

Tales from the DevOps Transformation Trenches

yes, you (still) need to start
with culture, not containers



Holly Cummins
IBM Cloud Garage
@holly_cummins



Austin
Copenhagen
Dubai
London
Madrid
Melbourne
Munich
New York
Nice
Raleigh
San Francisco
São Paulo
Singapore
Tokyo
Toronto



BOOKS

FORUM PAPERS

DEVOPS ENTERPRISE SUMMIT

BLOG

IF YOU'RE A VENDOR OR CONSULTANT

I've emailed the submitter, asking to re-submit with their client

, and we had to **reject** the submission.

ones, I've emailed the submitter, asking to re-submit with their client. Many were not able to do so, and we had to reject the submission.

Since 2013, we've reviewed nearly one thousand submissions for our Call for Presenters for [DevOps Enterprise Summit](#). In this post, I wanted to share my top advice and tips to maximize your chance of submitting a presentation proposal that gets accepted.

LAST ADVICE: SUBMISSIONS THAT ARE ALMOST ALWAYS REFUSED

~~ALMOST ALWAYS REFUSED~~

- “Why DevOps Is Important For DevOps”
- “Why DevOps Is Important,” “Why DevOps Is Important For DevOps,” “Why Culture Is Important For DevOps”: the first two are good, the last one is bad because it’s repetitive. However, rest assured that DevOps is important. However, rest assured that DevOps is important.

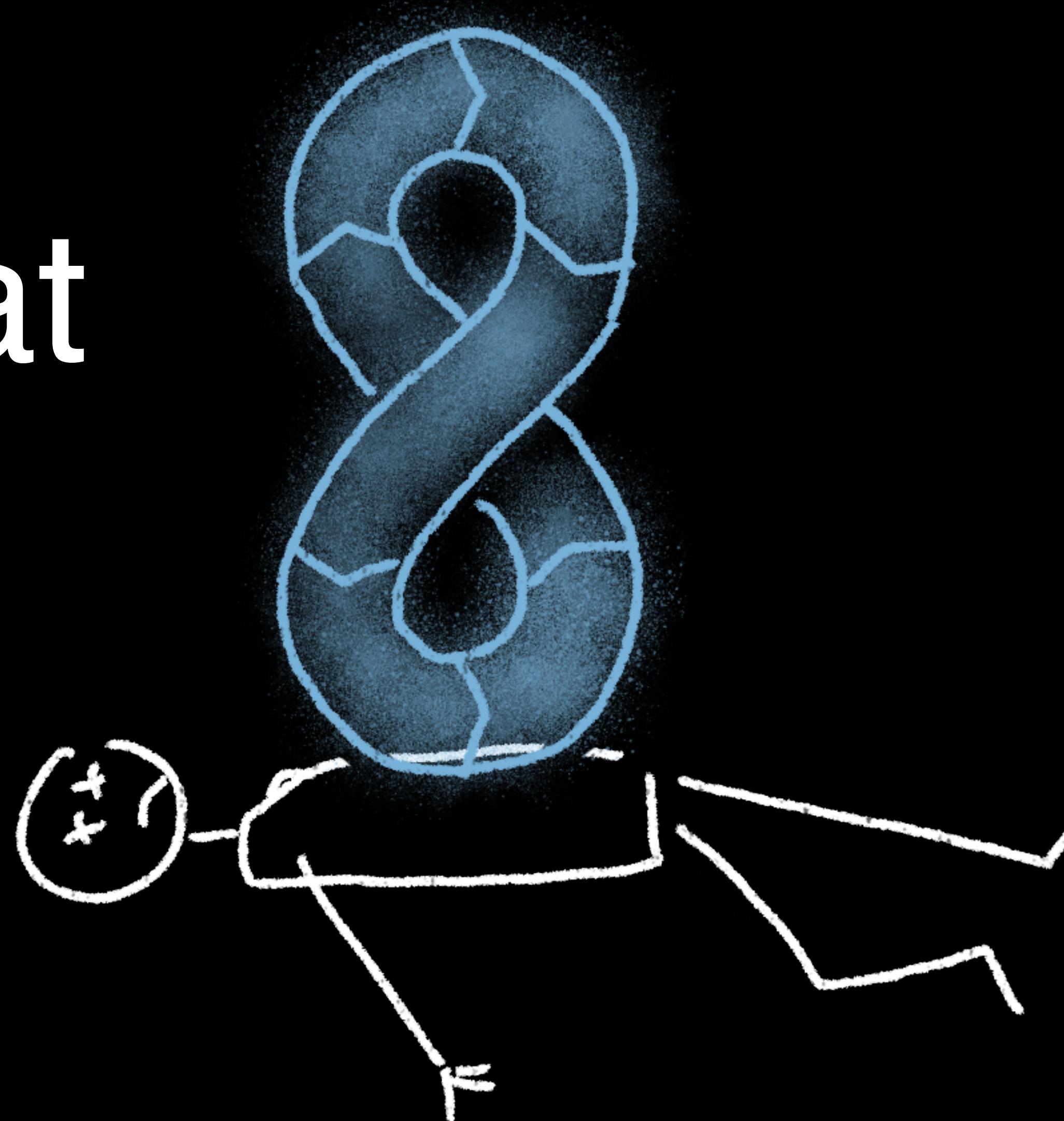
hi.

i'm a consultant.

these are my
scary stories

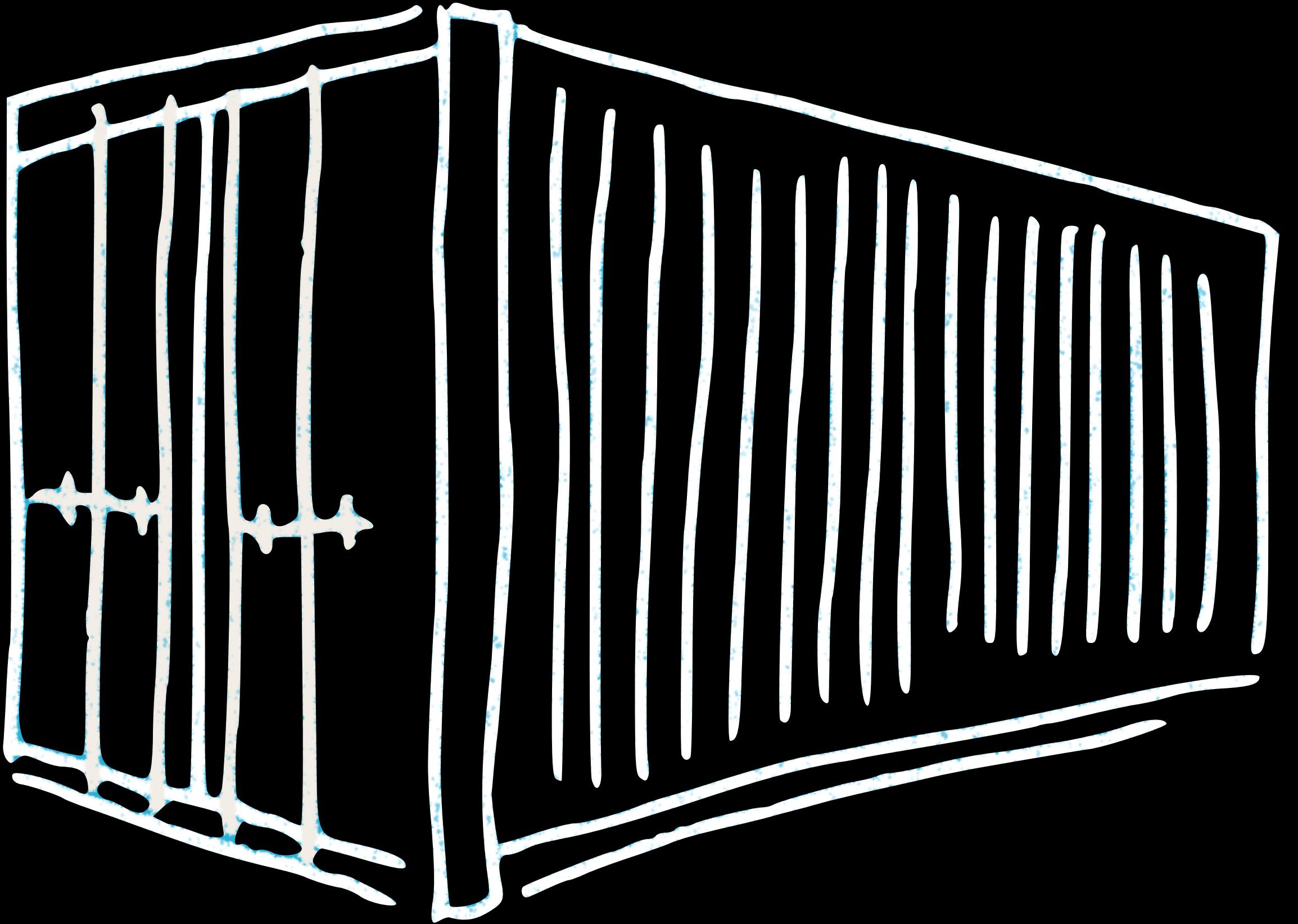


how to fail at devops

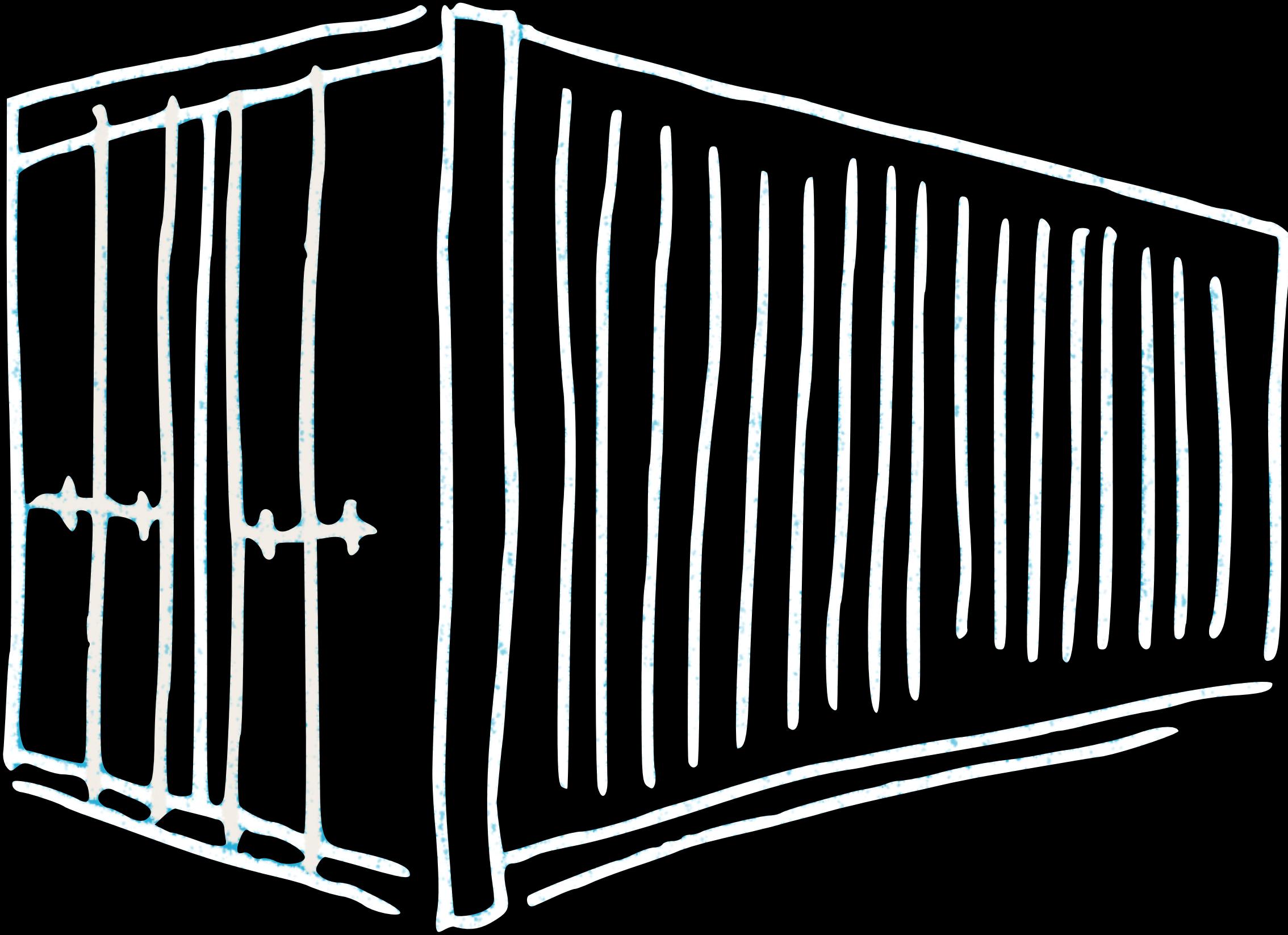


“this is our devops team”

“... last year we called them the build



containers will not fix
your broken devops
culture



even kubernetes will not fix
your broken devops culture

“we’re going too slowly.
we need to get rid of COBOL
and make microservices!”

“... but our release
board only meets twice
a year.”

hackernoon.com/8-devops-trends-to-be-aware-of-in-2019-b4232ac8f351

M

HACKERNOON

AI LATEST TOP STRATEGY GET PUBLISHED DEV POD JOIN COMMUNITY

8 DevOps Trends to Be Aware of in 2019

From Microservices to ML to AI to...

Pavan Belagatti [Follow](#)
Nov 26, 2018 · 5 min read

DevOps Gets More Exciting in 2019.

DevOps and microservices lately are going hand in hand. Microservices are independent entities and hence doesn't create any dependencies and break other systems when something goes wrong. Microservices architecture helps

The chart shows a blue line graph with a y-axis scale from 0 to 50. The x-axis has labels for Nov 24, 2013, May 31, 2015, Dec 4, 2016, Jun 10, 2018, and 2019. A sharp dip in the line is labeled 'Note' with an arrow pointing to it. The line starts at approximately 20 in November 2013, rises to about 25 by May 2015, dips to 20 in July 2015, rises to 40 by December 2016, dips again to 25 in January 2017, and then fluctuates between 30 and 50 until June 2018, where it rises sharply to 50 and remains high through 2019.

