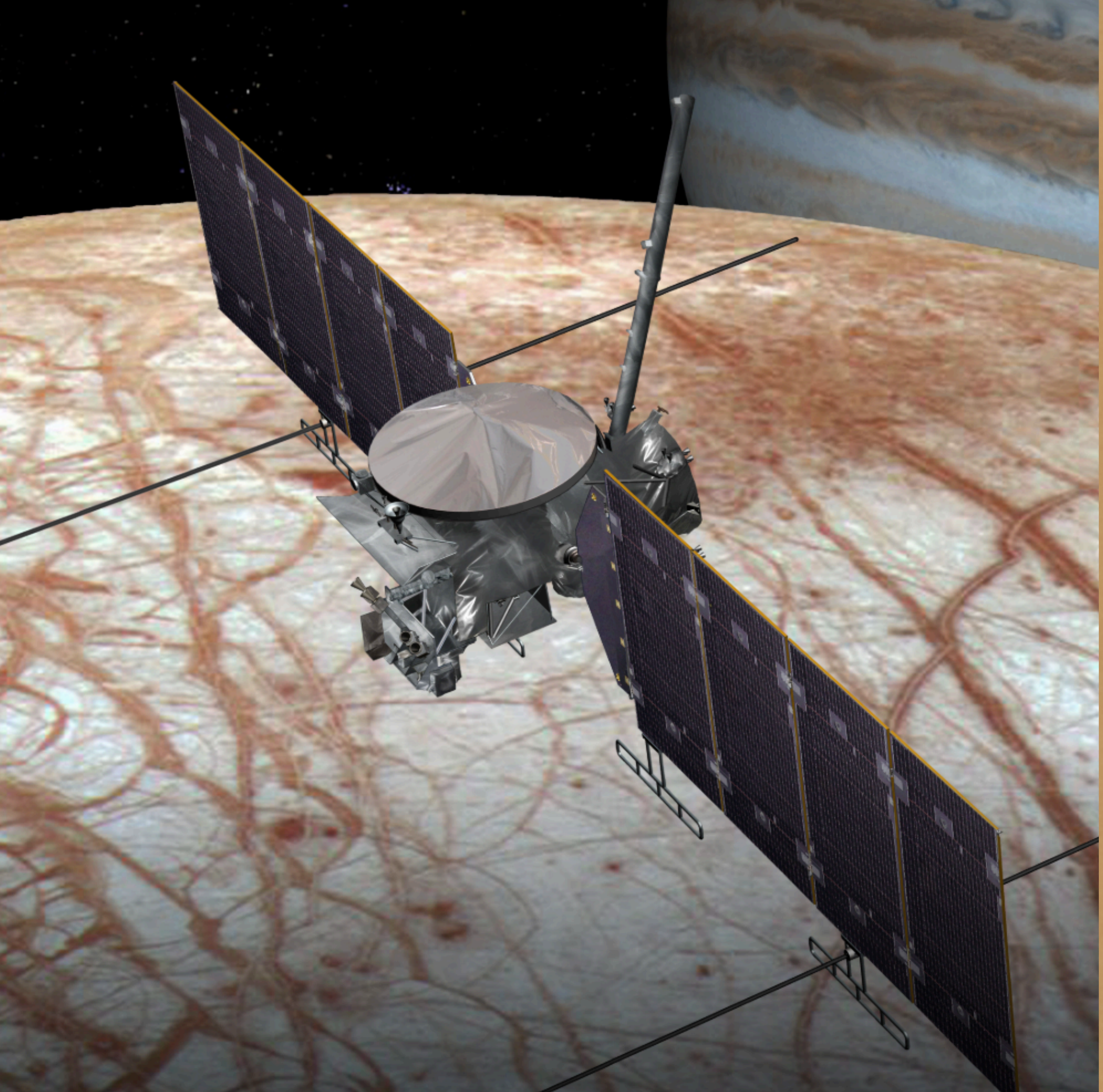


# Radical Change Management

Advocating for UX in a Heritage-Engineering-centric Environment

Marijke Jorritsma,
Senior User Experience Designer

Jet Propulsion Laboratory
California Institute of Technology

# When I say “radical” I mean…

Like This

Not This

**Jet Propulsion Laboratory**
California Institute of Technology

1 of 10 NASA centers

Jointly run by NASA and California Institute of Technology

