or what” I am perceived to be

Always: 2% (6 votes)
Often: 25% (65 votes)
Sometimes: 48% (127 votes)
Never: 25% (66 votes)

75% people feel ignored at times

My team isn’t performing at its best due to some people feeling unsafe (For example, people scared about speaking up, or feel unheard, or embarrassed about being wrong)

Always: 7% (20 votes)
Often: 33% (88 votes)
Sometimes: 47% (126 votes)
Never: 13% (36 votes)

87% teams could be performing better
Agile Community Call to Action

We need to find safer ways to capture and utilize data from teams and organizations.

safer = better data and happier people
We pay too high a price for “predictability”
Where is our “analytical” effort spent?

Selection / Prioritization
Status / In-progress
Customer Validation (Impact)

Lots

Little

Now

Goal
“Which one moves the needle most”
Why are “we” last to know?

Get status more often

Cherry pick senior staff

Insist on More planning

Yell during meetings
"You can’t do anything with status except worry"

Tony Grout
“Watermelon Status – Green on the outside, Red on the inside”
Data is a People Problem
...the price we pay for the potential of true novelty and creativity is uncertainty.

— Alicia Juarrero
Would you trade...

2x to create for

10x customer value (potentially)
Agile Community Call to Action

We need to find better ways to measure outcome rather than output

We need to balance our predictability expectations with creativity and novelty
Agile Community Call to Action

We need to incorporate New Information faster

Deployment ENDS speculation
(do this more often)
Yeah, but how long will this feature take?
Multiple options

Duration, not ETA

Until you start, then continuously updated with Time Remaining
Contrast **Software Planning** to **Google Maps**

If you currently...

- **Give one** forecast even though multiple approaches considered
- **Give a calendar date** for undefined “complete” & “start”
- If the original date is in doubt we find out **near the end**

Consider doing...

- **Give multiple** options of investment and implementation
- **Give a duration** and define what started & complete means
- If the original date is in doubt, **know earlier** and react faster
Forecasting is about knowing when to START

#1 Reason we miss deadlines

We START too late
You don't do forecasts and estimates to know you are right; you do forecasts and estimates to detect you are wrong.
Story Points or Throughput?
1 point

Impediment / dependency

13 points

Impediment / dependency

https://pxhere.com/en/photo/775063
13 points
**Story Points or Item Count Forecast Better?**

**Story Points Work Better...**
- Development Time > Delays
  - Few Dependencies
  - Flexible capacity / Dedicated staff

**Item Count Works Better...**
- Delays > Development Time
  - Many Dependencies
  - Constrained capacity / Shared staff

**Why?**
- Development time dominates the lead time to release
- Error introduced by assuming all similar sized items can be huge

**Why?**
- Delay time(s) dominates the lead time to release
- Error introduced by story point size estimates can be huge
Experiment

Hide last “months” data

See if you can predict where you are now
Yeah, but How much data do I need?
What is the chance the next sample tells me something new about the actual data?

At 10 samples, 18% (or 9% for “worse”)

At 20 samples, 10% (or 5% for “worse”)
Never marry before 7
Marry the best of the first 11
When **forecasting** using historical velocity or throughput data

Use the **most recent 10** samples and delete the rest

Stale data erodes context
Dependencies
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1 in 16
(Seated on-time)

15 in 16
(Seated late)
Chances at least one team not delayed

$1$ in $2^n$

or

$1$ in $2^7$

or

$1$ in $128$
7 dependencies
1 chance in 128
6 dependencies
1 chance in 64
5 dependencies
1 chance in 32
PERFORMANCE
Team Size relationship to performance

Performance index total

< 3
3 - 5
5 - 9
9 - 15
15 - 20
> 20

- Productivity
- Predictability
- Responsiveness
- Quality

@LMaccherone | Larry@Maccherone.com
Experiment

Organize to minimize dependencies

Better?
Agile Community Call to Action

We need to **visualize** and manage dependencies

We need to minimize **dependencies**

We need to talk about tactical **larger teams**
OK, Brace Yourself

We NEED to compare teams

Common Cause vs Special Cause

Everyone vs Just Us
Throughput per week for 100 teams

NOTHING you can estimate poorly will be as DAMAGING as a system issue.
Data is a People Problem
Thank you....

Stay sandy San Diego.......  

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Bit.ly/SimResources