

# 9 ways to fail at cloud native

Holly Cummins  
**IBM**

@holly\_cummins



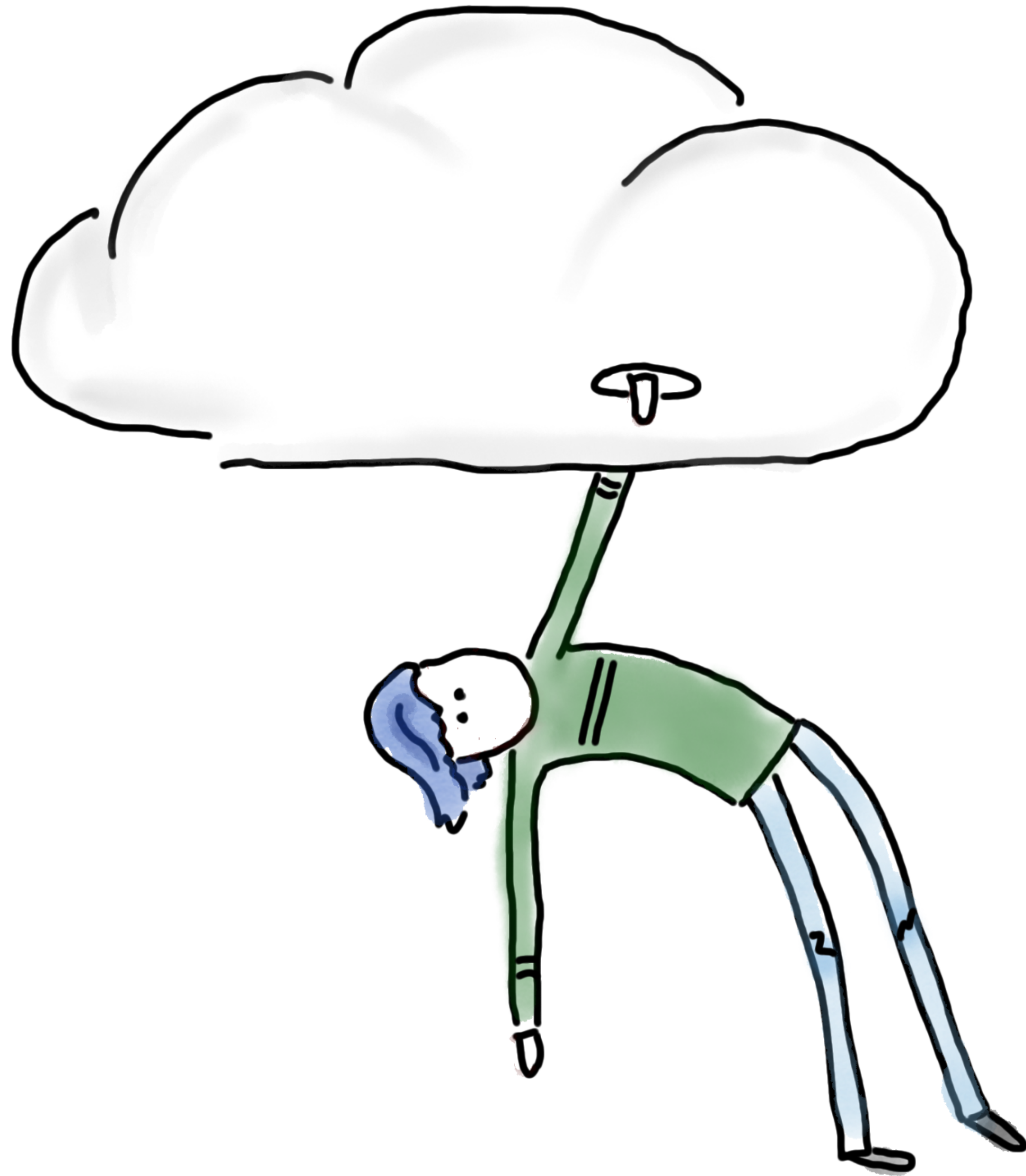
my job is helping organisations  
take advantage of the cloud



these are my scary stories



fail



the muddy  
goal

what problem are  
we trying to solve?



my CV looks  
dull... time to add  
containers to our  
stack!

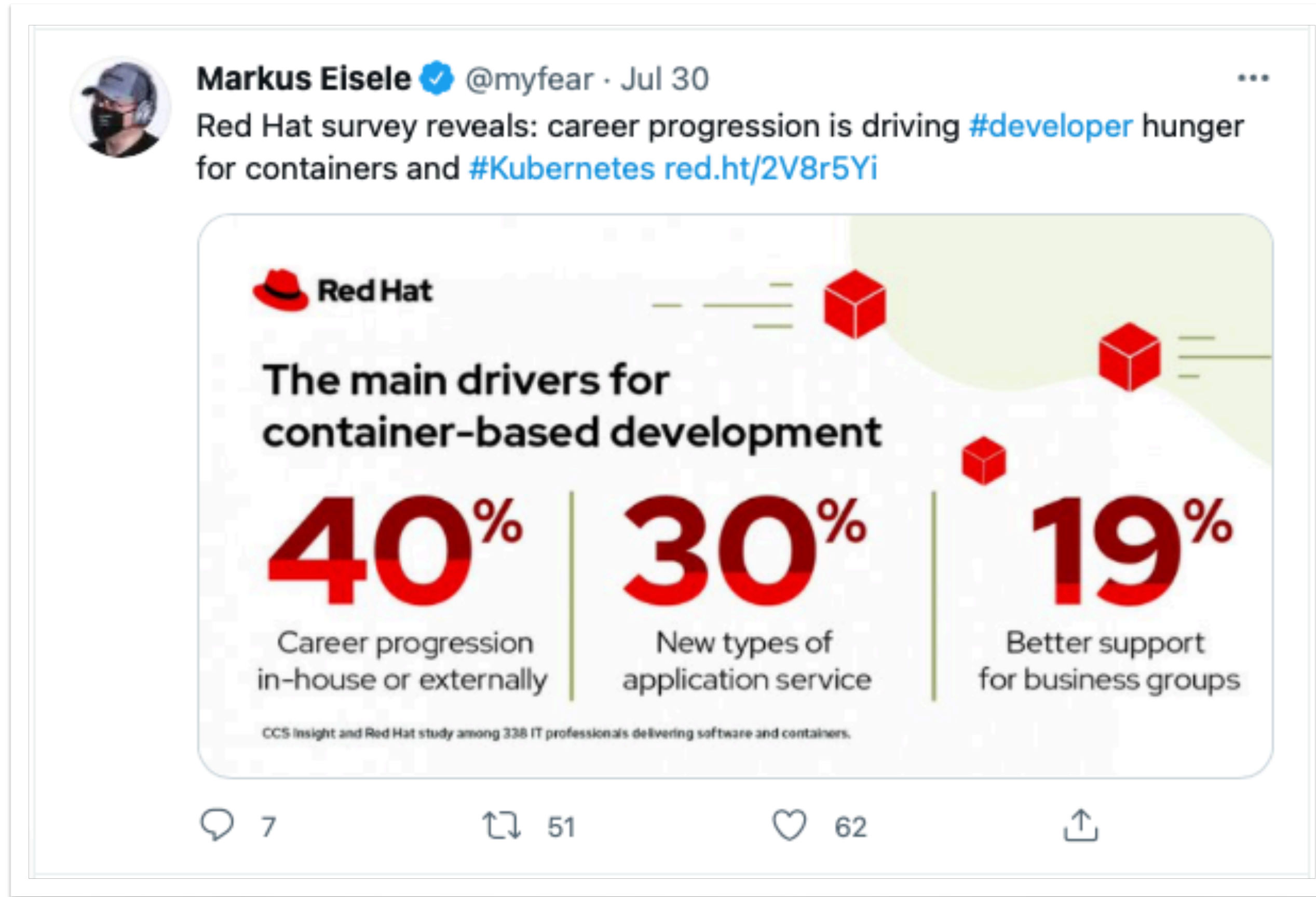


(this is **not** a good reason  
to go cloud native)

surely no one would ...



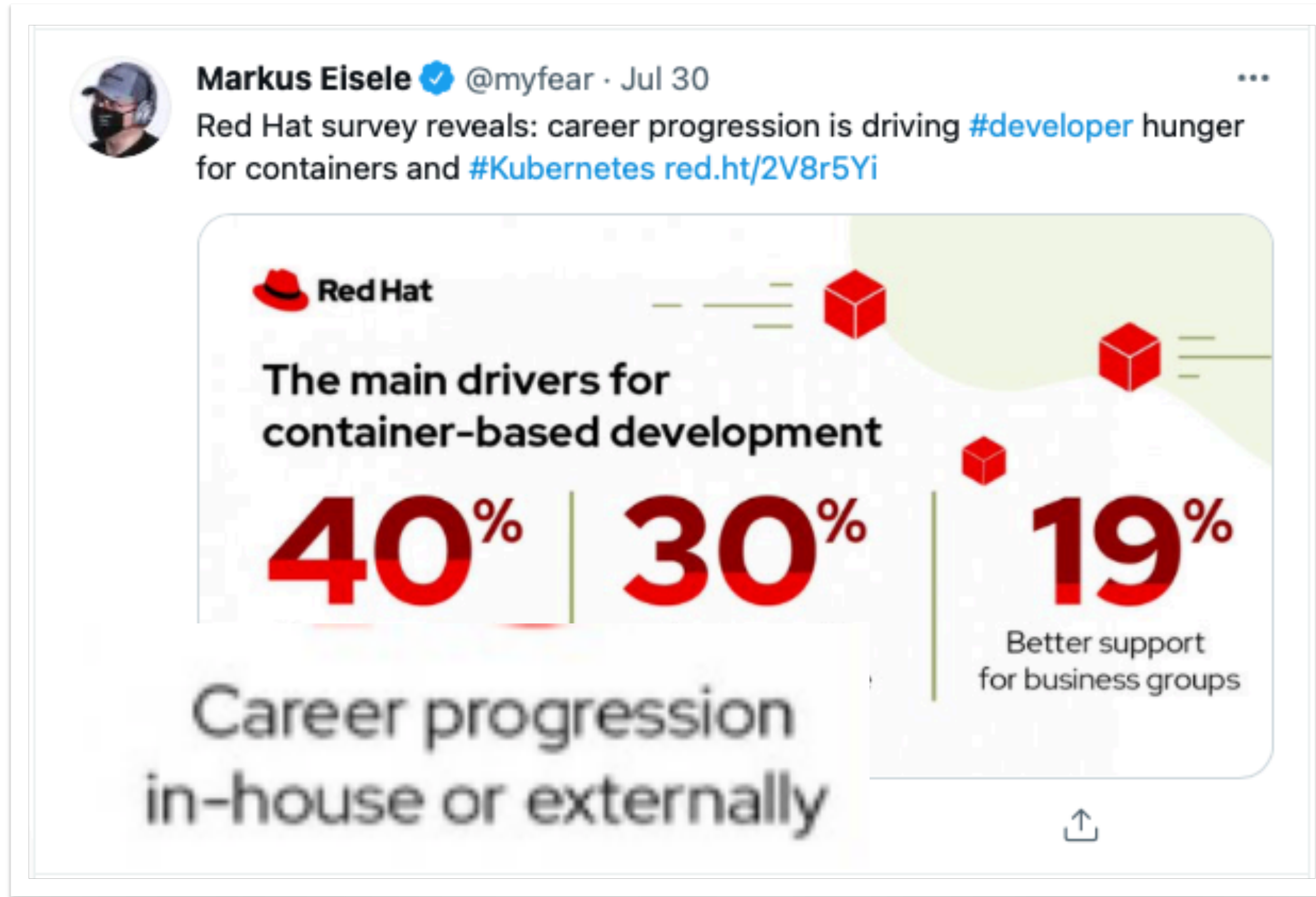
surely no one would ...





surely no one would ...

oh.



