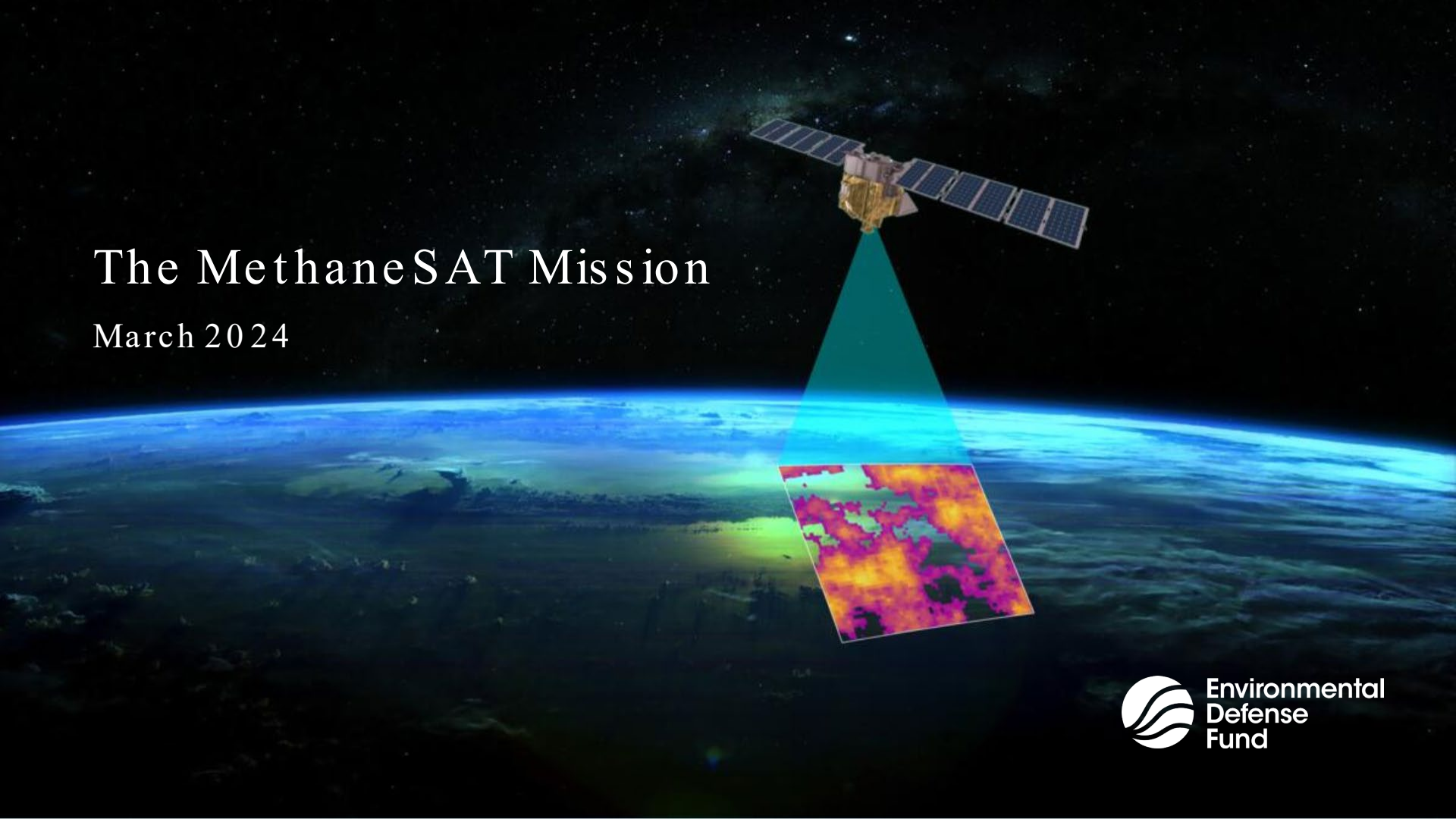
The MethaneSAT Mission

March 2024



Environmental Defense Fund

MethaneSAT is the most advanced methane-tracking satellite in space

Goal | To quantify methane emission rates, from multiple sectors, including at least 80% of global oil and gas production regions

Purpose | Provide radical transparency through freely accessible methane data on a global scale

Launch | Launched on March 4, data expected by end of year.

Partners

BLUE CANYON TECHNOLOGIES

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Ball Aerospace & Technologies Corp.

