



GWFF

GEOSPATIAL WORLD FORUM

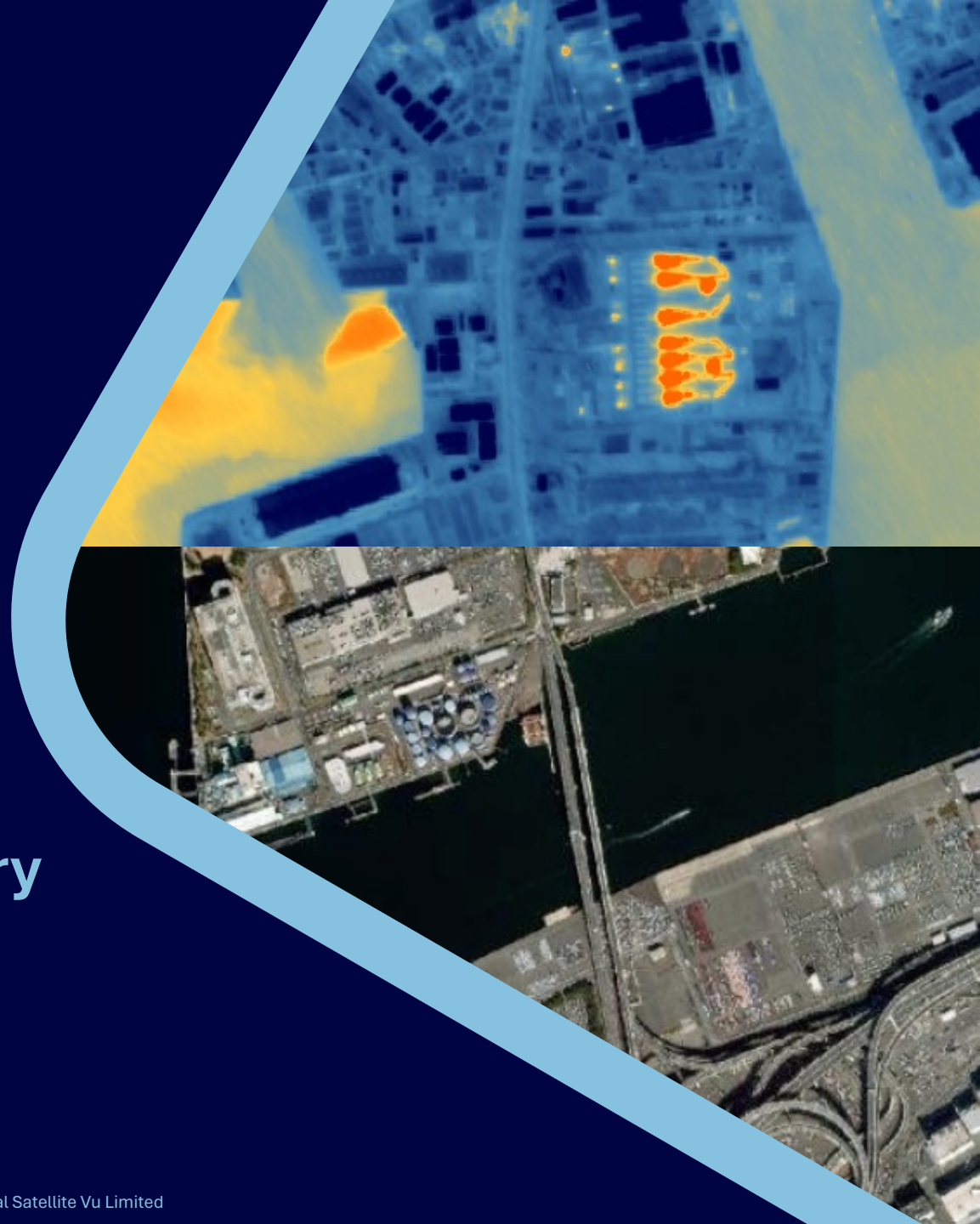
[**CLICK TO KNOW MORE**](#)