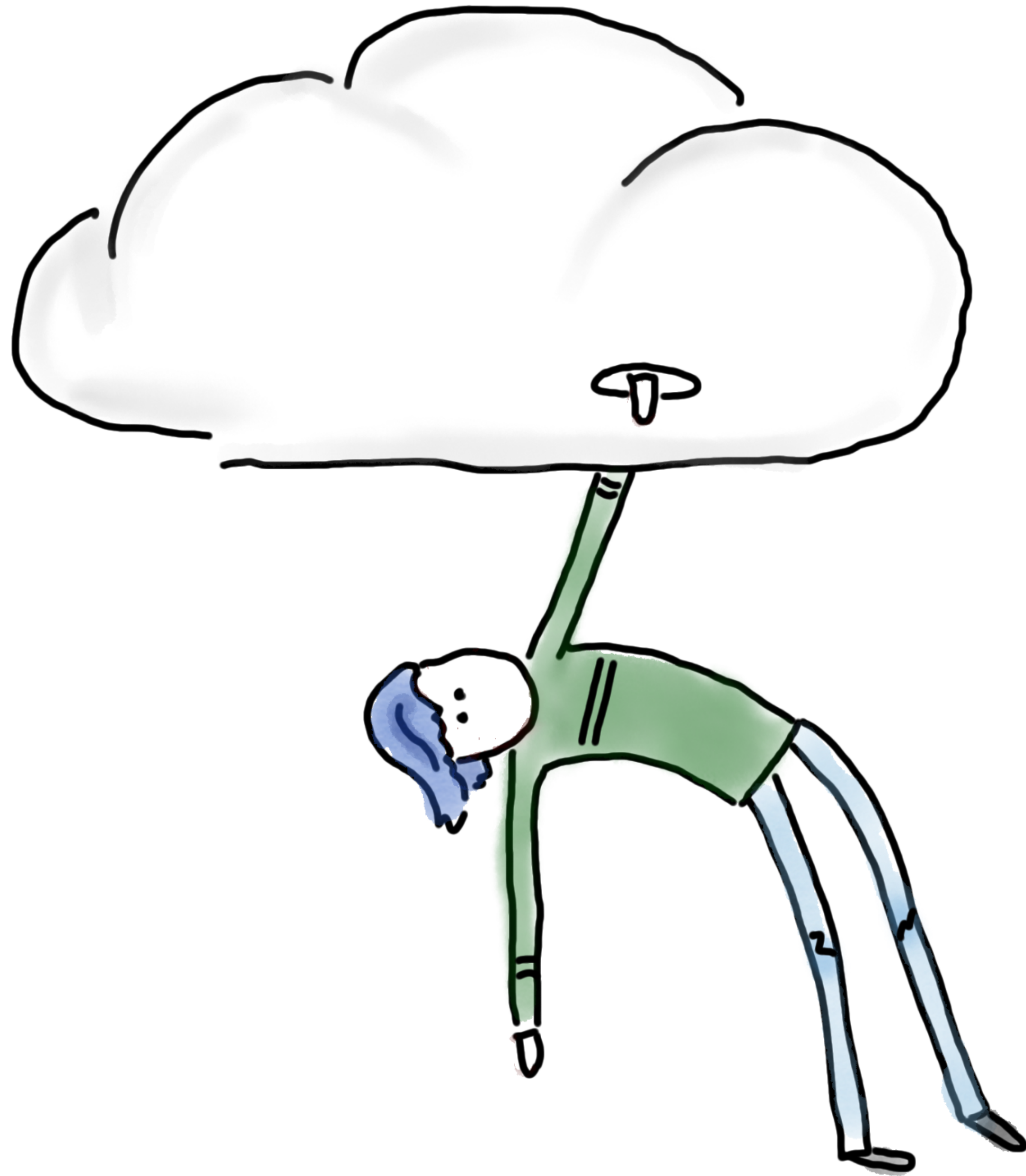




why are there  
no **microservices**  
in this cloud native  
app Bob?



fail



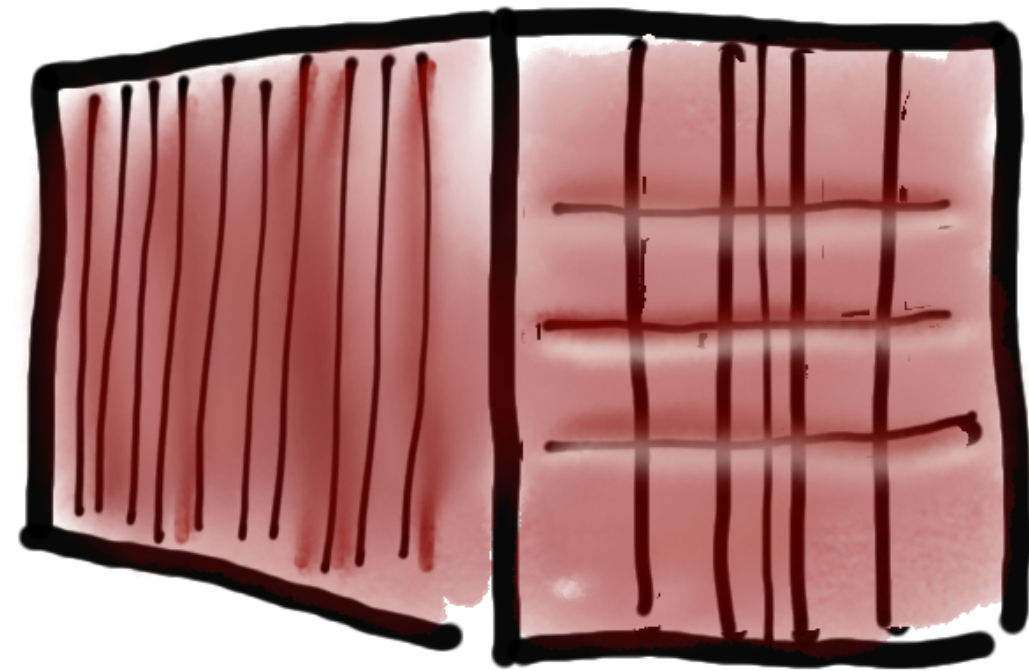
microservices  
envy

microservices  
are not the **goal**

microservices  
are not the **goal**  
they are the **means**



microservices  
are not the **goal**  
they are **a** means



containers are a good base





it's not a  
**competition** to  
see how many  
you can have

containers are a good base



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

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we need to get rid of COBOL  
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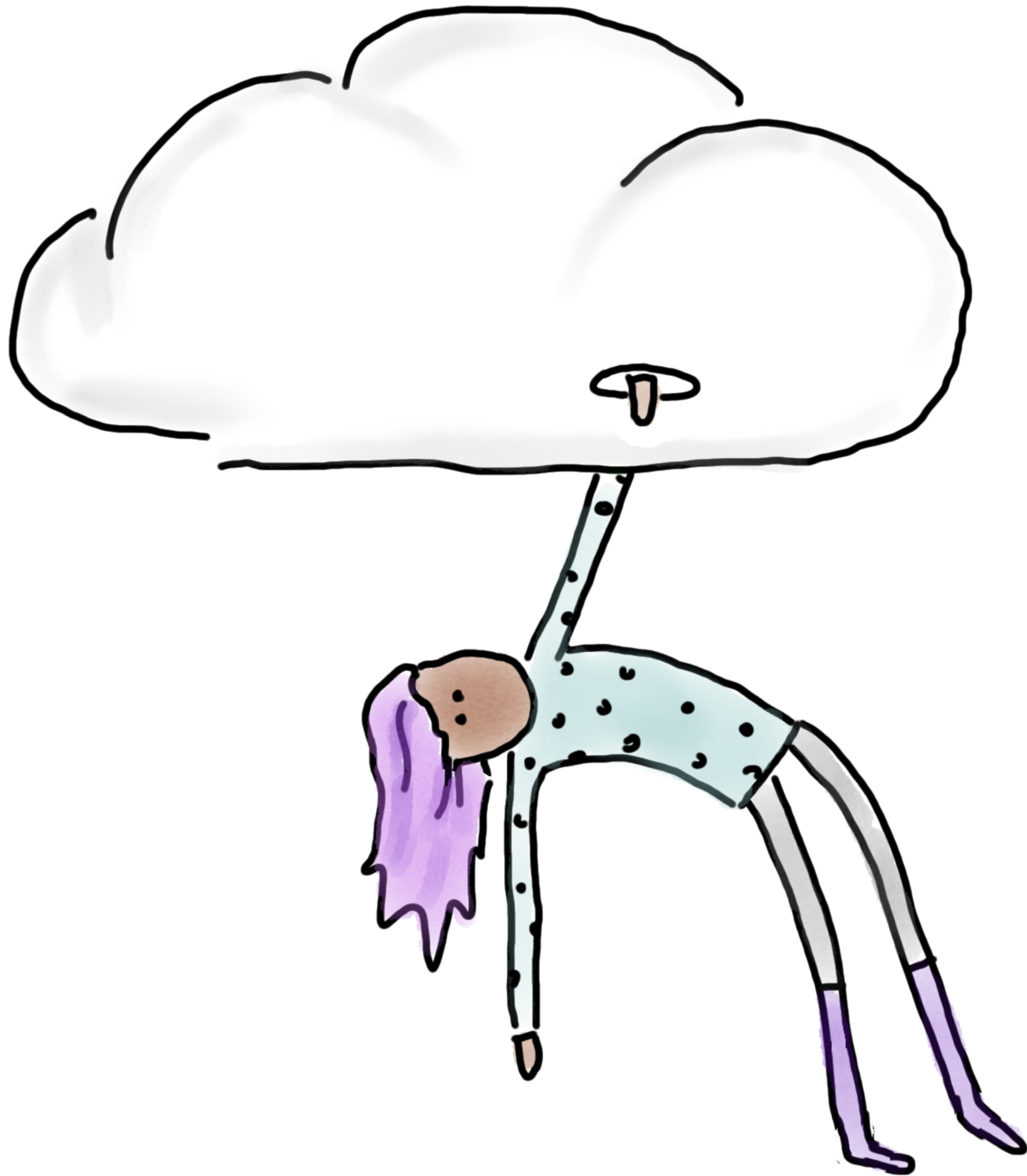
“... but our release board  
only meets twice a year.”