5,000+ employees

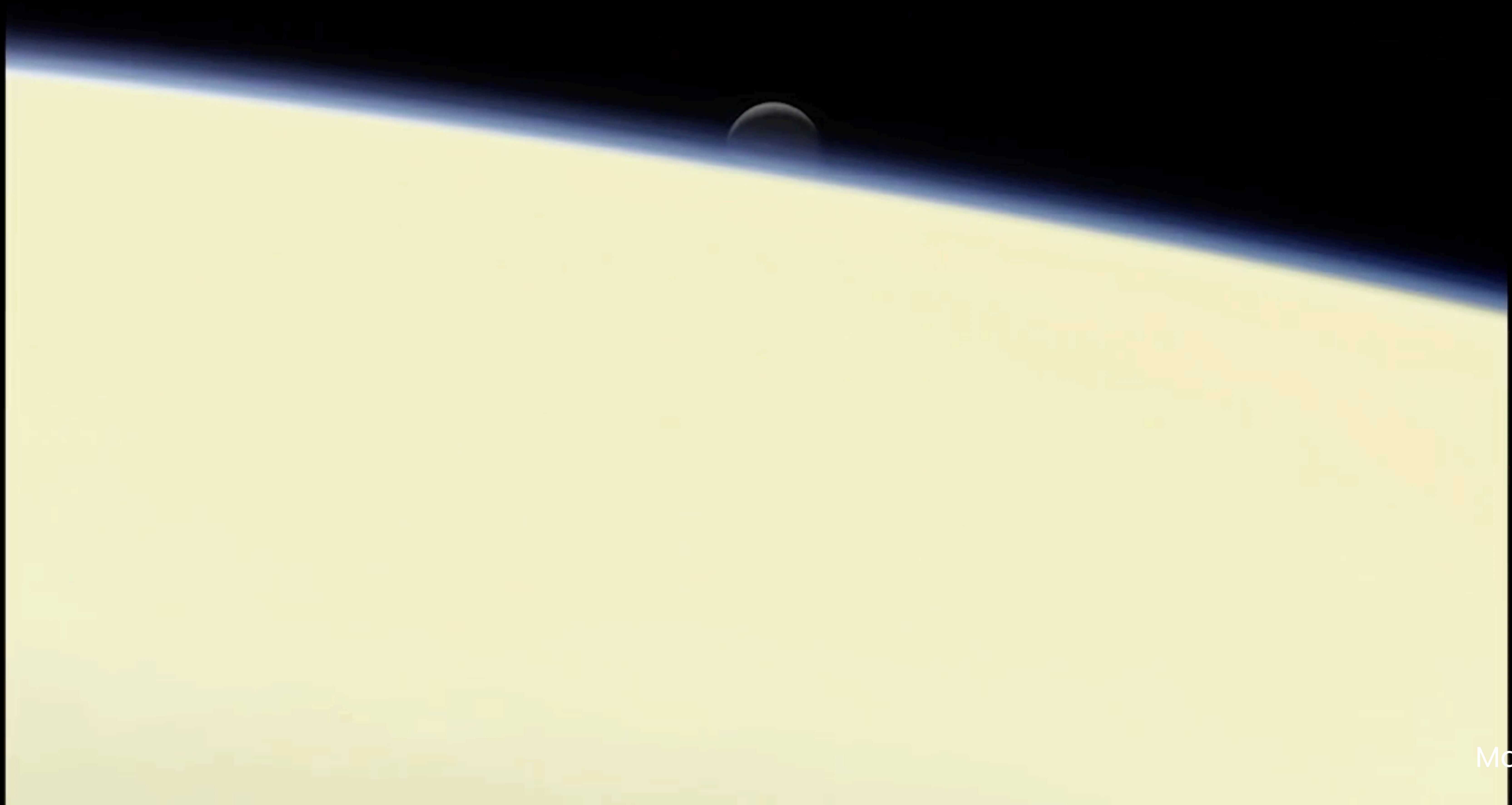
20 Spacecraft, 10 major instruments

100% Best NASA Twitter Handles

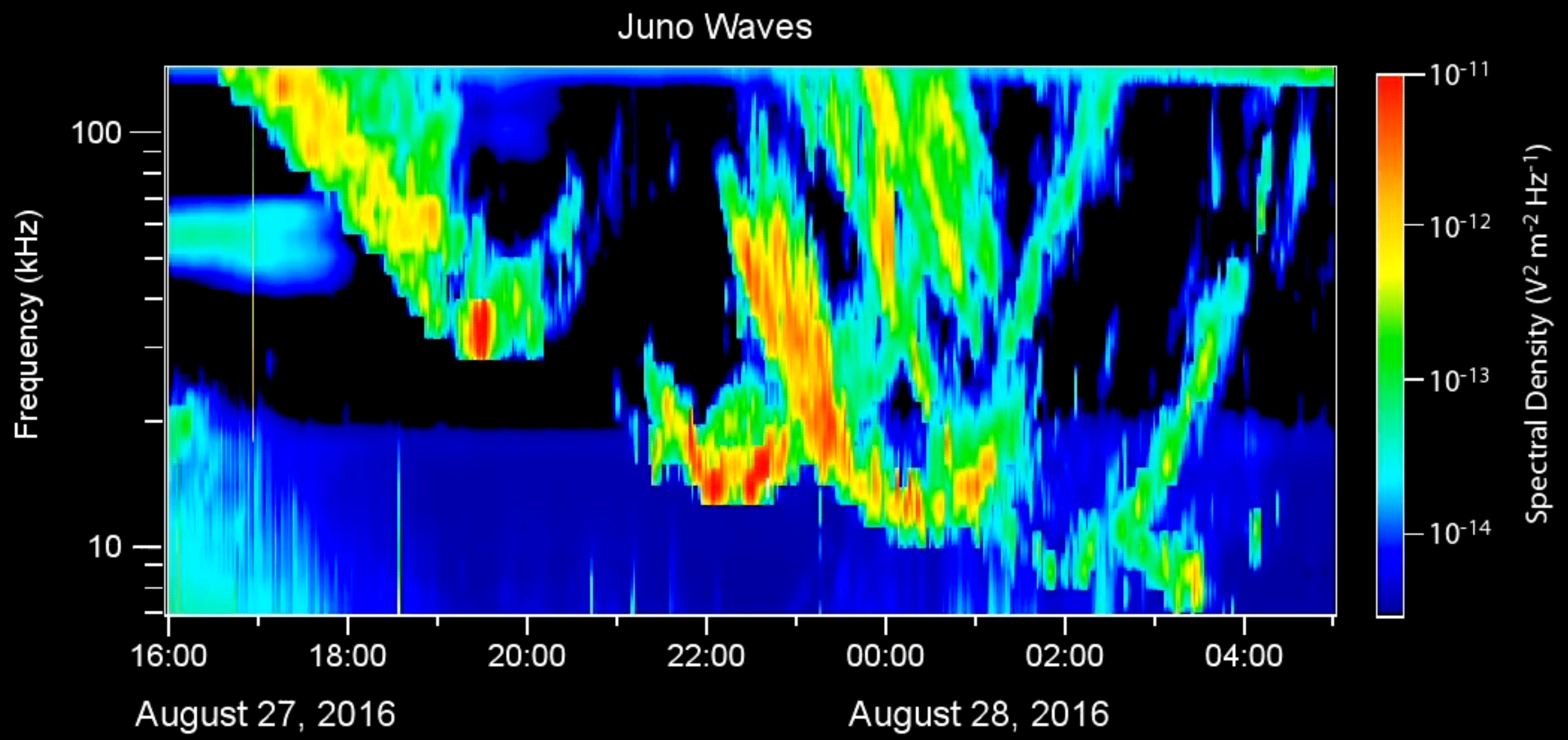
Marijke Jorritsma/IXDA/2019

# Mars Rovers & Landers

# Cassini



# Juno


Juno Waves
Frequency (kHz)
100
10
16:00
18:00
20:00
22:00
00:00
02:00
04:00
August 27, 2016
August 28, 2016
Spectral Density ($V^2$ $m^{-2}$ $Hz^{-1}$)
$10^{-11}$
$10^{-12}$
$10^{-13}$
$10^{-14}$