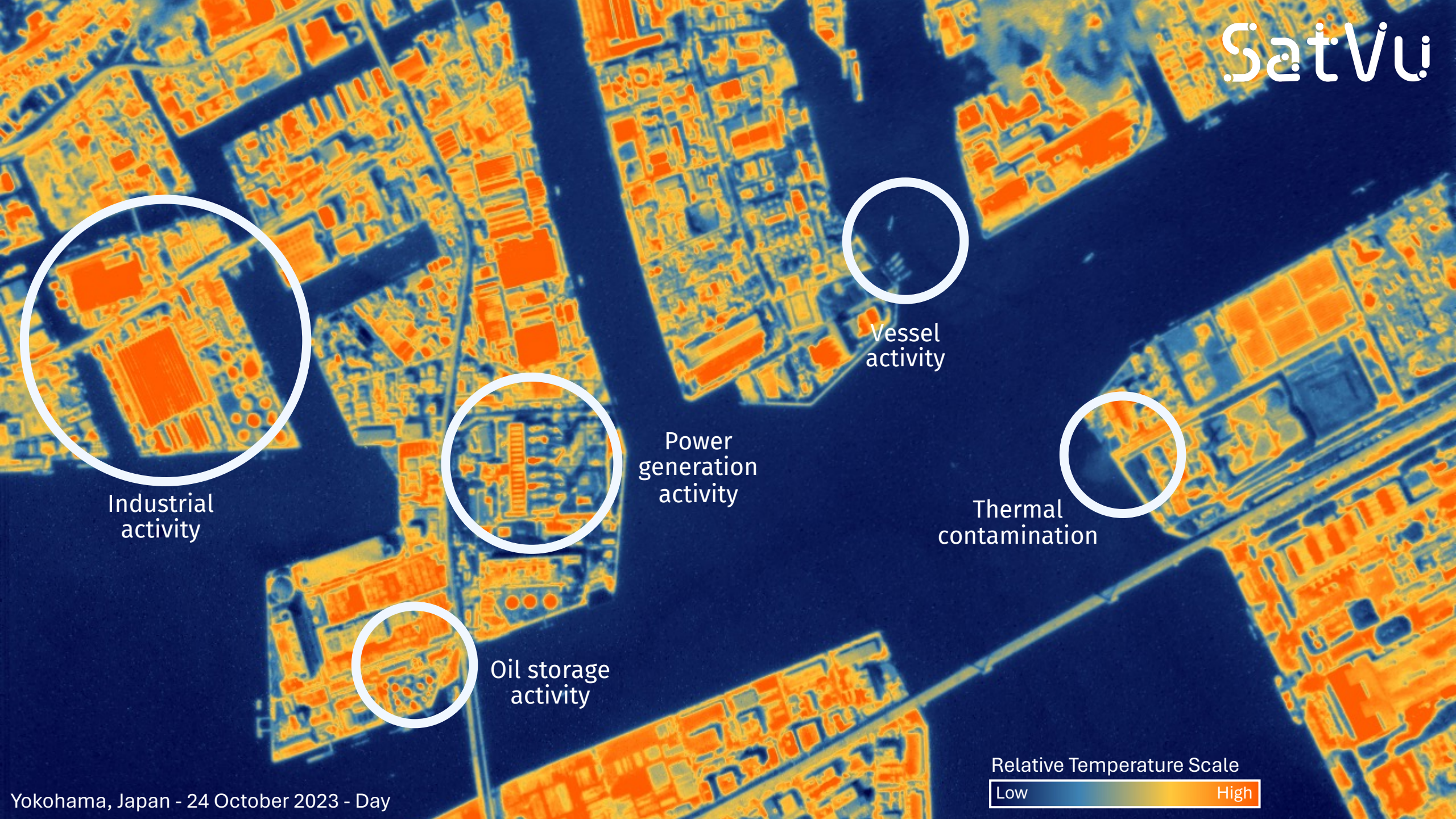


First images from HotSat-1

Introducing a Unique Thermal Imagery
Dataset: From Concept to Market

Alex Gow





Industrial activity

Oil storage activity

Power generation activity

Vessel activity

Thermal contamination

Relative Temperature Scale

Low

High

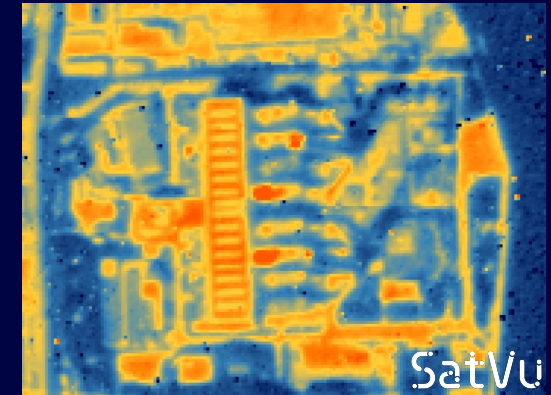
Thermal infrared on the electromagnetic spectrum



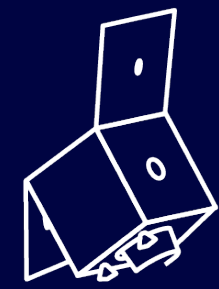
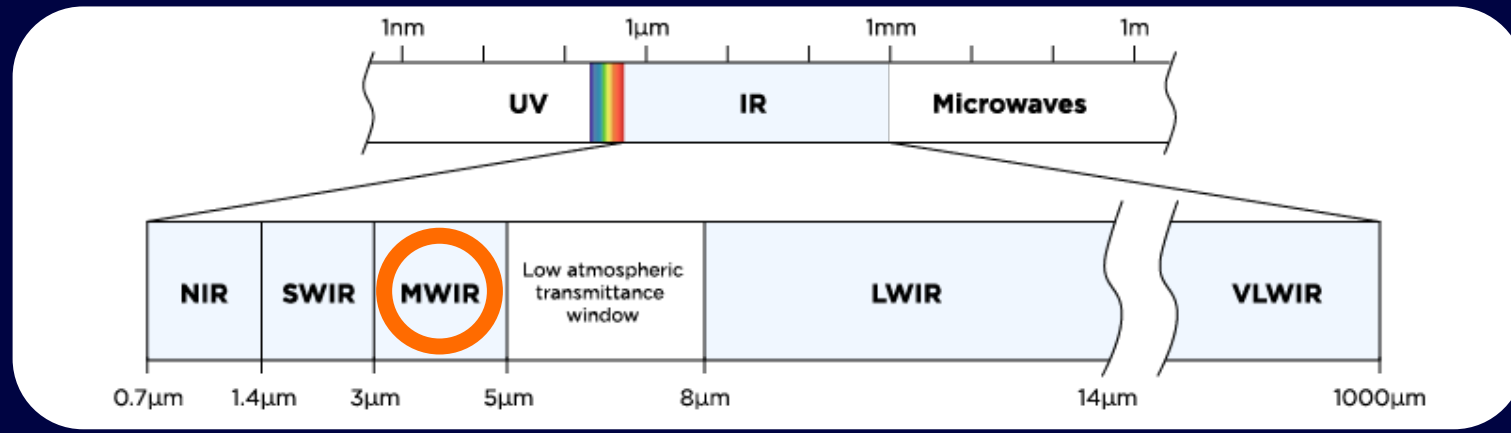
Visible imagery shows the outside of structures during the day