# distributed monolith

# distributed monolith

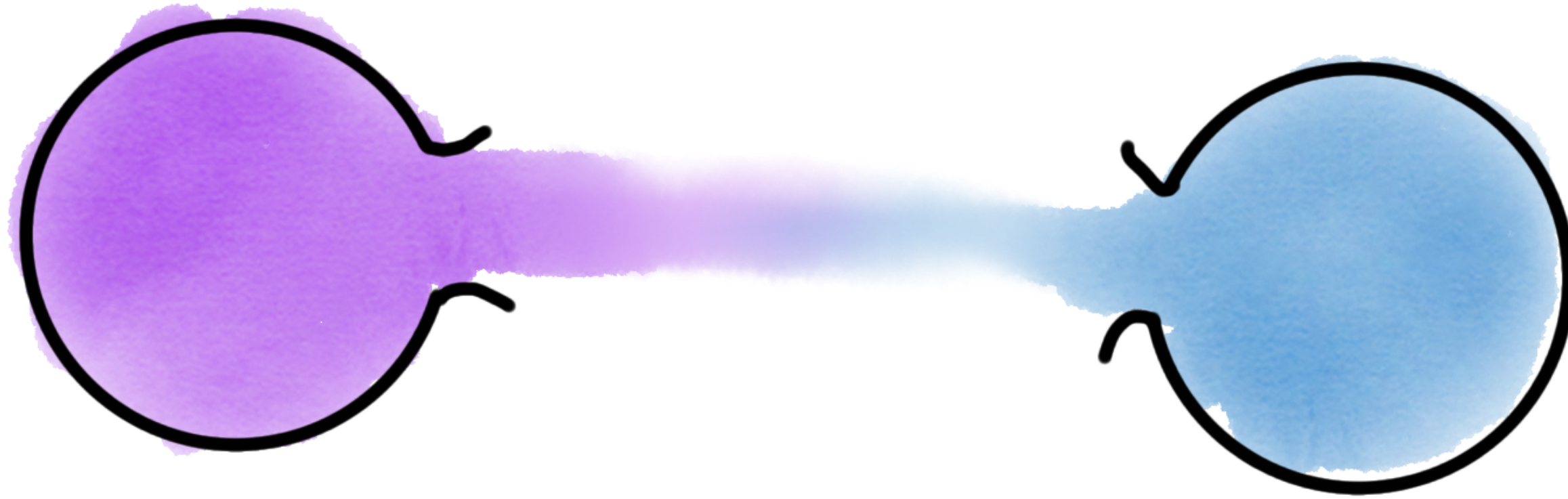
but without compile-time checking  
... or guaranteed function execution

cloud-  
native  
spaghetti



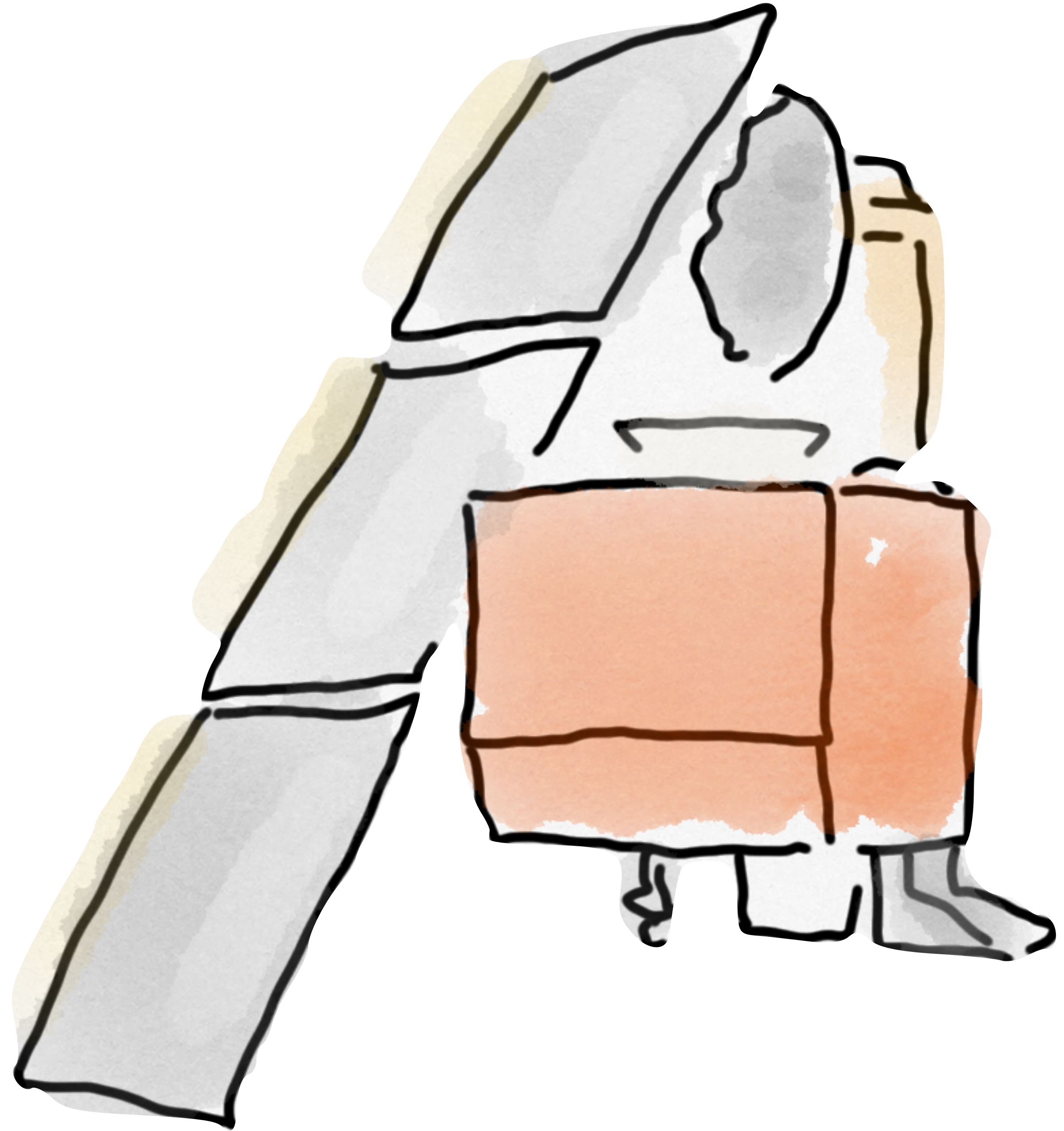


“every time we change one  
microservice, another breaks”