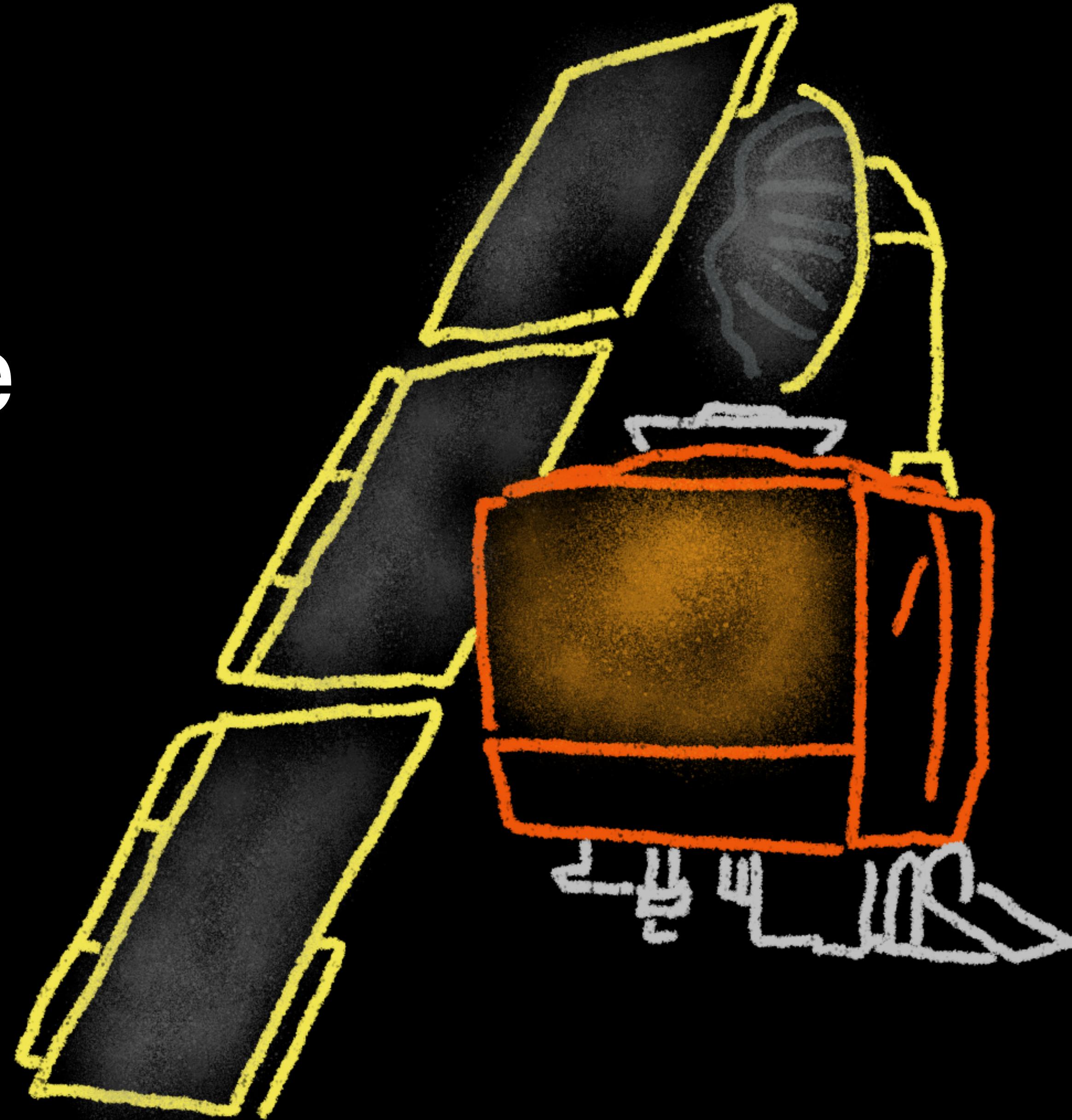
<https://hackernoon.com/8-devops-trends-to-be-aware-of-in-2019-b4232ac8f351>

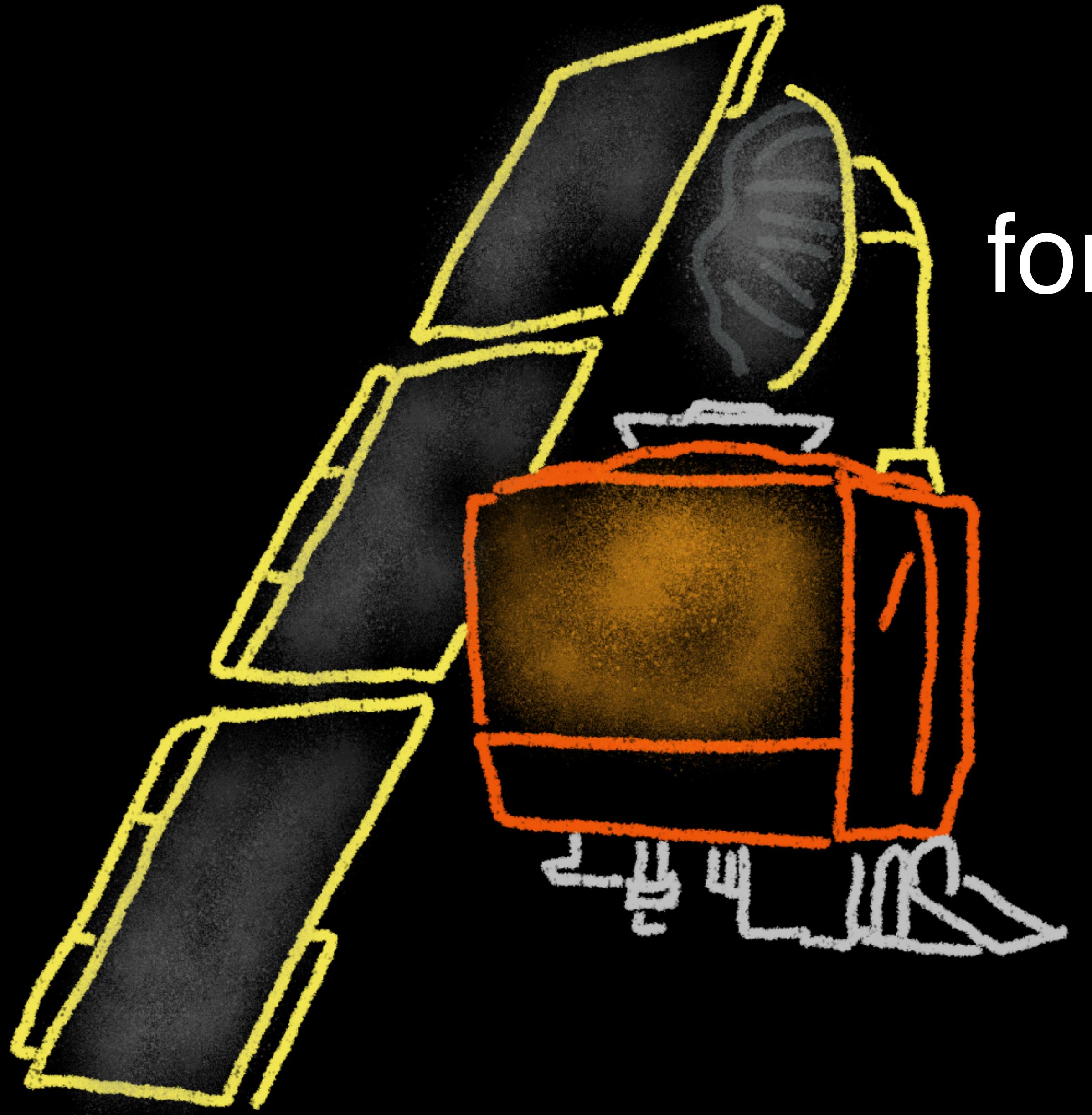
“every time we change
code, something breaks”

distributed monolith
but without compile-time checking

just because a system runs
across 6 containers doesn't
mean it's decoupled

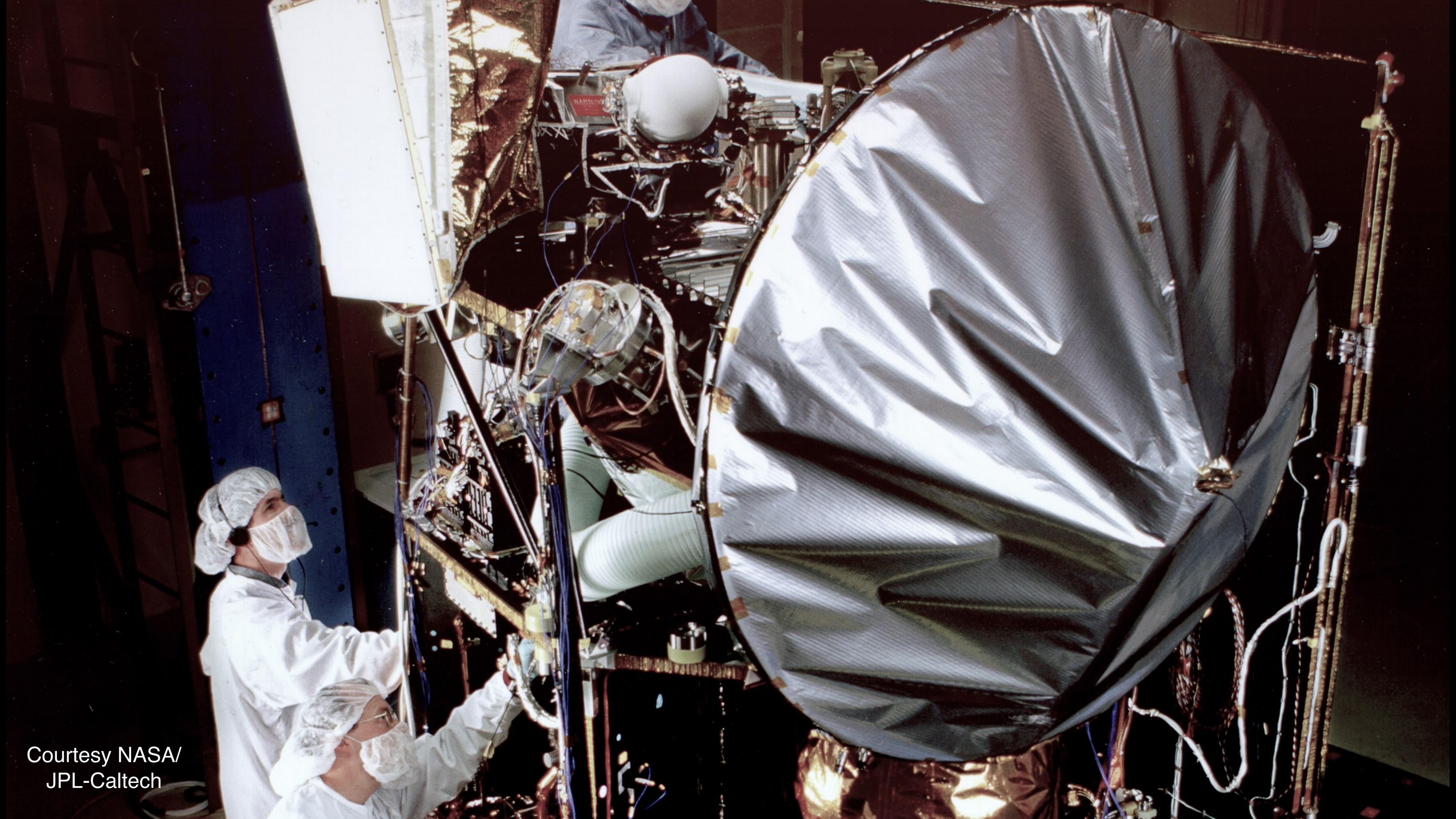
mars climate explorer



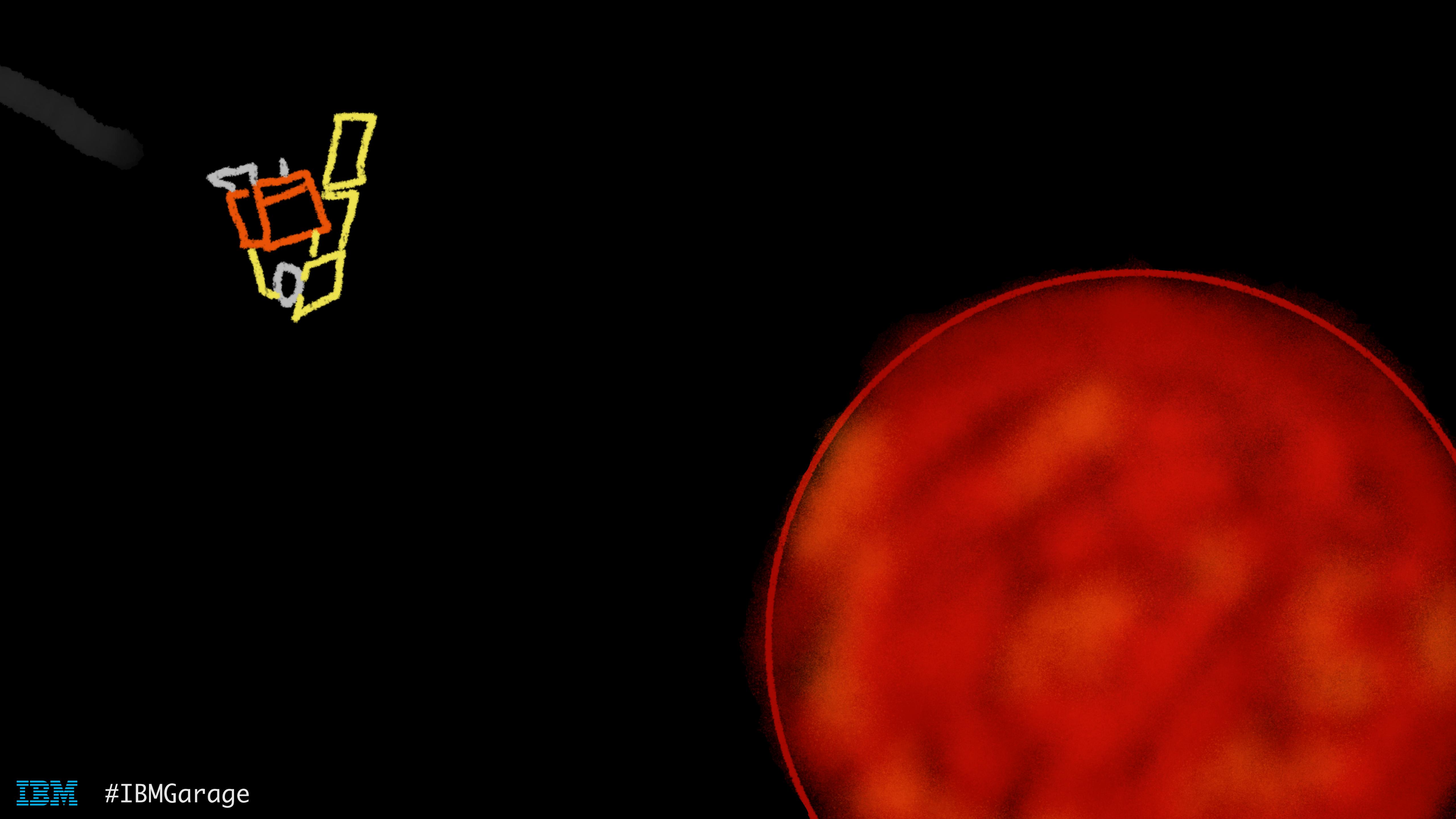


for clarity: this wasn't a
client of mine.