Radar imagery shows the surface geometry of structures day and night

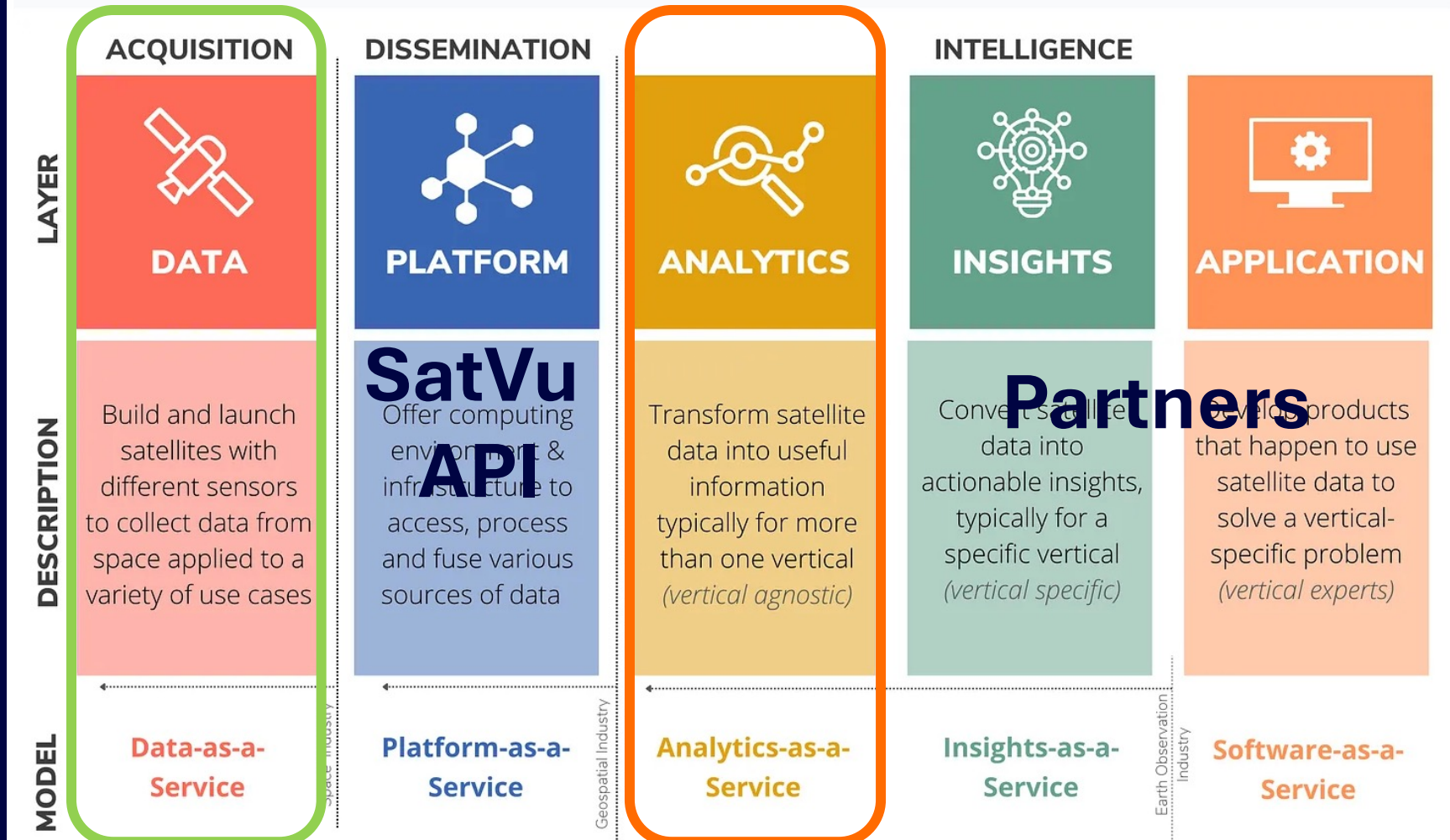


Thermal Infrared can indicate activity inside structures day and night



- HotSat Specification:**
- 3.5 m at nadir
 - 16 km² at nadir
 - Single image & Video
 - Day & Night Imaging

EARTH OBSERVATION OPERATING STACK



Market Overview

NATIONAL SECURITY
Geospatial Intelligence

ECONOMIC MONITORING
Energy, Commodities and Infrastructure

CLIMATE
Urban and Environmental Heat Monitoring

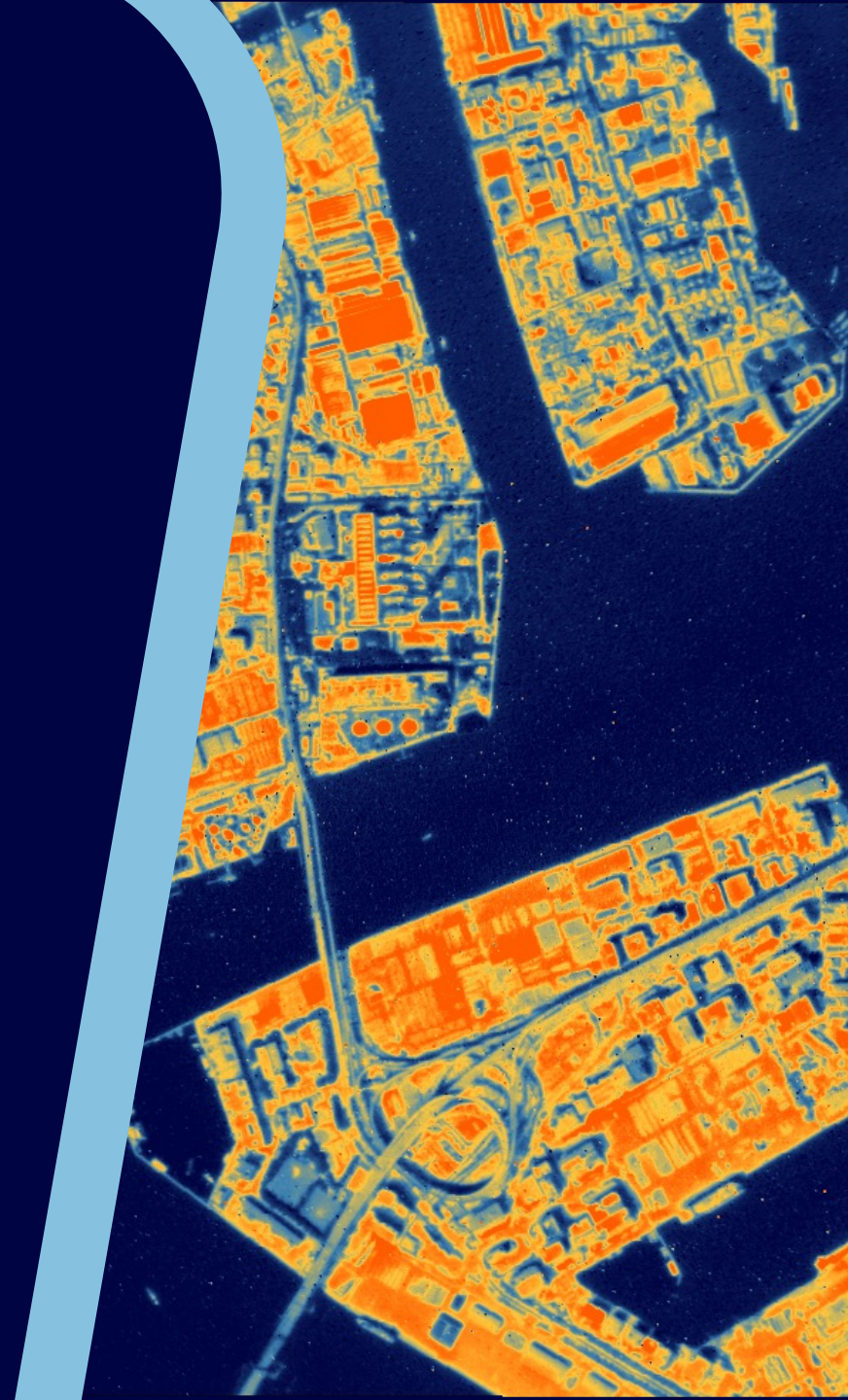
Data

Analytics

Insights (Partnerships)

Case Study: Industrial Activity Analysis

Al Zour Refinery, Kuwait



Strategic Industrial Activity Analysis

Al Zour Oil Refinery, Kuwait



Strategic Industrial Activity Analysis

Al Zour Oil Refinery, Kuwait

- Open-Source media reports indicate a fire incident took place 16th Nov 2023 at a desulphurisation facility within the Al Zour Oil Refinery plant in Kuwait.
- **Temporal SatVu HotSat Thermal Mid-IR imagery** collection and analysis confirms this fire incident occurred during the times indicated, and normal plant operations were resumed by 30 November.

Nov 16, 2023 - 08:28

Al Zour 615kbd Refinery Has "Limited Fire" Thursday During Ramp Up

A fire broke out at the 615kbd KIPIC Al Zour refinery earlier Thursday in a desulphurization unit according to the operator.

