

how - and why - to **modernise** your scruffy old java **applications**

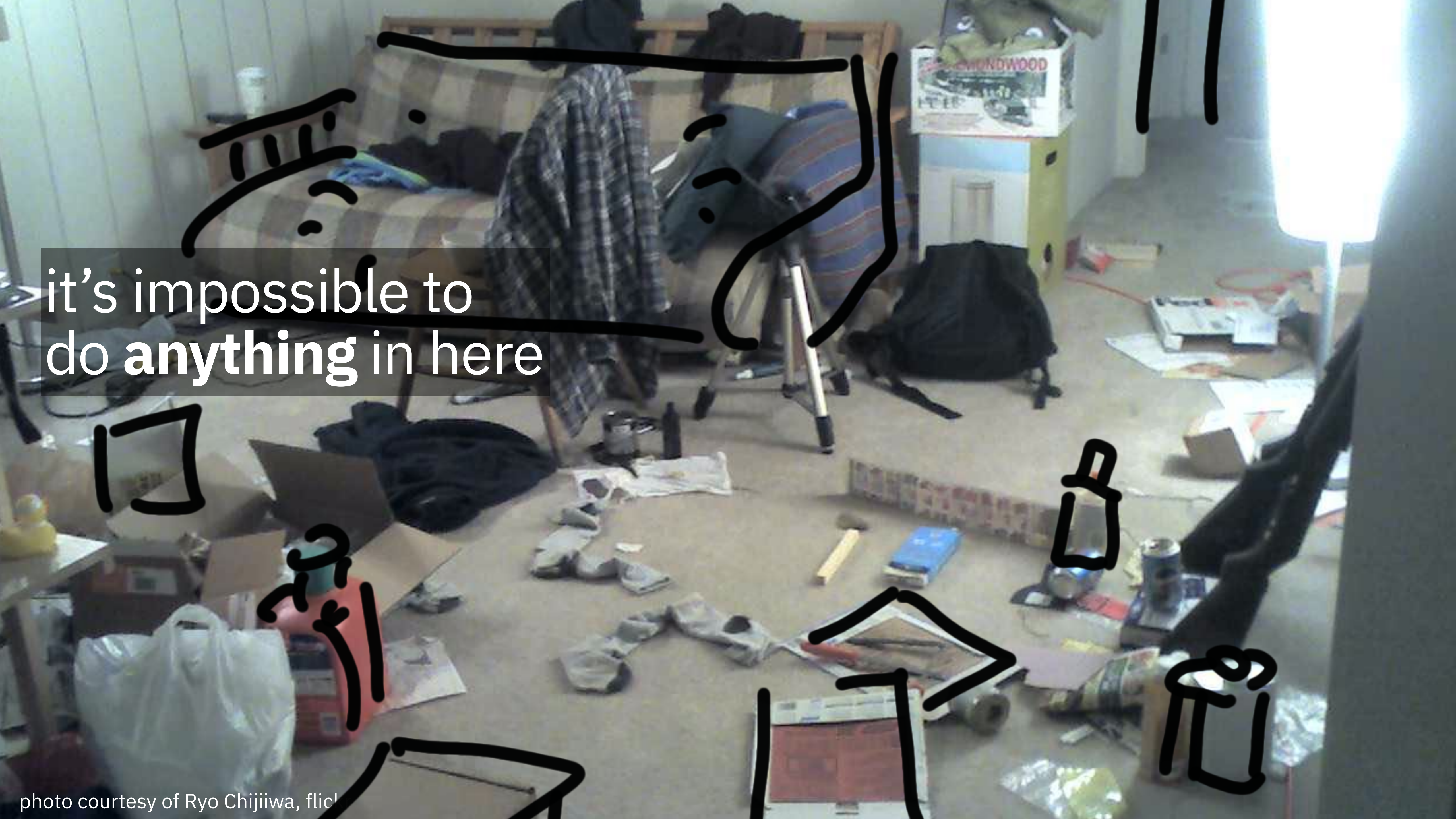
Holly Cummins
IBM Garage
@holly_cummins



a codebase is like a home

(thanks for *Livable Code*, Sarah Mei!)

does yours do
what you need?



it's impossible to
do **anything** in here

it made sense a
long time ago





it **never** made sense

it's too expensive to maintain



these problems are
too **fundamental**
for us to fix them



it needs capabilities
never envisioned in
the original



you **obviously** can't
retrofit a rollercoaster
to a ... oh.



you **obviously** can't
retrofit a rollercoaster
to a ... oh.



Room For Rent

~~_____~~ t.--Excellent location. Lot's of space. Quiet and friendly atmosphere.

\$800 a month

Includes Utilities, Cable, Internet, Laundry
(All the comforts of home)

Lease starting June 1st, although accommodations can be made if you're moving out of campus housing.