distributed  $\neq$  decoupled

“each of our microservices has  
duplicated the same object model ...  
with twenty classes and seventy fields”

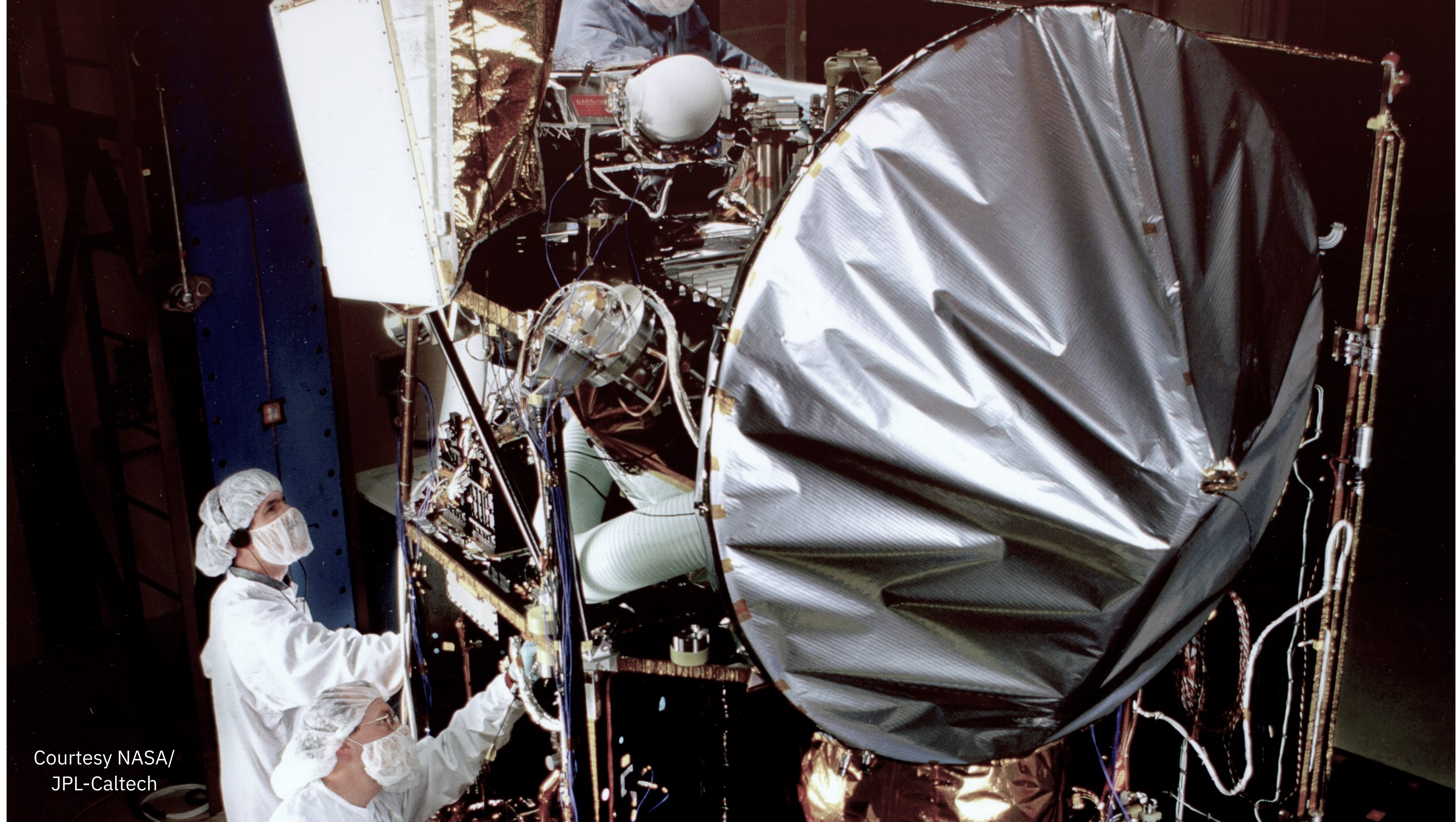




# mars climate explorer

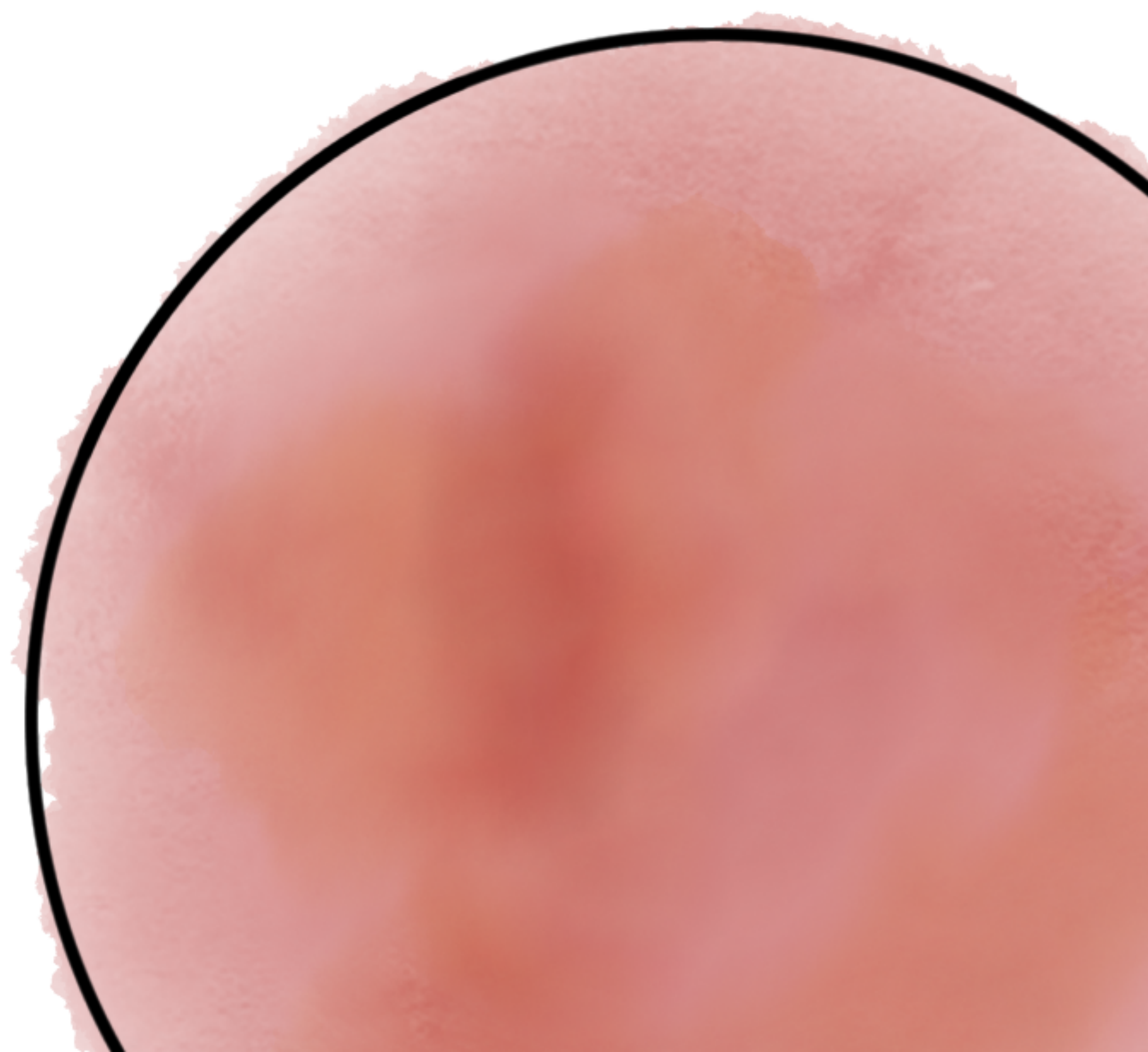
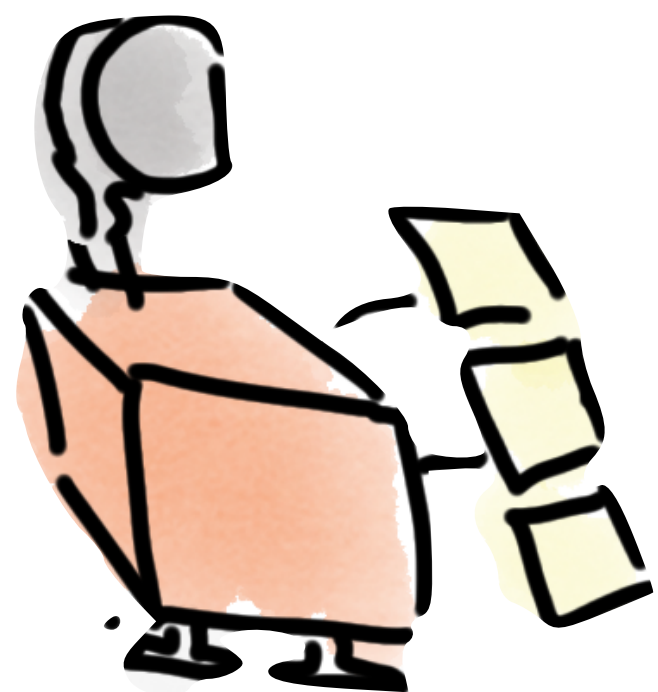