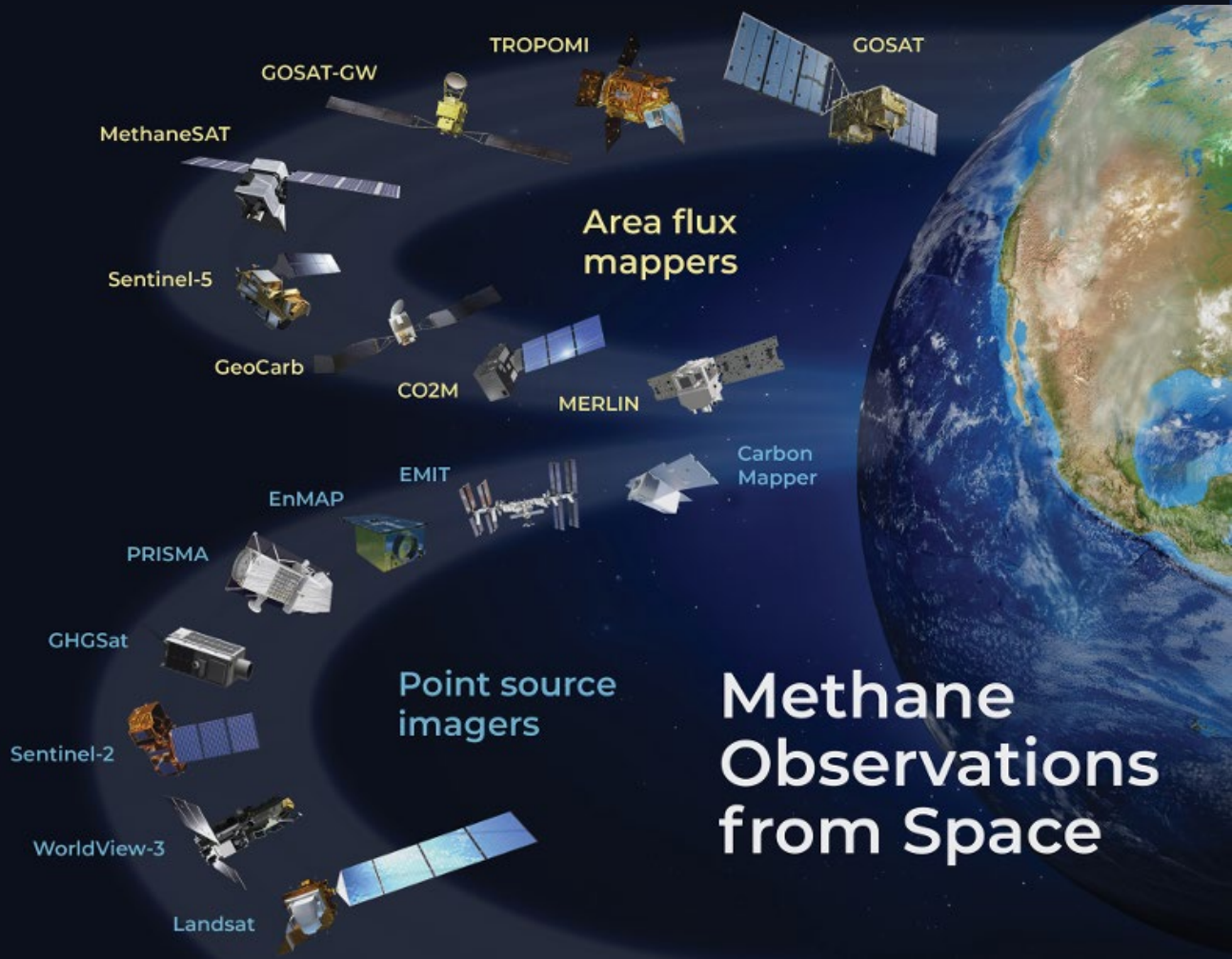
ROCKETLAB

HARVARD UNIVERSITY

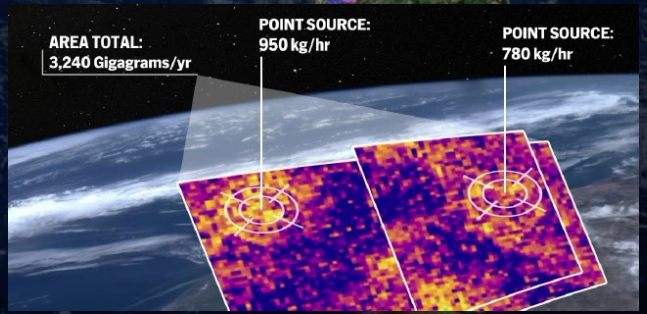
CENTER FOR ASTROPHYSICS
HARVARD & SMITHSONIAN

