



If a tree falls in the forest, can you hear it from space?

+ Oklahoma GIS Council, October 7, 2022
Chris Wilson - Planet Labs PBC

Mercator Projection

Oklahoma
Geographic Information
Council

+ What could you do with Superpowers?

- X-Ray Vision
- Time Travel
- Fly anywhere in seconds

Monitor your areas of interest, discover patterns, and get timely insights

And like superheroes, you can use superpowers to use space to help life on earth!

+ Agenda

1. Challenges
2. Solutions
3. Planet Capabilities



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





PLANET'S MISSION

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





It can be a challenge for forestry and natural resources professionals to visit each and every ongoing management activity across geographically distributed land assets.

Putting eyes on all operations is increasingly a challenge as organizations run lean due to tight labor markets.

Planet's imagery products are a game changer for efficient real time monitoring of land assets.

Southern Forestry Consultants

+ Traditional approaches are falling short



Infrequent, unreliable data collection

Risky, manual
approaches; satellite
imagery could be
months/years old



Limited coverage

Full coverage not
always available (ie,
drone or fixed wing)



Cost prohibitive

Existing solutions are
outside of forest mgmt
budgets



Difficult to access

Multiple parties
required for
processing



CHALLENGE 1- Monitoring vast areas

Gabon — August 22, 2018





Planet imagery covers large-scale plantations like palm

50,000+ ha palm plantation in Mouila, Gabon

Gabon — August 22, 2018



+ Here is an area that's 1 million hectares

Chocope Peru - 2017





But you can't observe everything at once



Daily drone
coverage:
200 ha



+ It would take 5000 drones to see this every day

Chocope Peru - 2017



+

CHALLENGE 2- Change Measurement

Gabon — August 22, 2018





PLANETSCOPE

3.7 meters/pixel

SENTINEL-2A

10 meters/pixel

LANDSAT 8

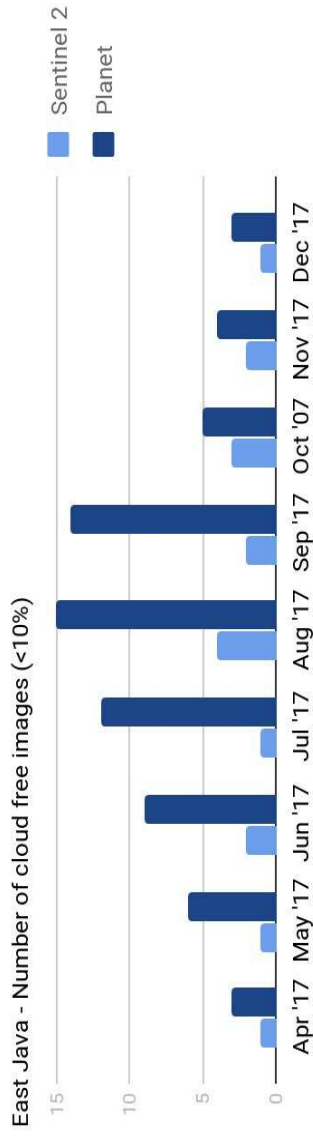
30 meters/pixel



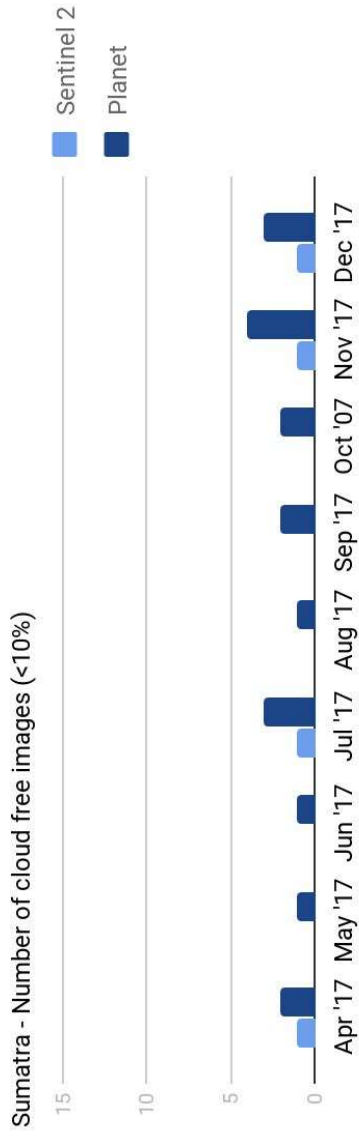


Planet has up to 5x more image availability in cloudy areas

East Java



Sumatra



+

CHALLENGE 3- Prioritizing Resources

Gabon — August 22, 2018



+ SkySat imagery provides even further detail

Peru – July 27, 2018

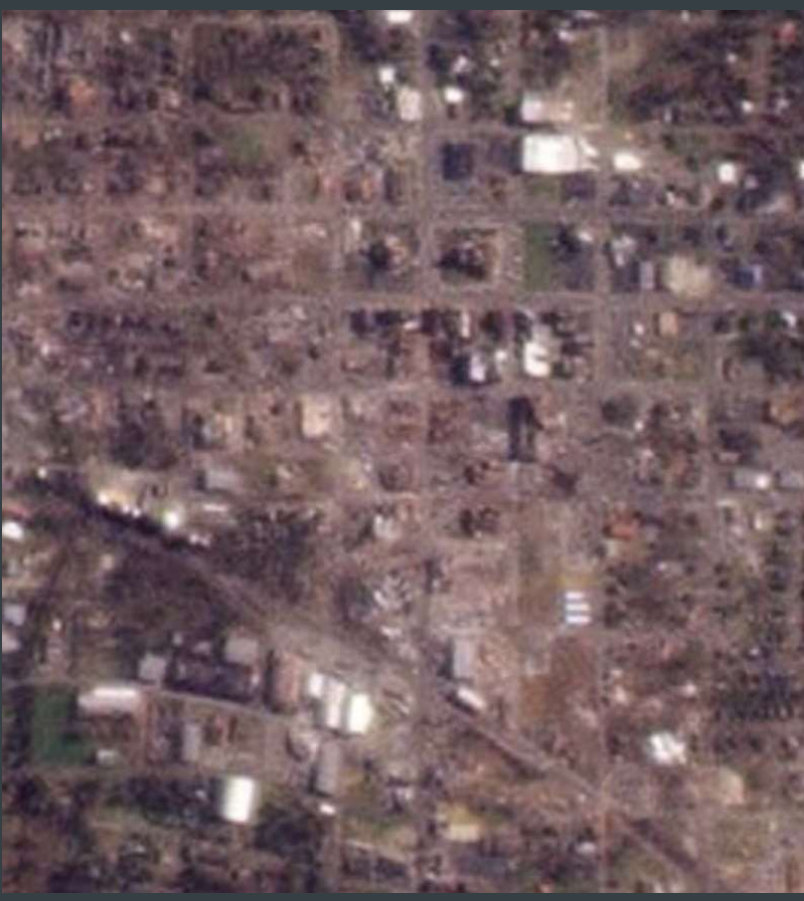
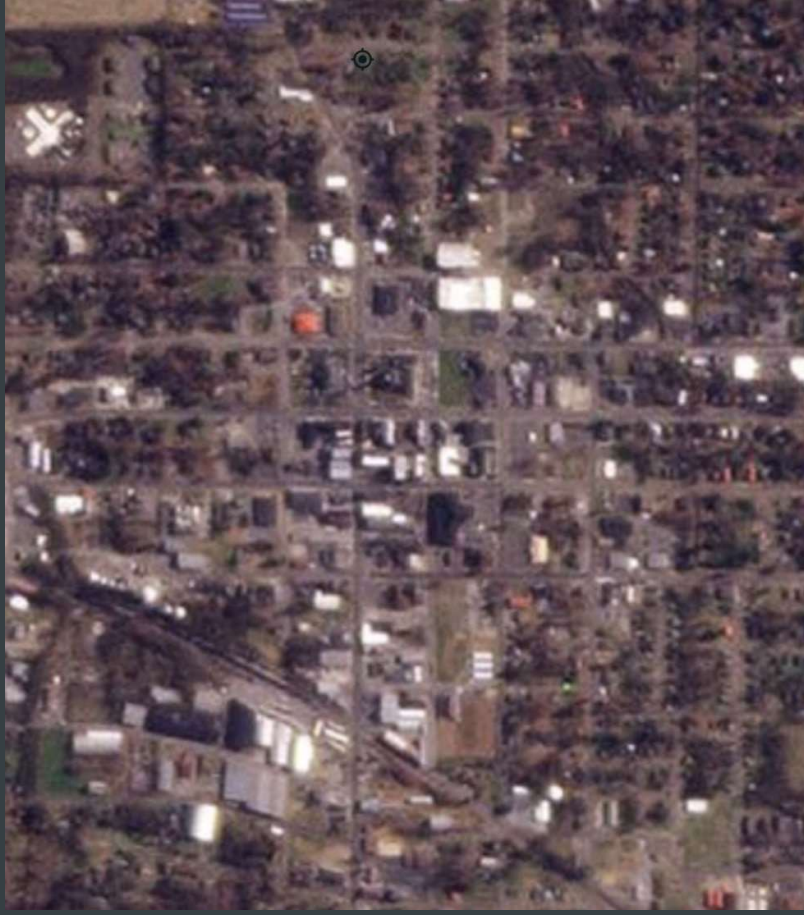


