



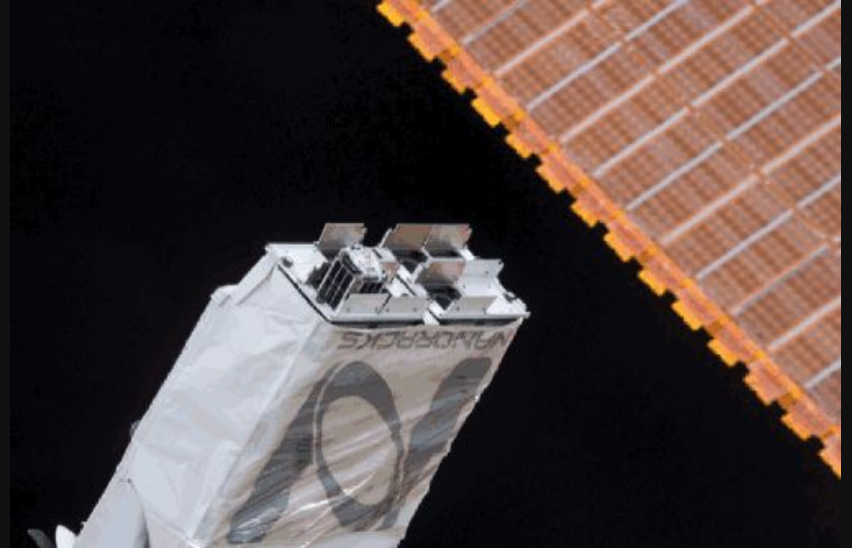
Hello, World: Tiny Satellites, Big Impact

+

Mercator Projection

Sara Safavi

Software Engineer, Geographer
Planet Labs



A satellite image of Woody Island, South China Sea, showing a large airport runway, a town, and surrounding water. The image is overlaid with a semi-transparent dark rectangle containing text.

Earth Observation:
collecting data about the earth,
from a distance.