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

Current Satellite Constellation



MethaneSAT will cover 80% of the world's O&G regions in 150 targets. Each target will be 200 km x 200 km



These sites are located in 48 production basins around the globe.

Not real data, for demo purposes only.

MethaneSAT's unique capabilities

The satellite

Wide view path & geographic scale

- ✓ 200 km (124 mile) view path
- ✓ 200 km x 200 km targets
- ✓ Revisits targets every 3-4 days

High resolution & precision

- ✓ Native pixel size of 100m x 400m
- ✓ Concentration measurement sensitivity of 3 parts per billion

The data platform

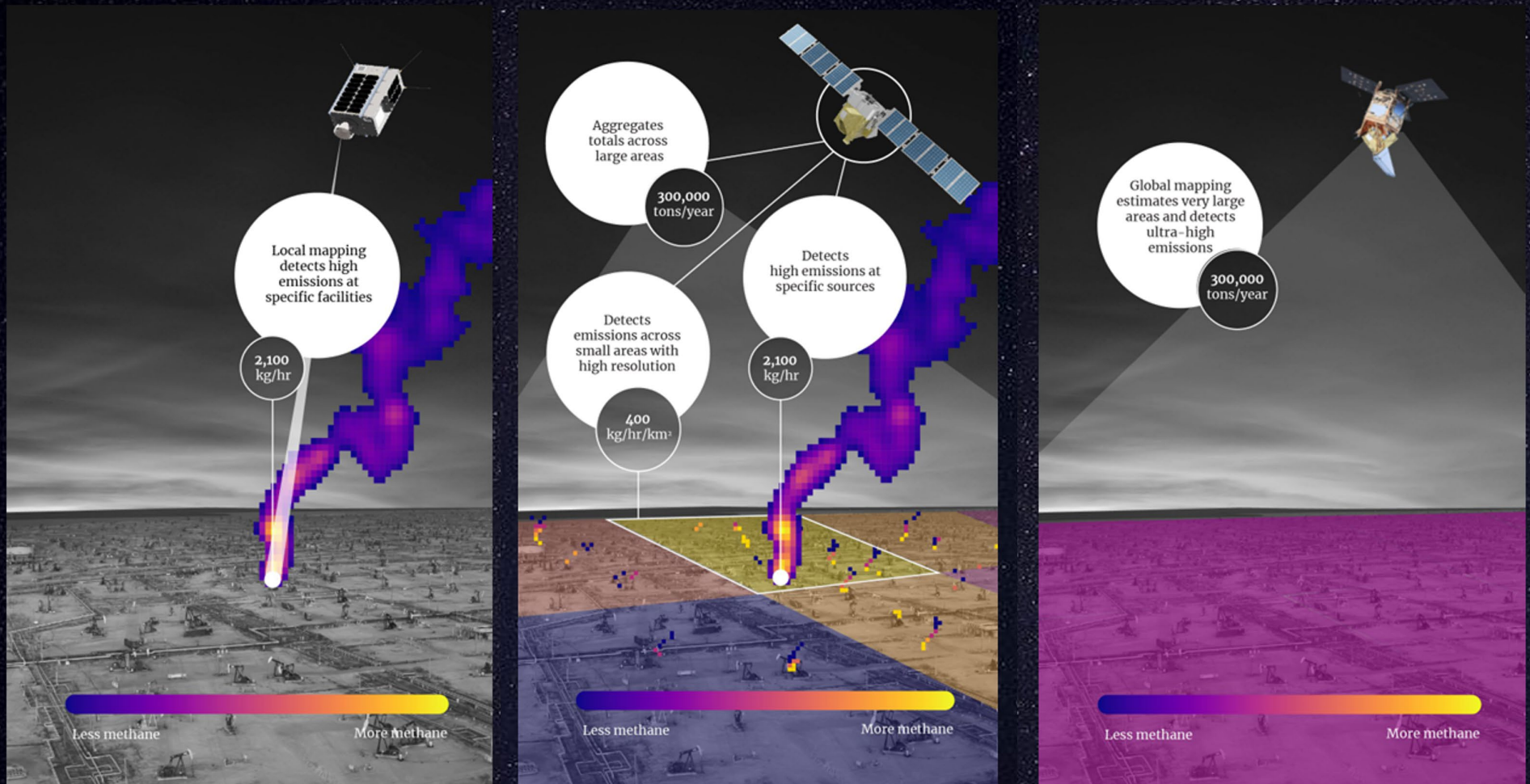
Automation of emission rates

- ✓ Determines emission rates, or how fast methane is escaping
- ✓ Automates calculations that currently take scientists weeks to months, providing users with data in a few days

Ease of access & transparency

Emissions data will be:

- ✓ Visualized online
- ✓ Overlaid with O&G assets
- ✓ **Free** to access for methane mitigation purposes
- ✓ And underlying datasets available for download on **Google Cloud Marketplace**