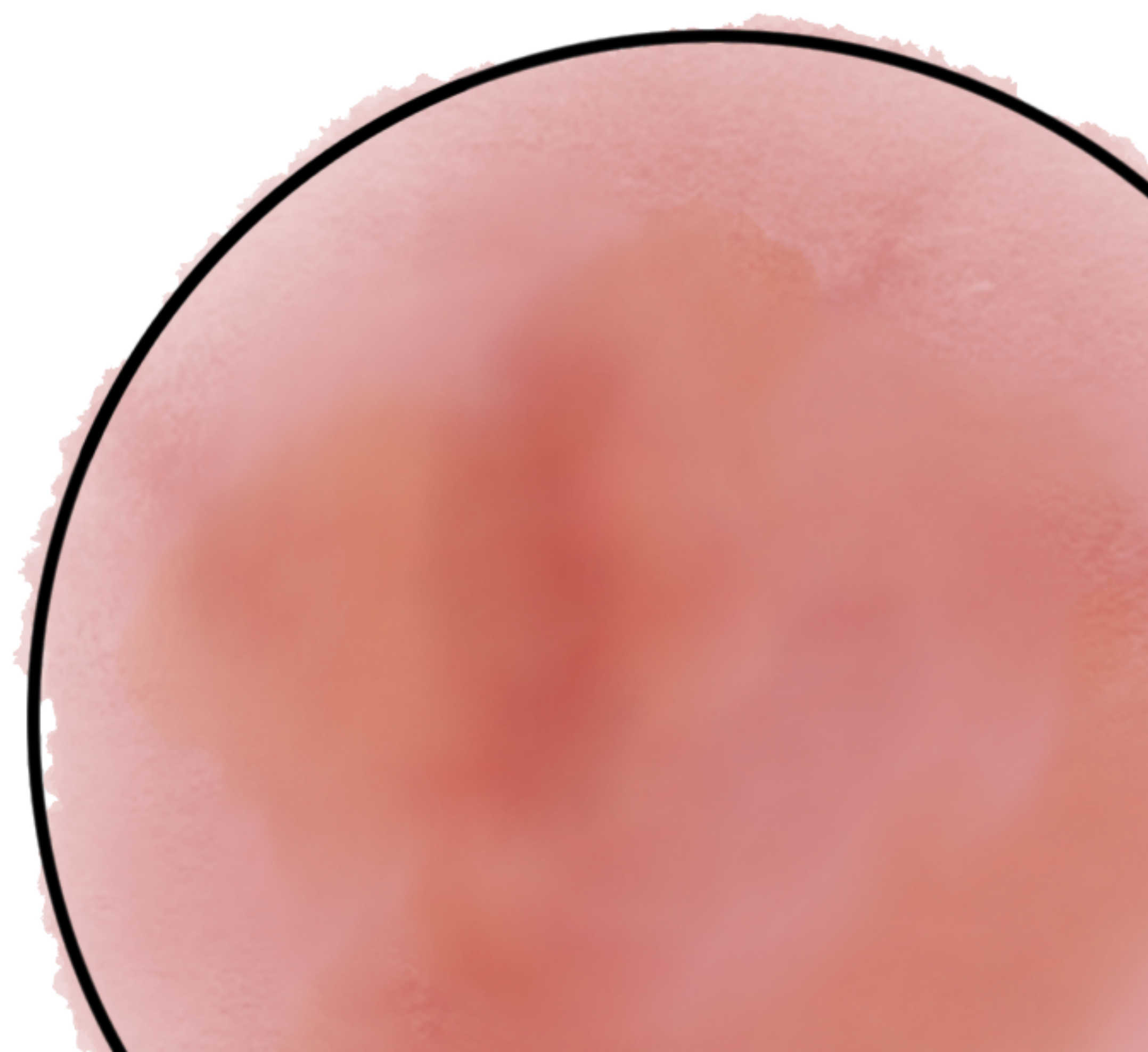


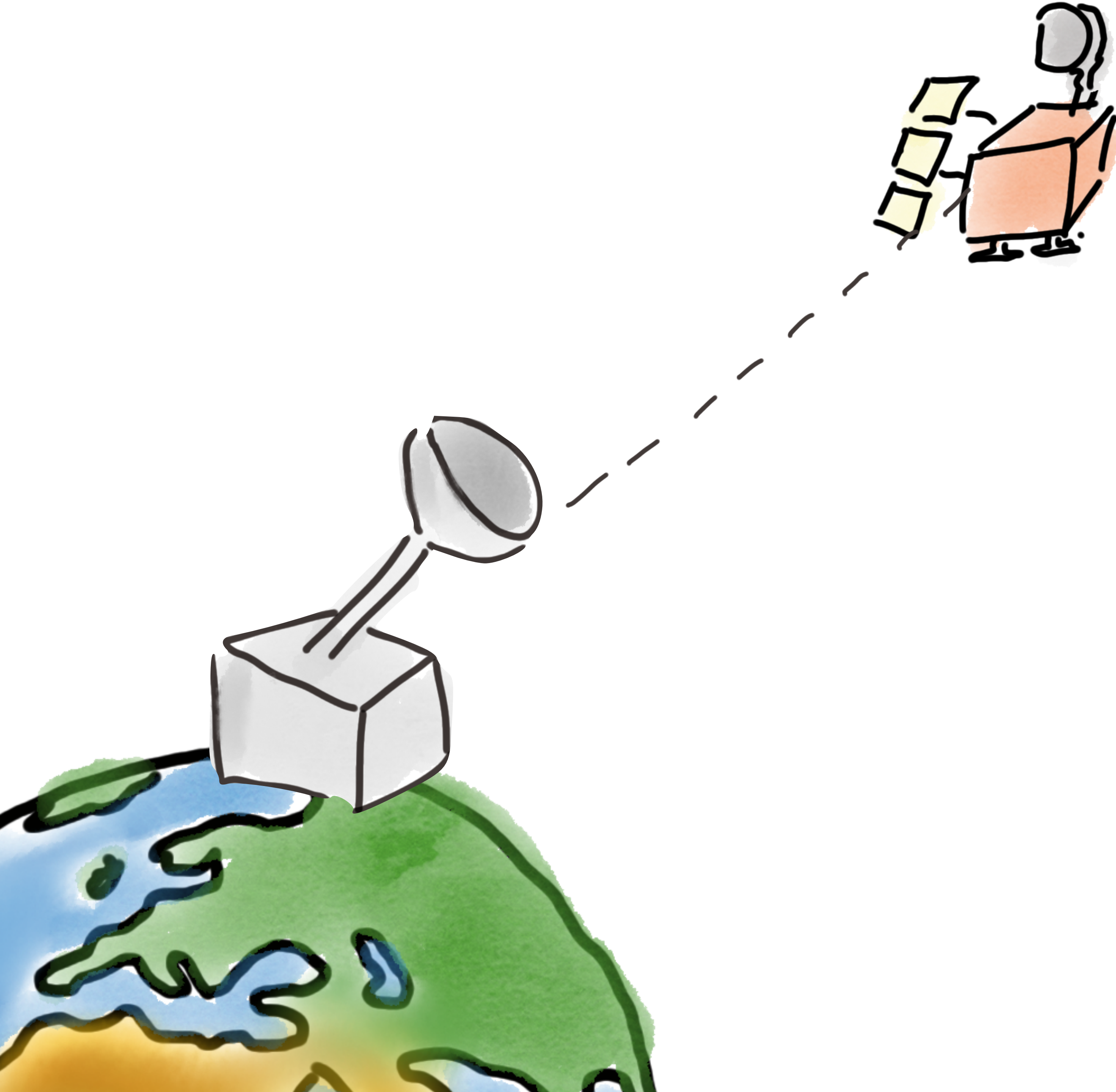
Courtesy NASA/  
JPL-Caltech

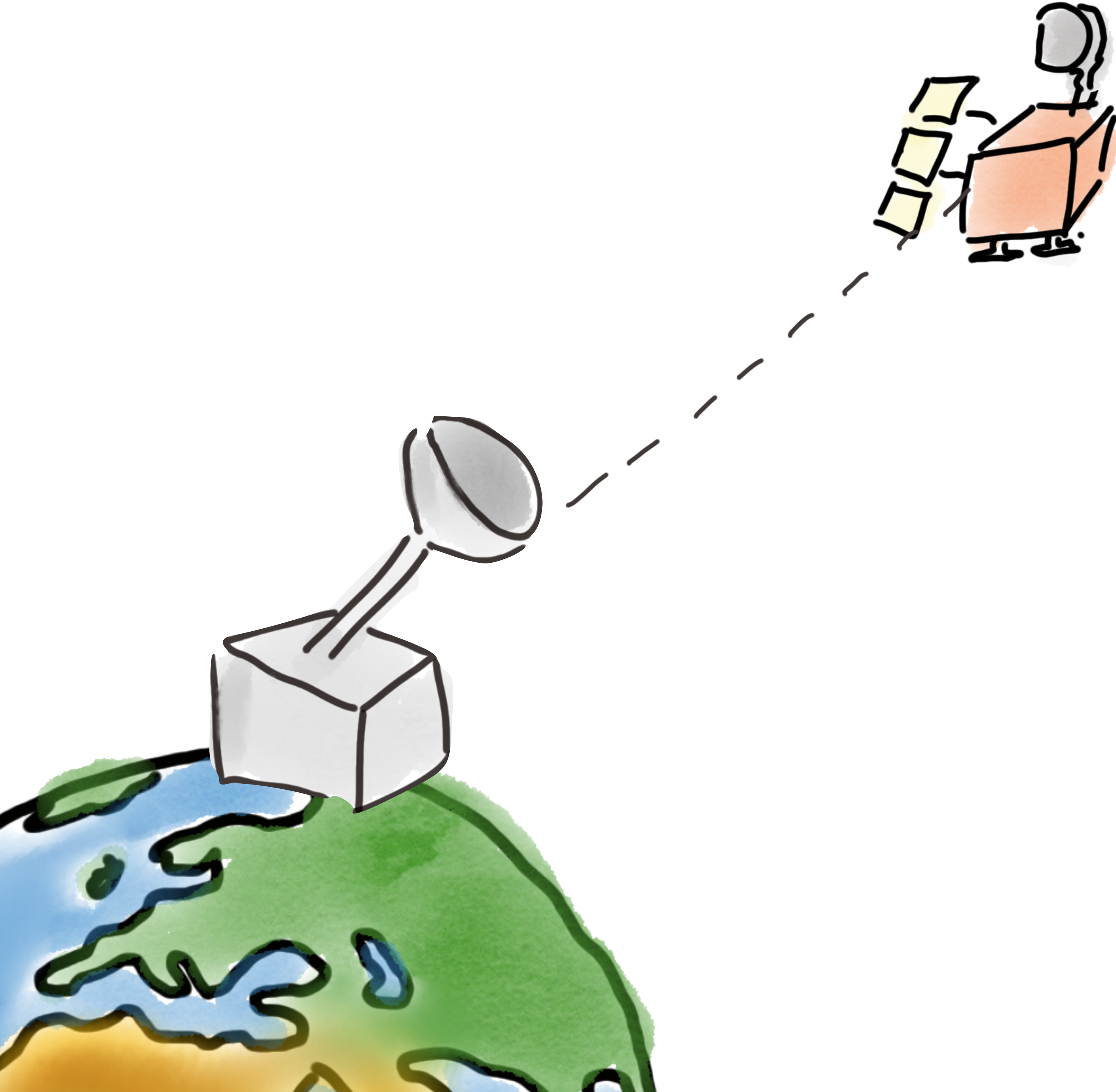






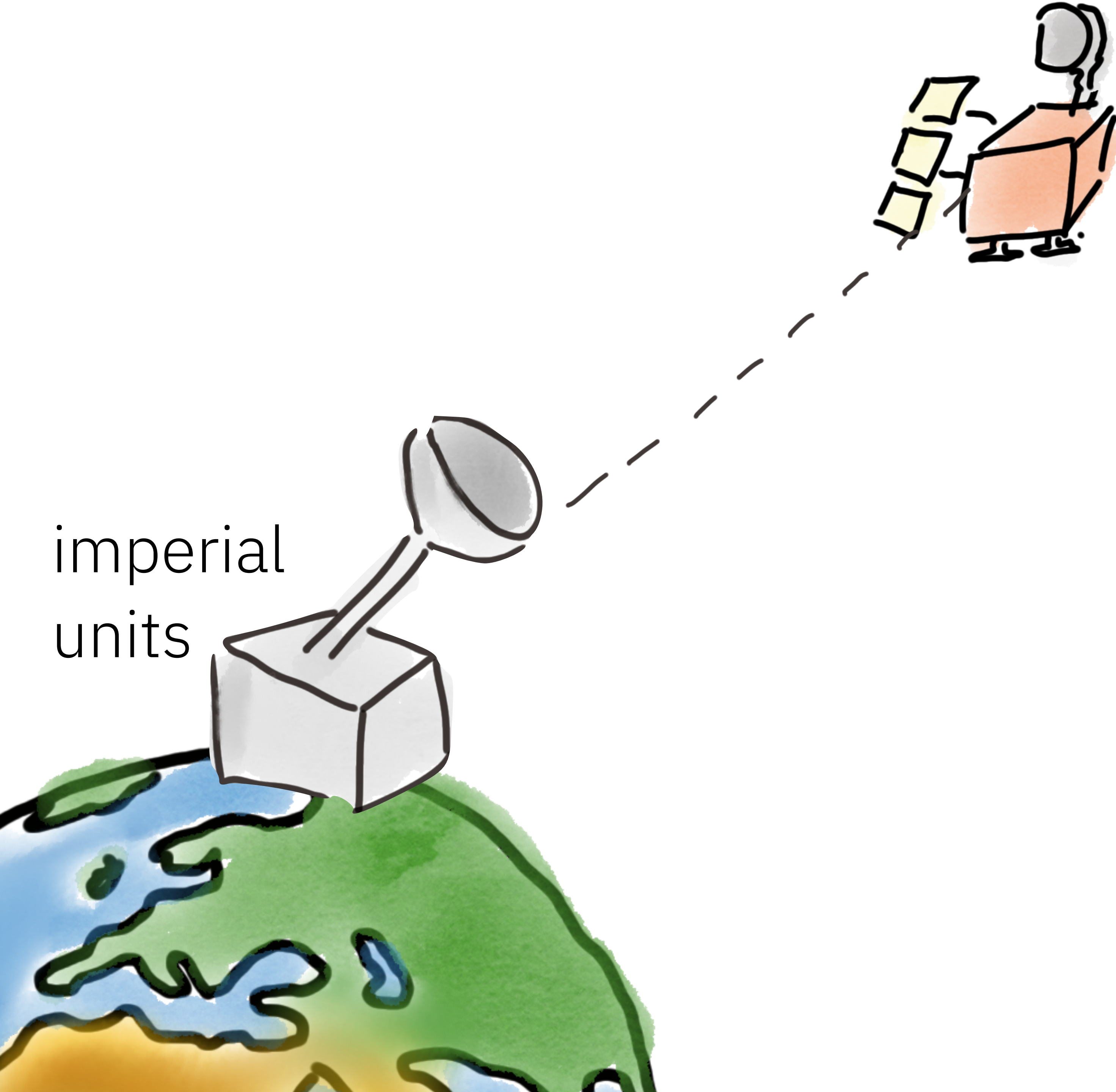






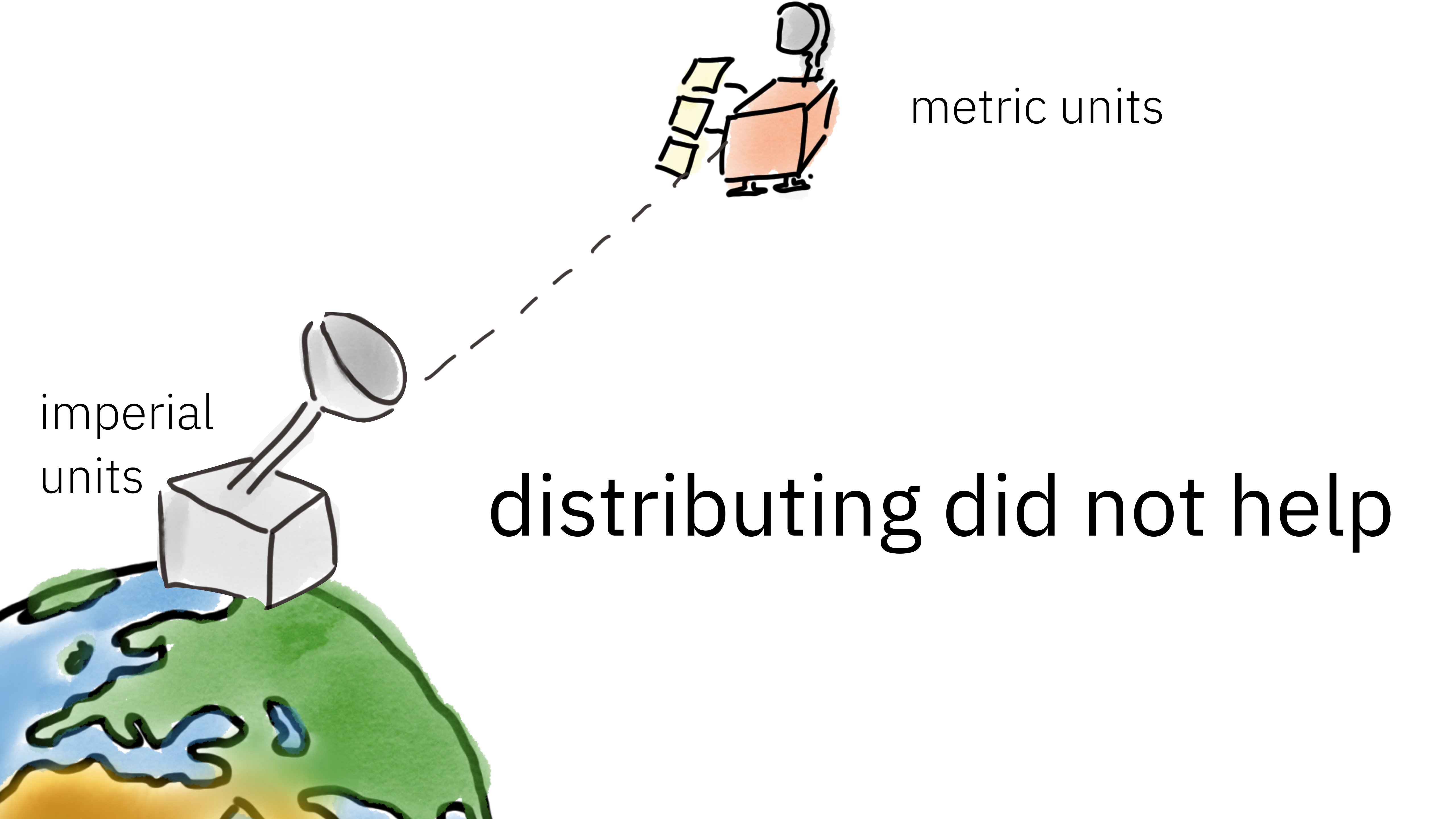
metric units





imperial  
units

metric units



imperial  
units

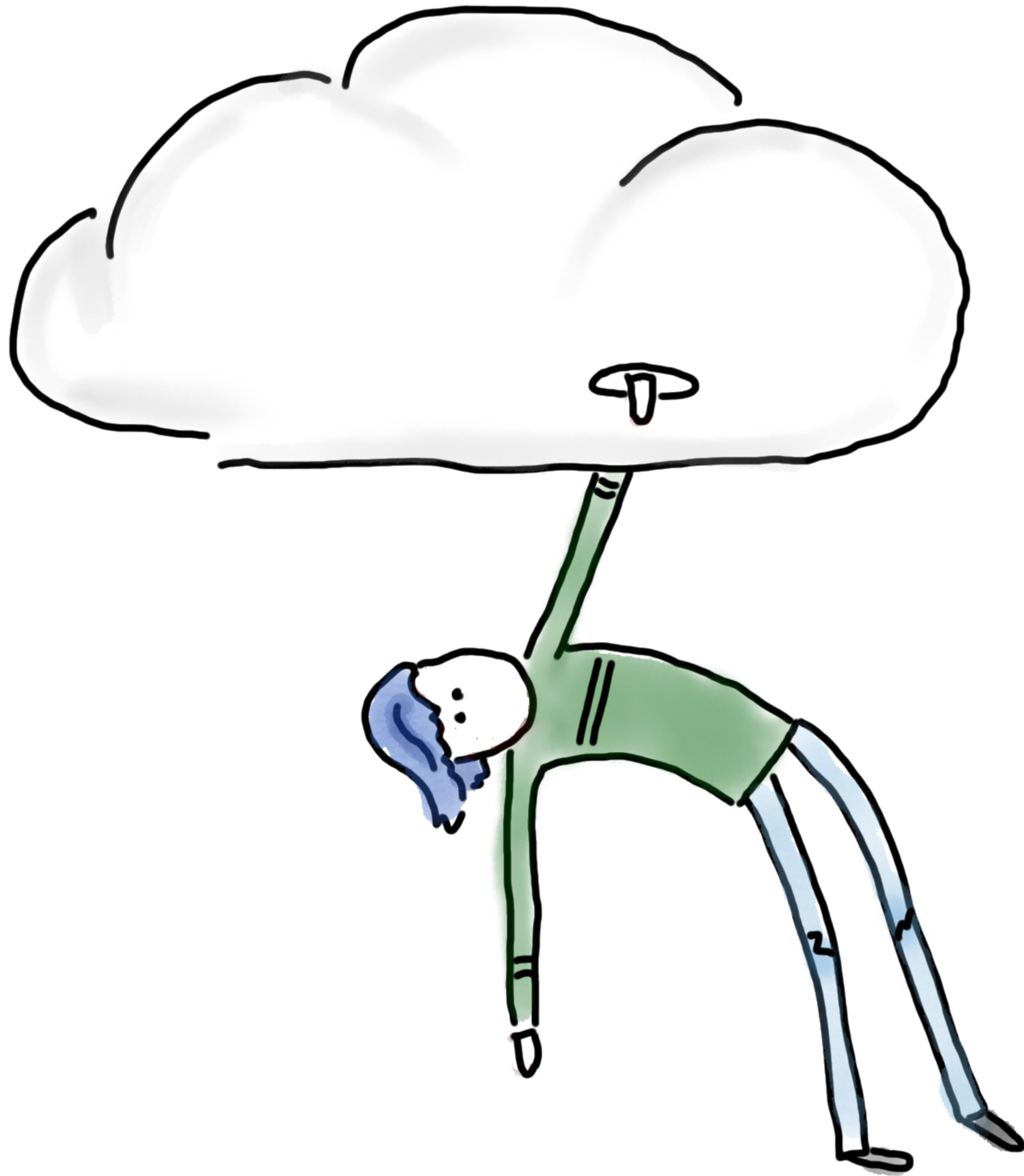
metric units

distributing did not help

microservices **need**  
consumer-driven contract tests



fail



the  
'someday'  
automation



“our tests aren’t  
