Sidekick

GLOBAL PERSISTENT MONITORING SERVICES FOR THE ENERGY AND DEFENSE SECTORS



ORBITAL SIDEKICK - EARLY STAGE COMPANY

Current Energy Infrastructure Monitoring is costly, subjective, and ineffective.

OSK uses hyperspectral satellites to provide a vertically integrated, scalable solution for global, persistent, objective monitoring.

OSK has captured initial monitoring services contracts with over a dozen of the largest pipeline operators in North America.

Presently finalizing \$16M Series A led by Temasek, along with a \$16M contract with the US Air Force.



PIPELINES ARE EVERYWHERE, AND THEY'RE 60 YEARS OLD

Pipelines are responsible for 40% of US methane leaks (130 MMT CO₂e) Pipeline incidents have caused over 500 deaths & 2500 injuries since 1990



Santa Barbara

San Bruno

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Bellingham



ENERGY INFRASTRUCTURE MONITORING TECHNOLOGY IS STUCK IN 1960



Monitoring Platforms 2.7M kilometers of pipeline



Subjective Monitoring This is what operators see

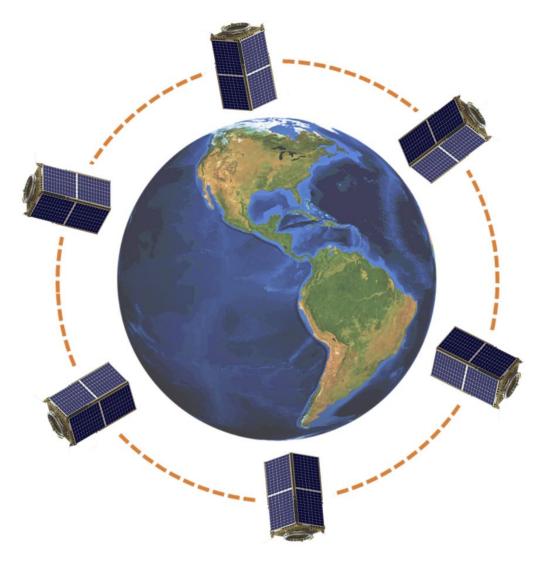
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Date	Observation Report	Method	Time	Reported To:
1/1/2019	No previously unreported activity.	Phone	12:08 PM	Name
1/8/2019	No previously unreported activity.	Phone	11:53 AM	Name
1/15/2019	No previously unreported activity.	Phone	10:30 AM	Name
1/22/2019	No previously unreported activity.	Phone	2:11 PM	Name
1/29/2019	No previously unreported activity.	Phone	1:17 PM	Name
2/5/2019	No previously unreported activity.	Phone	12:30 PM	Name
2/12/2019	No previously unreported activity.	Phone	11:31 AM	Name
2/19/2019	No previously unreported activity.	Phone	11:27 AM	Name
2/26/2019	No previously unreported activity.	Phone	2:17 PM	Name
3/5/2019	No previously unreported activity.	Phone	11:27 AM	Name
3/12/2019	No previously unreported activity.	Phone	9:38 AM	Name
3/19/2019	No previously unreported activity.	Phone	10:48 AM	Name
3/26/2019	Excavator parked @Location	Phone	11:55 AM	Name

Reporting This is what operators get

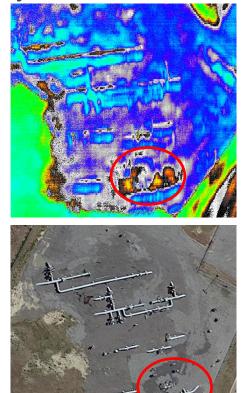


GLOBAL PERSISTENT MONITORING WITH HYPERSPECTRAL SATELLITES





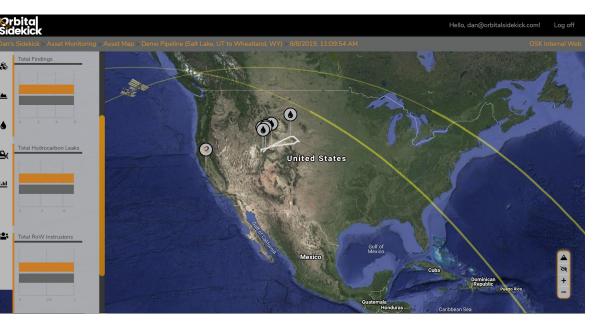
Hyperspectral Image Hydrocarbon Detected