TWO VOYAGERS
BEGAN AN ODYSSEY

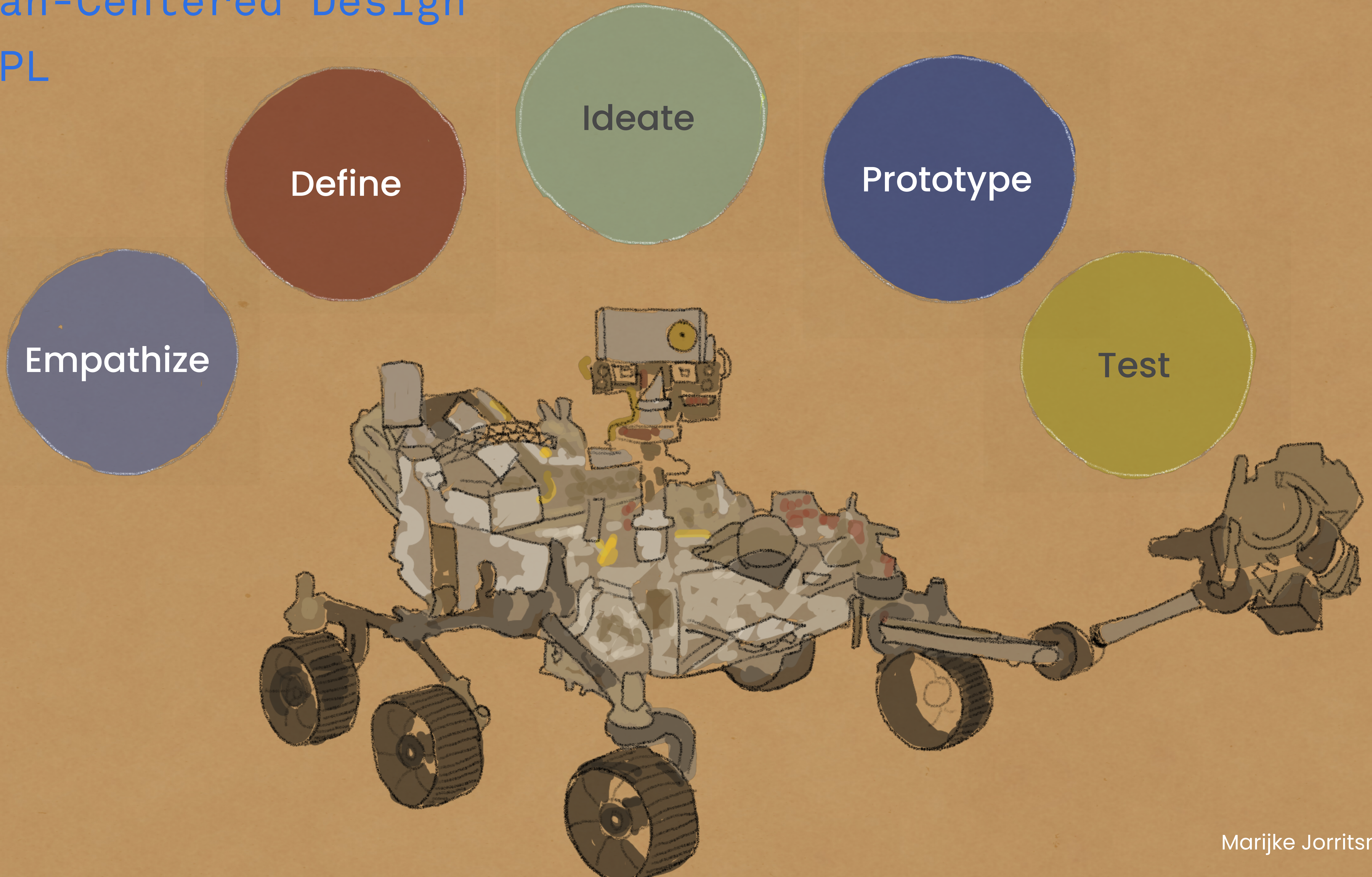
# JPL Mission History


mission launch date x area of study

past / present / future / proposed

