

Measuring Developer Productivity: What and What NOT to Do



Don Brown

CTO/Co-founder Sleuth



@mrdonbrown

14.65%
↑ 10.6%



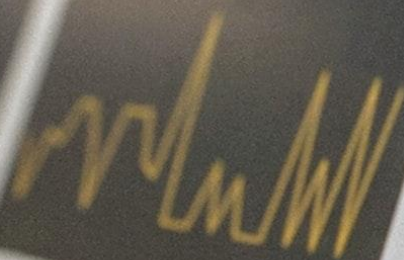
1.67
↓ 0.08



1.28
↓ 0.08



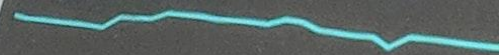
Cost per conversion
673.27
↓ 0.2%



Quality Score

9.38

↓ -0.1%



**We keep doing it
wrong**

ANNIVERSARY EDITION WITH FOUR NEW CHAPTERS



ESSAYS ON SOFTWARE ENGINEERING

THE MYTHICAL MAN-MONTH

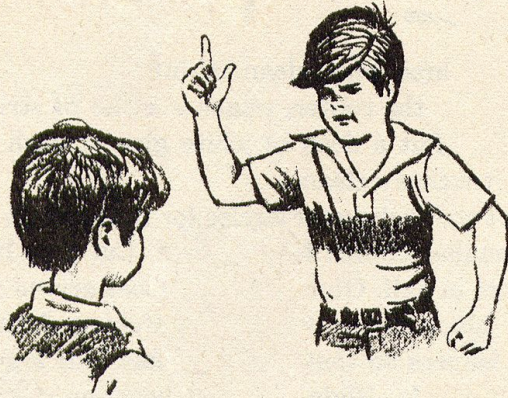
FREDERICK P. BROOKS, JR.

How NOT to measure developer productivity

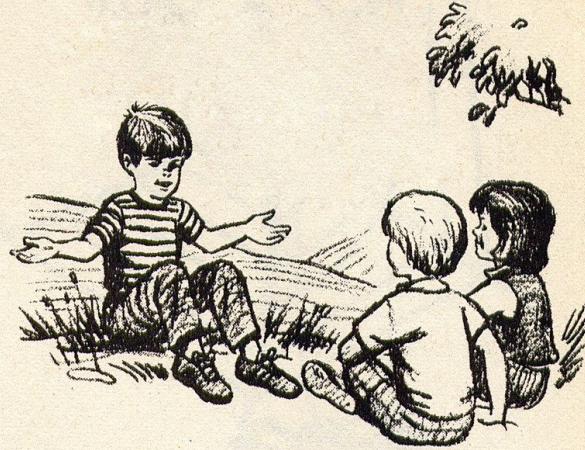


#1 - Measure individuals

Goofus and Gallant



Goofus tries to measure individuals



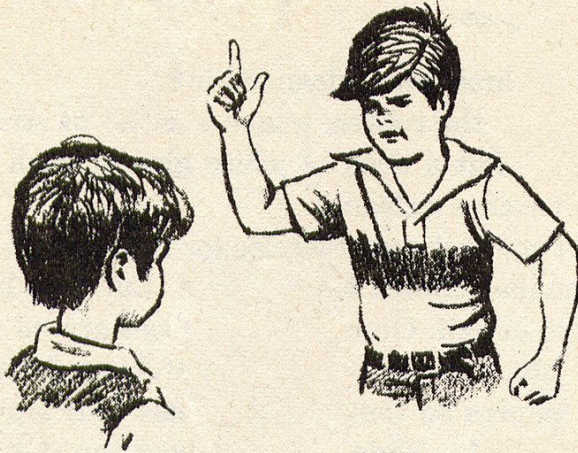
Gallant measures team efficiency

**Great teams are
greater than the sum
of their parts**



#2 - Only one metric

Goofus and Gallant



Goofus tries to use the "one true metric"