Woody Island, South China Sea – March 28, 2018



+

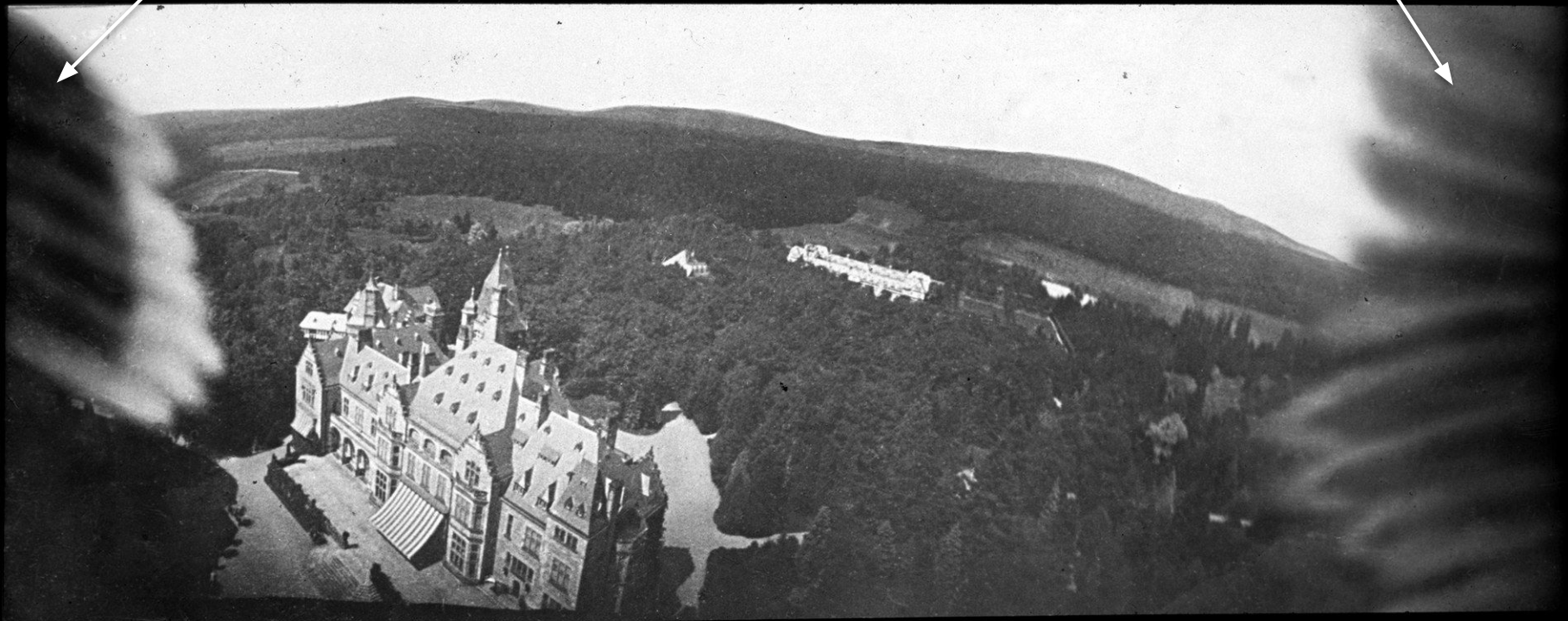
Aircraft

Sensor



Sensor Artifact

Interference Pattern

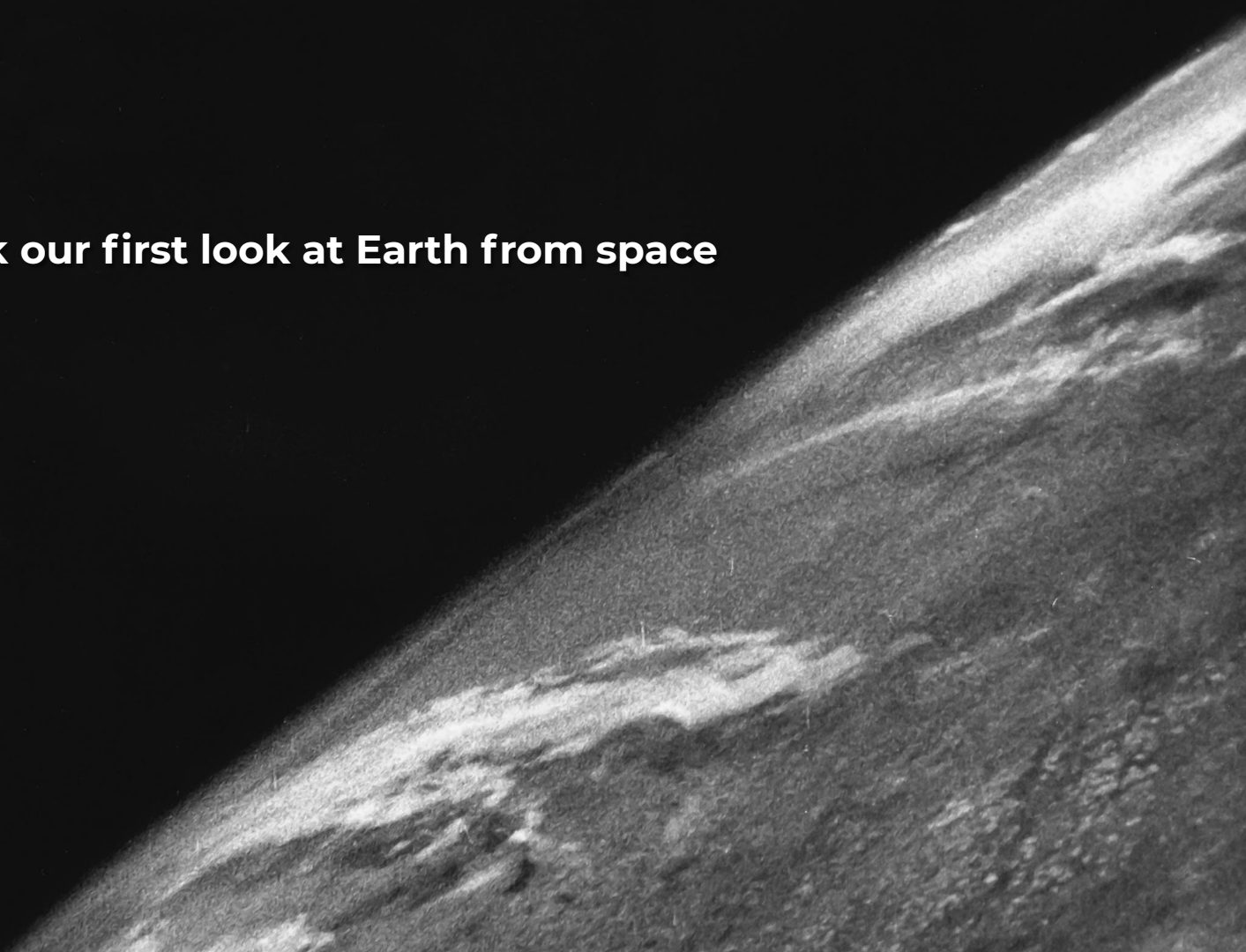


you can't fix
what you can't see



**+
1946**

humans took our first look at Earth from space