jpl.nasa.gov

# Human-Centered Design @ JPL

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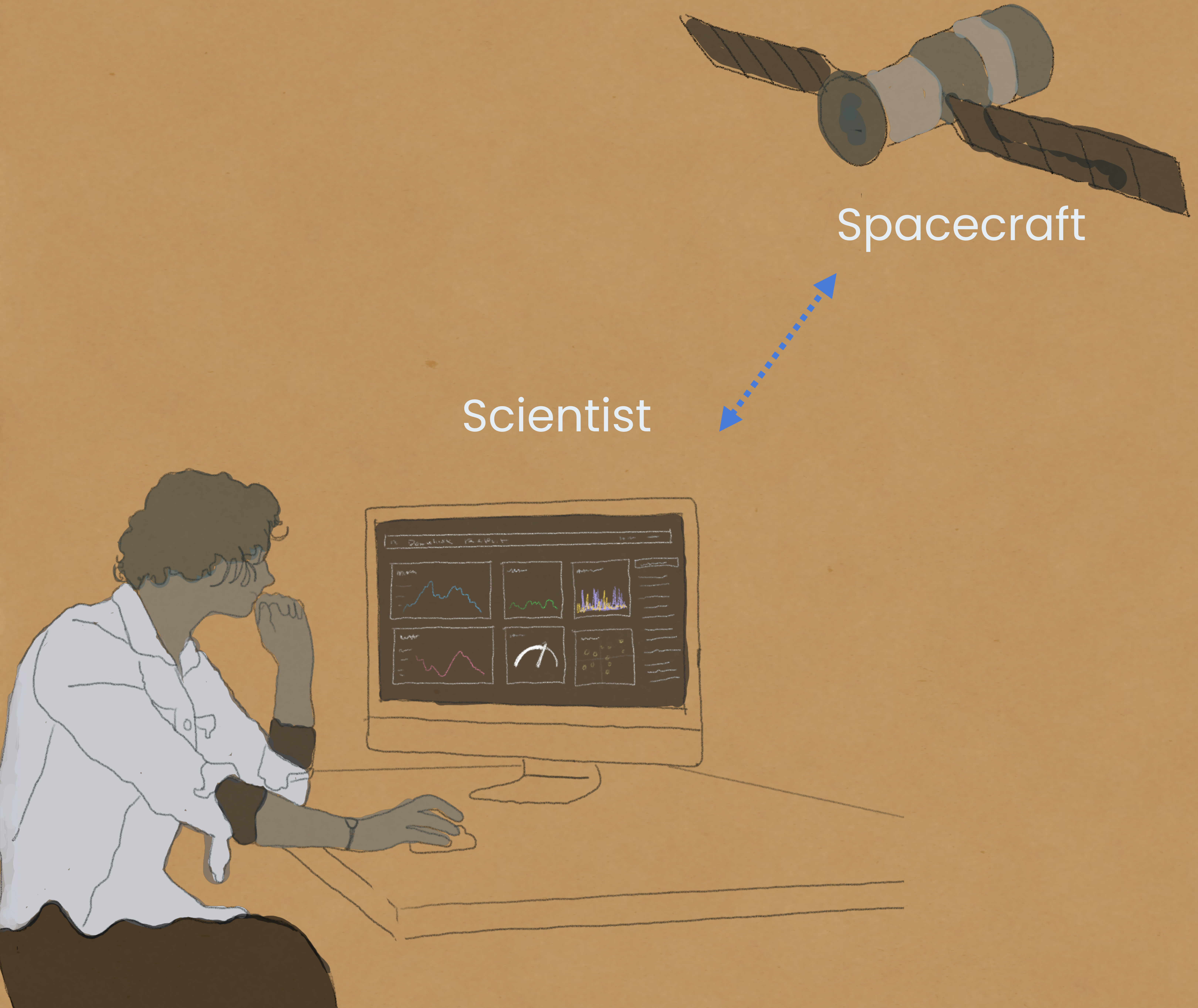
Spacecraft