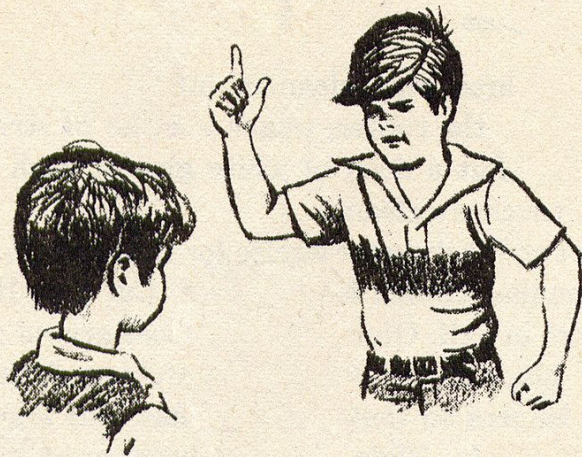


Gallant tracks multiple measures

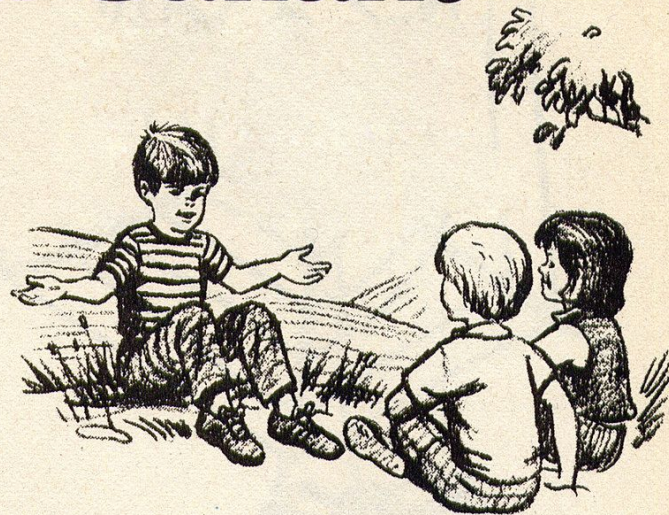


#3 - Too many metrics

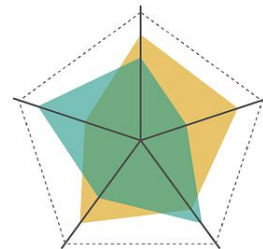
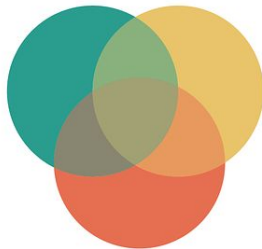
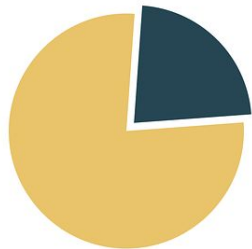
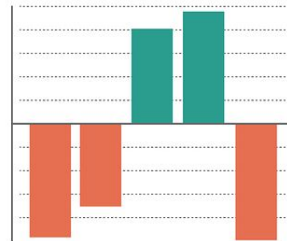
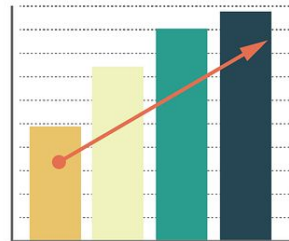
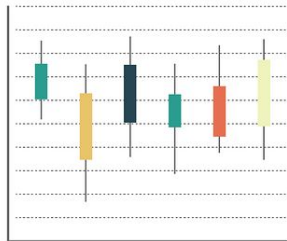
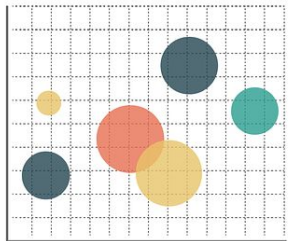
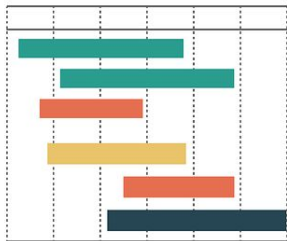
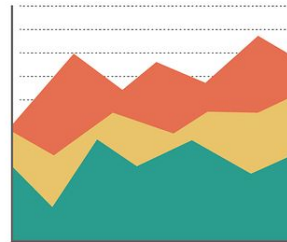
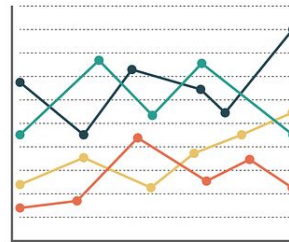
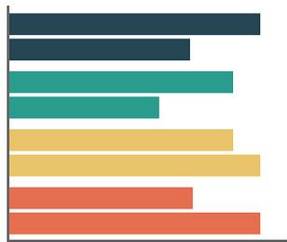
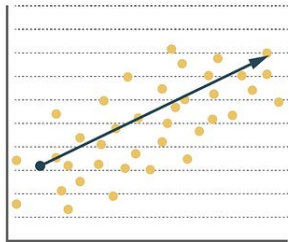
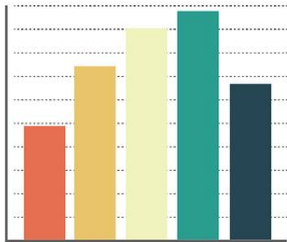
Goofus and Gallant