LOCAL MAPPING
METHANESAT
GLOBAL MAPPING
Local mapping detects high emissions at specific facilities
2,100 kg/hr
Less methane
More methane
Aggregates totals across large areas
300,000 tons/year
Detects high emissions at specific sources
2,100 kg/hr
Detects emissions across small areas with high resolution
400 kg/hr/km²
Less methane
More methane
Global mapping estimates very large areas and detects ultra-high emissions
300,000 tons/year
Less methane
More methane

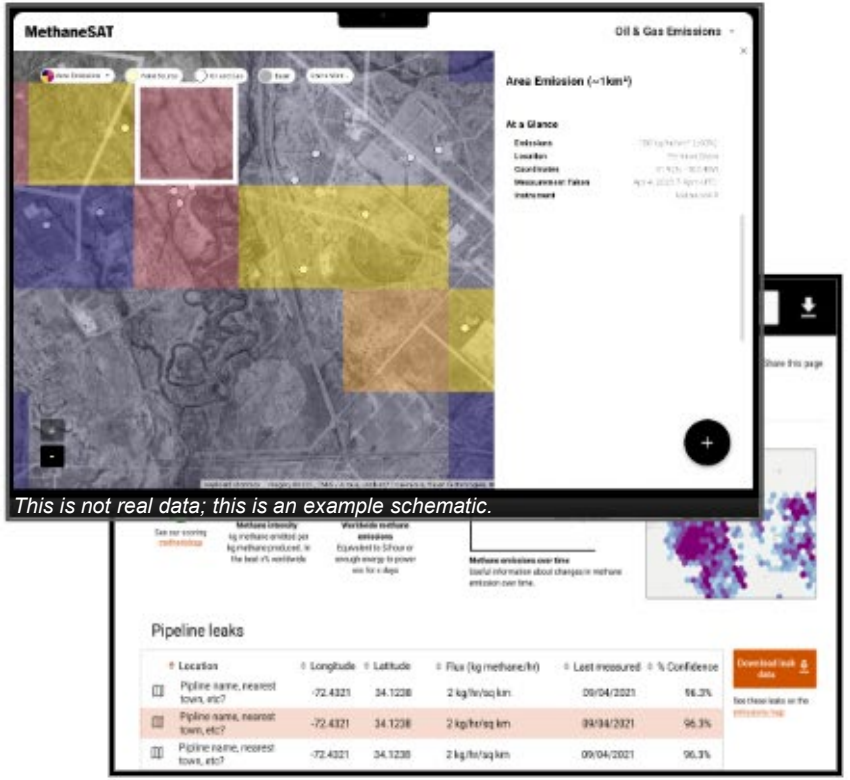
DATA PRODUCTS

- Quantify and track total regional emissions from individual O&G basins and subbasins, providing sector-wide emission quantification
- Quantify and track area source emissions, to reveal how much methane is emitting at 1km² scale & how emissions vary across the landscape
- Quantify and trace high-emitting point sources back to latitude and longitude

Not real data, for demo purposes only.

Mockups of the MethaneSAT web portal

This is not real data; this is an example schematic.



This is not real data; this is an example schematic.