automated”

“we don’t know if  
our code works”



the not-actually-  
continuous  
continuous integration  
and continuous  
deployment

“we have a CI/CD”



CI/CD is something you **do**  
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 ....”



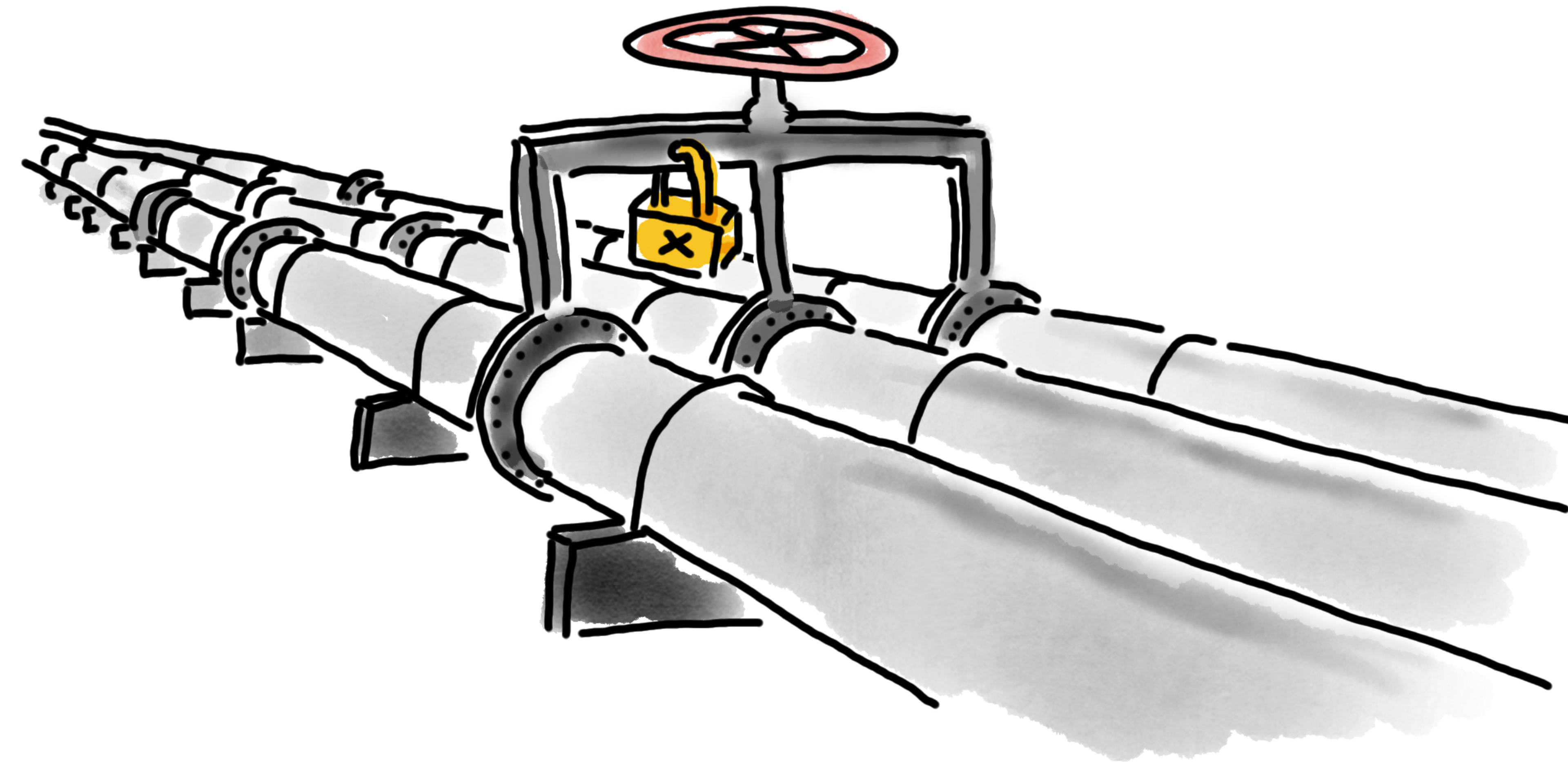
# **continuous.**

I do not think that word means  
what you think it means.

“we can’t actually **release** this.”

“we can’t release this microservice...

we deploy all our microservices at the same time.”