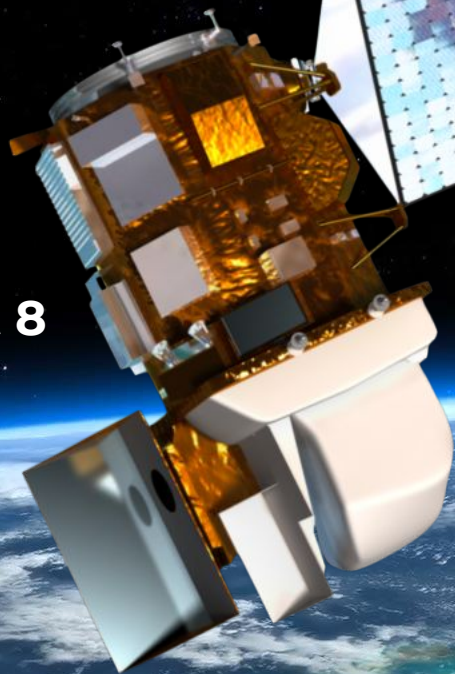
+
2014



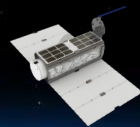
Planet launches Flock-1



**NASA
Landsat 8**

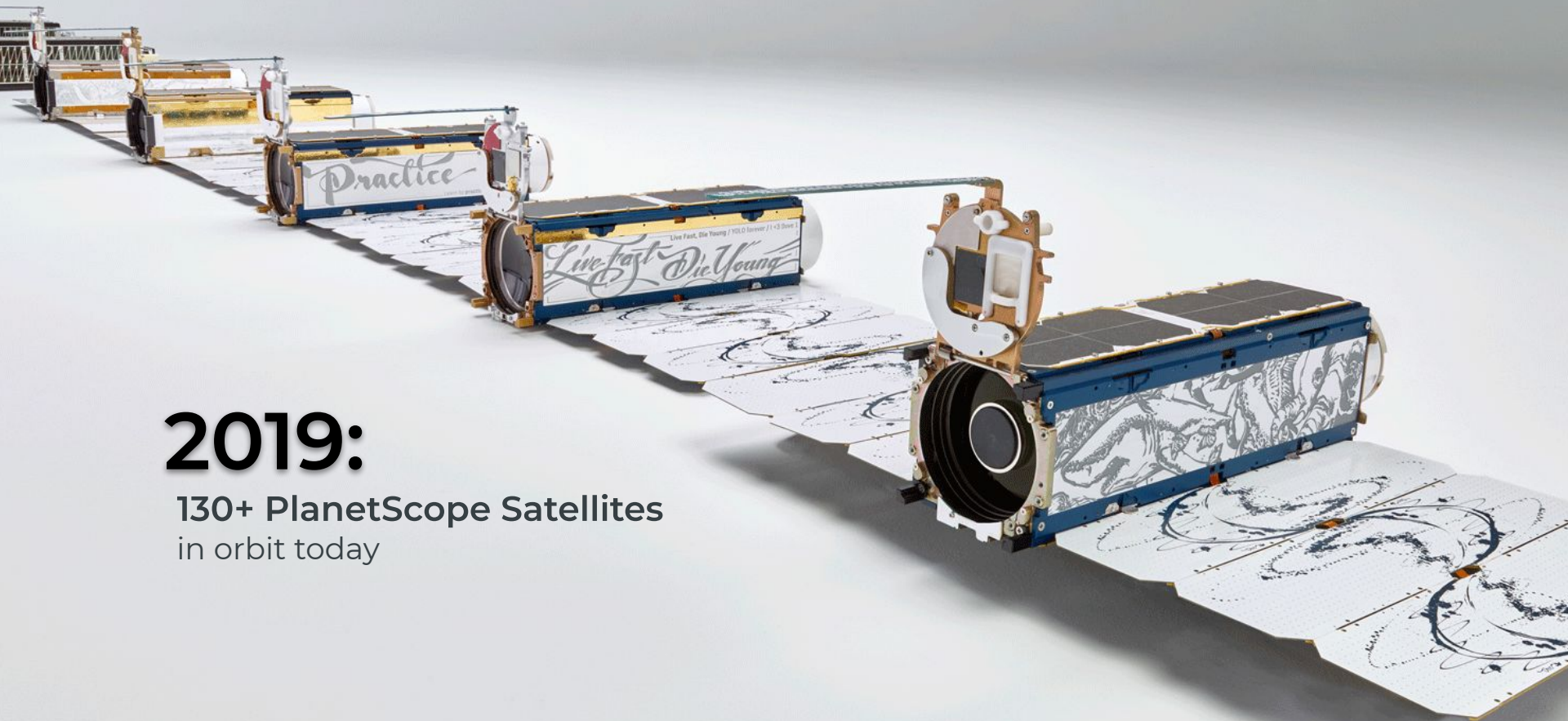


**Planet
Dove**



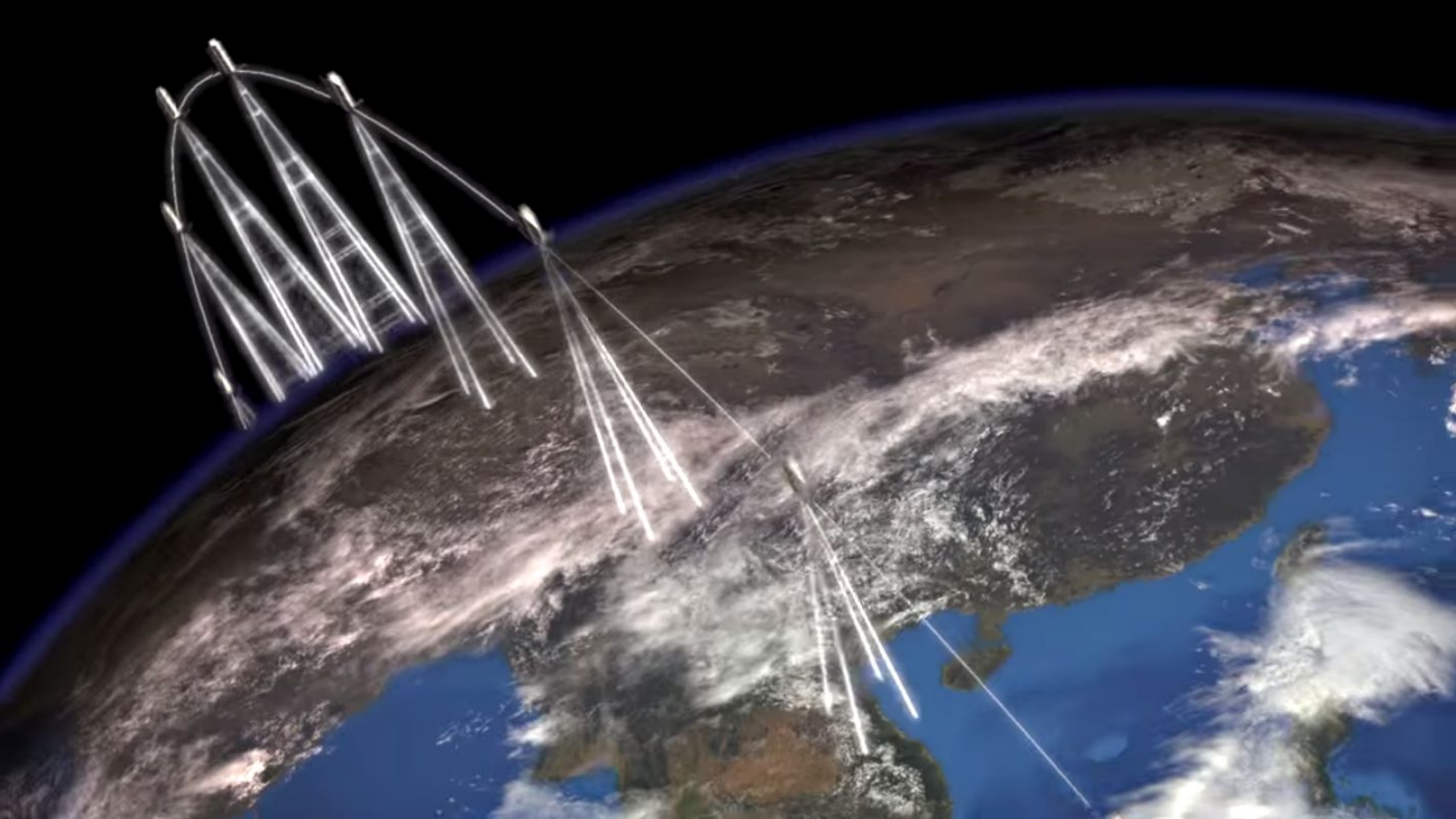