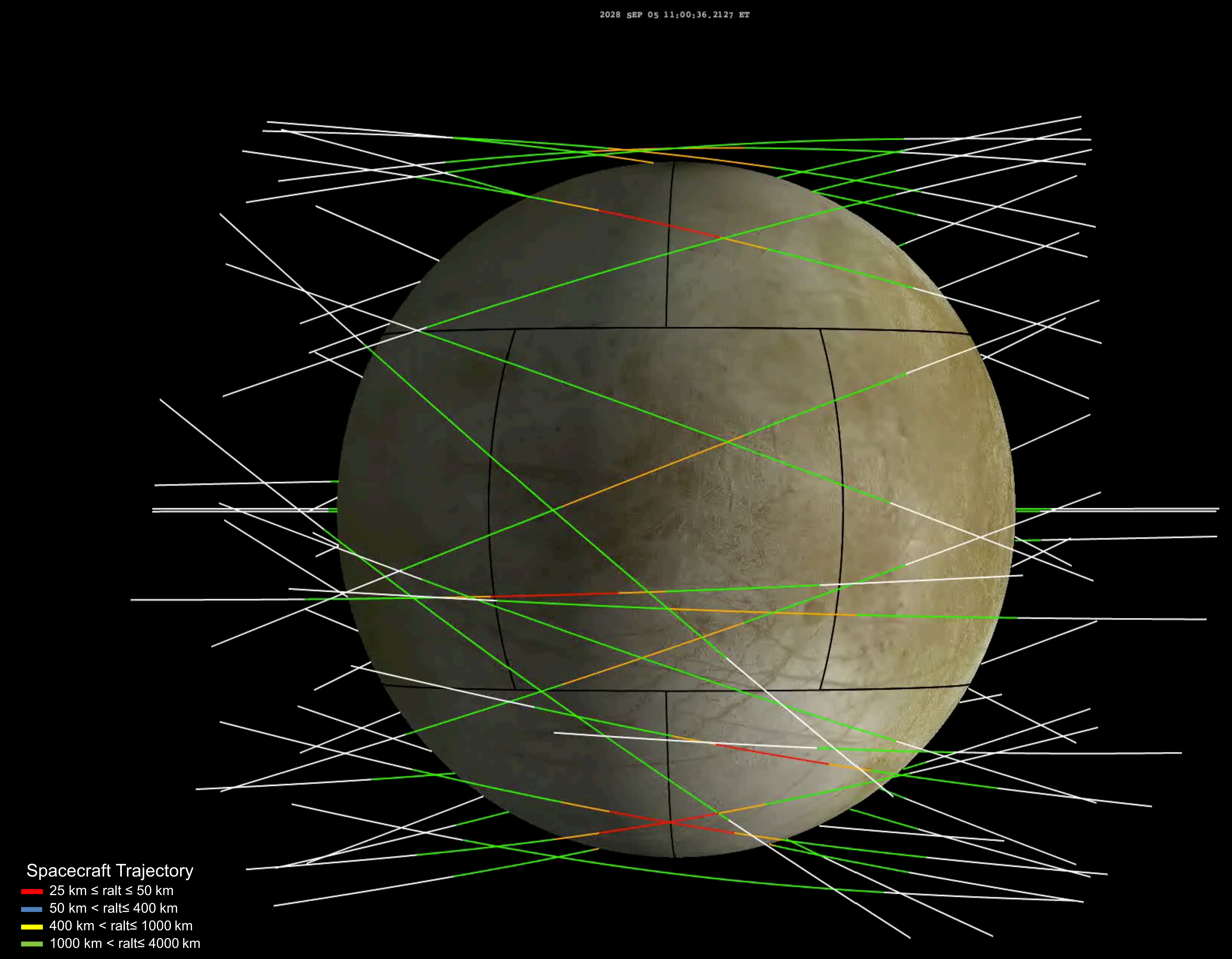


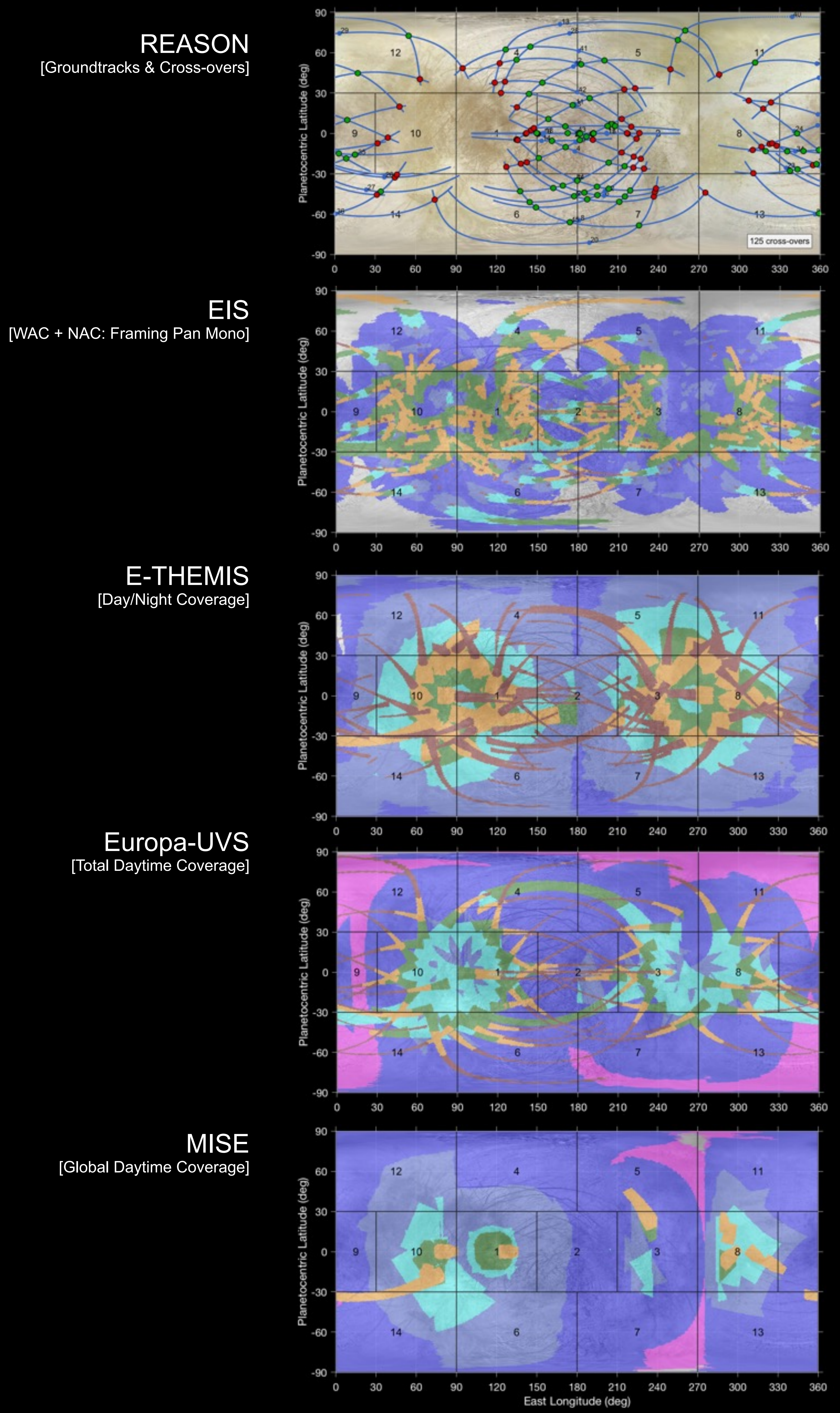

Marijke Jorritsma/IXDA/2019


Spacecraft
Scientist
Engineer
Marijke Jorritsma/IXDA/2019


Now with x% more science in space!
Spacecraft
Scientist
Engineer
Marijke Jorritsma/IXDA/2019

# Europa Clipper

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5 m mag Boom
3 m High Gain Antenna
22 N Thrusters (x16)
Solar Array Panels (5 per wing) ~100 m² area
Forward-Pointed Instruments
Downward-Pointed Instruments
Radar VHF Antenna (x4)