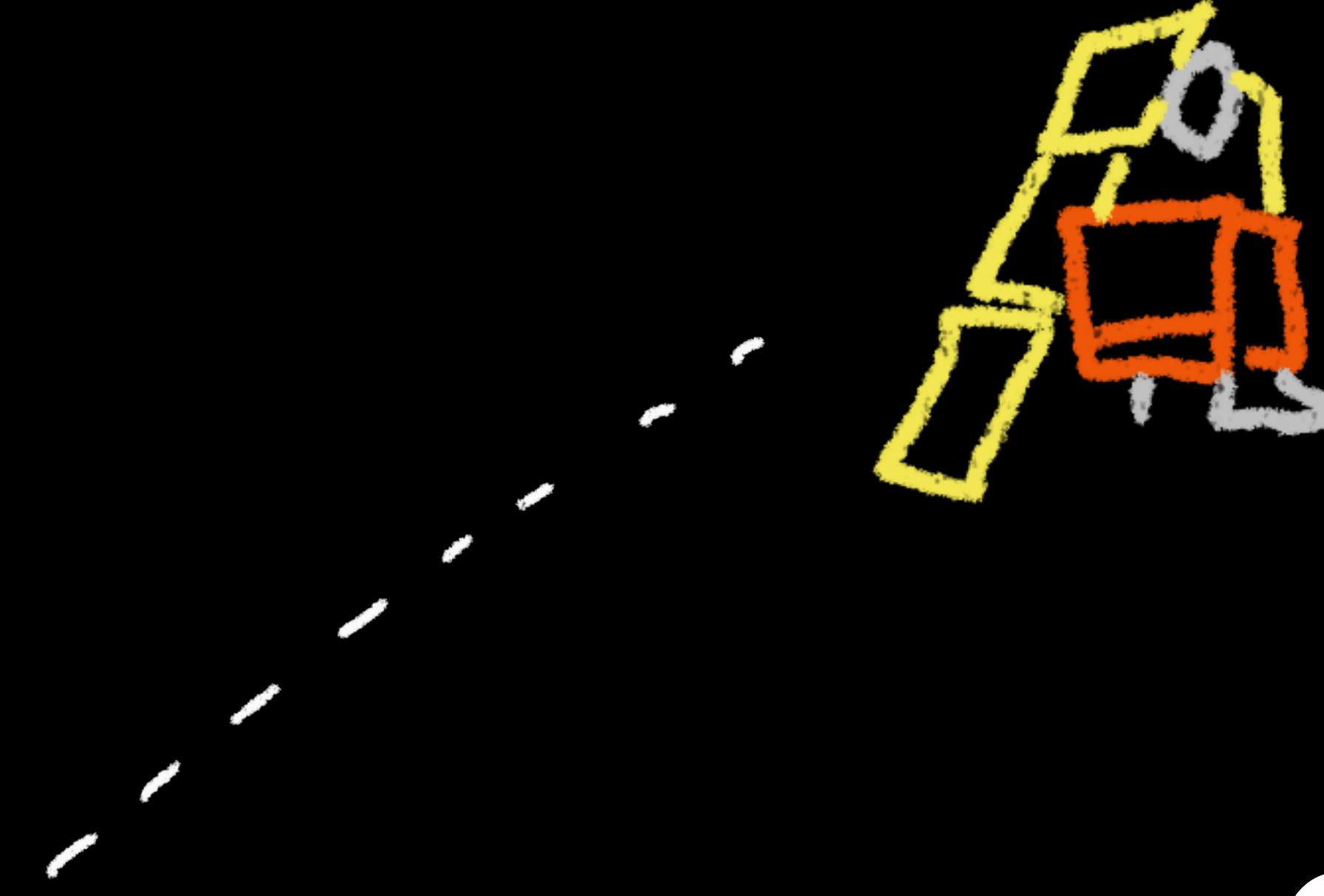
other people's
trenches



Courtesy NASA/
JPL-Caltech



imperial
units



metric units

distributing
did not help

microservices need
consumer-driven contract tests

Cluster + Ariane 5



\$370 million loss

[https://en.wikipedia.org/wiki/Cluster_\(spacecraft\)](https://en.wikipedia.org/wiki/Cluster_(spacecraft))

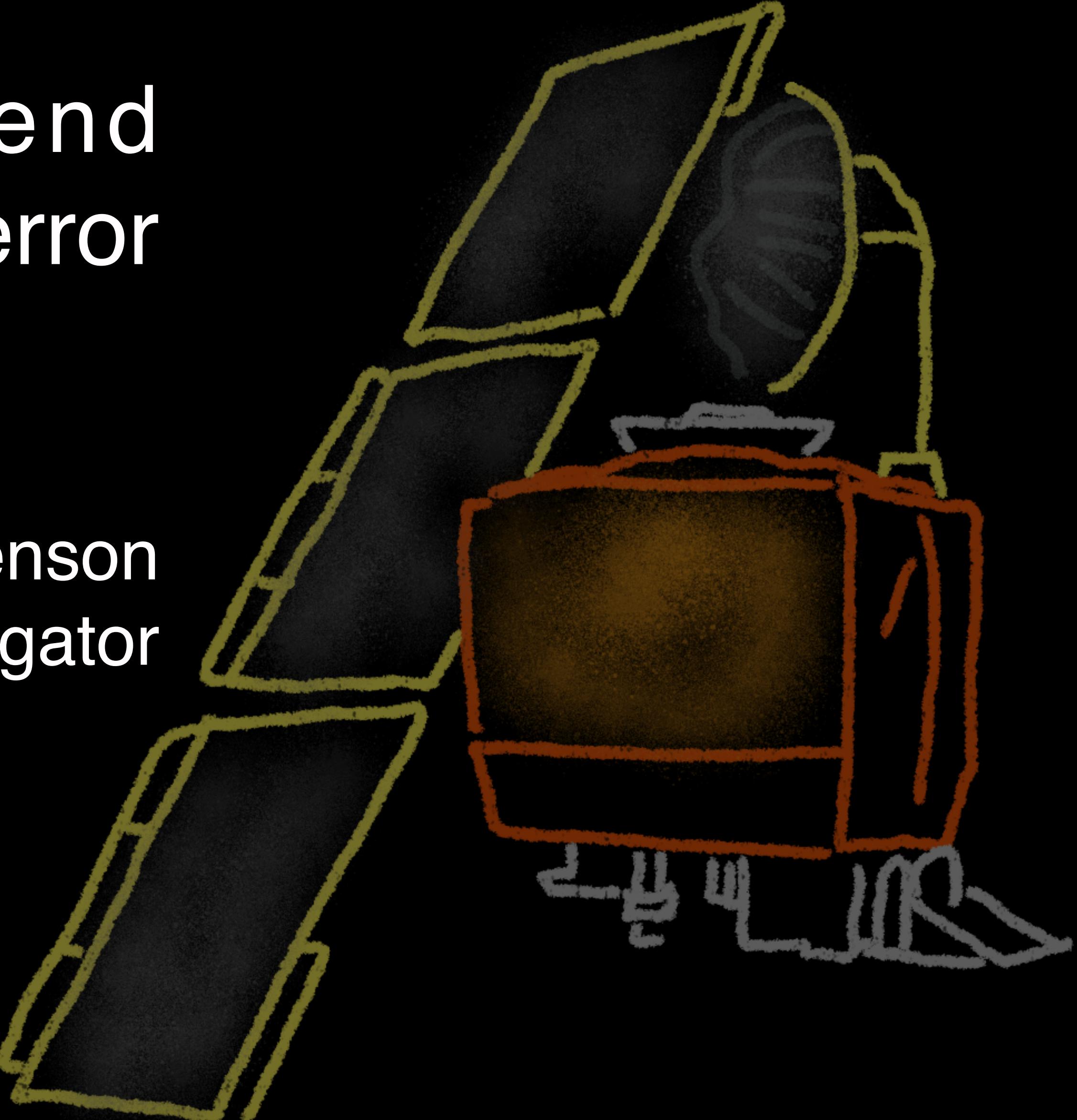
they tested it . . .

but stubbed out one component.

that component was the one that broke.

“Had we done end-to-end testing, we believe this error would have been caught.”

Arthur Stephenson
Chief Investigator



microservices need
automated integration tests

“we have a CI/CD”

CI/CD is something
you do, it's not a
tool you buy

“I’ll merge my branch
into our CI next week”

“CI/CD ... CI/CD ... CI/CD ...

we release every six months

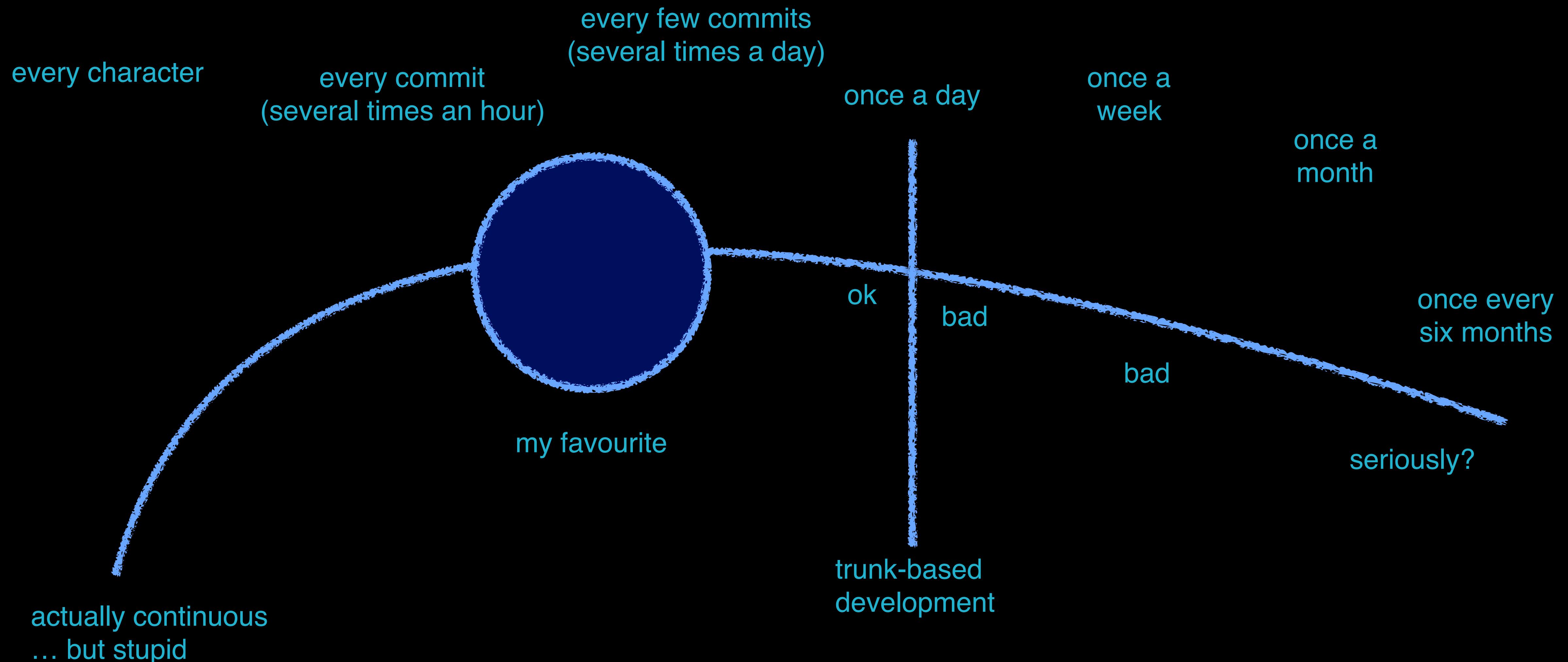
...

CI/CD”

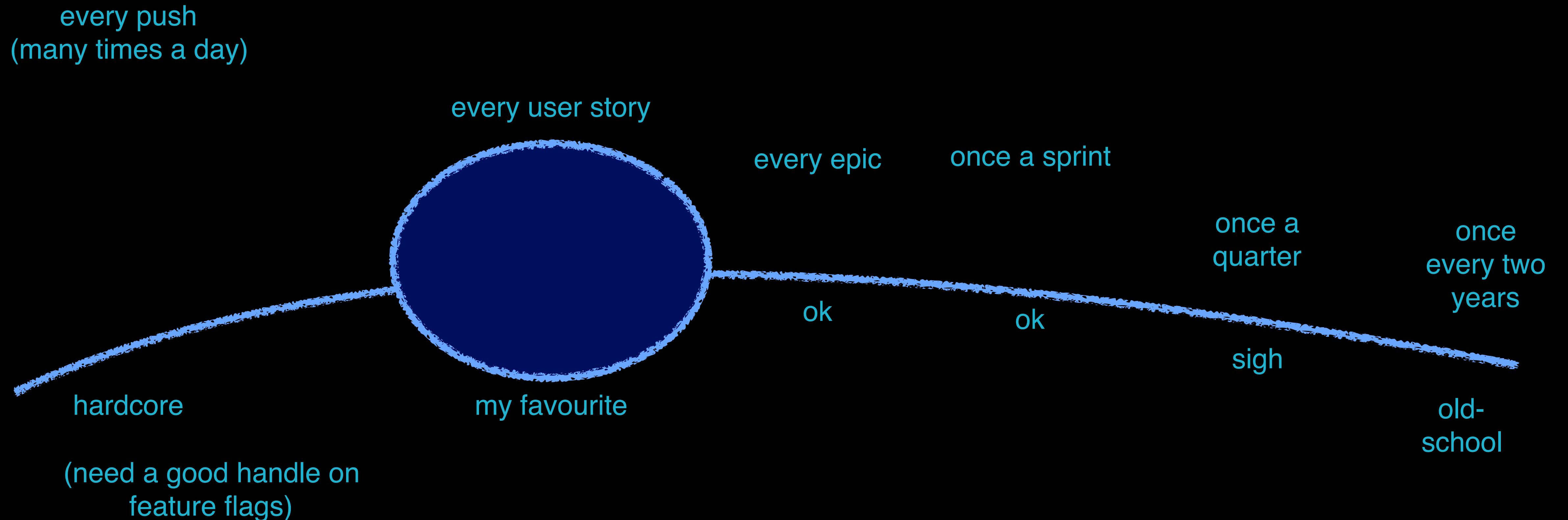
continuous.