- The fire has now been extinguished.
- Al-Zour was already offline as it was ramping back up again because of an interruption in fuel gas supplies last week.
- The restart of the refinery is reported as unaffected. The official X account tweeted Wednesday that full restart would take 10 days (before the fire struck)
- KIPIC tweeted after the fire "The Kuwait Integrated Petroleum Industries Company confirms that restart operations, low-sulfur fuel transfer operations to electric power generation stations, or external export operations have not been affected as a result of the limited fire accident that was controlled this morning in record time"

kipicofficial @kipicofficial

أعلنت الشركة الكويتية للصناعات البترولية المتكاملة عن نشوب حريق محدود في وحدة نزع الكبريت (رقم 12) في مصفاة الزور صباح اليوم الخميس وبادرت قوات الإطفاء وعلى الفور بمكافحة الحريق تطبيقا لخطة الطوارئ. ولم يسفر الحريق عن أي حوادث والله الحمد

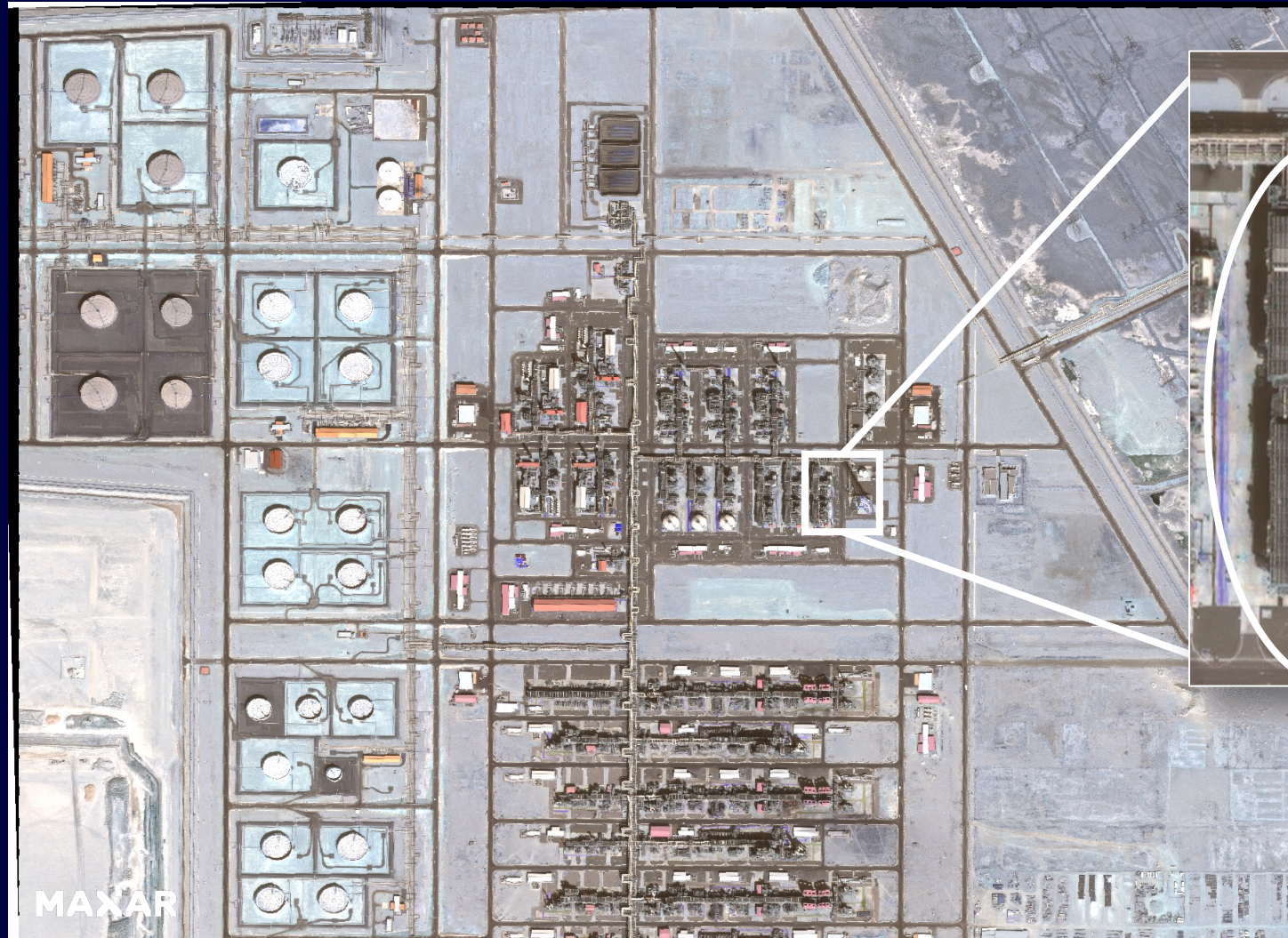
Translated from Arabic by Google

The Kuwait Integrated Petroleum Industries Company announced that a limited fire broke out in the desulfurization unit (No. 12) at Al-Zour Refinery on Thursday morning. The fire forces immediately began to fight the fire in implementation of the emergency plan. The fire did not result in any accidents, thank God