16 m Radar HF Antenna (x2)
Marijke Jorritsma/IXDA/2019

# UX Adoption on Europa Clipper

Marijke Jorritsma/IXDA/2019

# 9 Lessons Learned on how to advocate for UX

## How to be an advocate for UX....

# 1

Learn about who you're working with

# How to be an advocate for UX....

2

Figure out how to deliver value for them and value for UX

# How to be an advocate for UX….

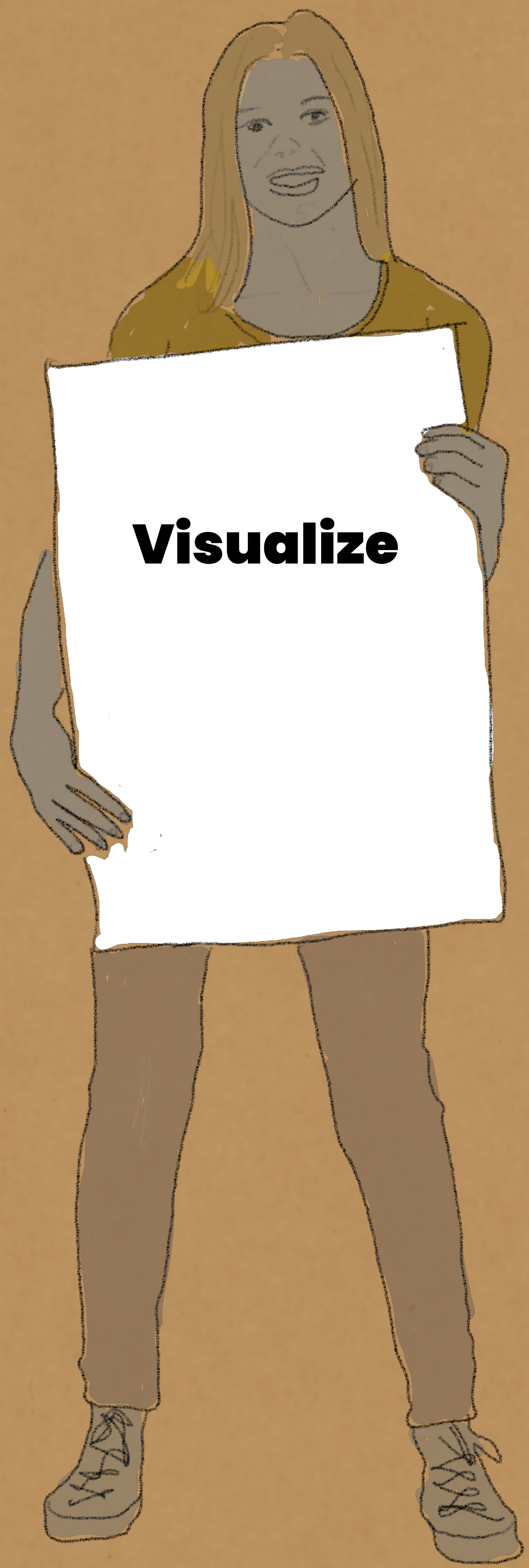
# 3

Use your design thinking skills to help facilitate their process

How to be an advocate for UX....