Looking for a female, clean, quiet, *mature* and *incredibly normal* roommate.

No hipsters, please.

Non-smoking. Non-partying.

Must love Ashley, our cat.

no one is
allowed to
do stuff

but ...



**sometimes the change you need
to make isn't the change you
think you need to make**

shiny is temporary
habits are persistent



“we’re moving too slowly.

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we should modernise our COBOL
application into microservices.

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our release board meets twice a year.”

to the code!

Public
Private
Public
Private
Public
Private

the problem with app mod demos



the problem with app mod demos

if an application is too complex to
manage ... untangling it won't be trivial



strangler pattern

Photo by David Casteel, flickr



mono 2 micro

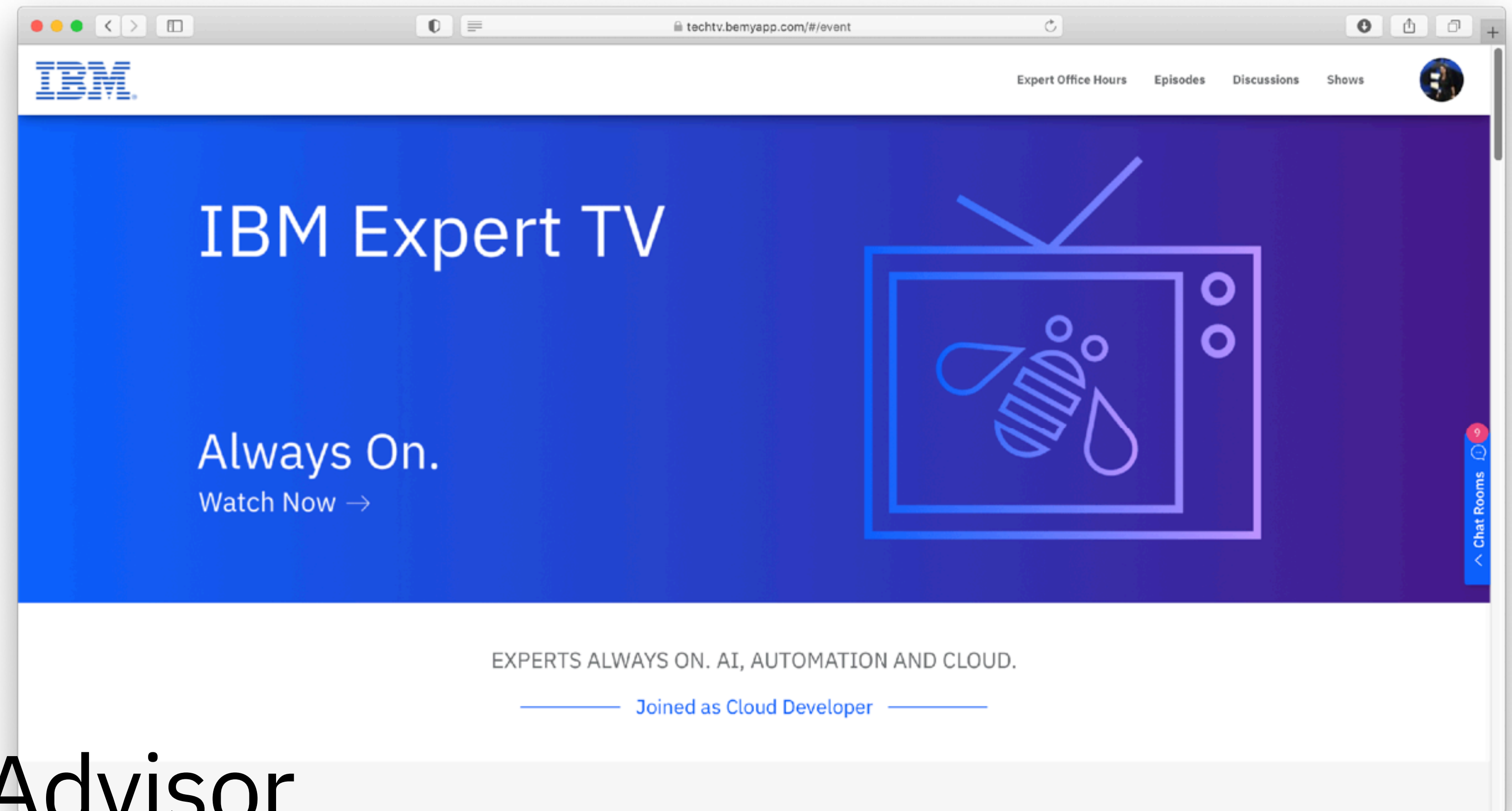
Transformation Advisor

WebSphere Application Migration Toolkit