Last edited 5:29 AM · Nov 16, 2023 · 5,399 Views

Strategic Industrial Activity Analysis

Al Zour Oil Refinery, Kuwait

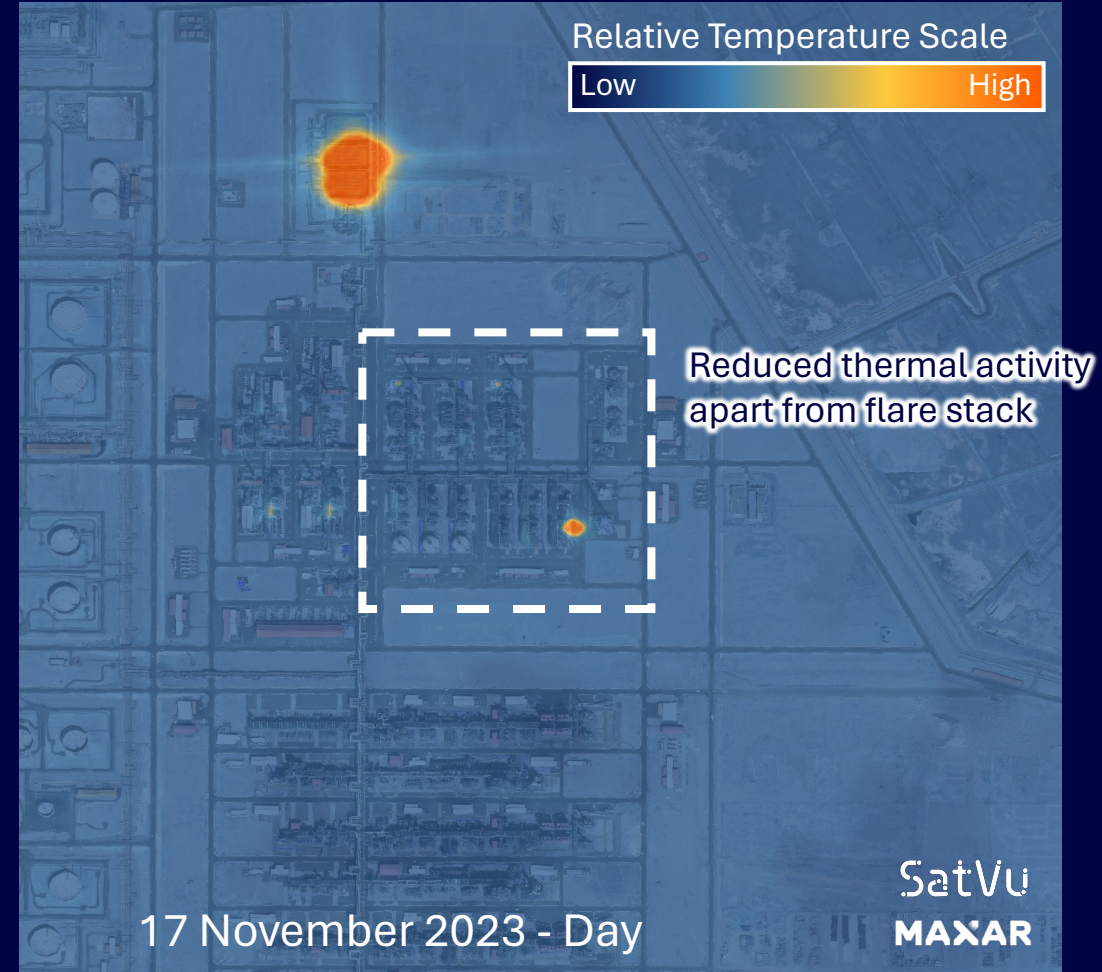
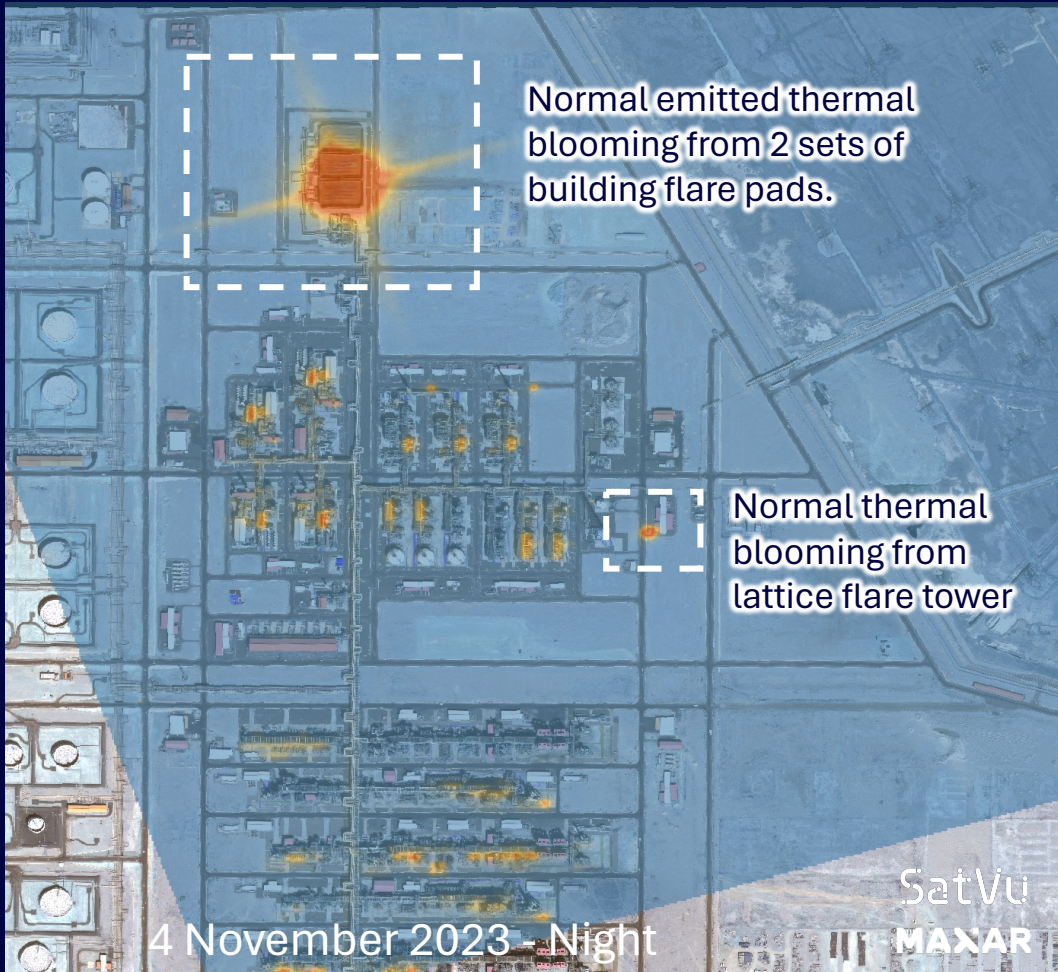


Likely Unit 12 Desulphurization plant



Strategic Industrial Activity Analysis

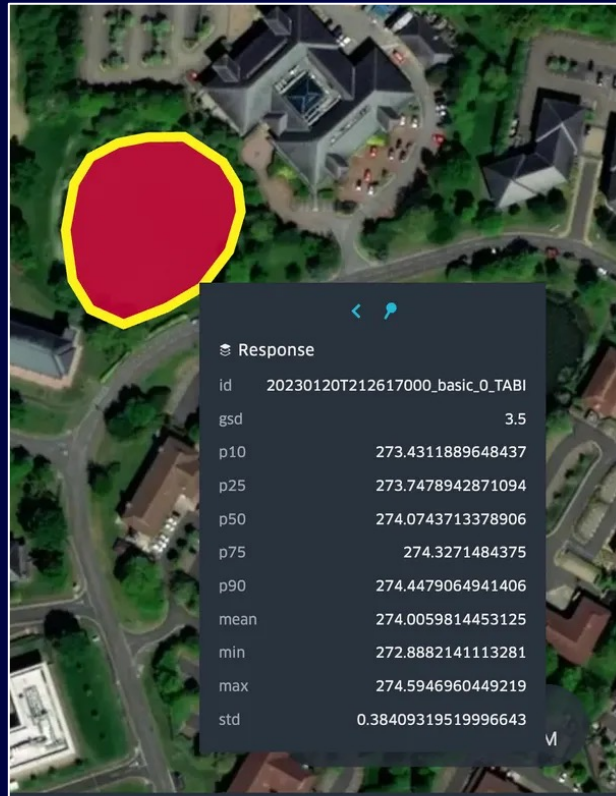
Al Zour Oil Refinery, Kuwait



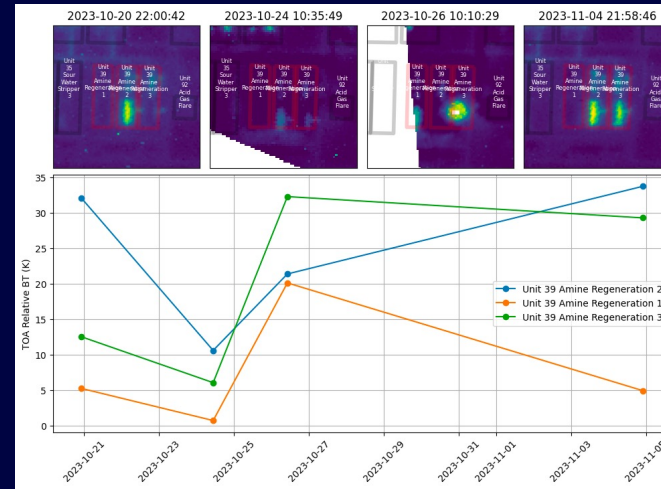
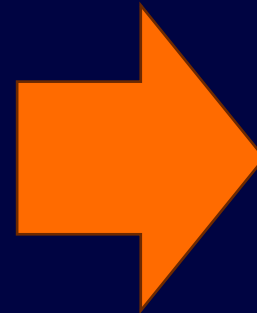
Analytics - Temperature Statistics API