# 4

Synthesize complex process through visualization

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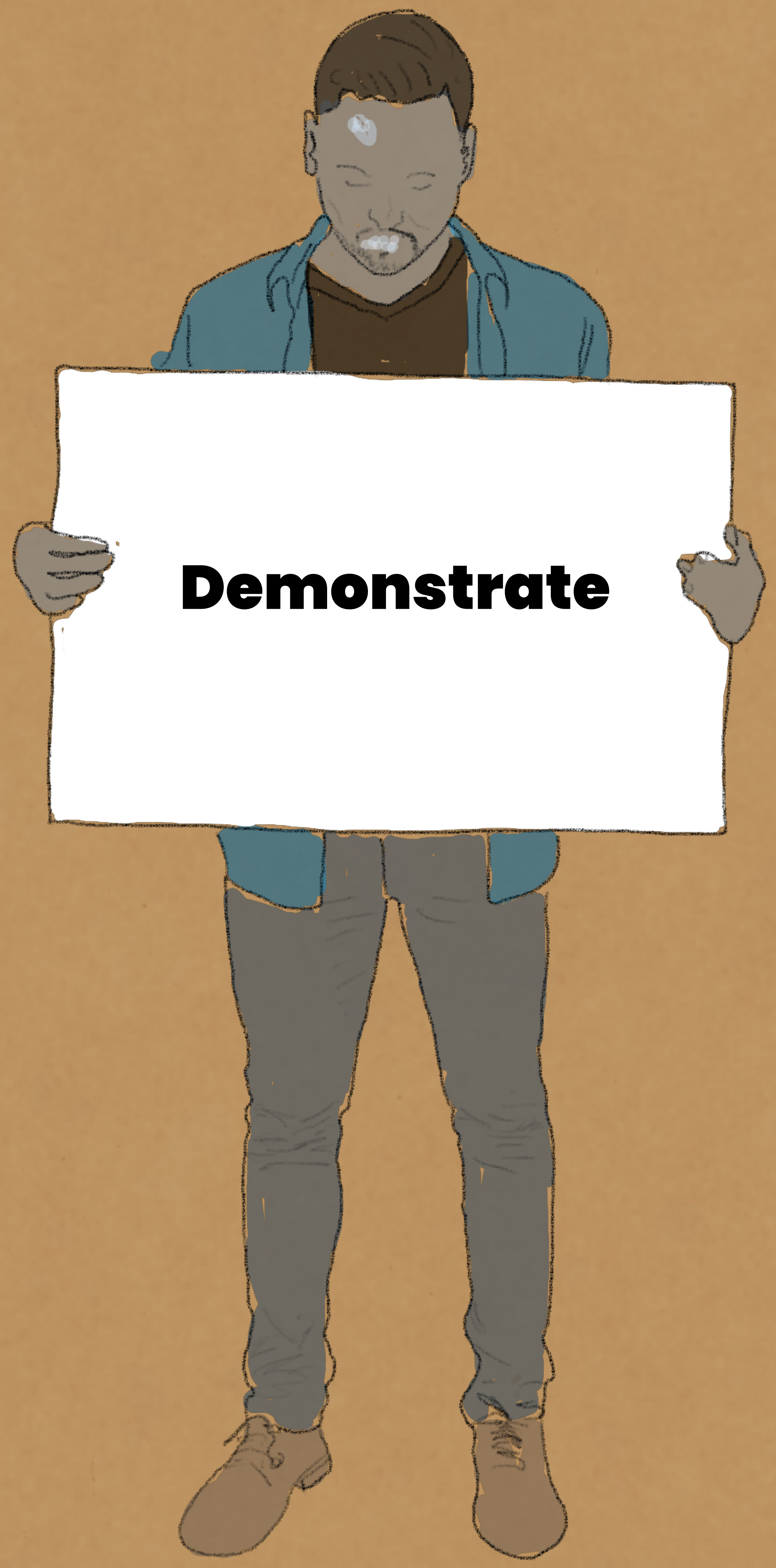
How to be an advocate for UX….

# 5

Show them how UX improves their development process



How to be an advocate for UX….