Goofus measures everything under the sun

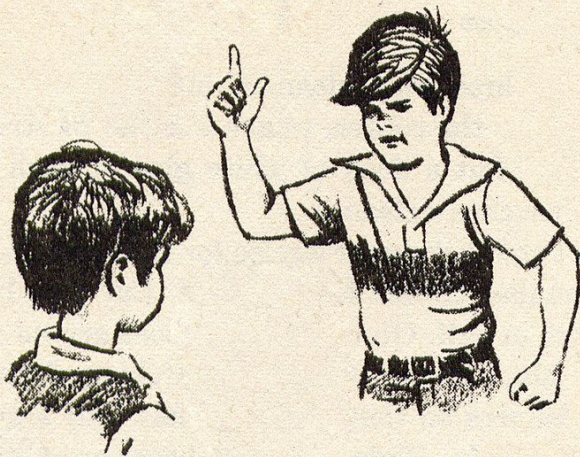


Gallant tracks a handful of metrics

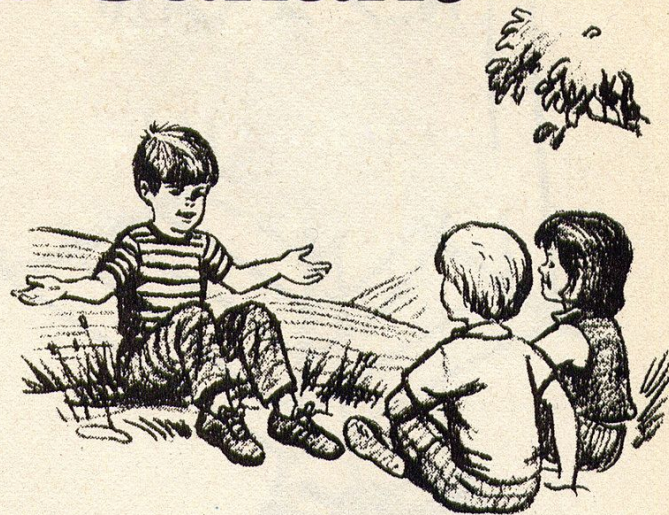


#4 - Only for managers