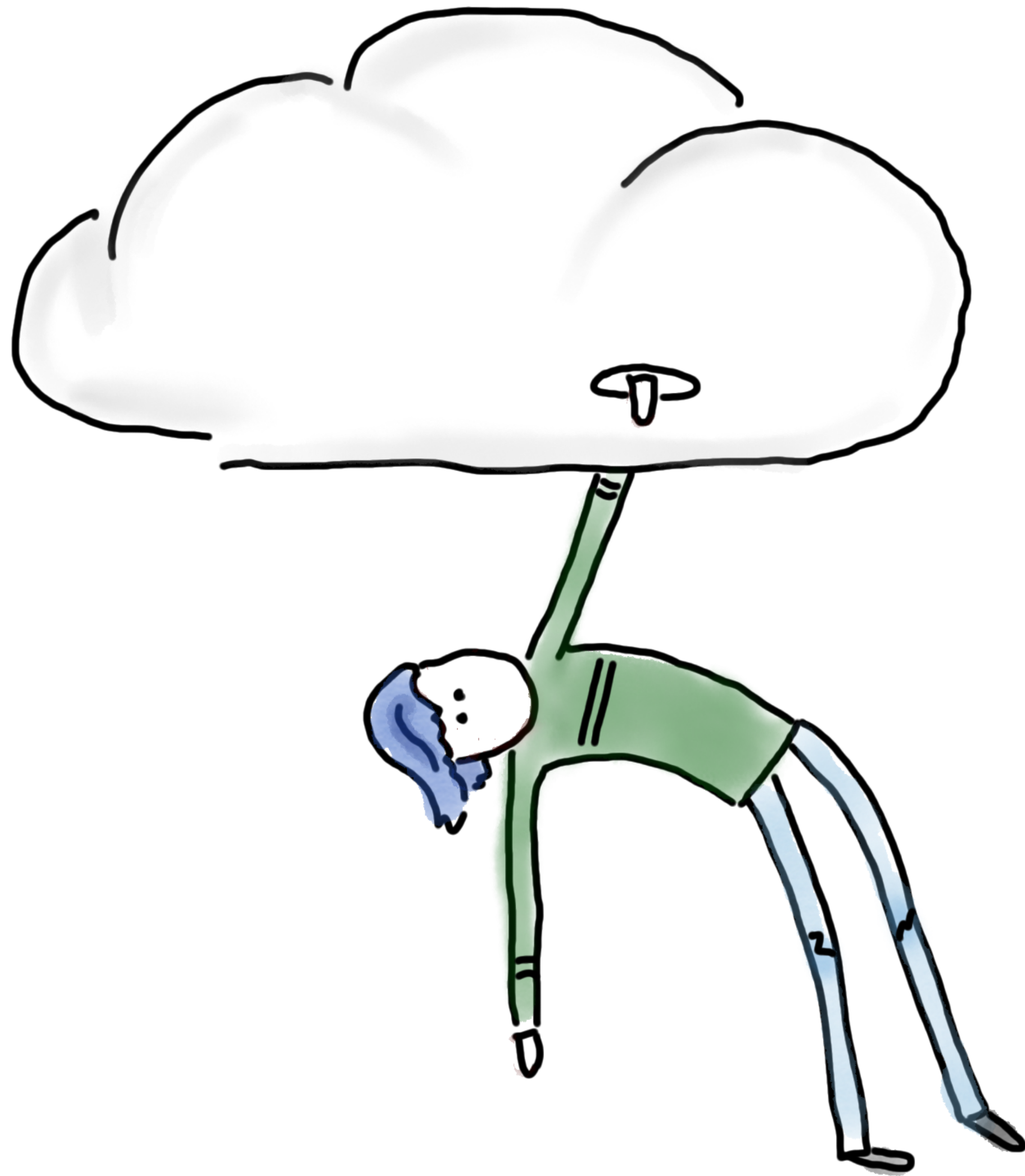
# deferred wiring

# feature flags

A/B testing  
canary deploys

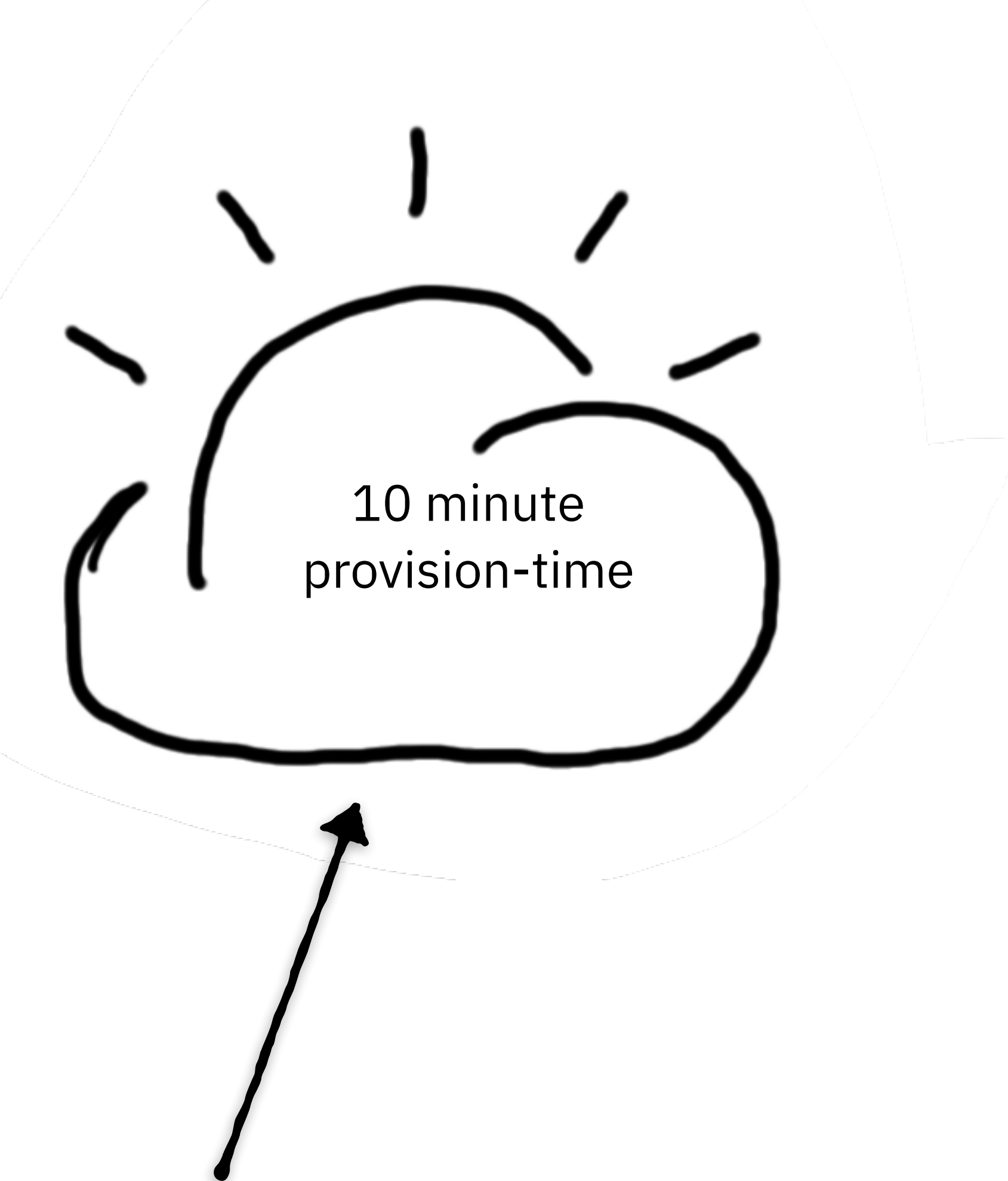


fail



the locked-  
down totally  
rigid inflexible  
un-cloudy cloud

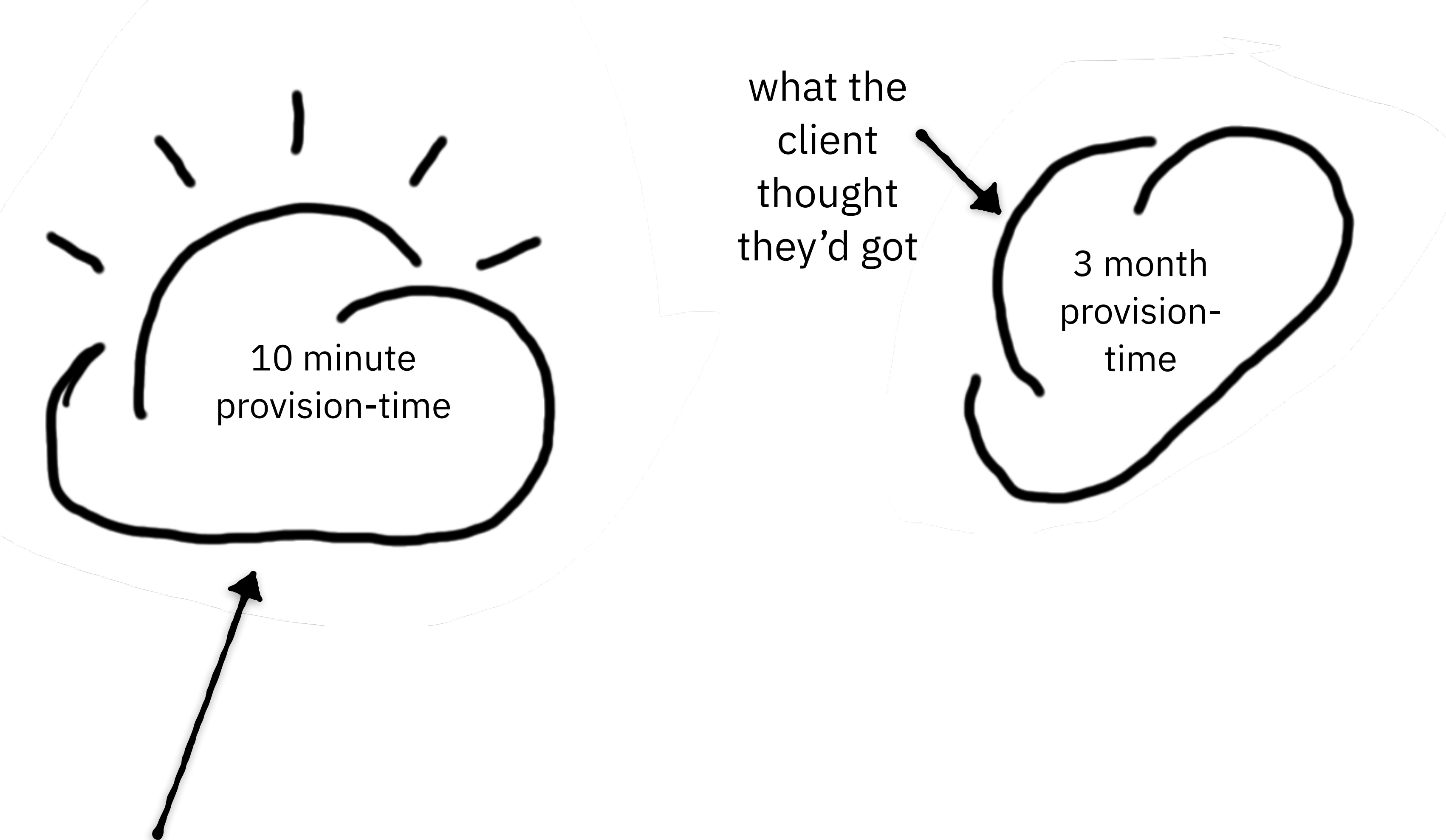
“this provisioning  
software is broken”



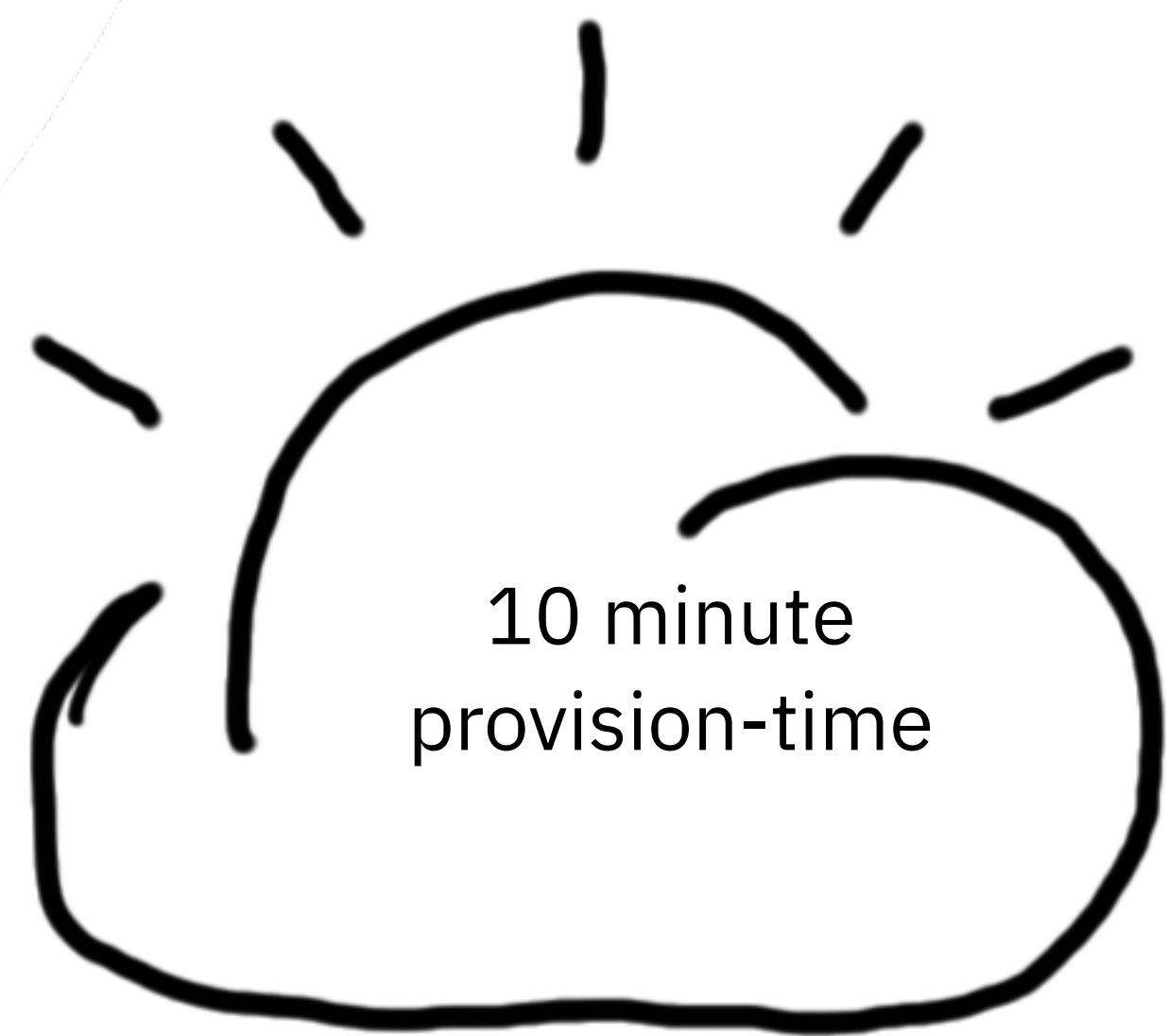
what we sold

“this provisioning  
software is broken”