Corgi

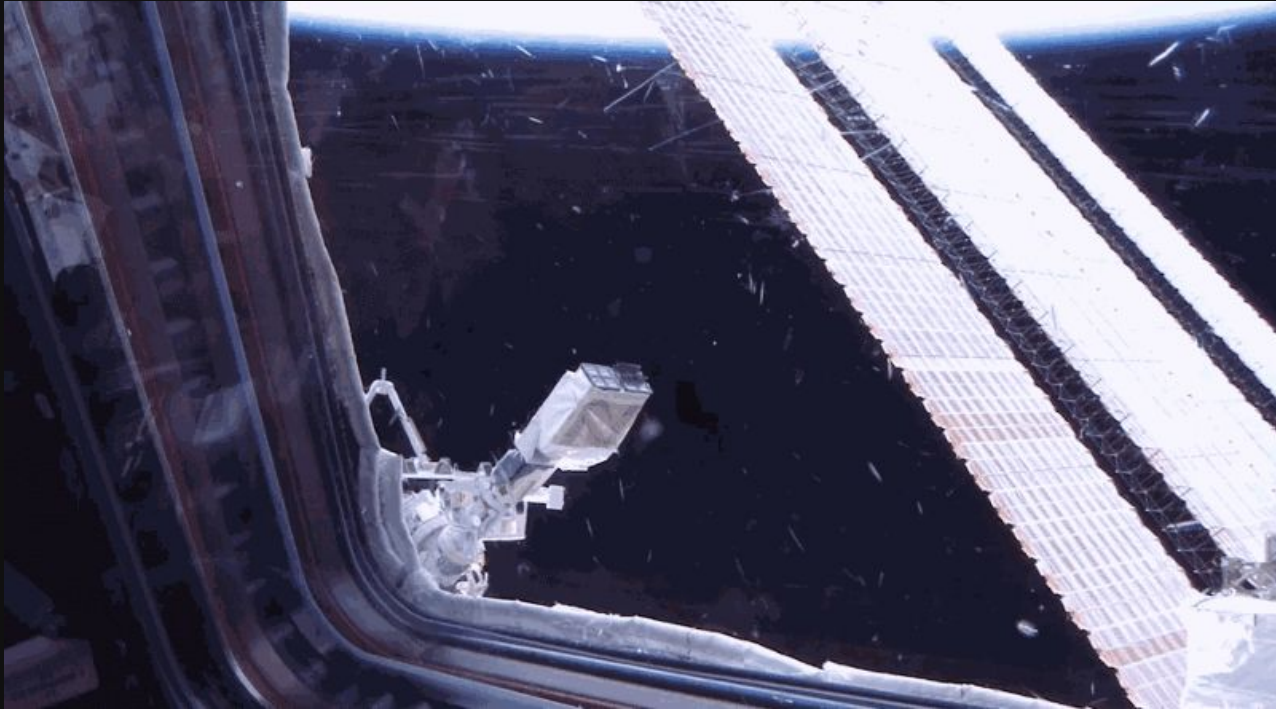




2019:

130+ PlanetScope Satellites
in orbit today





Planet built the largest satellite constellation in the world...
what now?



How do we successfully drink from the firehose?

Zoom out.





PLANET'S MISSION

~~To image the whole world every day,~~
making change **visible, accessible
and actionable.**



WHEN A USER TAKES A PHOTO,
THE APP SHOULD CHECK WHETHER
THEY'RE IN A NATIONAL PARK...

SURE, EASY GIS LOOKUP.
GIMME A FEW HOURS.

... AND CHECK WHETHER
THE PHOTO IS OF A BIRD.