I don't think that word means
what you think it means.

how often should you integrate?

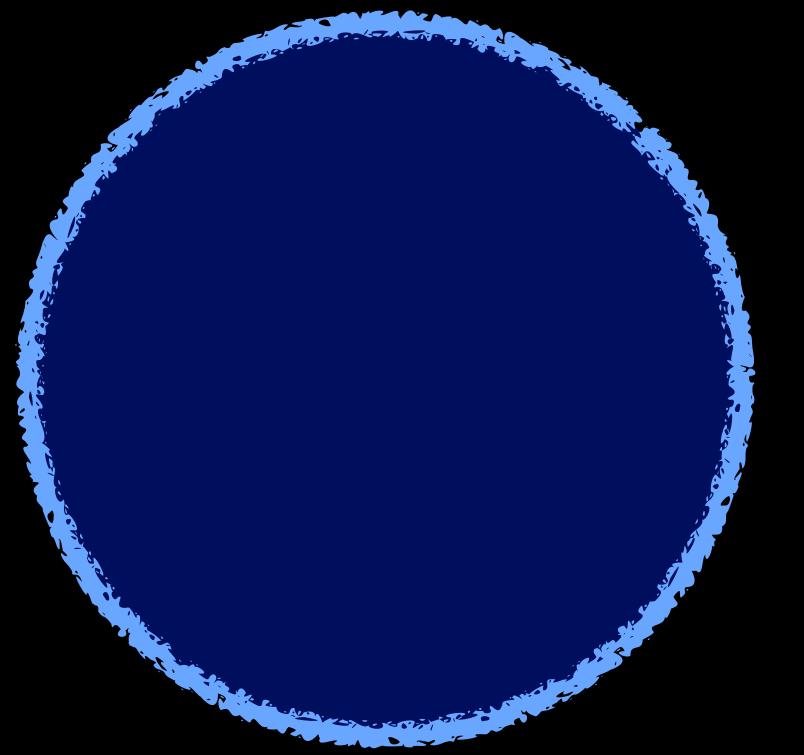


how often should you deploy?



how often should you deliver?

every push



my favourite

“we can’t actually release this.”

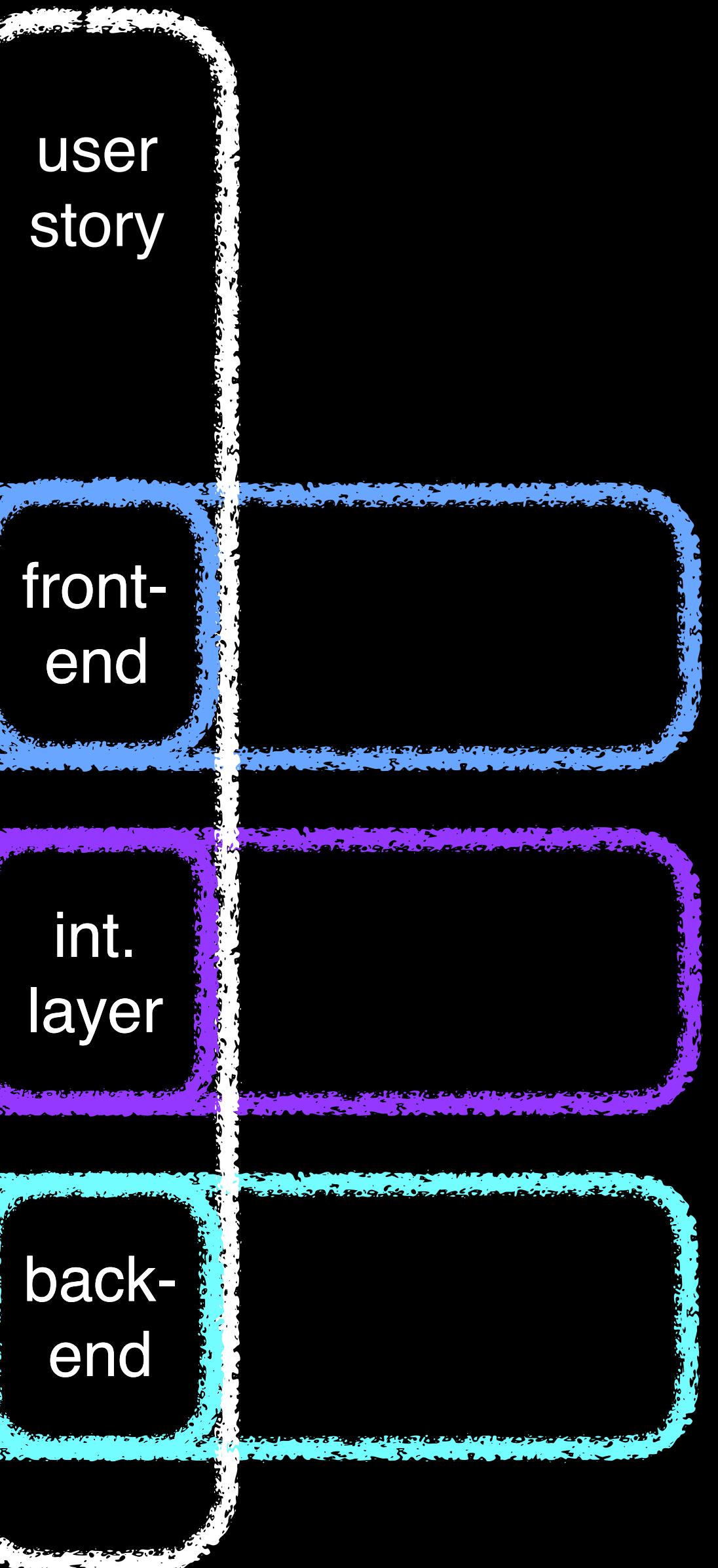


why?

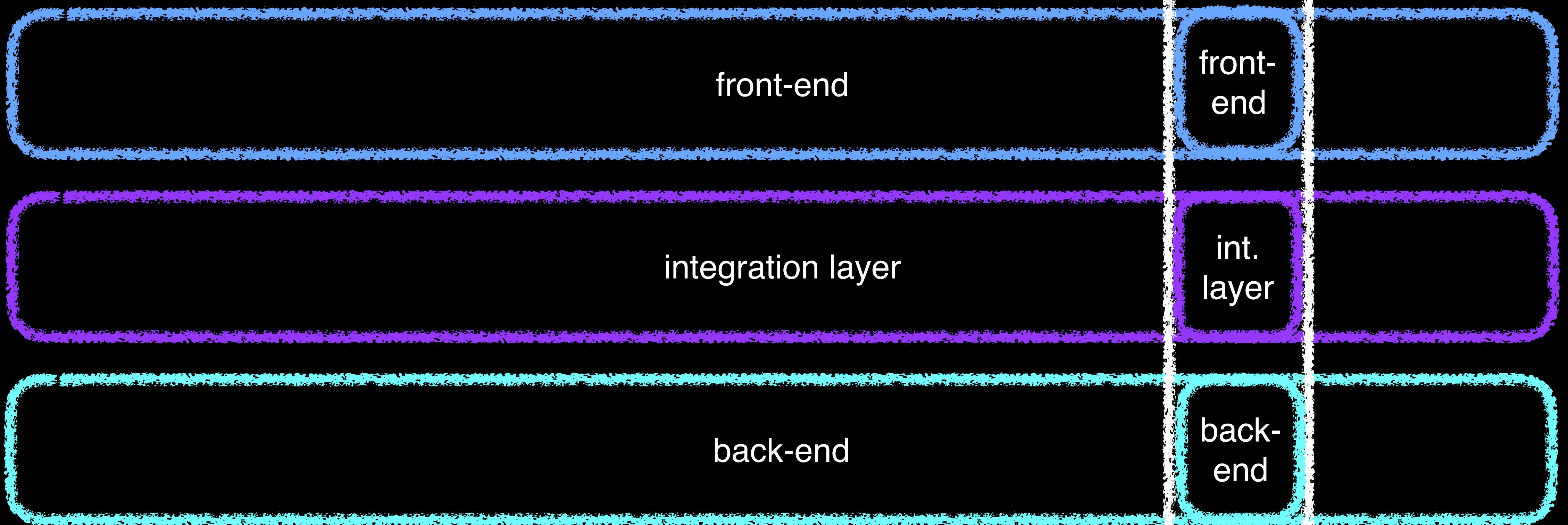
what's stopping more
frequent deploys?

“we can’t release this microservice...
we deploy all our microservices at
the same time.”

“it looks like it’s complete ... but
nothing works if you click on it.”



✓ it works by the time anyone sees it



stakeholders need to be careful what they incentivise

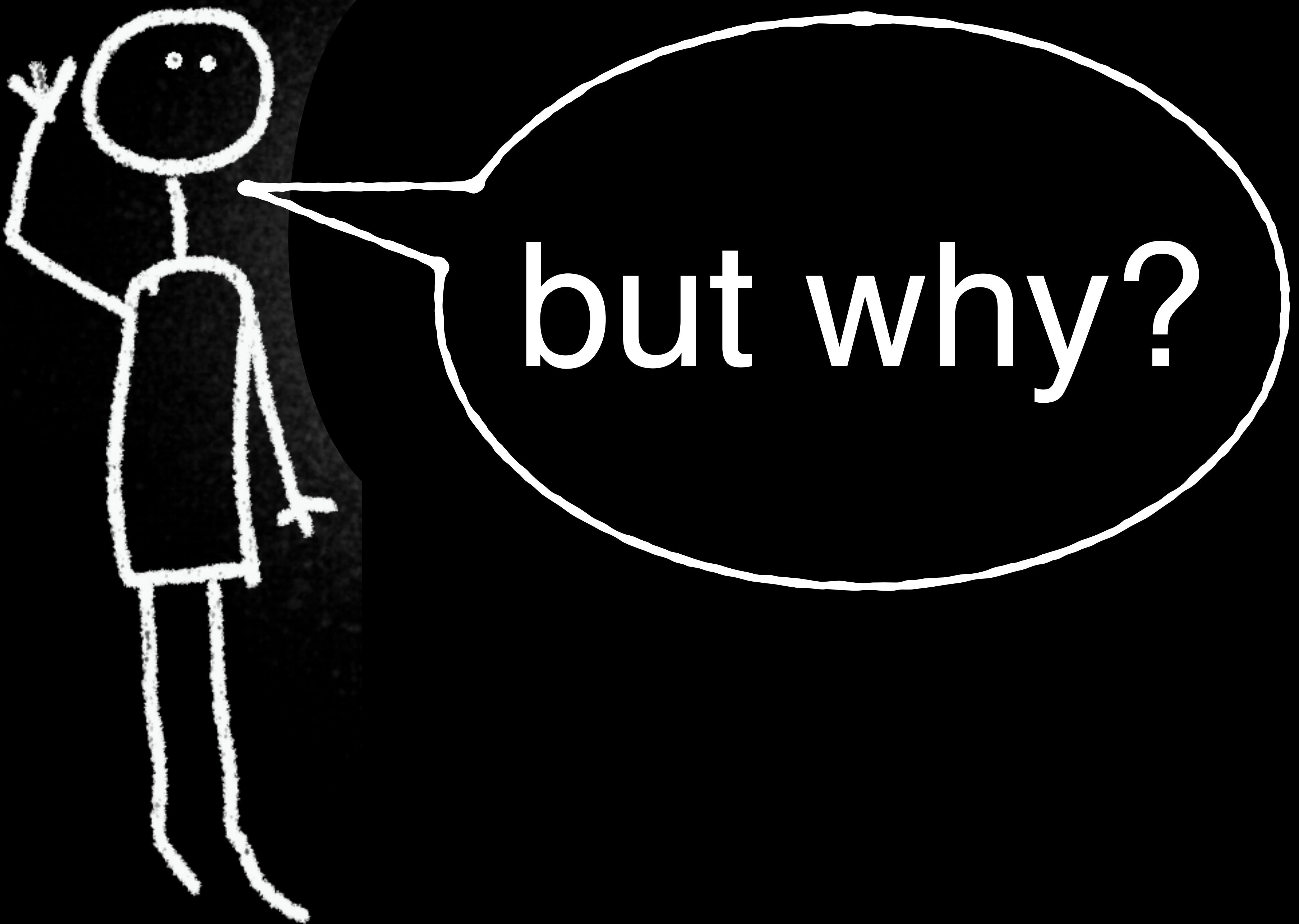
vertical slices

back-first development

deferred wiring

feature flags

“we can’t ship until every
feature is complete”



“users won’t find it compelling
enough if we release now”

if you're not embarrassed by
your first release it was too late

- Reid Hoffman

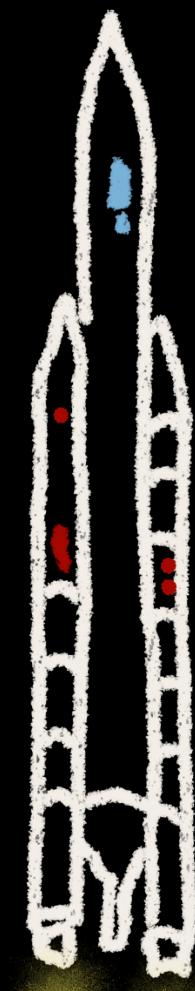
lean

“we only get one
chance to get it right”

the ariadne failed in 36 seconds

you can't a/b test a
\$370 million rocket

we think
we're here



one chance

market failure
(indifference)