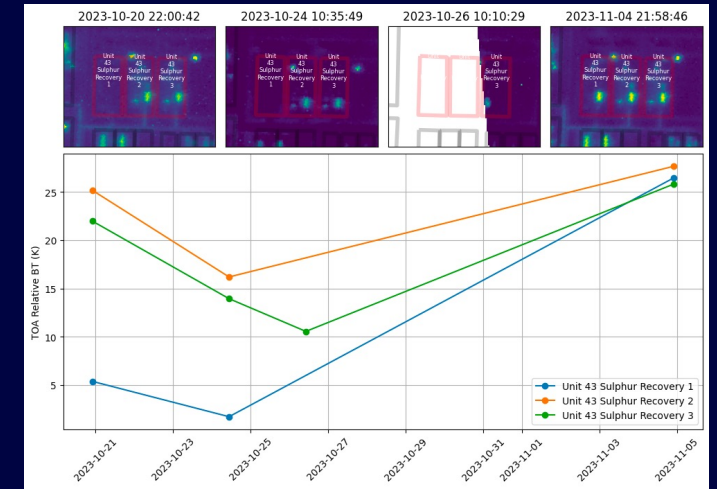
Add value by automating analytics



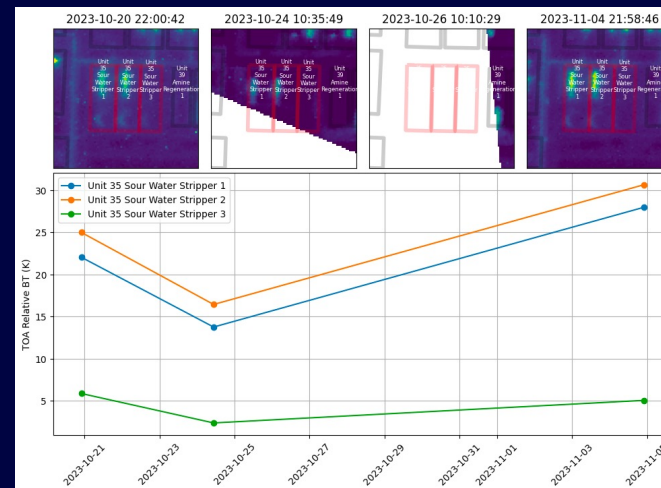
GeoJSON thermal statistics from HotSat imagery.