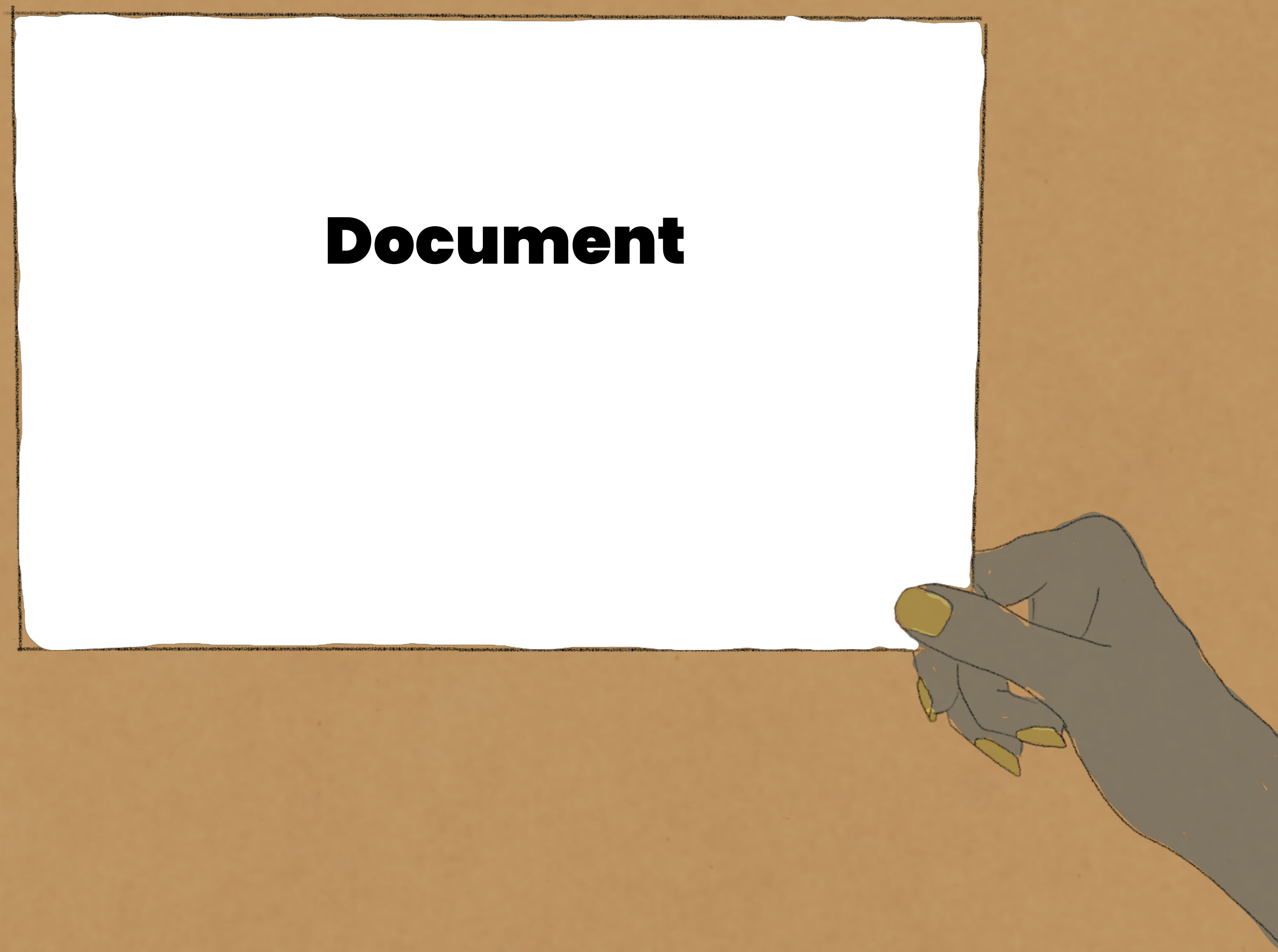
# 6

Show them the kinds of deliverables they can ask for

How to be an advocate for UX….

# 7

Make your contributions visible



How to be an advocate for UX....

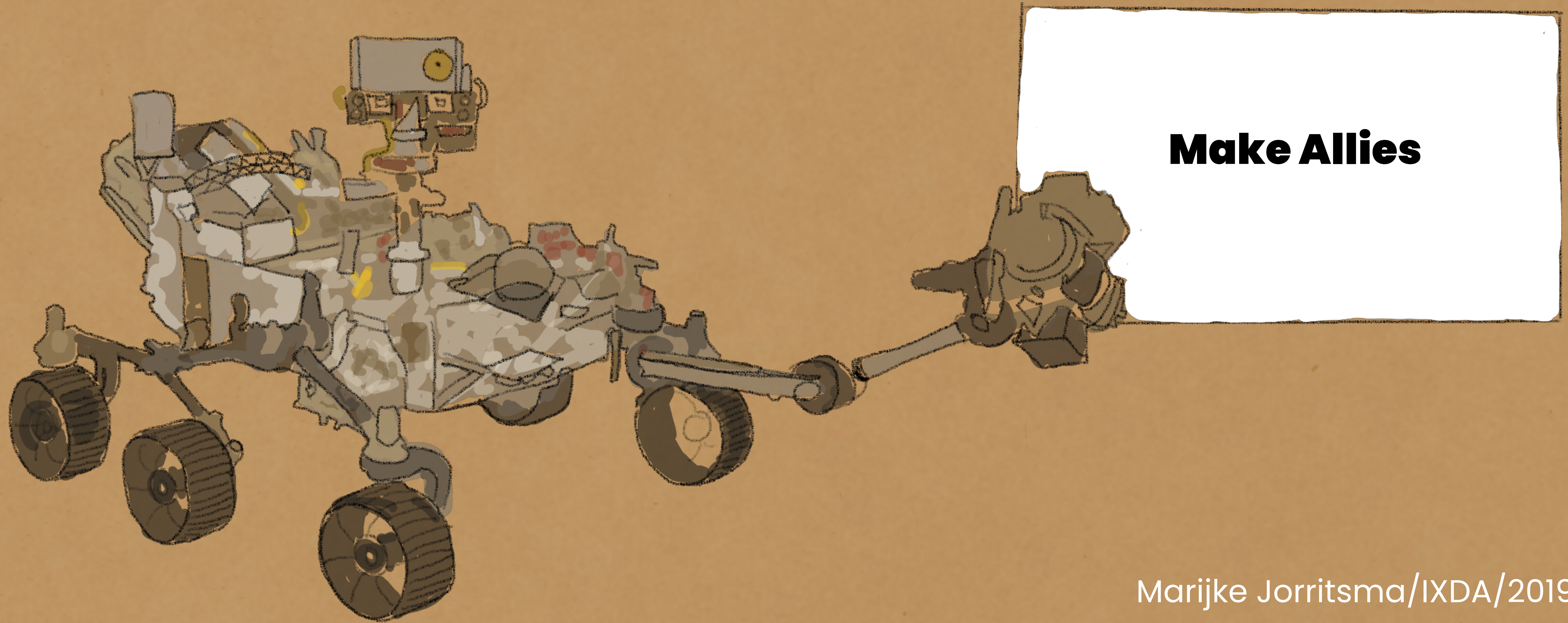
8

User your awesome research skills to ramp up quickly

How to be an advocate for UX....

9

Find supporters of UX who will advocate for the quality of your work



# Rocket Science?

# Thank you!

https://www.jpl.nasa.gov/
https://www.jpl.nasa.gov/missions/europa-clipper/
https://hi.jpl.nasa.gov/

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Jet Propulsion Laboratory
California Institute of Technology