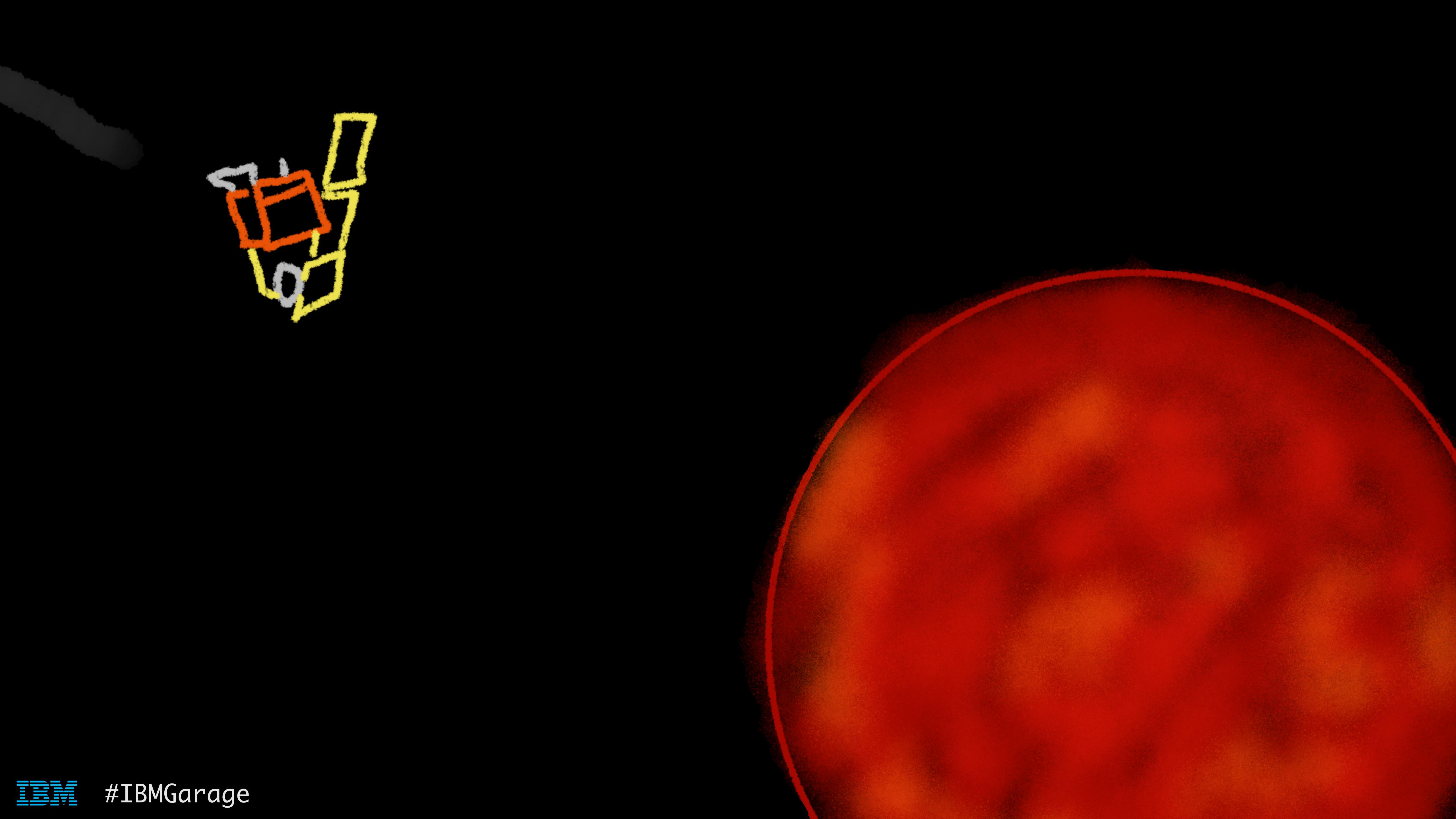
brand damage

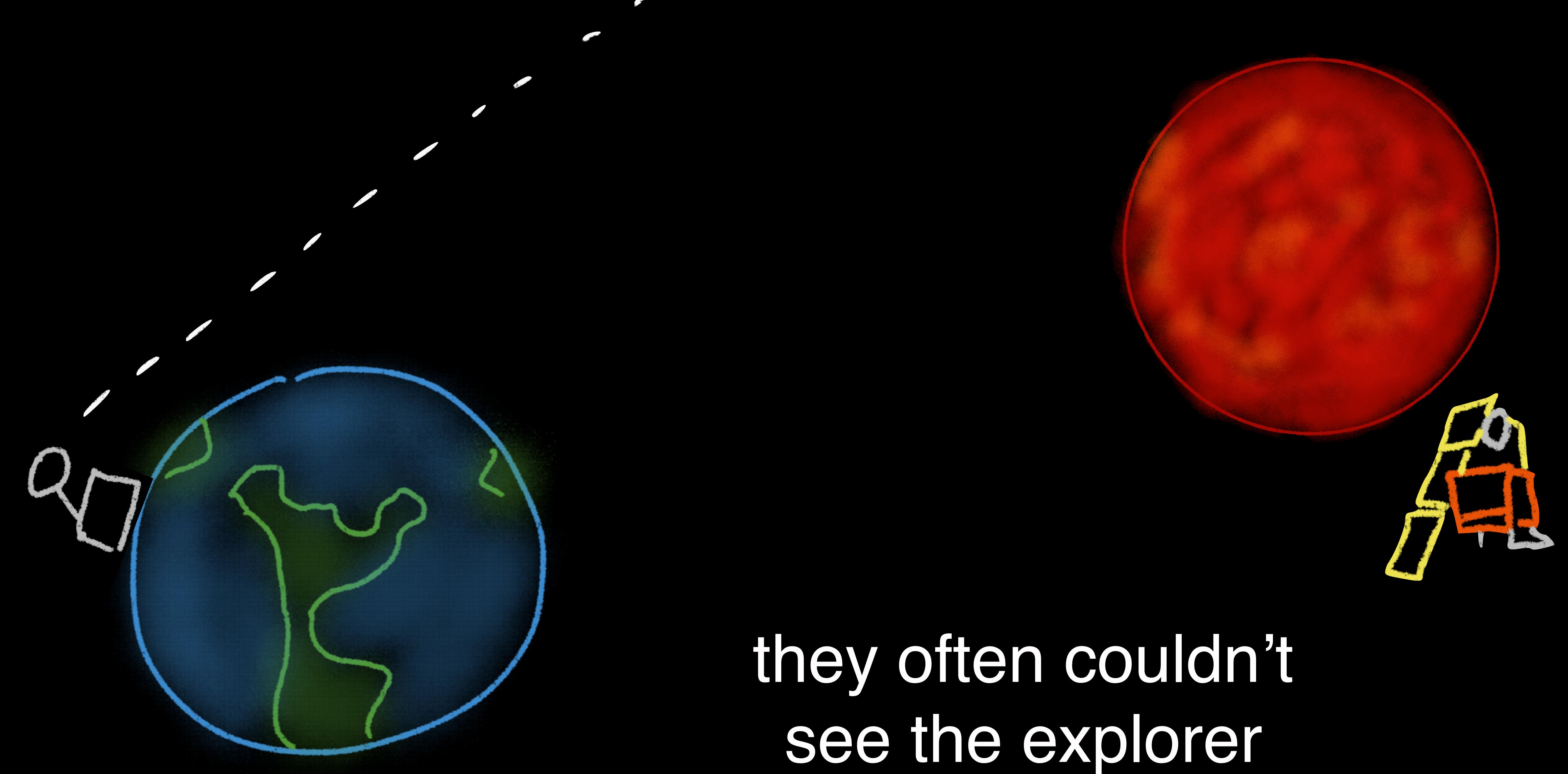
continuous
improvement
delights growing user
base

could we be
here?



a/b testing

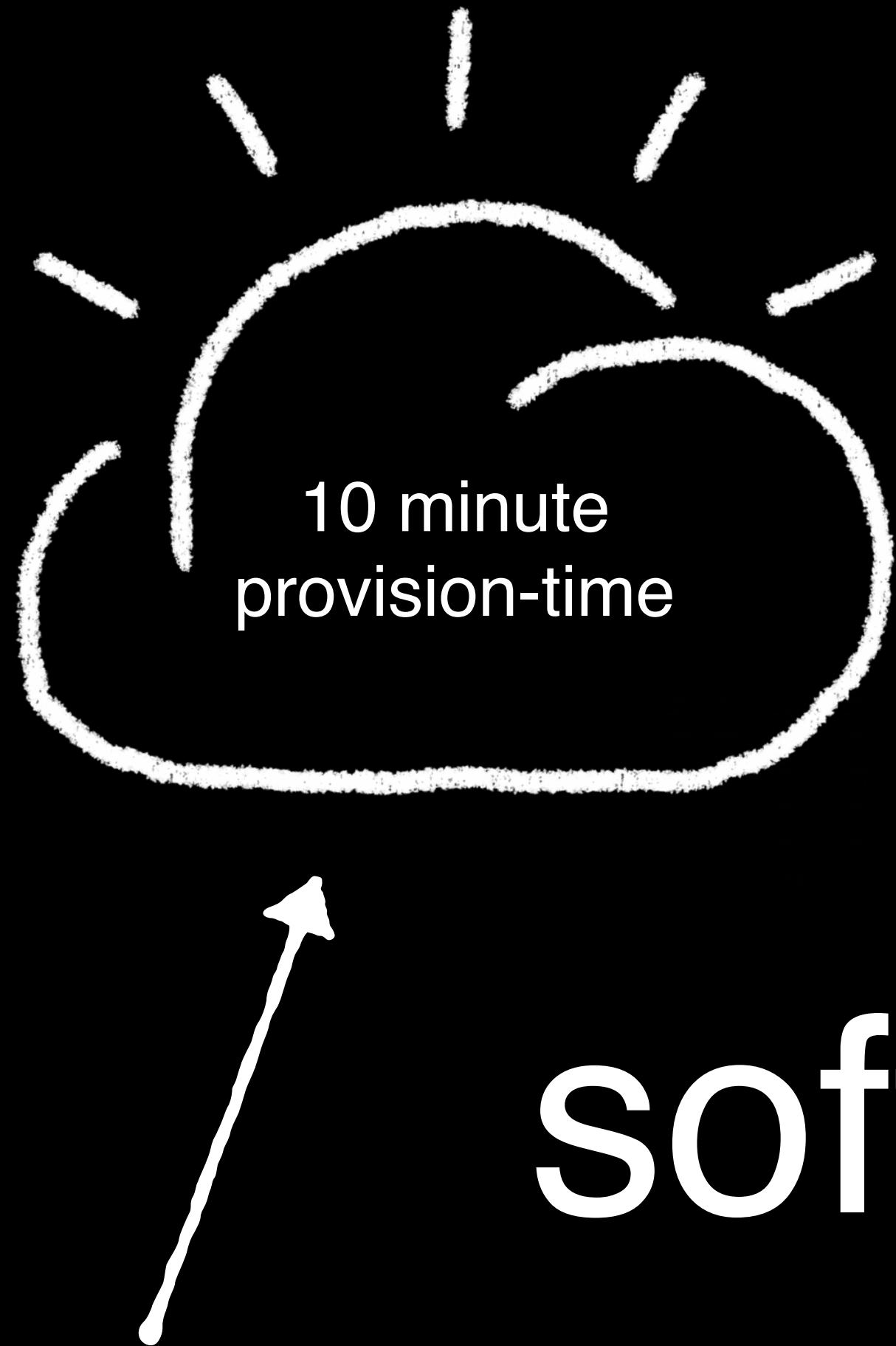




they often couldn't
see the explorer

“but our change
control process . . .”