**+ Very high
resolution**

Evidence of current human
activity in the Skysat
imagery



Mayfield KY - 12/8/21 to 12/12/21- Tornado hit evening of 12/10/21



Mayfield KY - 12/8/21 to 12/12/21



Mayfield KY- 12/12/21- SkySat 50cm Resolution



+

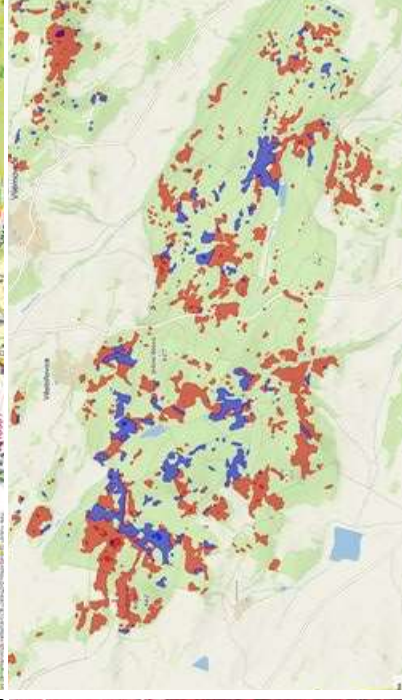
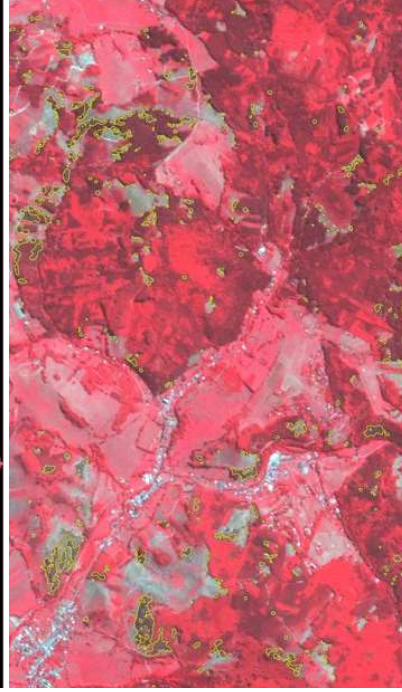
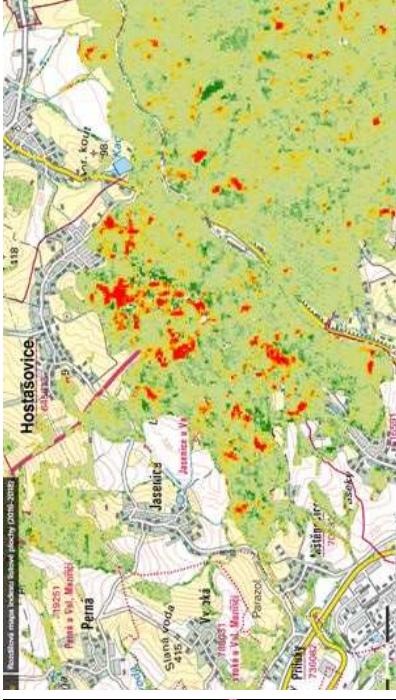
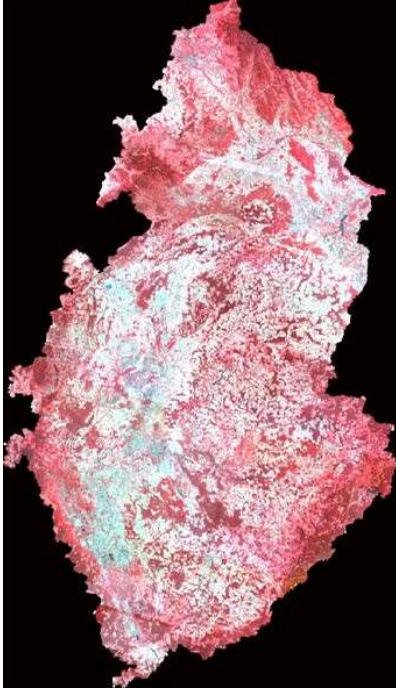
CHALLENGE 4- Acting before it is too late