Goofus and Gallant



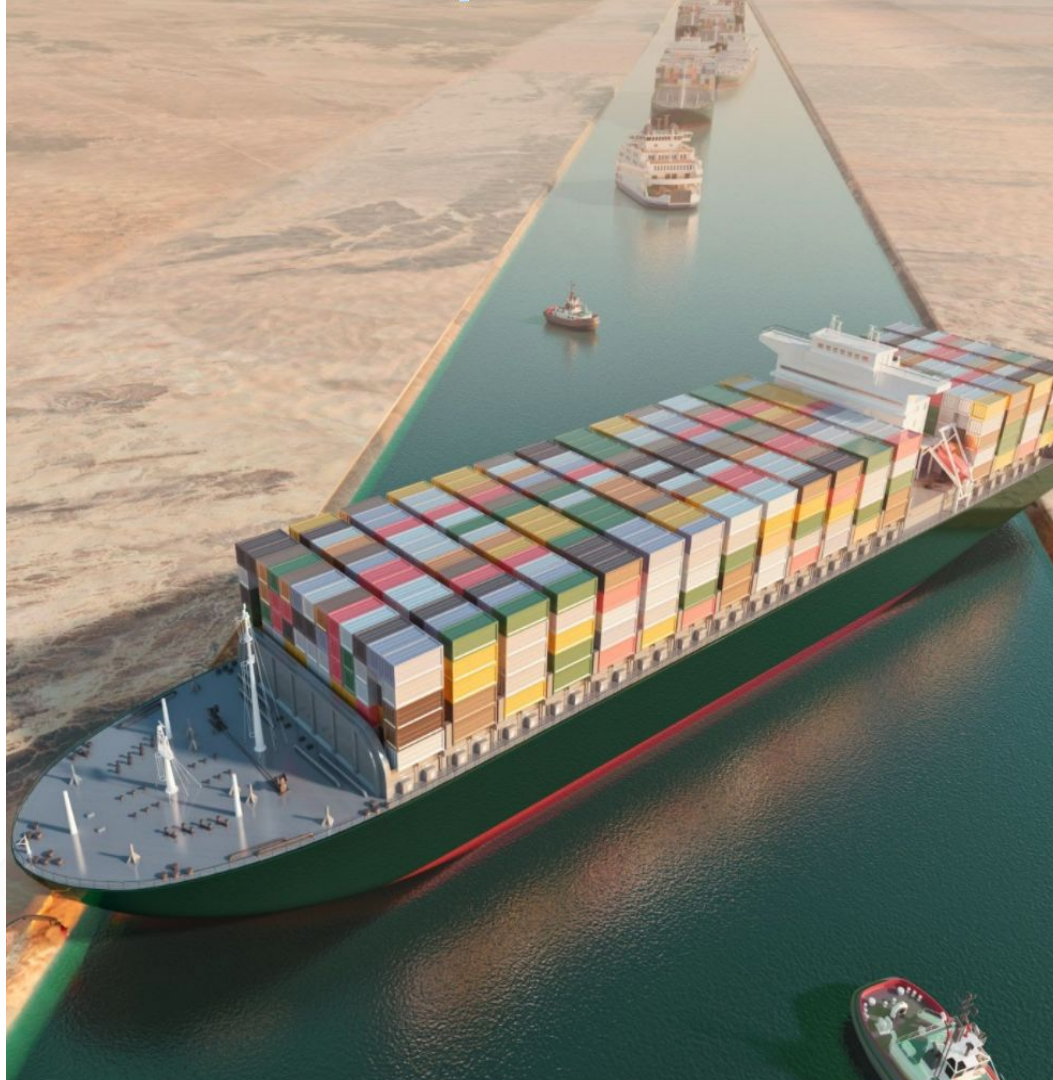
Goofus uses metrics against devs



Gallant shares his metrics with everyone

Metrics can help find bottlenecks!

