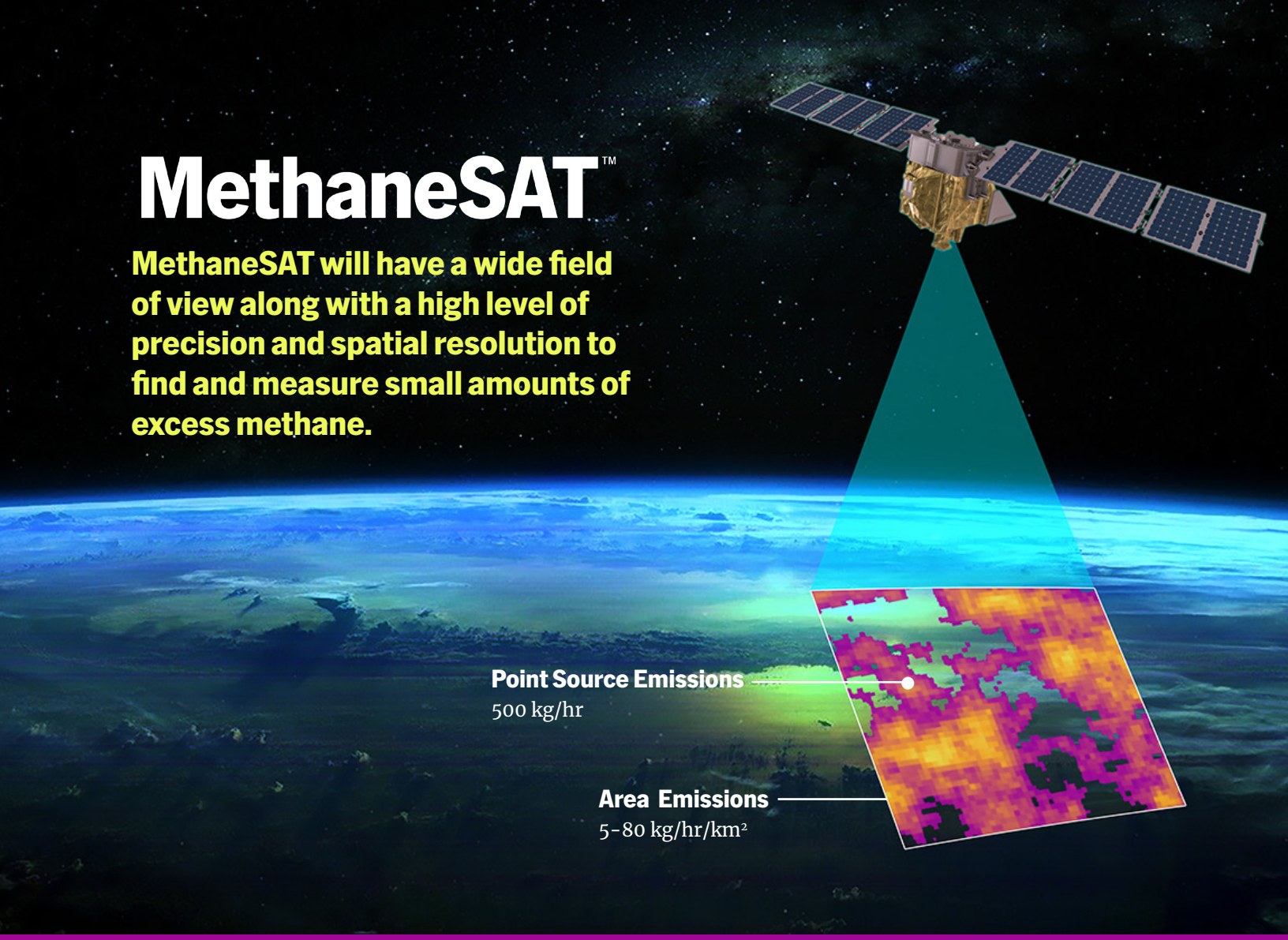
MethaneSAT™

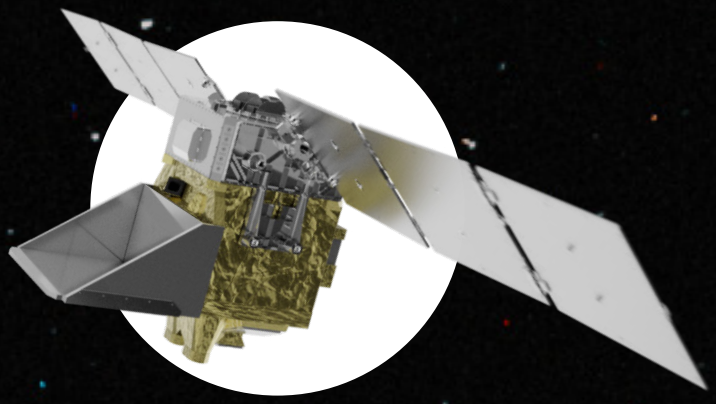
MethaneSAT will have a wide field of view along with a high level of precision and spatial resolution to find and measure small amounts of excess methane.



METHANE CAPABILITY	SPECIFICATION
Create high-resolution emissions heatmap of area sources (or spatially distributed emissions)	Heatmaps of 1 km^2 areas across targets that are 200 km x 200 km, with a native pixel size of 100m x 400m
Quantify total regional emissions	Emissions from individual oil/gas fields/basins accounting for more than 80% of global oil and gas production
Automate computations used to measure emission rates, cutting a process that can take months down to days	Actionable emission rate data will be accessible in a few days
Broad area coverage	Orbit Earth in 100 minutes, with a swath width of 200 km
Point source attribution	Trace larger single emission events back to their point source
Quantify methane concentrations with high precision	Detect excess methane at 3 parts per billion (highest precision compared to satellites currently in orbit)
Transparency	Free public data access

THE METHANE SATELLITE ECOSYSTEM

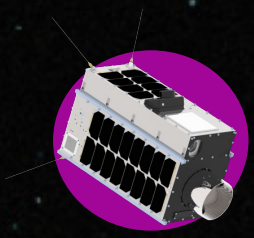
A complementary ecosystem of methane satellites for addressing methane emissions globally