Software is provision

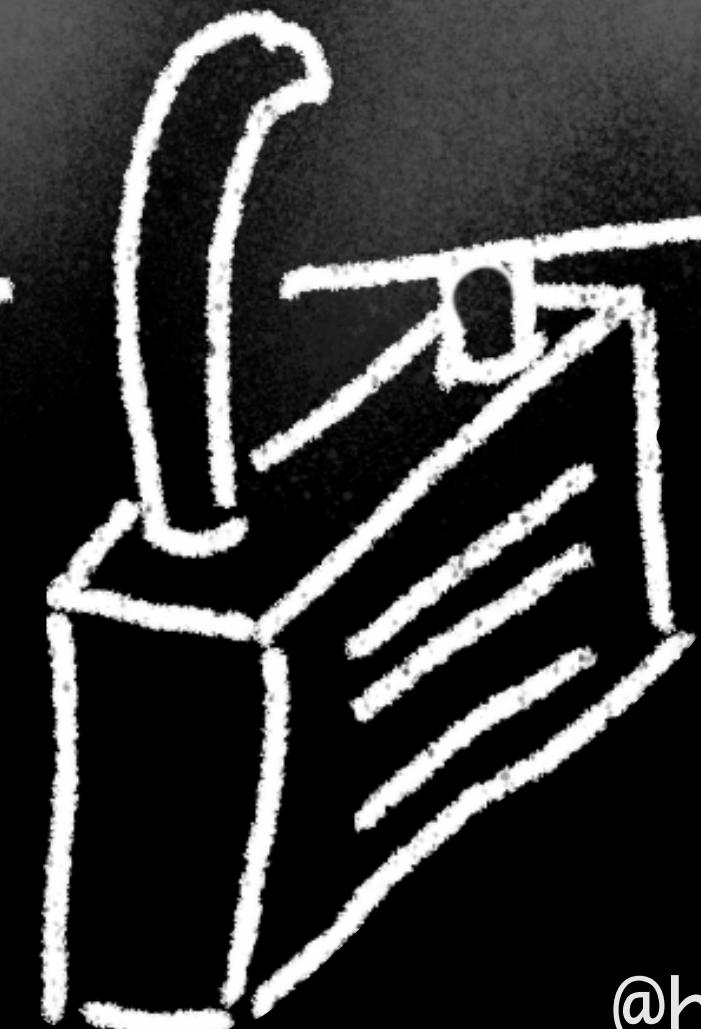


what the
client
thought
they'd got

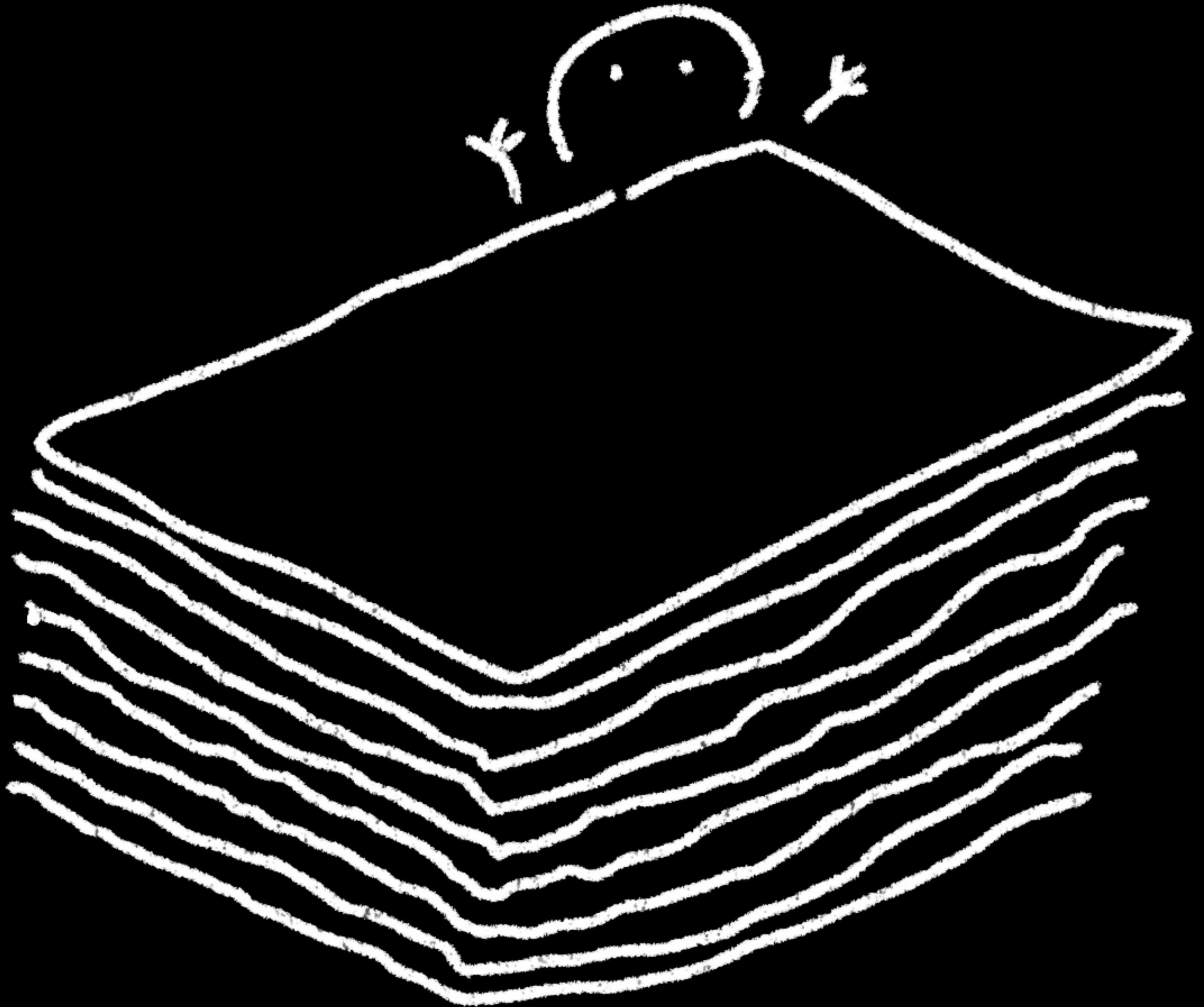
3 month
provision-
time

84-step
pre-approval process

the reason



@holly_cummins



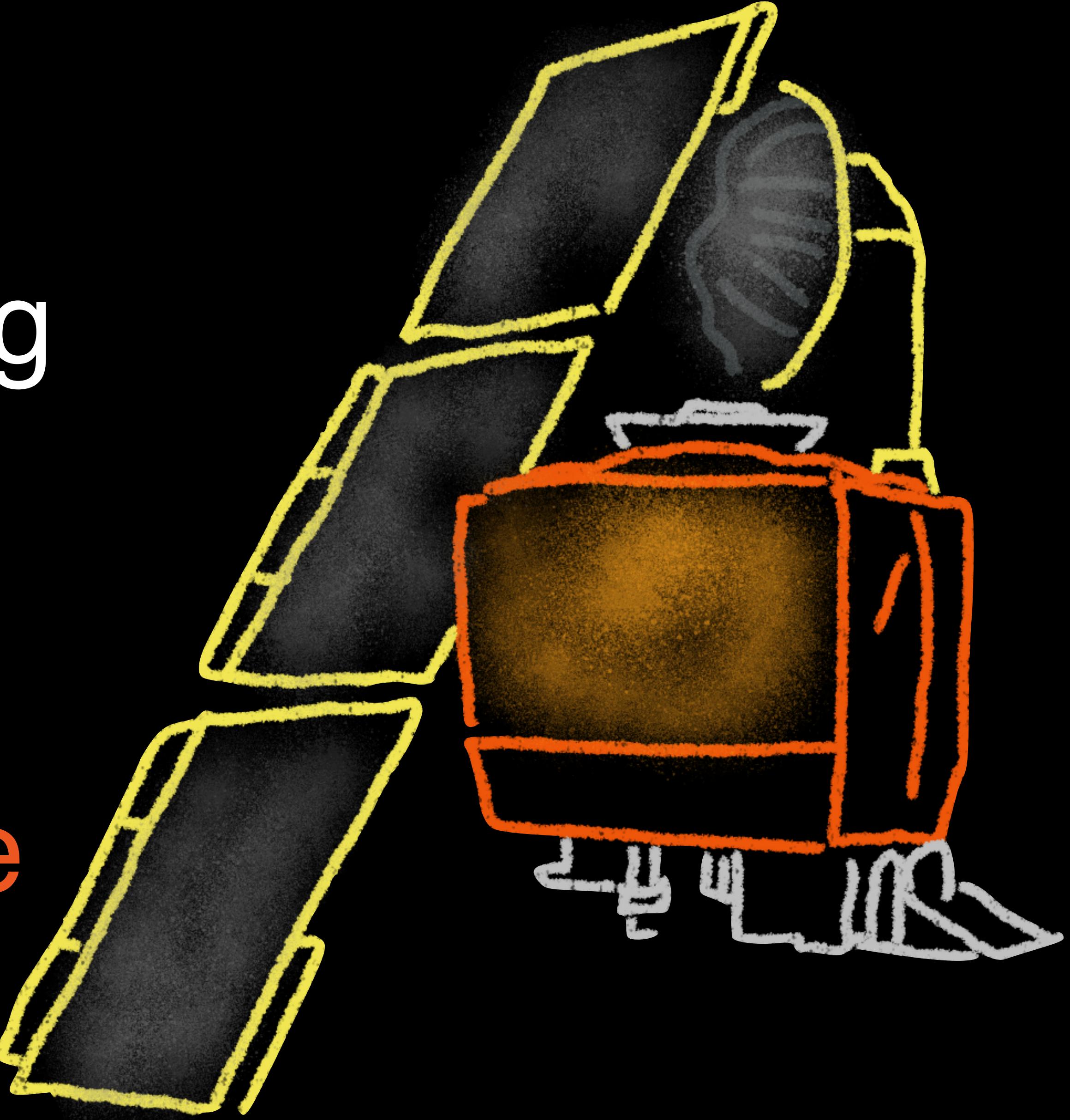
“we’ve scheduled
the architecture
board review for a
month after the
project ships”

does the process
add value?

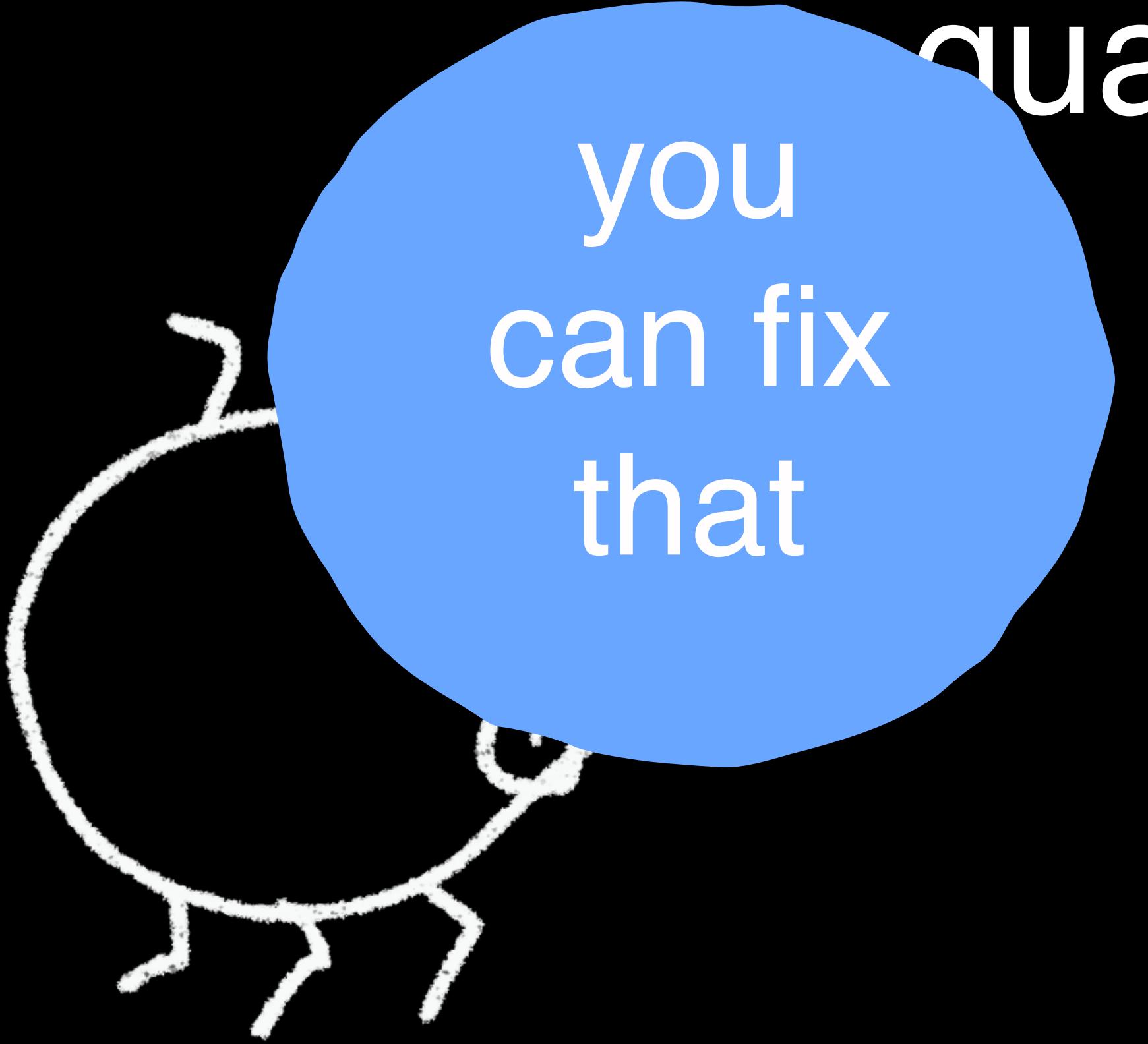
navigators warned
something was wrong

they didn't fill in the
right form

so nothing was done

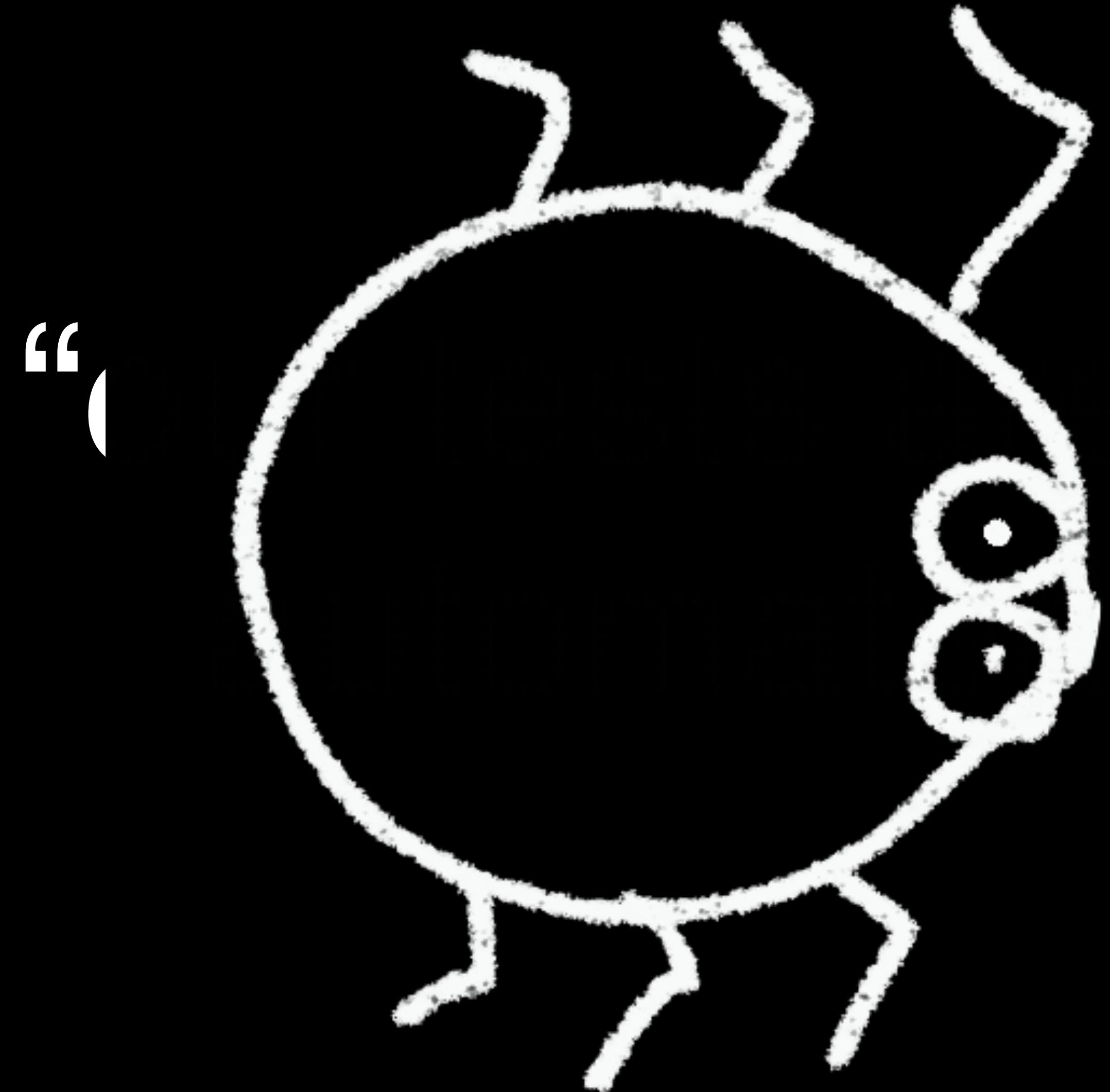


“we can’t ship until we have
more confidence in the
quality”