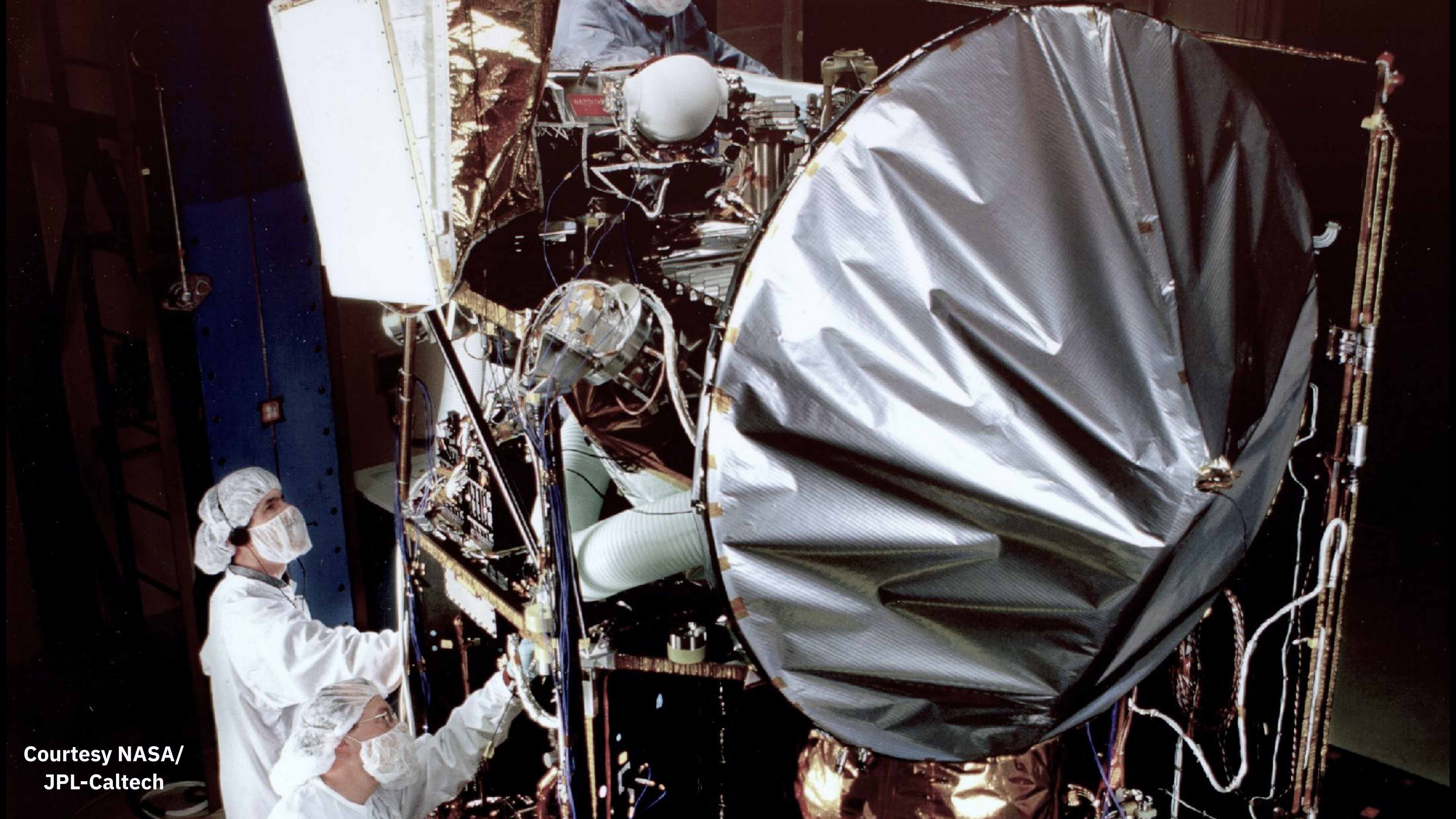
mono 2 micro

Transformation Advisor

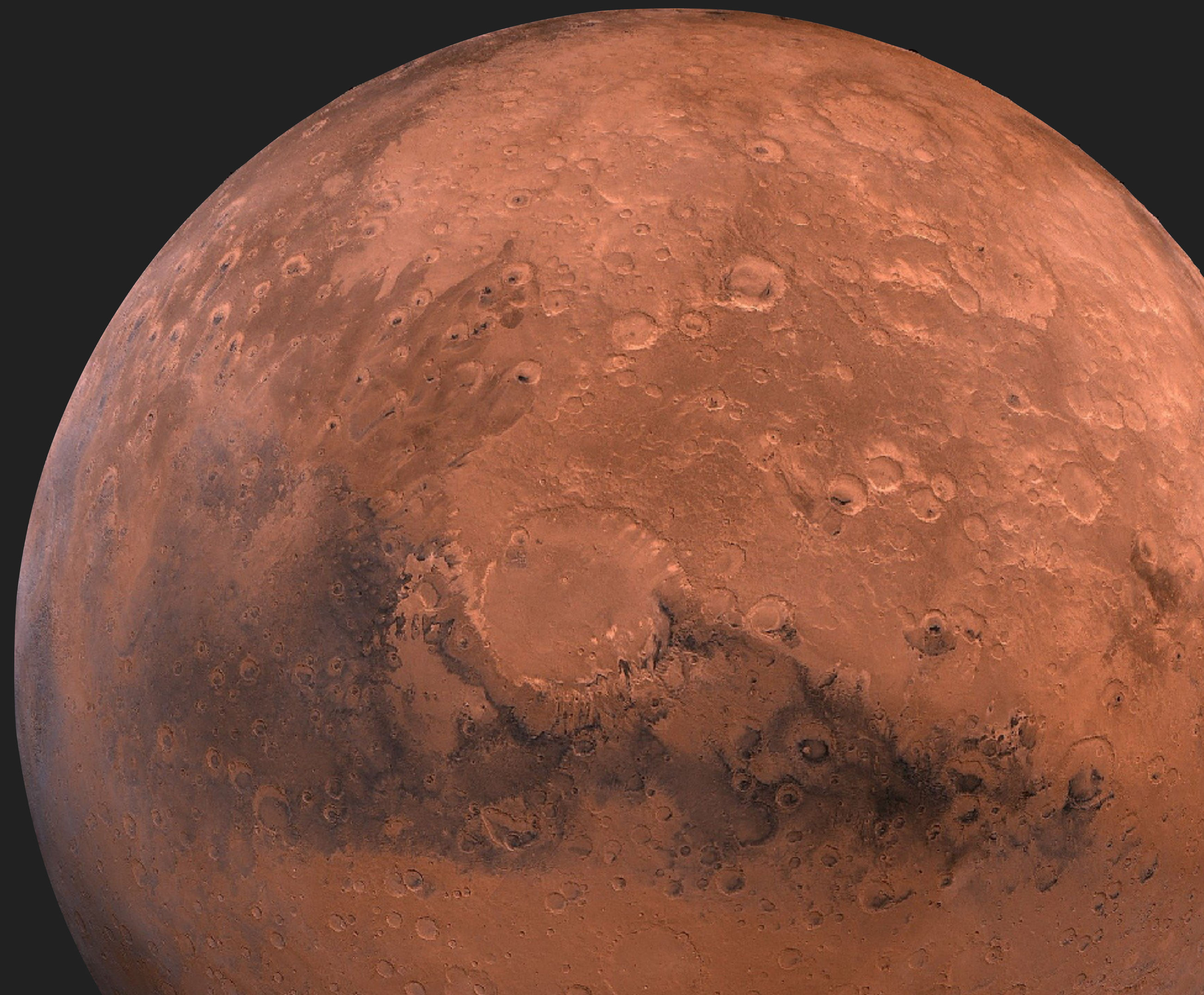
WebSphere Application Migration Toolkit

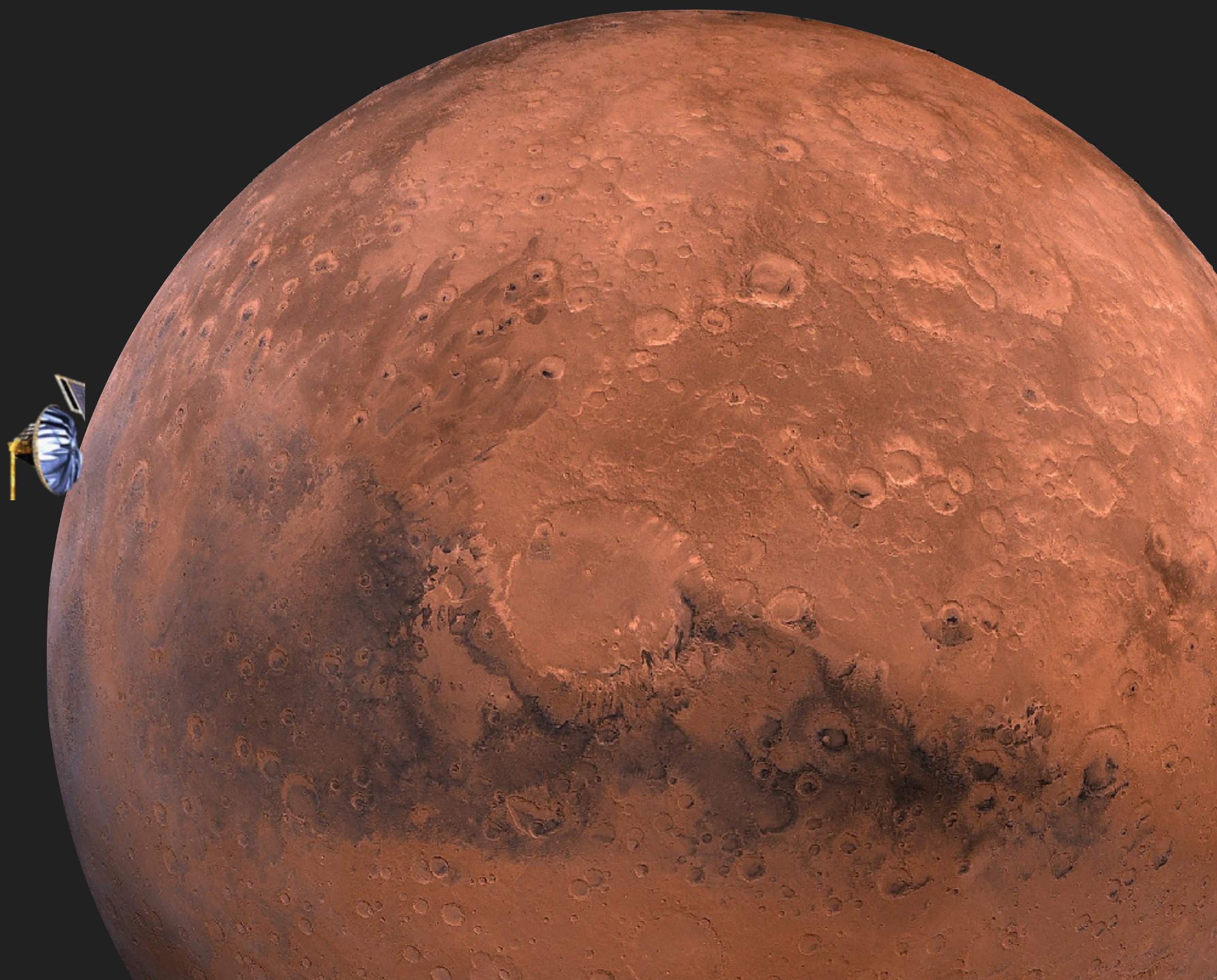


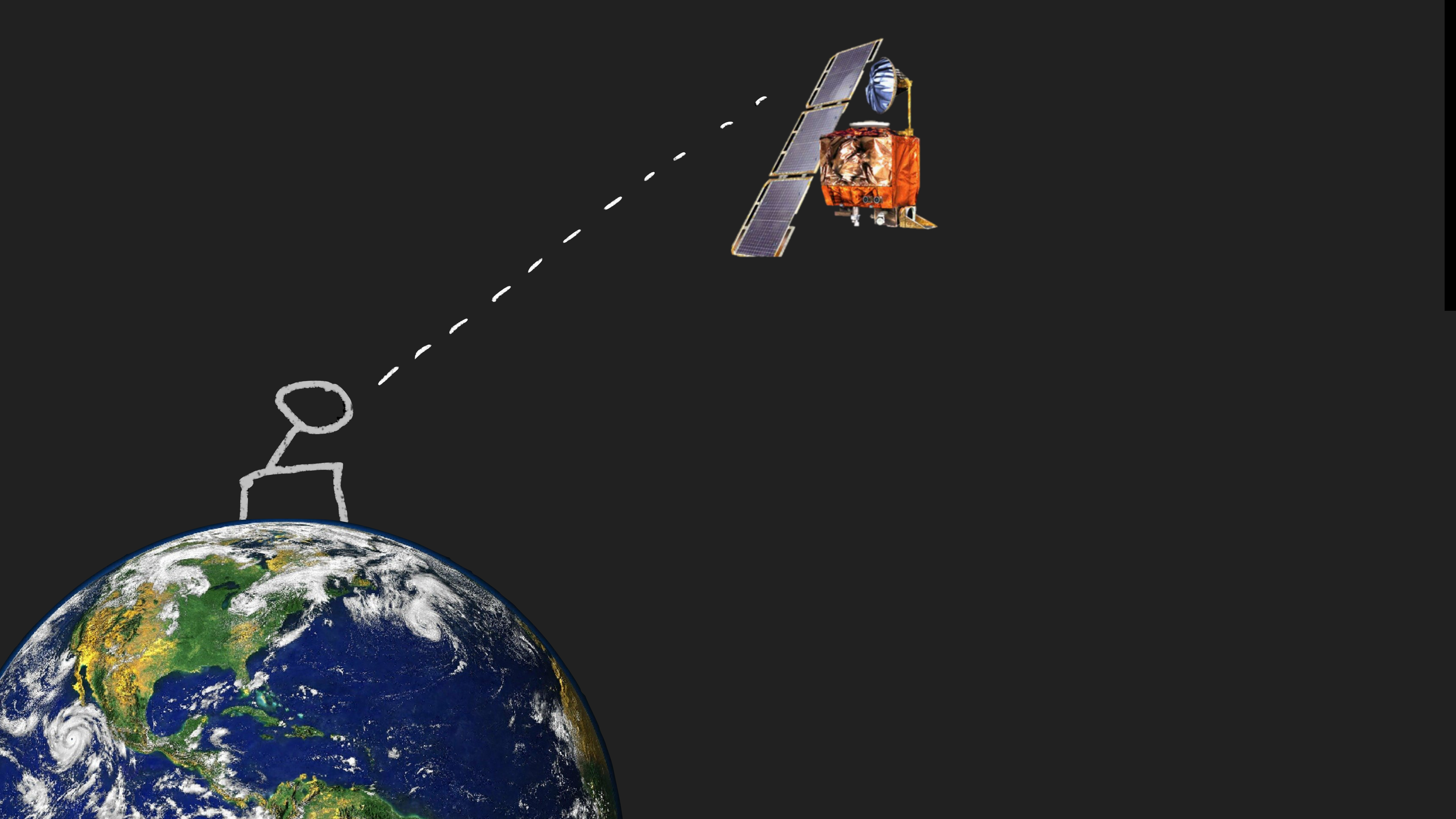
“every time we touch one
microservice, all the others break.”