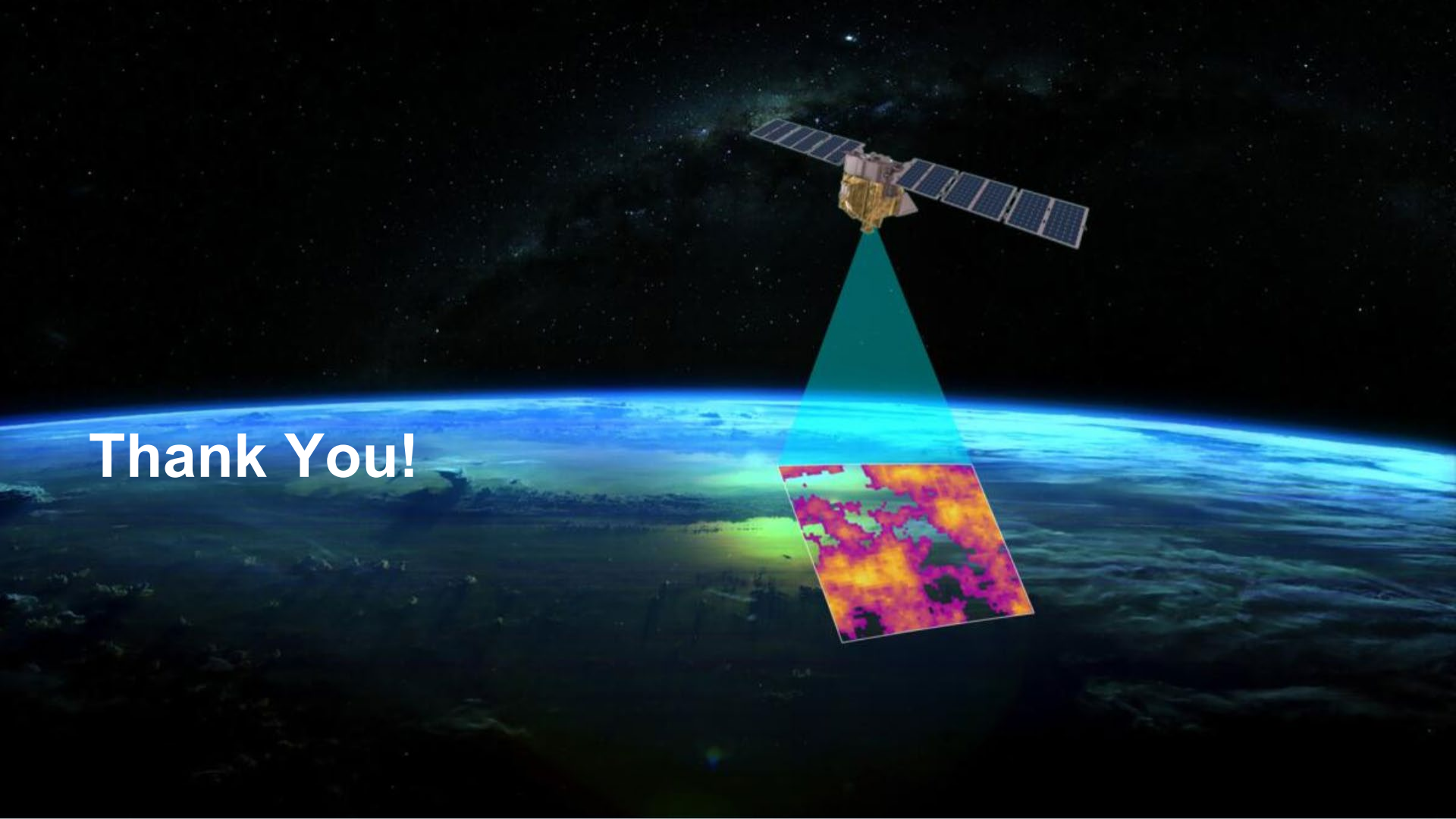
The MethaneSAT mission was designed to enable and motivate faster action to reduce methane emissions

Regulator example use cases

- ✓ **Identify** total emissions, problem infrastructure and inventory gaps to inform regulatory requirements
- ✓ **Compare** data to operator reportings
- ✓ **Integrate** this additional data to existing datasets
- ✓ **Track** progress against emission reduction goals

O&G Operator example use cases

- ✓ **Prioritize** where to deploy leak detection and repair crews
- ✓ **Monitor** facilities that are remote, unmanned, or operated by joint venture partner
- ✓ **Integrate** this additional data with existing operations for LDAR


Thank You!