Devs love metrics as long as their job isn't on the line

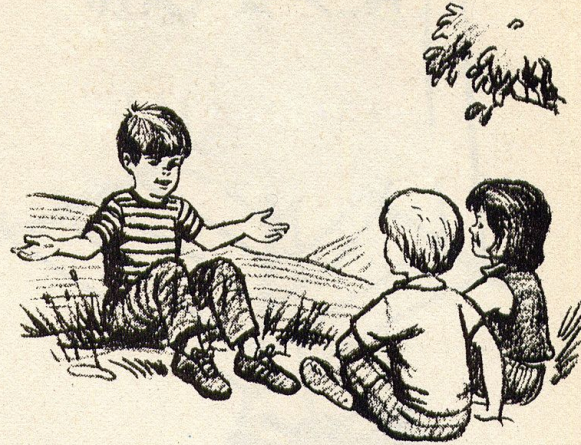


#5 - Tools solve everything

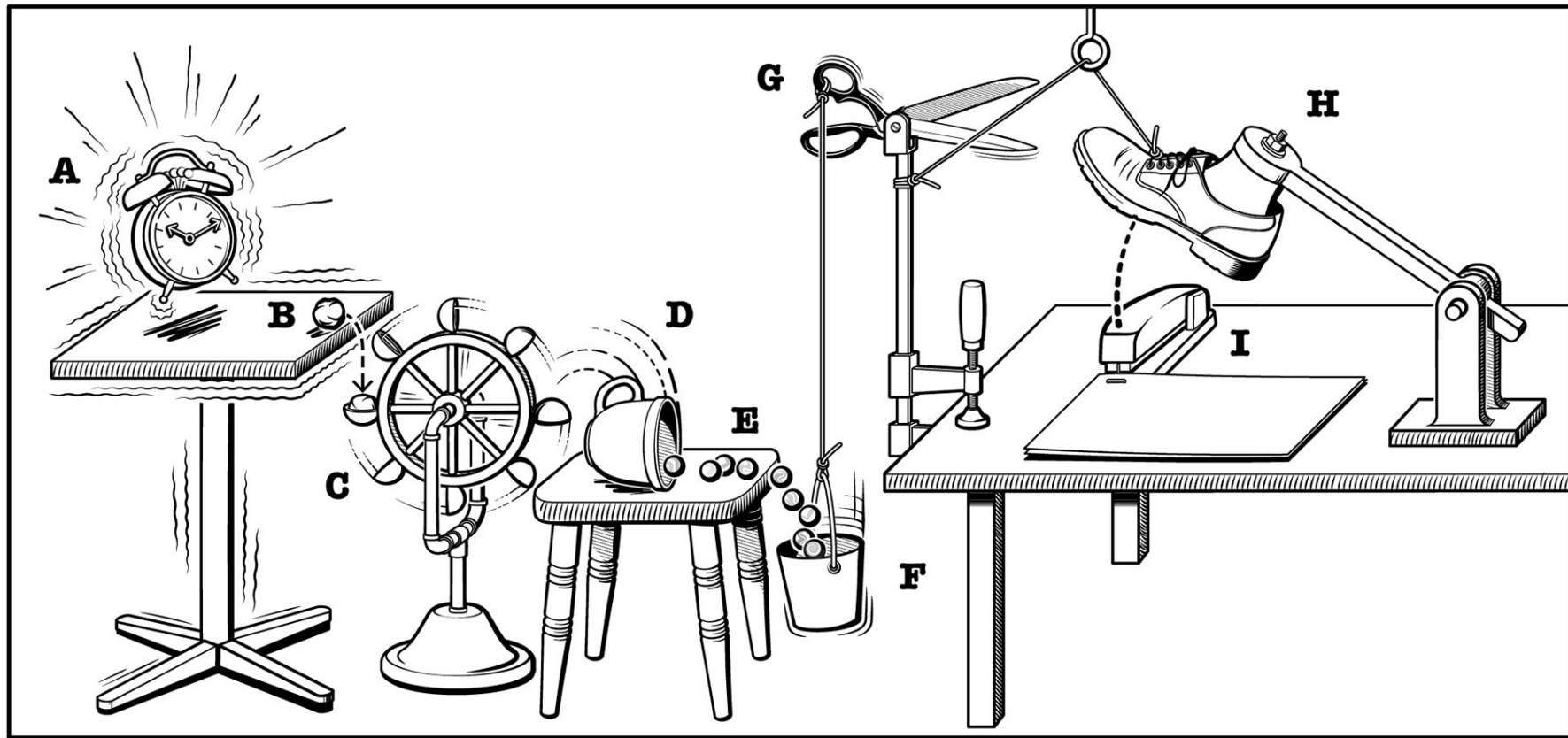
Goofus and Gallant



Goofus buys tools to solve people problems



Gallant uses tools in moderation



How to measure developer productivity

The background is a solid blue color. It is decorated with numerous small white plus signs scattered across the upper half, resembling stars. There are also a few small, faint planet-like icons. In the lower half, there are several overlapping, wavy lines in a lighter shade of blue, creating a sense of motion or data flow.