I'LL NEED A RESEARCH
TEAM AND FIVE YEARS.



IN CS, IT CAN BE HARD TO EXPLAIN
THE DIFFERENCE BETWEEN THE EASY
AND THE VIRTUALLY IMPOSSIBLE.

← 2014

2017 →

Hotdog!



Share

No Thanks

Not hotdog!

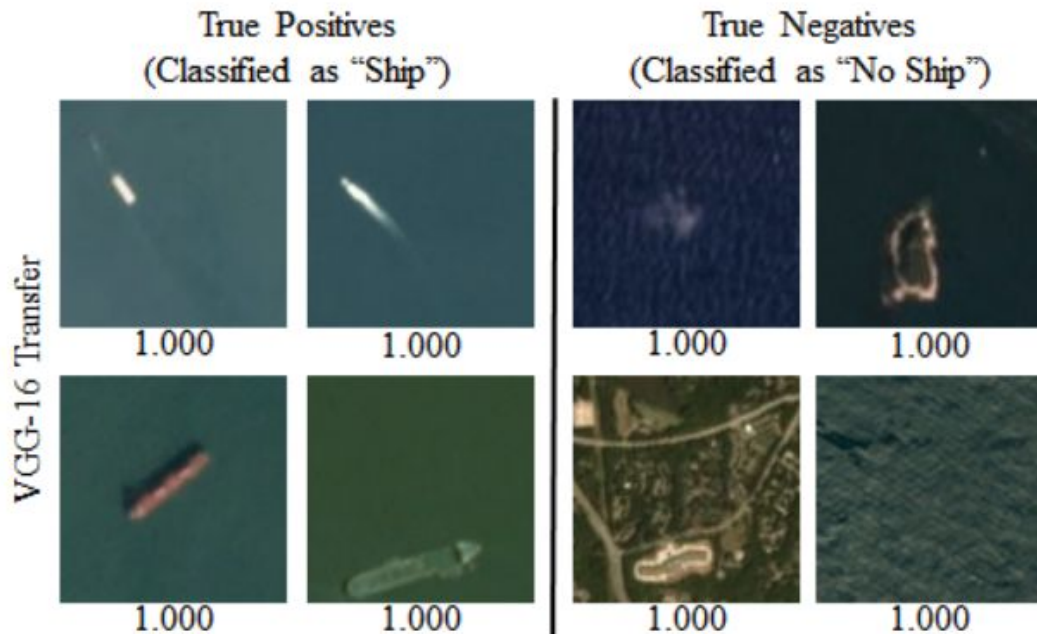


Share

No Thanks

+

Hotdog Ship! Not Hotdog Ship!



PLANET'S ULTIMATE GOAL:

Make the Earth searchable
the same way Google makes the
internet searchable





Buildings

Trains

Ships

Trucks

Trees

Roads

Planes

Copenhagen, Denmark



...so what?





SPOILER ALERT:

**Our planet is on fire
Everything is terrible**



**We are experiencing
technical difficulties...**





What can we do?

We're geo-people.

Let's work with what we know.

*What would **YOU** do if you could see daily change of _____?*





People are using daily earth
observation data **now** to:

Make the invisible visible

Respond to disaster

Do groundbreaking science

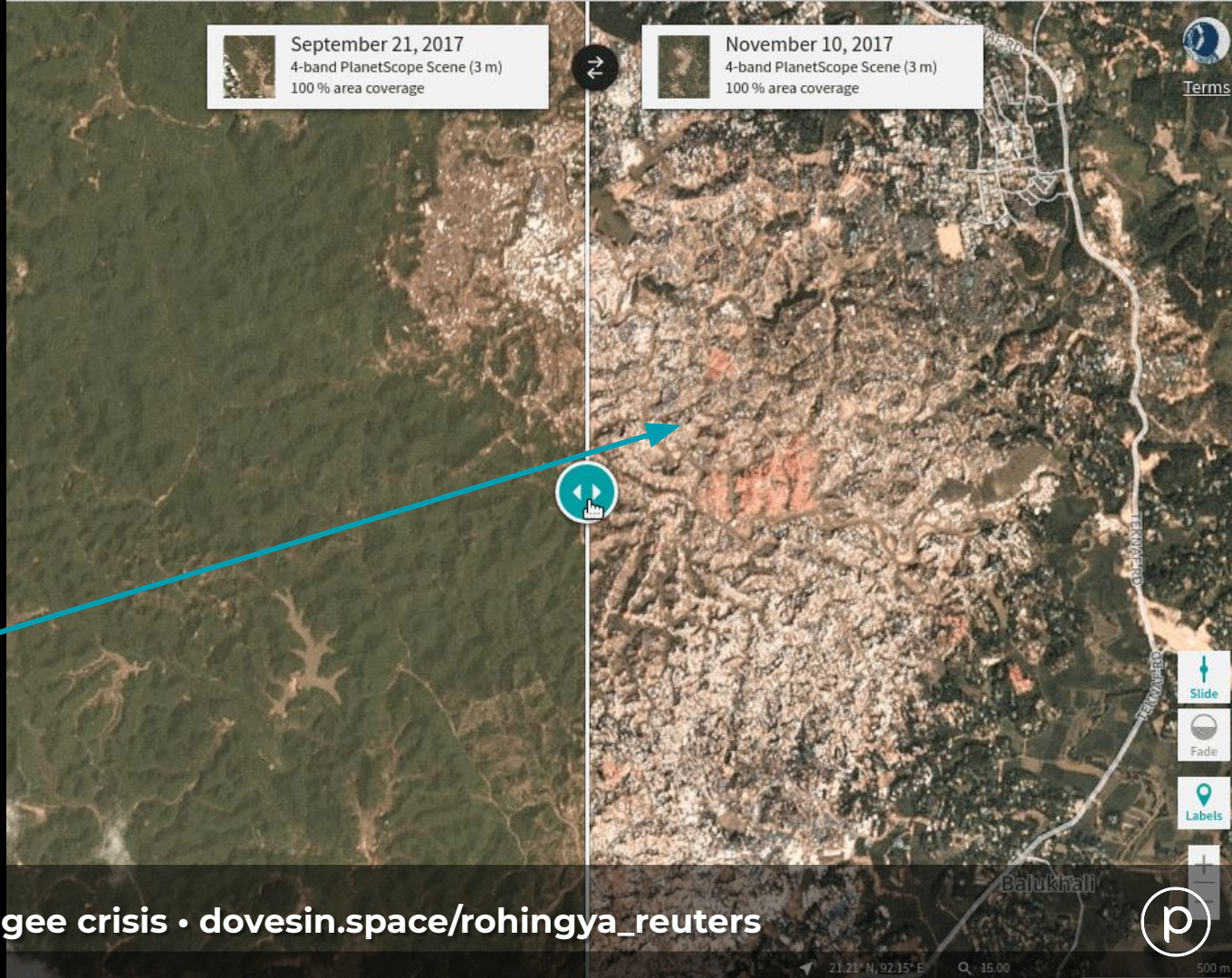
Fight climate change

Conserve natural resources





Making the Invisible, Visible



September 21, 2017
4-band PlanetScope Scene (3 m)
100 % area coverage

November 10, 2017
4-band PlanetScope Scene (3 m)
100 % area coverage

The Rohingya refugee crisis • dovesin.space/rohingya_reuters



21.21° N, 92.15° E 15.00 500m

+ Enforcing Transparency



North Korean missile launch • dovesin.space/nk_missile





Responding to disaster

Siau Island, Indonesia after Karangetang volcano • planet.com/disasterdata





Supporting community response