you
can fix
that

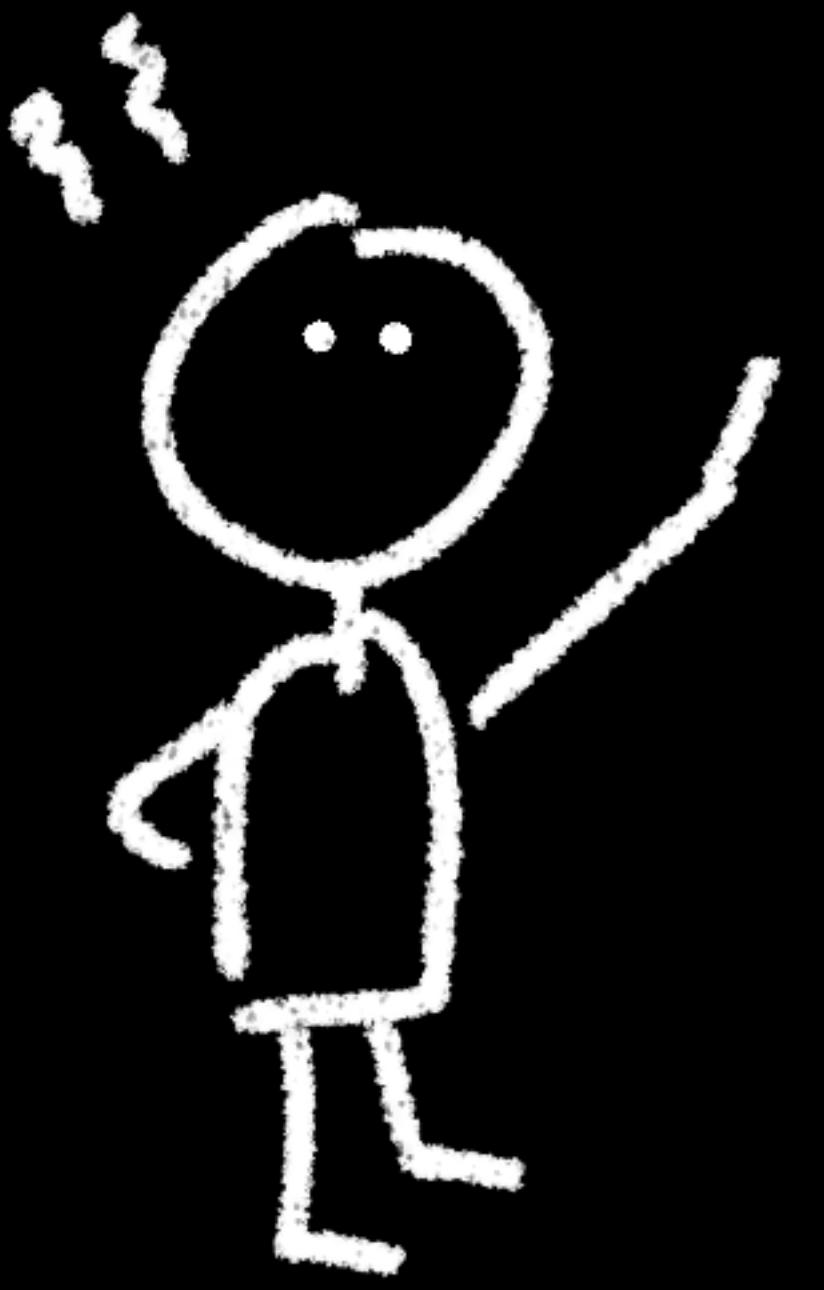
“this is the test team ... who
don’t have the skills to
automate their tests.”



“we don’t know if our
code currently works”

“it costs too
much to replace”

you
can fix
that



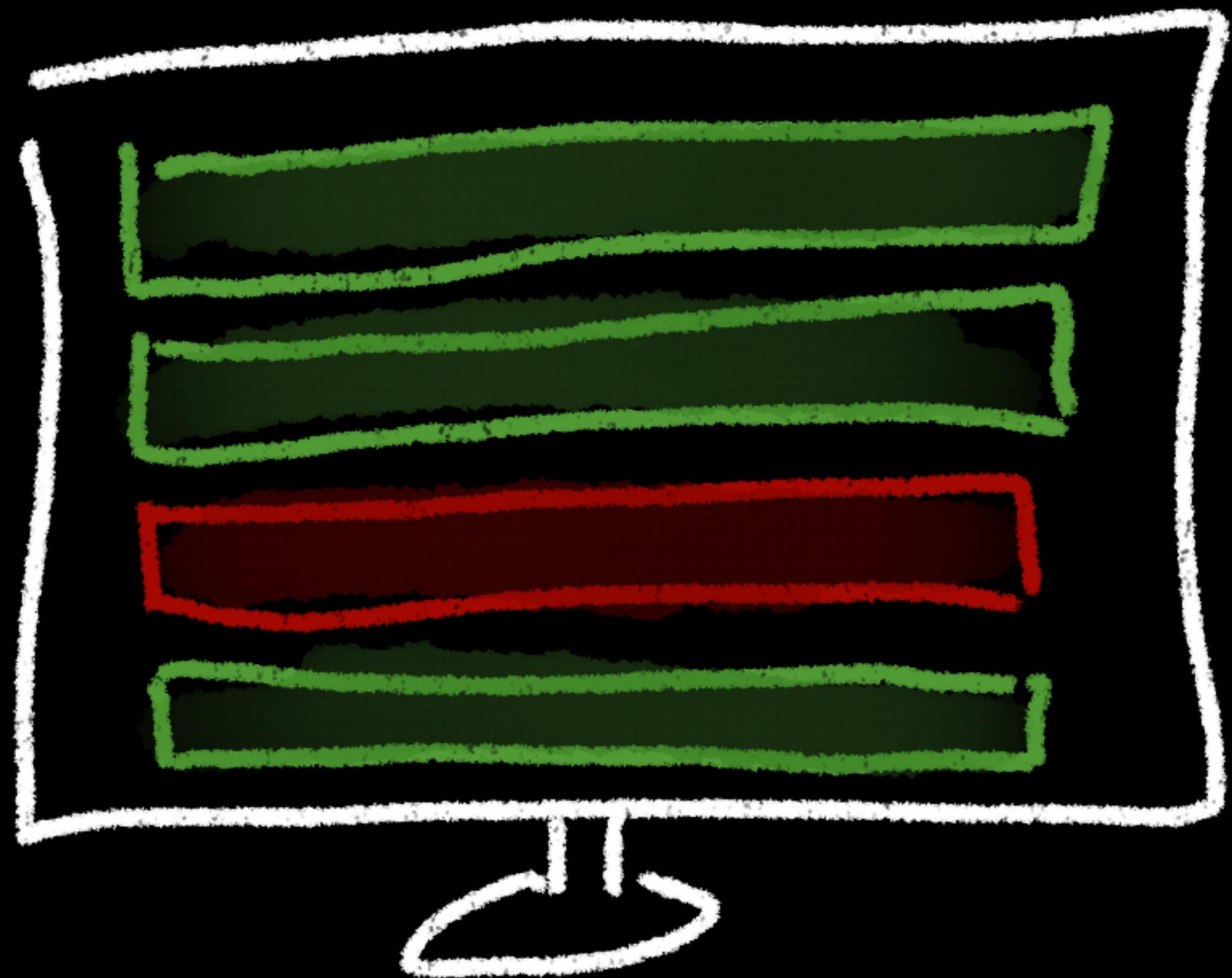
not a good CI/CD indicator



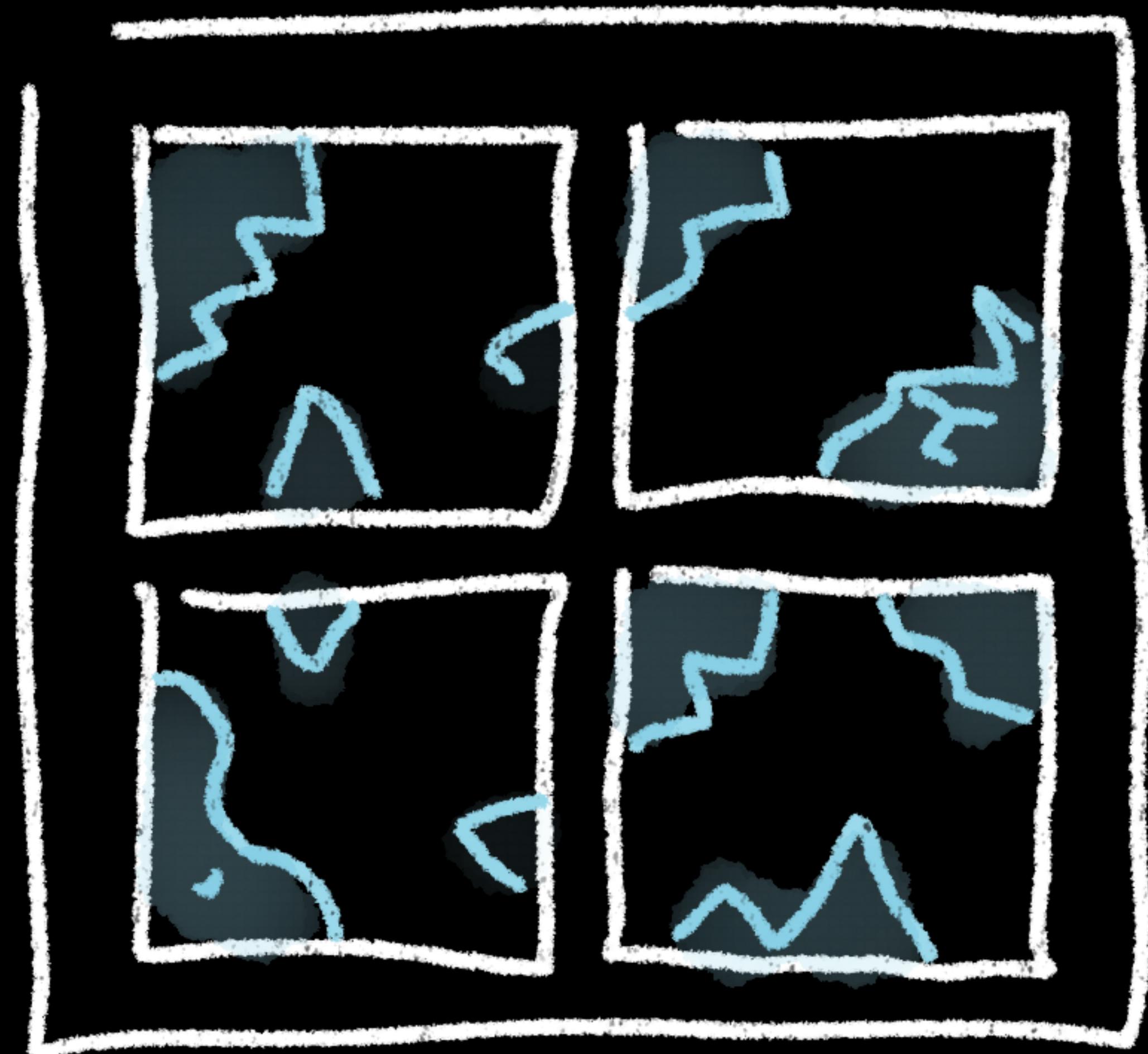
a good CI/CD indicator

“we don’t know when
the build is broken”

get the pipeline status
into the physical
spaces



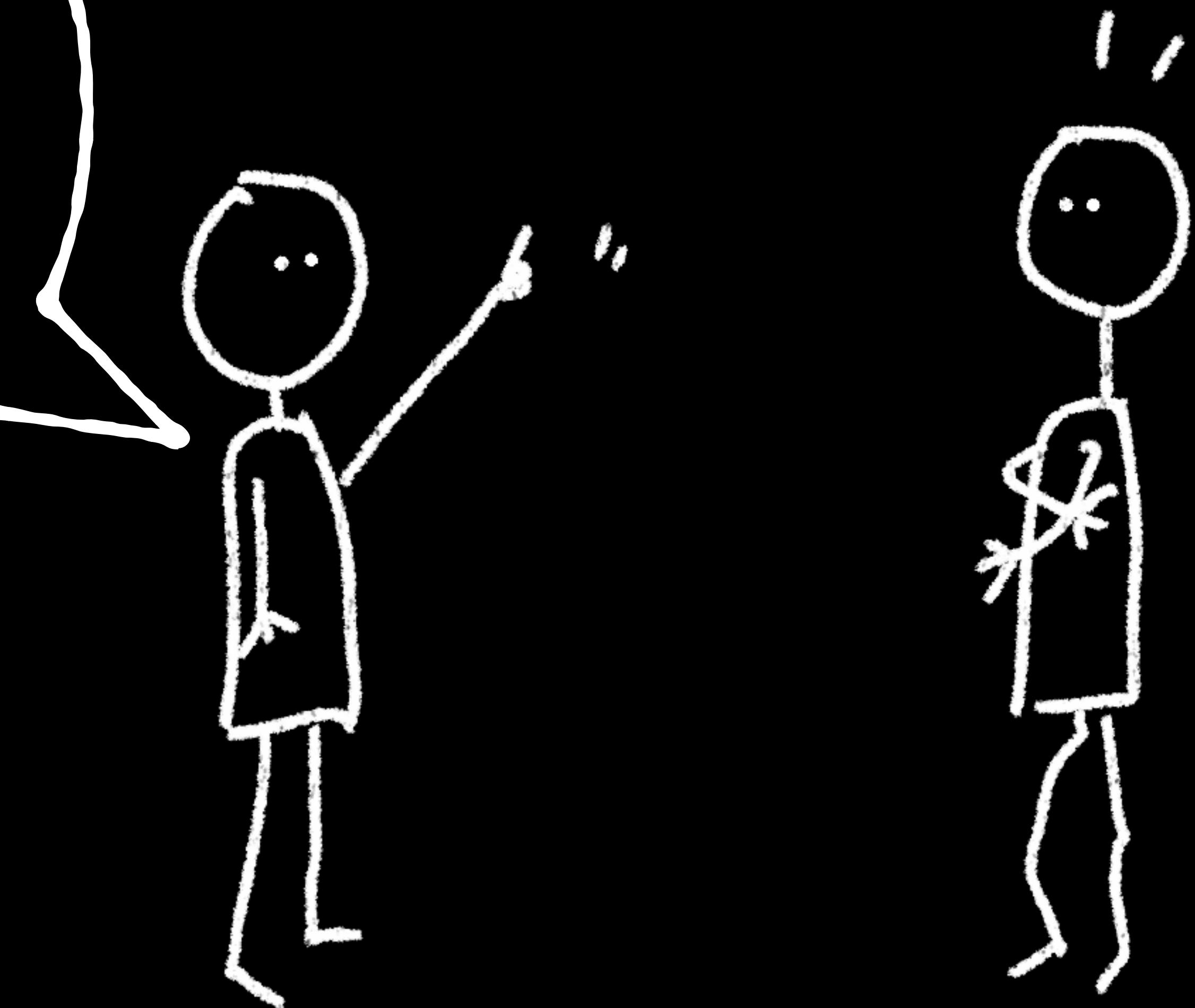
“only Bob can
change Jenkins”