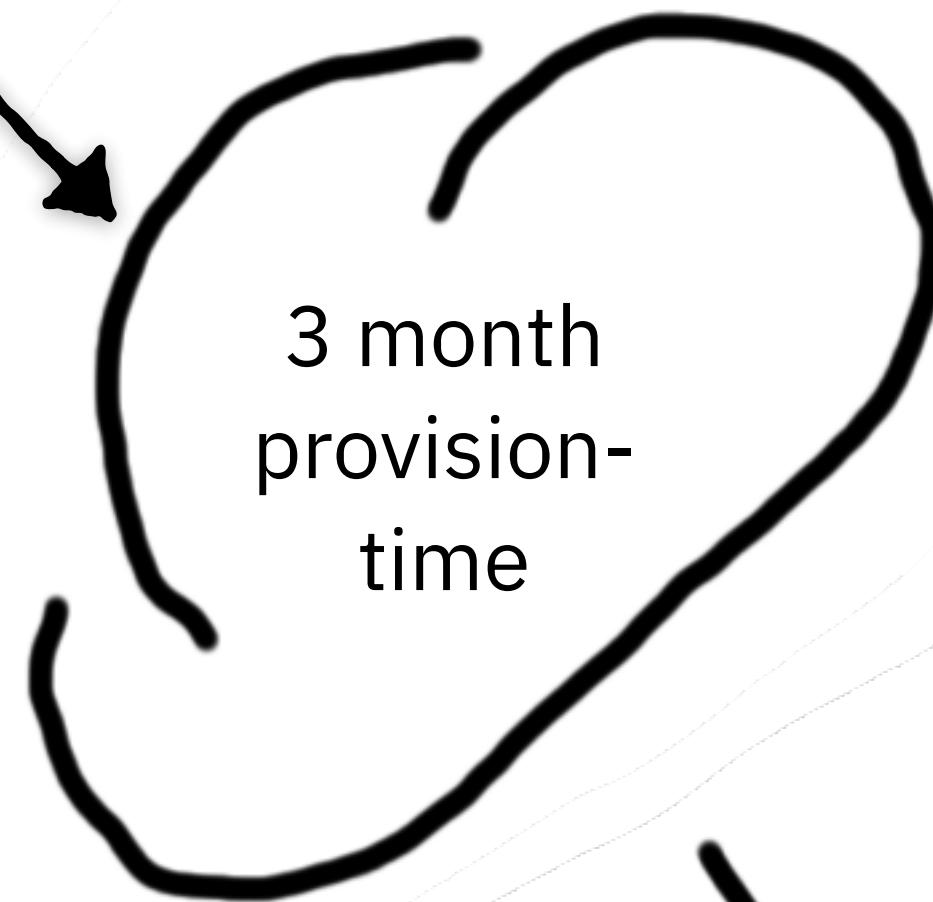


“this provisioning software is broken”



what we sold

what the  
client  
thought  
they'd got



the reason

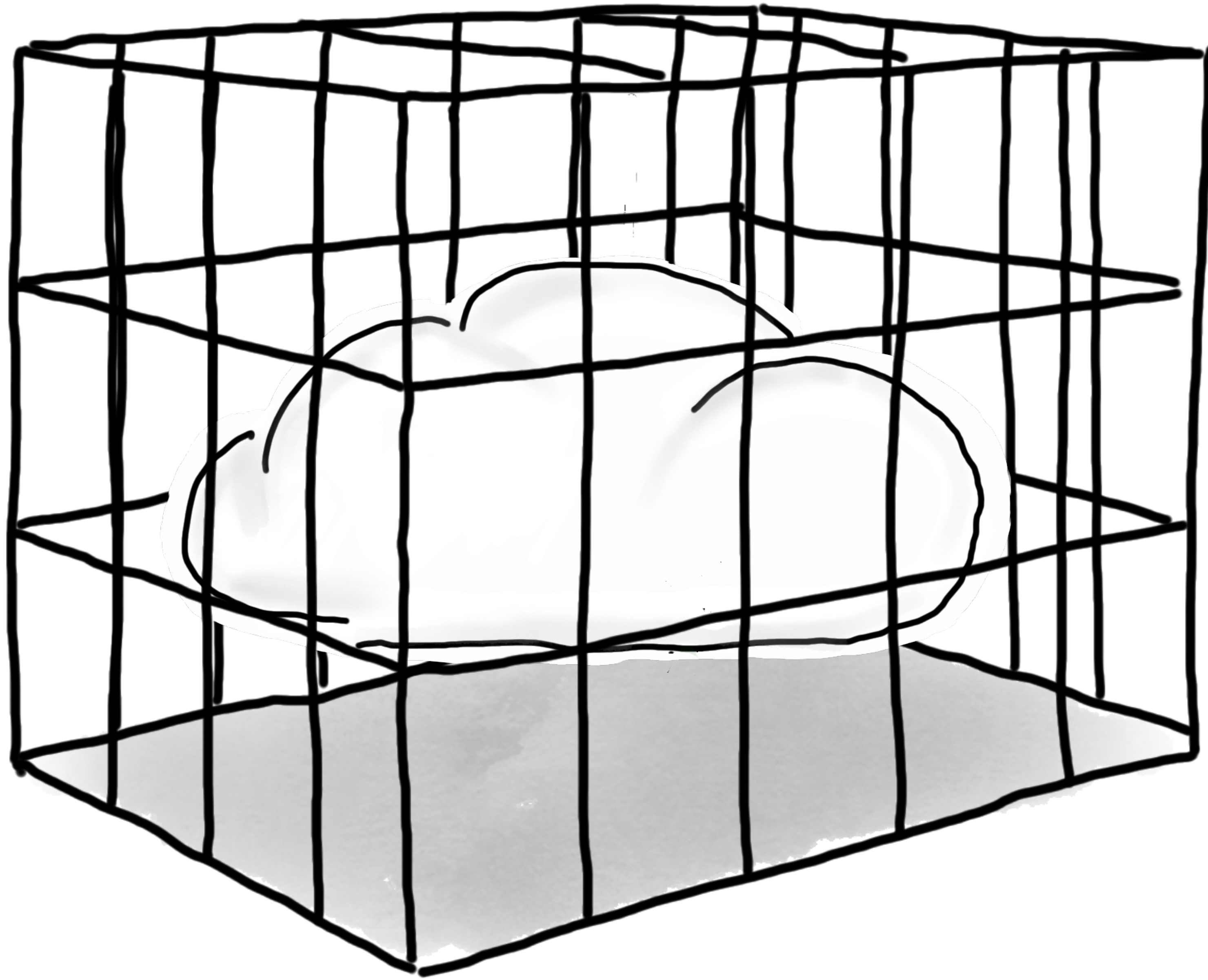


“this provisioning  
software is broken”



#IBM

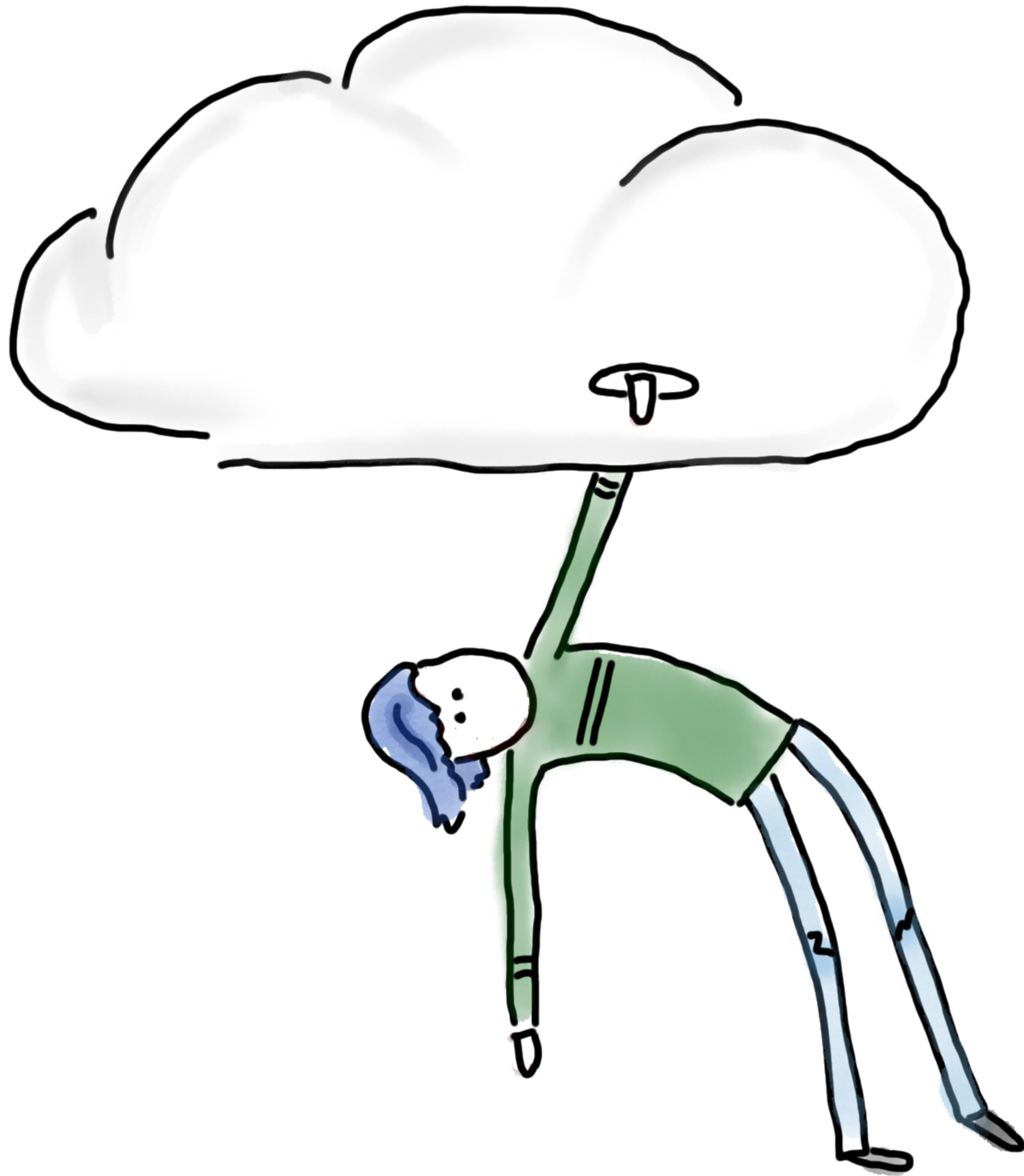
@holly\_cummins



old-style governance  
isn't going to work



fail



the  
mystery  
money pit

A cartoon illustration of a grey, multi-pointed star-like creature with a speech bubble. The creature has a soft, shaded grey body with several points of varying lengths. A large, black-outlined speech bubble originates from the creature's mouth area and extends towards the upper right. The speech bubble contains three lines of text. The creature's body has some faint vertical lines and a small tuft at the bottom. The overall style is simple and hand-drawn.

uh...

why are our cloud  
bills so large? what **is**  
all this stuff?

# FinOps

# ways to succeed at cloud native







# cloud native architecture ...

cloud native architecture ...  
**and**

# cloud native architecture ... **and** cloud native operations

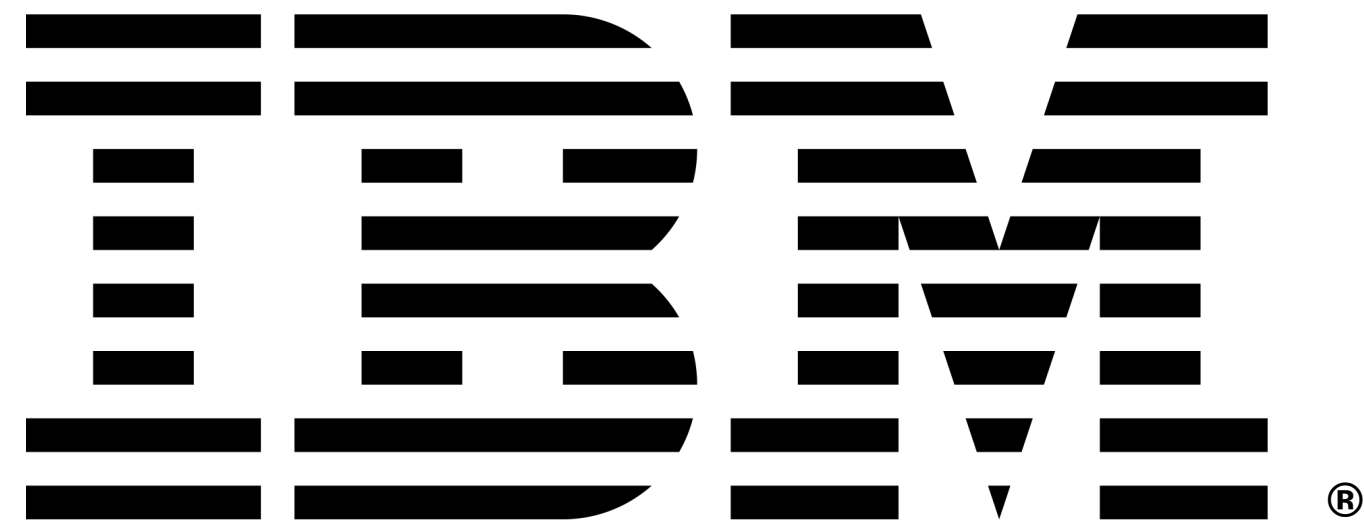


# align business and IT



optimise for feedback

be clear on what you're  
trying to achieve



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