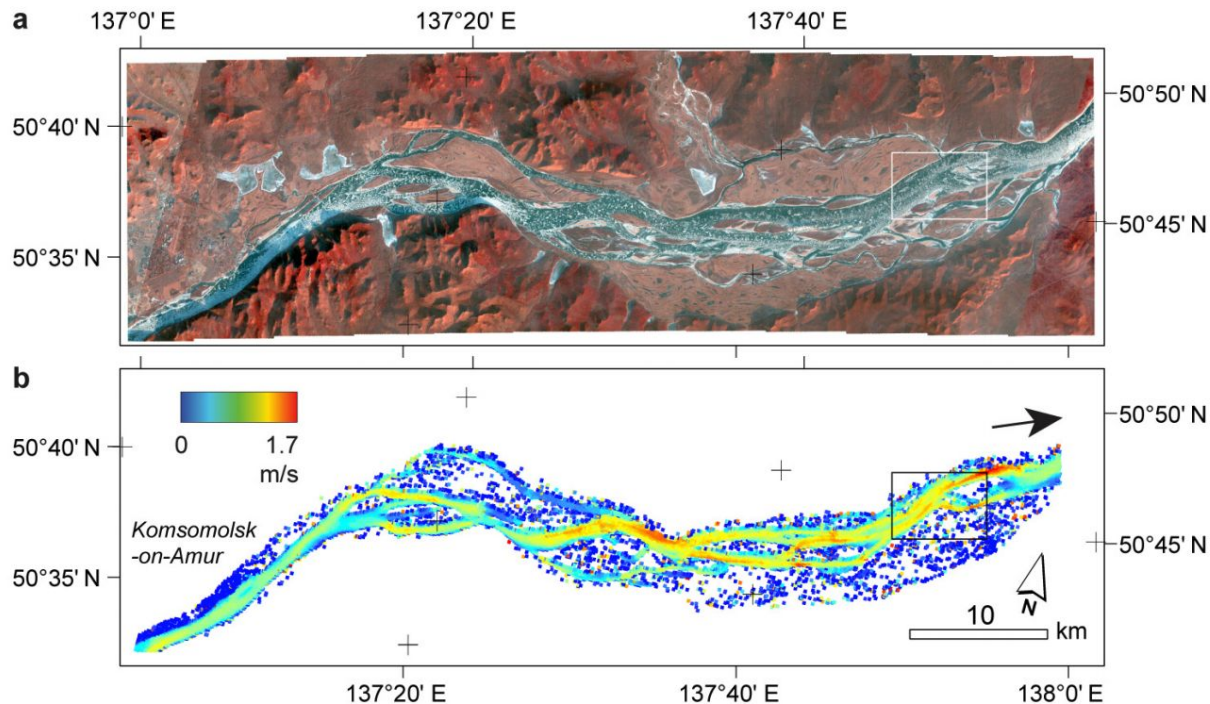


Beira, Mozambique after Cyclone Idai • March 2019





Doing new science





Fighting Climate Change





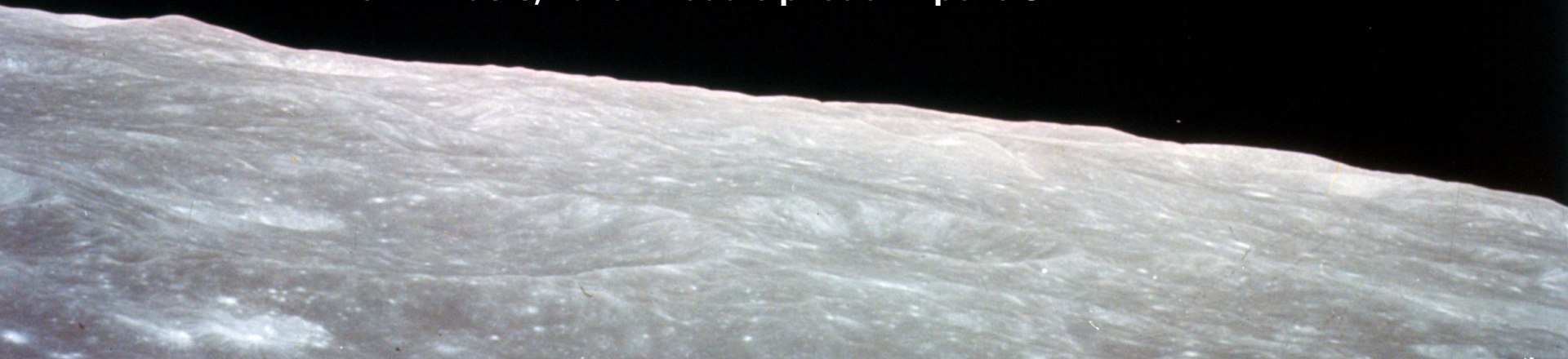
Conserving Natural Resources





**We set out to explore the moon and
instead discovered the Earth.**

- William Anders, Lunar Module pilot on Apollo 8

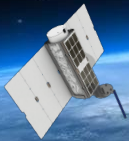


Today for the first time in history,
humans have a data archive that contains



over **800** pictures of every single place on earth

**You can't fix
What you can't see.**





THANK YOU!

get in touch:

sara@planet.com 

[@sarasomewhere](https://twitter.com/sarasomewhere) 