“oh yes, that build
has been broken
for a few weeks...”

judge judge

judge



modern devops

toolchains and processes reflect
cloud native apps and cultural transformation

many, single-tenant
toolchains

hybrid and multi-cloud
toolchains and
deployments

toolchains support
lean delivery
processes and
business agility

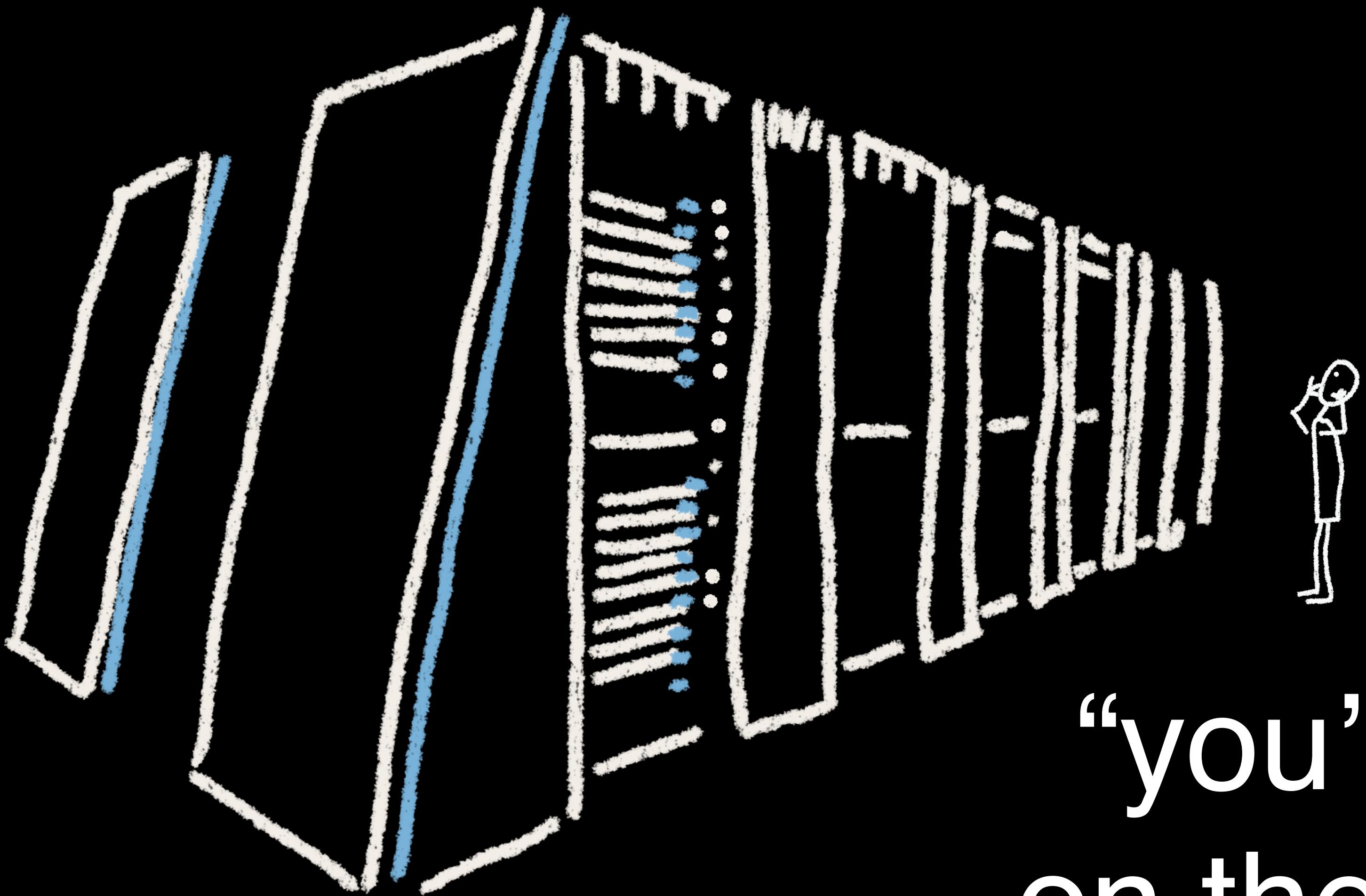
heritage devops

toolchains and processes reflect
heritage apps and **cultural inertia**

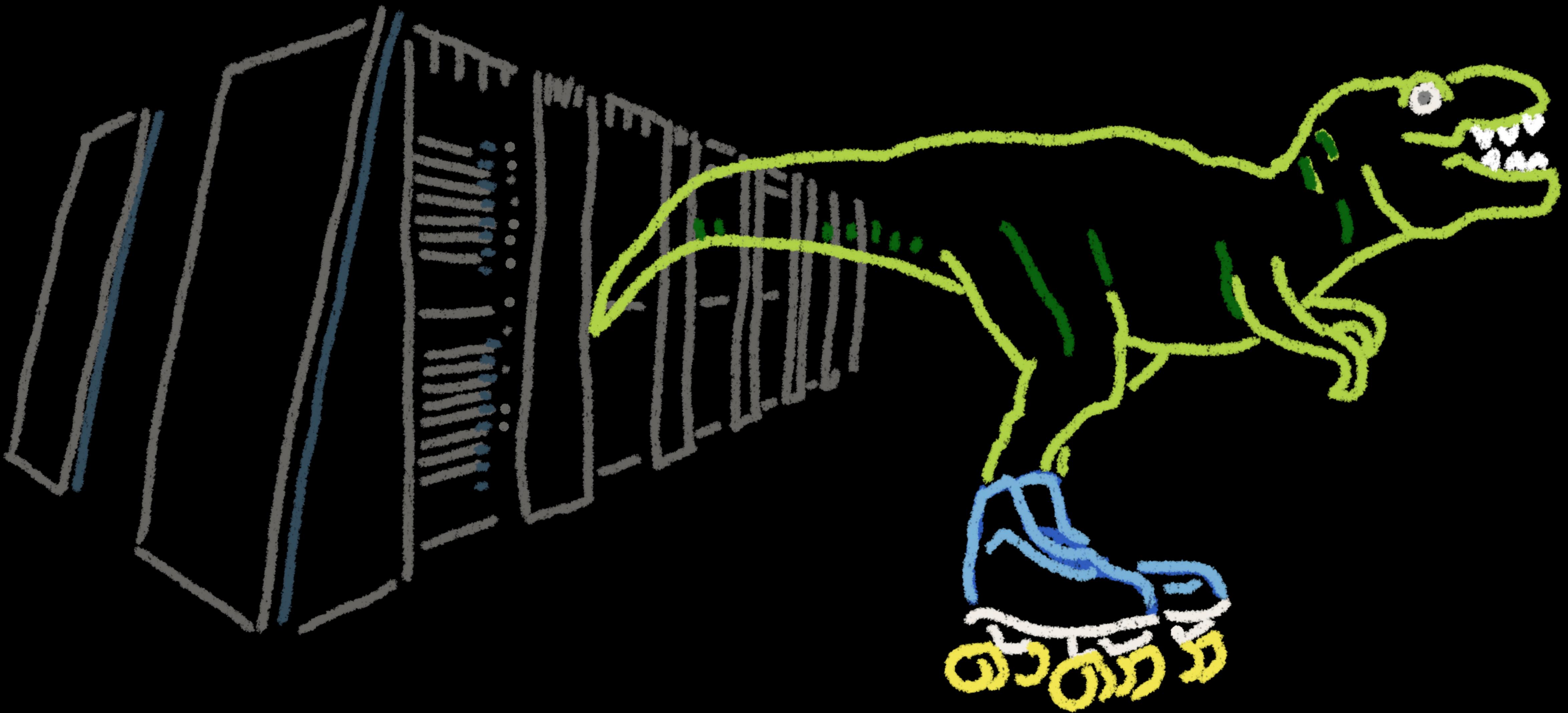
shared, multi-tenant
toolchain “backbone”

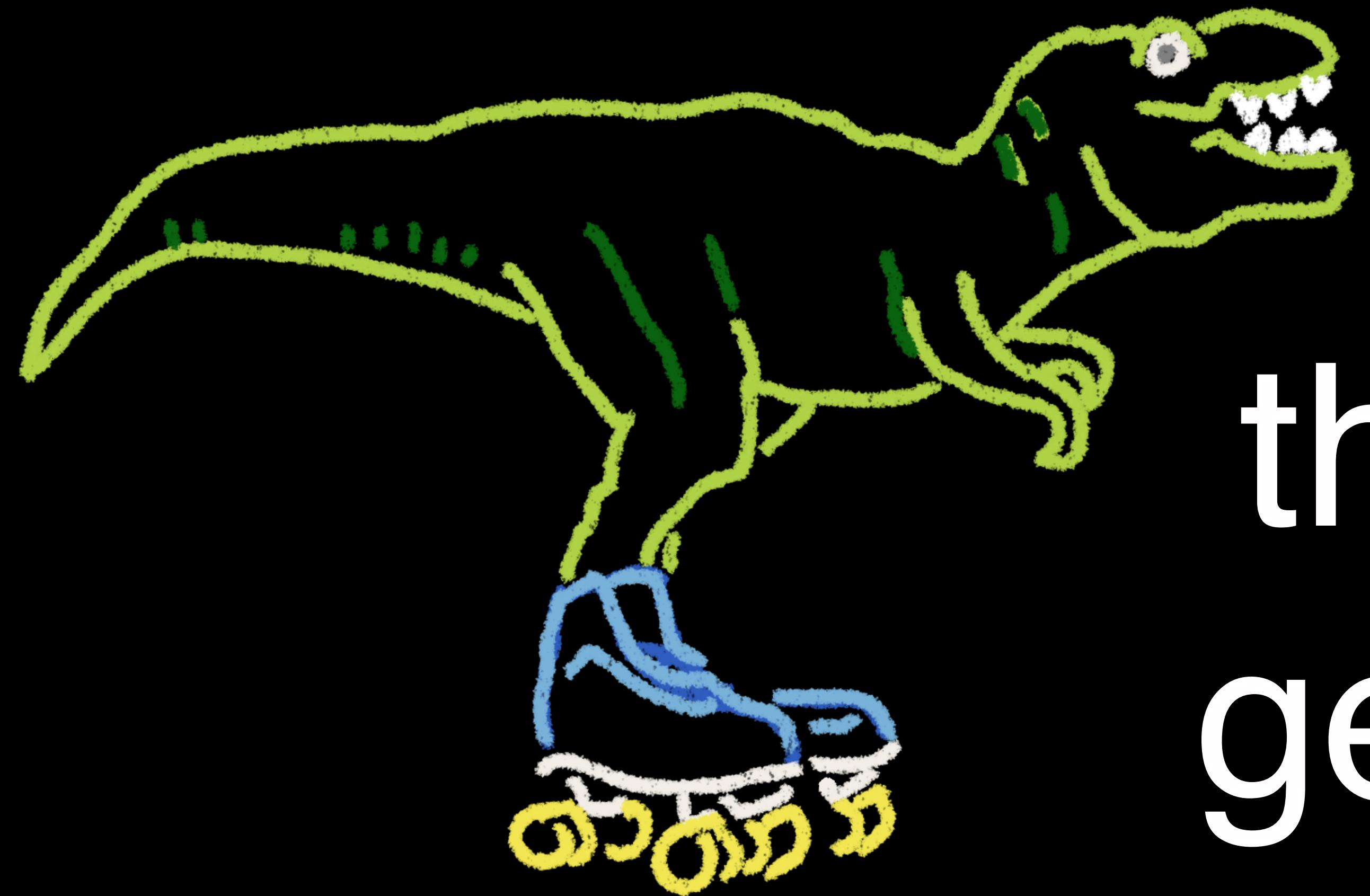
on-premise
automation tools

release management
and dependency
coordination are hard



“you’ll be coding
on the mainframe”

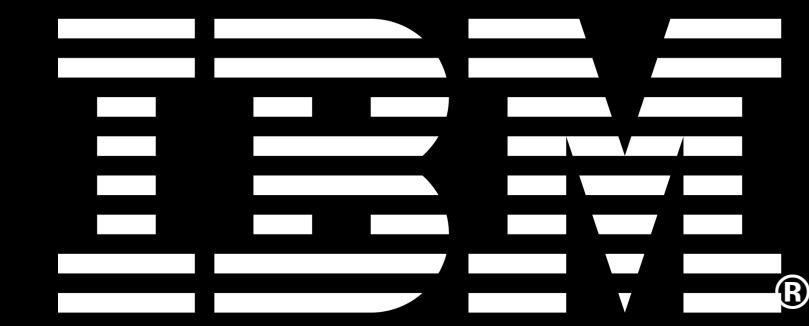




this can
get tiring

transformation
endurance

remember
the why



@holly_cummins

IBM Cloud Garage