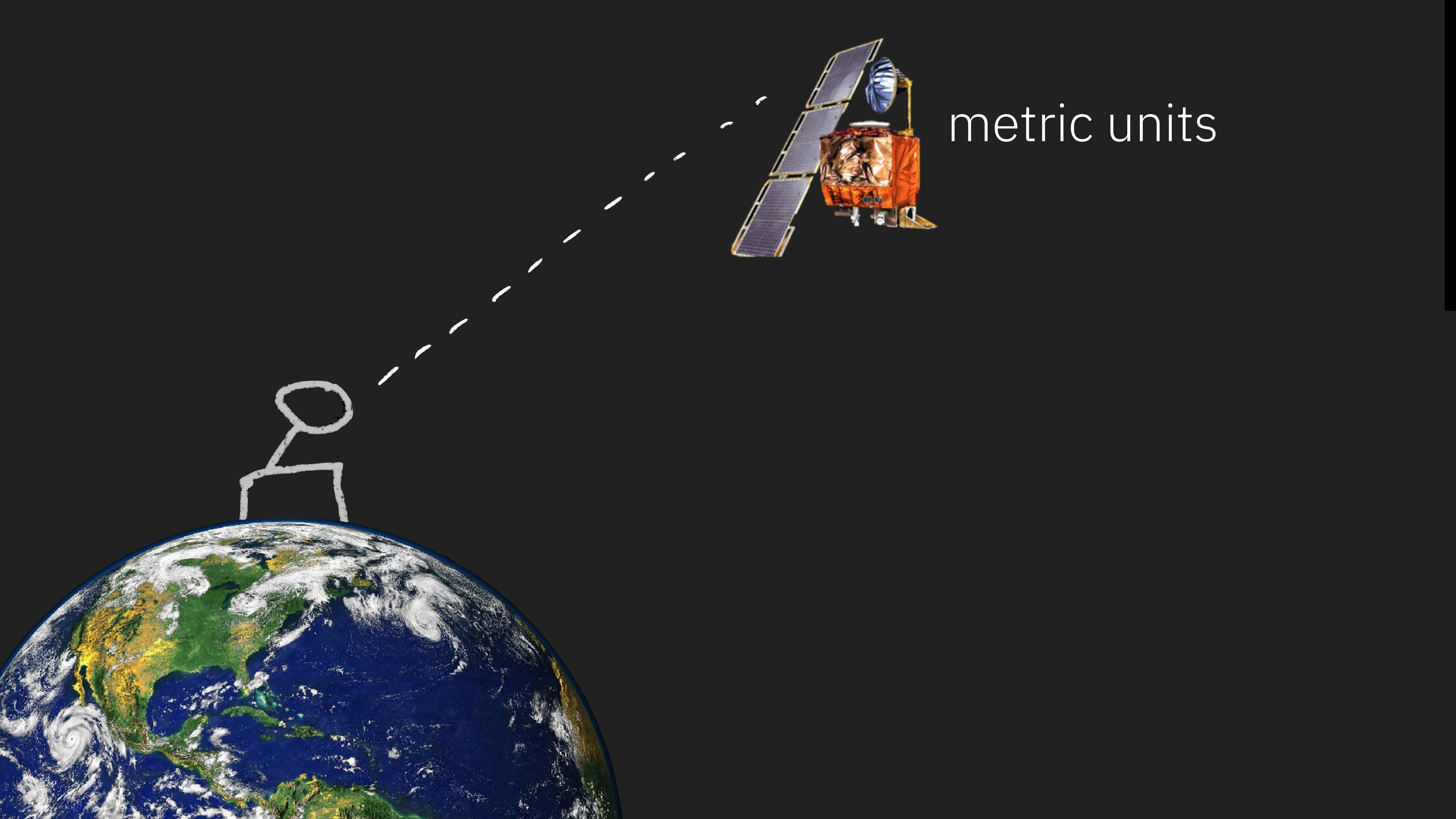


Courtesy NASA/
JPL-Caltech

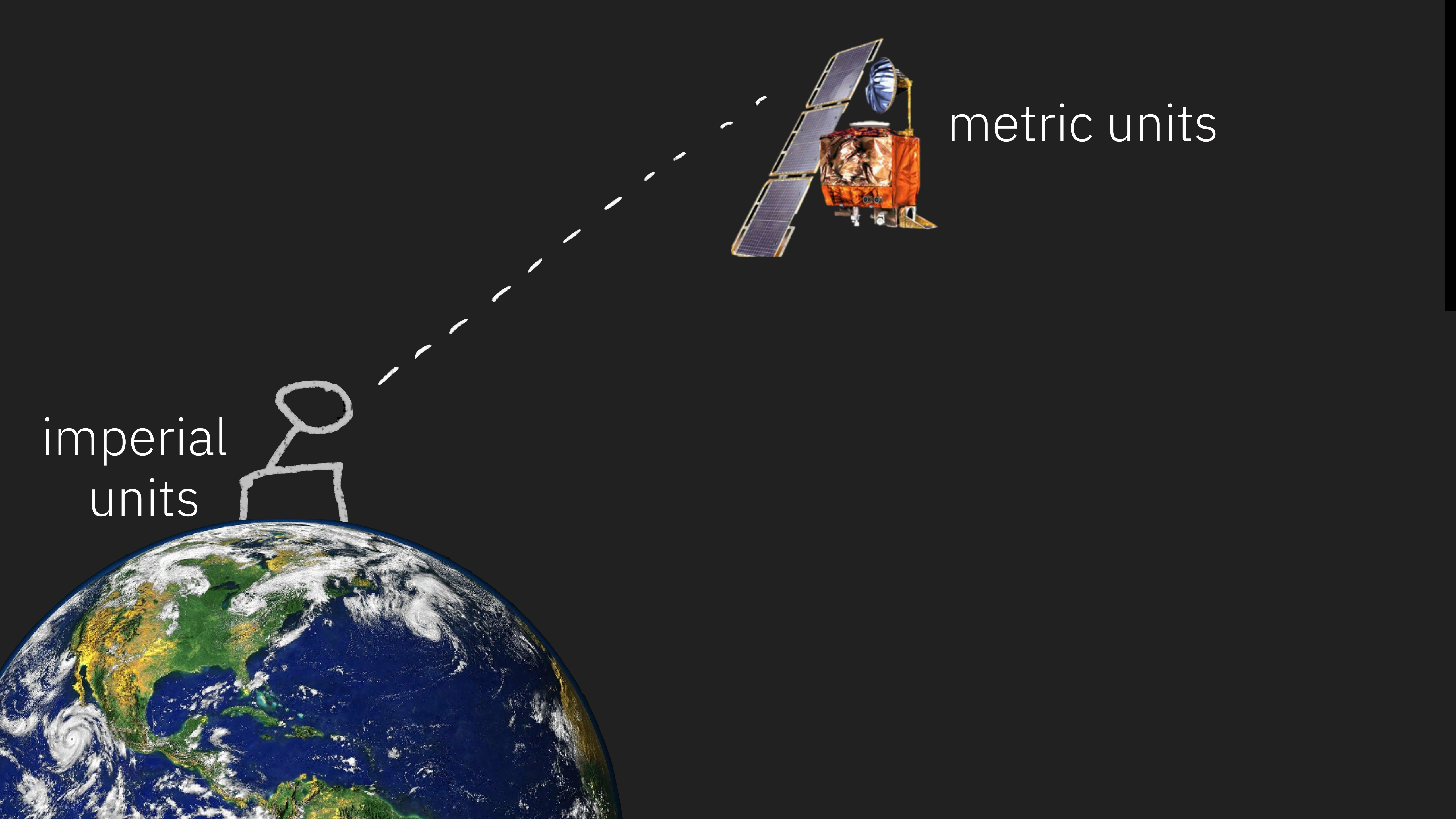






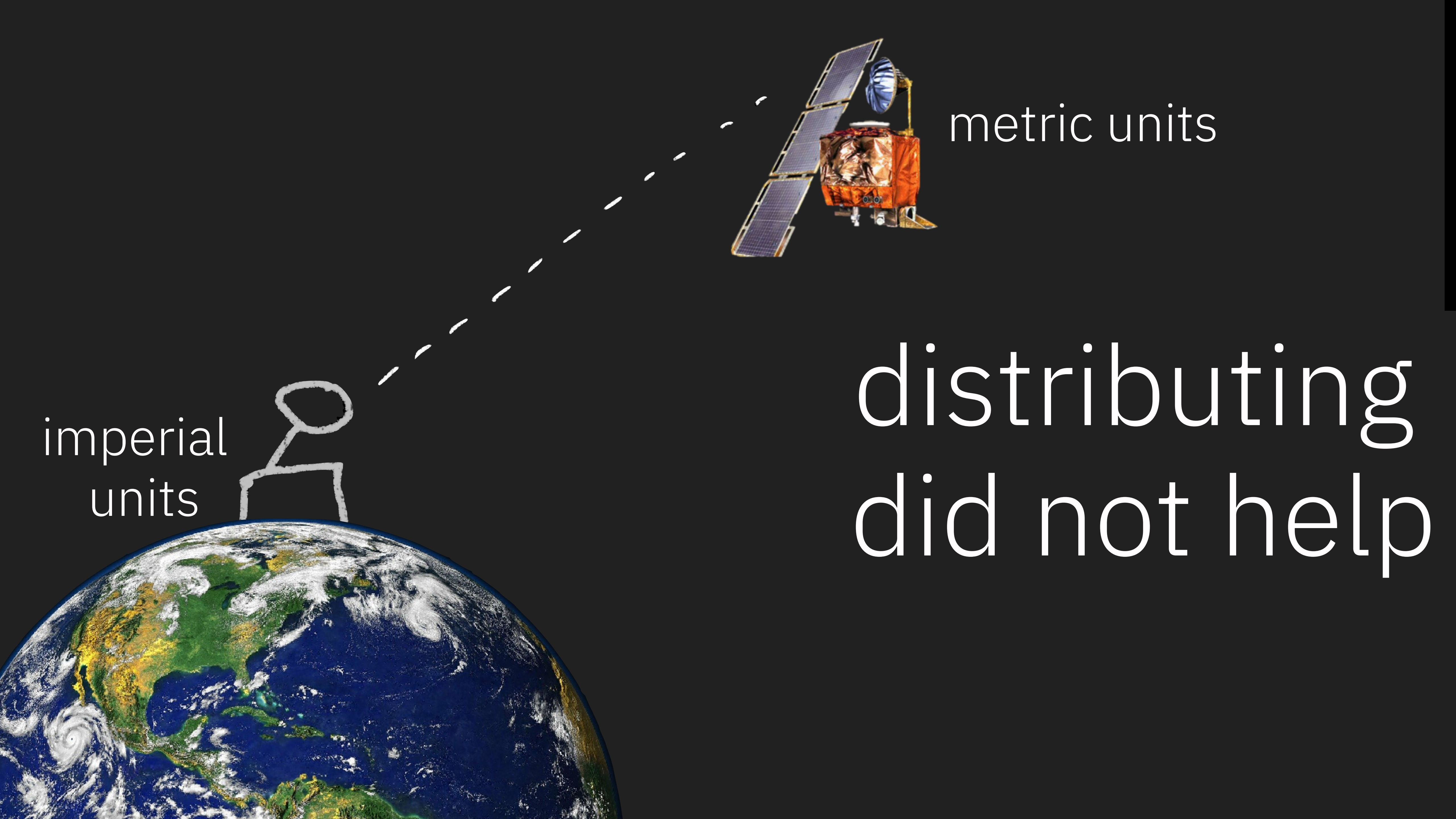


metric units



imperial
units

metric units



imperial
units

metric units

distributing
did not help

distributed \neq decoupled

If you're going to do microservices,
you need to get good at automation.

And testing.



the test
pyramid



the test
pyramid



the test
pyramid



the test
pyramid



How to test a fire alarm?



how **not** to test a fire alarm



unit testing a fire
alarm



uh ... is that enough?



contract testing a
fire alarm

to the code!

Public
Private
Public
Private
Public
Private

microservices **need**
consumer-driven contract tests

get the code:

ibm.biz/holly-tech-tv

learn more about application modernisation:

watch Dana Price on IBM Tech TV, October 29