SPACE framework

By Nicole Forsgren (DORA, Accelerate) and others

S - Satisfaction and well-being

P - Performance

A - Activity

C - Communication and collaboration

E - Efficiency and flow



Developers distrust productivity tools



Anxiety-inducing



Inaccurate/unfair
representation of devs' work



Often used against devs



Feel like spying

<https://youtu.be/MmgXIPTYMIY>

DevOps Research and Assessment

32k

Professionals

7

Years of data

6570x

Elite vs low performers

DORA Metrics

Deployment Frequency

How often a change makes it to production

Change lead time

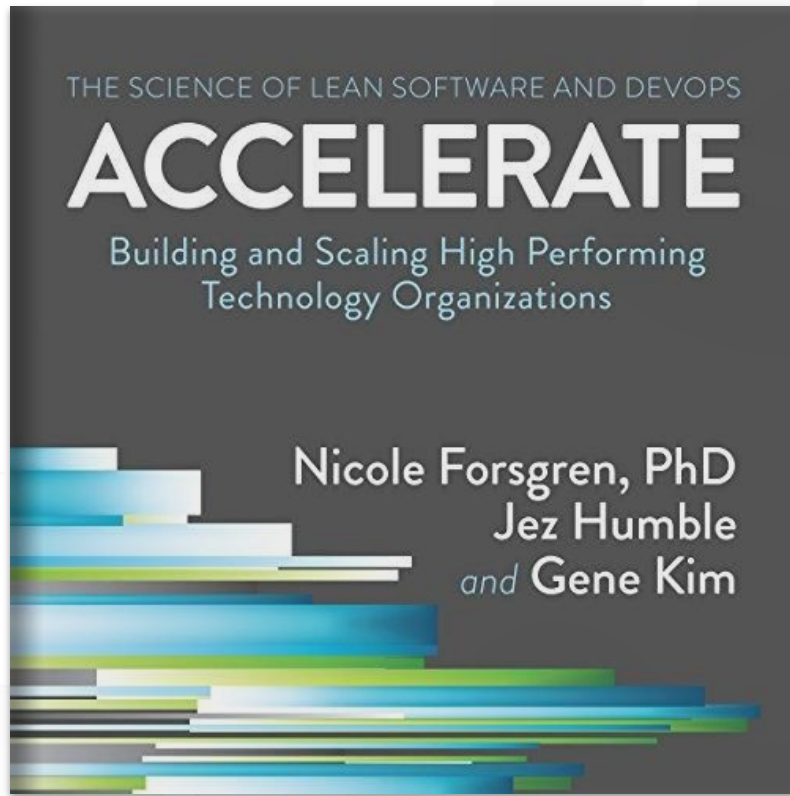
How long from first commit to deployed

Change failure rate

How often changes “fail”

Mean time to recovery (MTTR)

How quick until system health recovery



Accelerate

Frequency ↗ 2%

3.64 /day - 51 total

Lead time ↗ 60%

1d 20h 49m

1d 3h 55m

Failure rate ↗ 292%

7.8%

MTTR ↗ 233%

26m



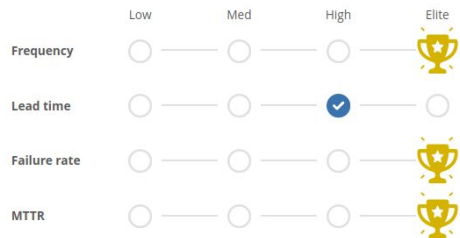
Lead time breakdown



Viewing 51 deploys for May 3 – May 16 sorted by lead time

Performance

High



Insights

✦ Your change lead time performance was high, improve by 20h 49m on average to reach elite.

✦ Your coding time is lower than your previous period by 54%.

💡 Your failure rate is higher than your previous period by 292%.

💡 56b54ae was your lowest ranked deploy in this period.



#5188 SD-5270: Prevent all subteams from...
sleuth/application/Production

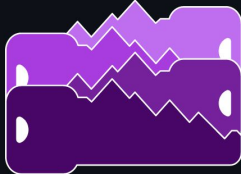


1 -0-5 >

Mato Zgajner

11d 2h 15m
today 7:21 AM

☰ README.md



four keys



The Four Keys

Measuring DevOps Success



Dina Graves Portman [@dinaportman](#)
Developer Relations Engineer, Google Cloud



Dave Stanke [@davidstanke](#)
Developer Relations Engineer, Google Cloud



0:00 / 33:12 • Intro >

<https://github.com/GoogleCloudPlatform/fourkeys>

How to use metrics



How to use metrics



Celebrate success,
internally especially

How to use metrics



Celebrate success,
internally especially



Track the progress of
initiatives

How to use metrics



Celebrate success,
internally especially



Track the progress of
initiatives



Work together toward
common goals

How to use metrics



Celebrate success,
internally especially



Track the progress of
initiatives



Work together toward
common goals



Be alerted of smoke
before it's a fire

People, and even teams, aren't numbers





Takeaway:
Use metrics, wisely

THANK YOU



Don Brown

CTO/Co-founder Sleuth

 @mrdonbrown

The background is a solid blue color with various white and light blue elements. There are numerous small white stars scattered across the field. A small planet with a ring, resembling Saturn, is located in the upper left quadrant. In the upper right, there is a faint, light blue spiral galaxy. At the bottom of the image, there are several wavy, overlapping lines in different shades of blue, some solid and some dashed, creating a sense of depth and movement.

Q&A

Do you have any questions?