Amine Regeneration Units



Sulphur Recovery Units



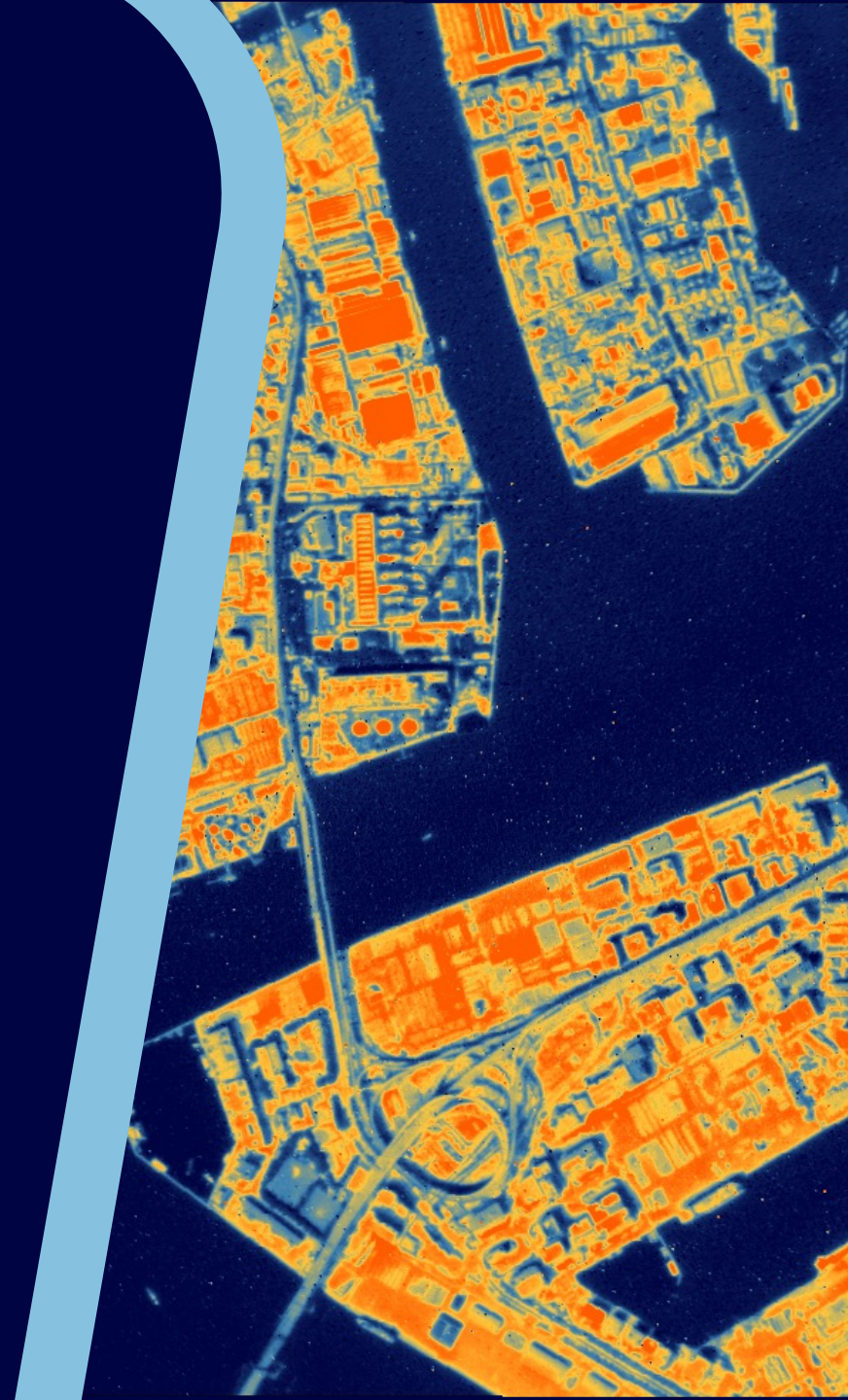
Sour Water Strippers



Hydrogen production units

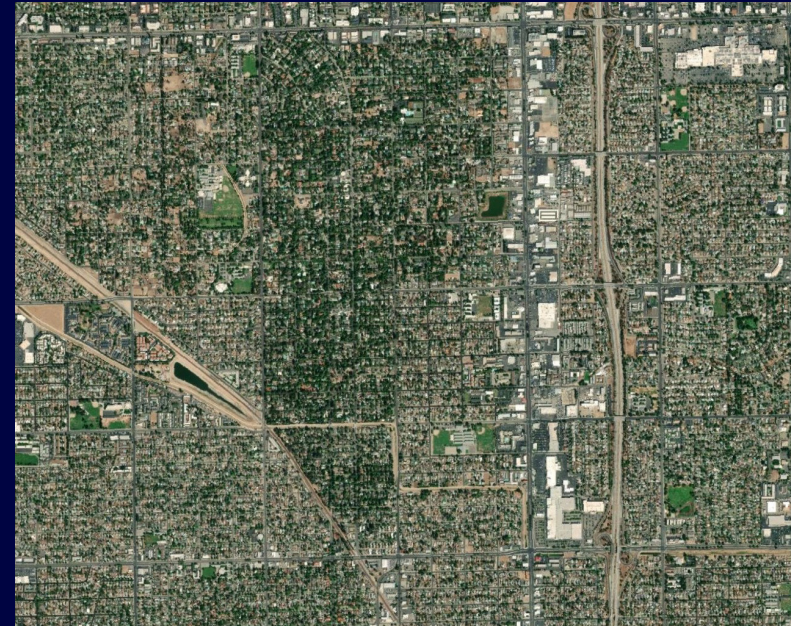
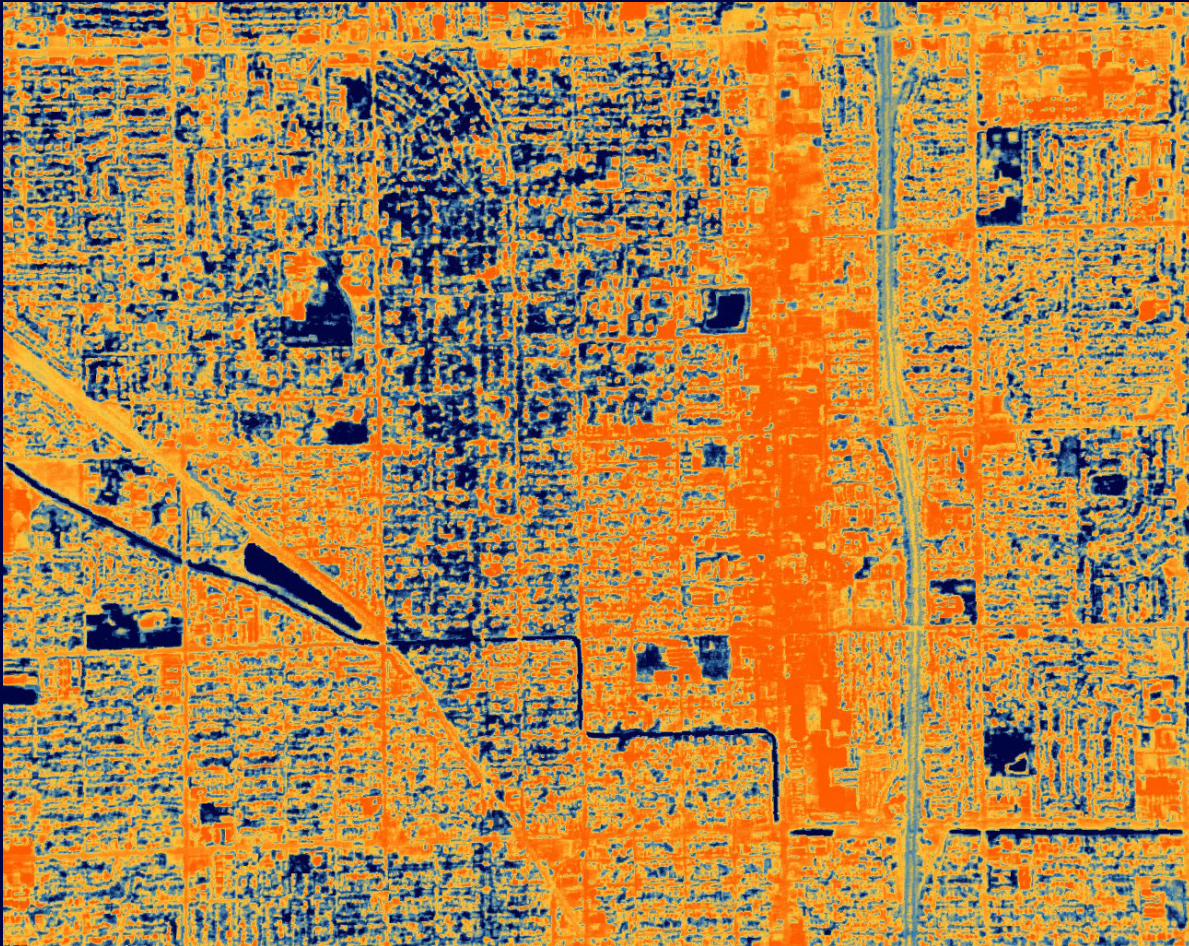
Case Study: Urban Heat

Global heat risk insights to
support urban greening



Urban heat – the power of trees

Fresno, California



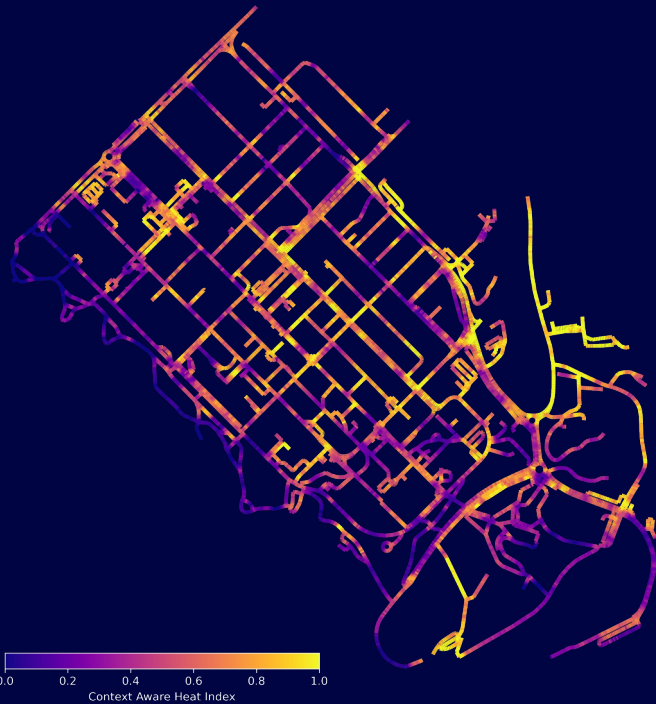
31 July 2023

High-density urban areas retain heat more readily. By comparison, the tree-lined suburbs of the wealthy suburb of Fig Gardens are noticeably cooler.