MethaneSAT

100 m x 400 m pixels across 200 km swath

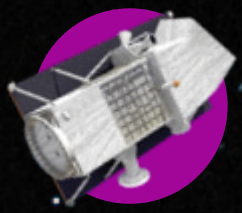
MethaneSAT will revolutionize measurement of methane emissions by detecting concentrated point sources and dispersed area sources. It quantifies total emissions – not possible with today's satellites – thus advancing the state-of-the-art and filling major data gaps globally.



GHGSat

30 m x 30 m pixels across 10 km swath

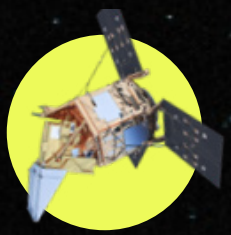
An industry-oriented constellation of commercial point-source satellites.



PRISMA

30 m x 30 m pixels across 30 km swath

Launched by the Italian Space Agency in 2019 it combines a hyper-spectral sensor with a high-resolution camera.



TROPOMI

7,000 m x 5,500 m pixels across 2,600 km swath

European Space Agency's global mapper launched in 2017 on the Sentinel-5P satellite.

Carbon Mapper

30 m x 30 m pixels across 18 km swath

A point-source instrument announced in 2021 by coalition of organizations together with commercial satellite provider Planet, planned for launch in 2023.

GLOBAL MAPPING	AREA MAPPING	LOCAL MAPPING
Global & large-scale regions Large point sources	Area sources Point sources Sector-wide quantification	Point sources Facility level attribution
TROPOMI, SCIAMACHY, GOSAT, GOSAT-2, CO2M	MethaneSAT	GHGSat, PRISMA, EnMAP GF-5, ZY-1, Carbon Mapper