Gabon — August 22, 2018





Planet Value for Beetle Disease Spread Prevention



(Clockwise from top left)

1. Create Surface Reflectance Basemap from Sept 2018
2. Use Sentinel-2 and National aerial data to identify candidates and do NDVI analysis
3. Locate infested forest stands
4. Make derivative data available to public



Bark beetle outbreak | SkySat imagery

The United States Forest Service uses **SkySat** imagery to monitor and forecast disease spreading in Southeast US.

Taheke-Okaiha





Bark beetle outbreak | SkySat imagery

Taheke-Okaiha



+ Government across the US trust Planet data



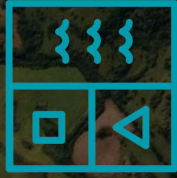


Forestry organizations pioneering new approaches with Planet





How they are leveraging Planet solutions



**Post-harvest analysis
& inventory**



Timber operations
(planting, harvesting, thinning)



**Forest health
& disease management**



**Disaster
& wildfire response**

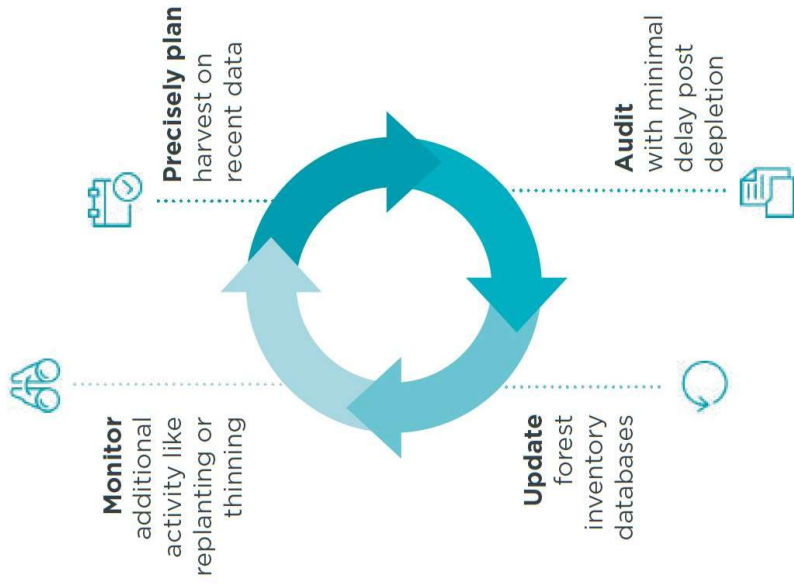


**Land acquisition
& due diligence**



**Surveying
& mapping**

+ Planet data for land conservation



High-frequency, ongoing monitoring

PLANET
MONITORING

or
PLANET
BASEMAPS

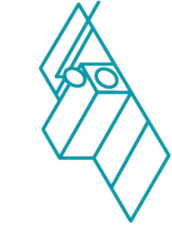
paired
with

Targeted activities

FLEXIBLE TASKING

+ Planet Monitoring

Monitor your areas of interest, discover patterns, and get timely insights



PlanetScope Monitoring

Always-on, Broad Area Monitoring

- 3 meter resolution
- Daily imagery collection, no tasking required
- RGB and NIR bands
- Archive back to 2014



SkySat Monitoring

Rapid Revisit, Targeted Monitoring

- .5 meter resolution
- Sub-daily imagery tasking
- RGB, NIR, and Pan bands
- Archive back to 2014

+ What could you do with Superpowers?

- X-Ray Vision
- Time Travel
- Fly anywhere in seconds

Monitor your areas of interest, discover patterns, and get timely insights

And like superheroes, you can use superpowers to use space to help life on earth!