Compare how different neighborhoods are impacted by the urban heat

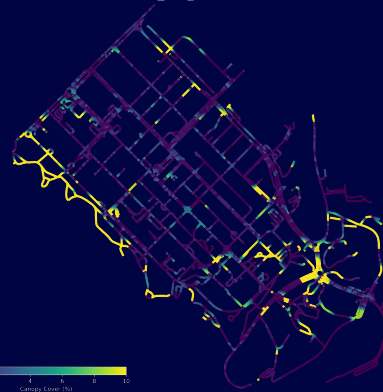
SatVu x OPO | Office of Planetary Observations

Context Aware Heat Stress (streets)

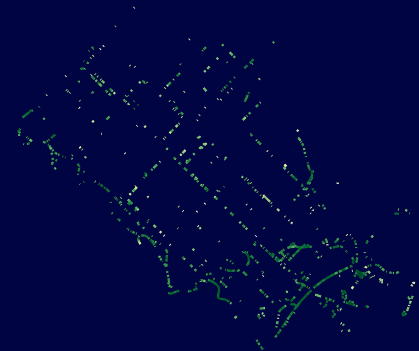


City of Darwin CBD

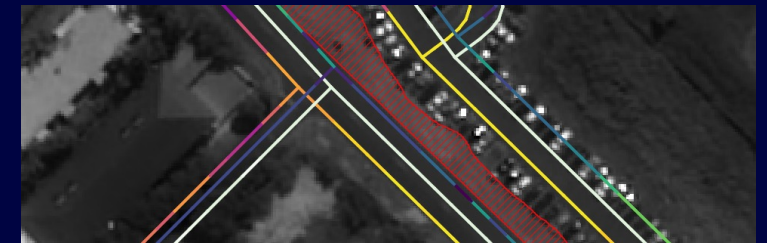
Canopy Cover %



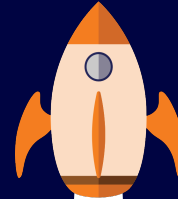
Tree Stress Index



Planting Area Prioritisation
(red hatch shows where to plant)



Our constellation



Mid 2025

HotSat-3 launched
2+ revisits per day

2026

Funding to scale constellation to 9 satellites
10-20 revisits per day

Early 2025

HotSat-2 launched

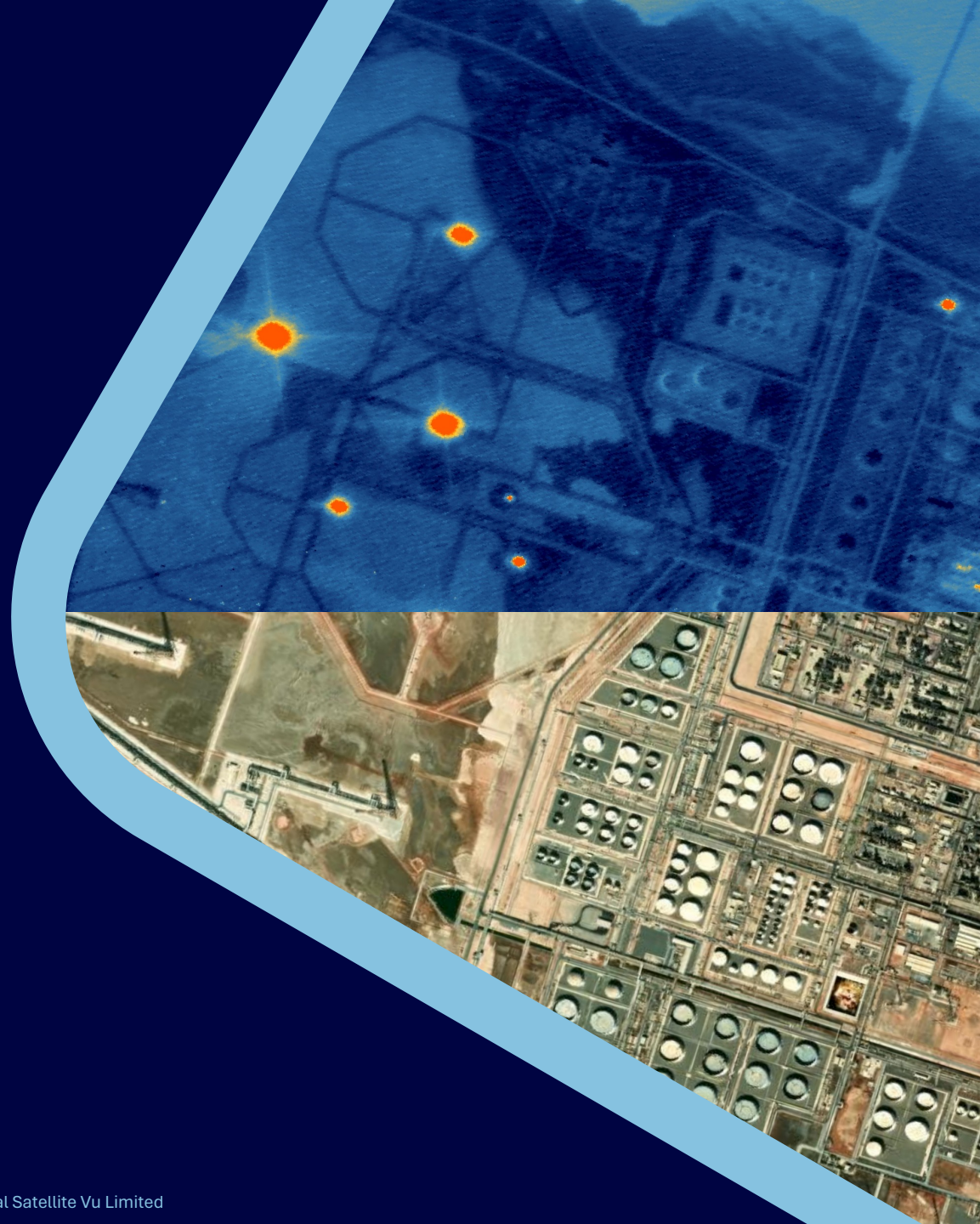
2024

HotSat-2 and HotSat-3 in build
Product and feature development,
including **assured priority tasking** and
the ability to **withhold** imagery from
the catalog

2023

HotSat-1 launched, but suffers failure in orbit after 6 months
Commercial operations begin





Thank you

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