RGB Image No Hydrocarbon Detected

Orbital Sidekick HSI Satellite Constellation Daily Monitoring

Spectral Intelligence[™] **Proprietary Chemical** Fingerprinting

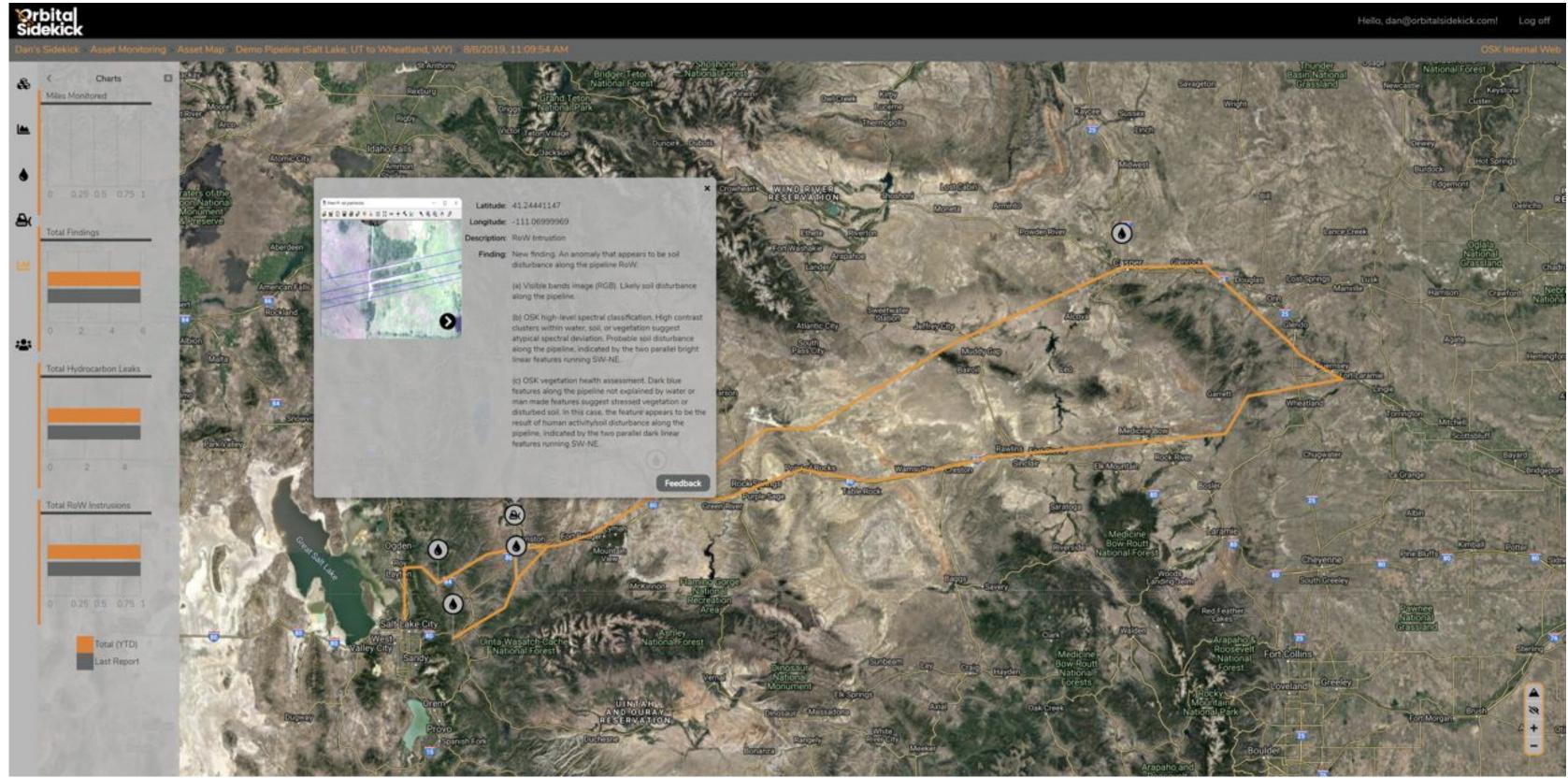


SIGMA[™] User Platform **Global Monitoring Application**



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SPECTRAL INTELLIGENCE GLOBAL MONITORING APPLICATION (SIGMATM)





PROPRIETARY TECHNOLOGY AND DEFENSIBILITY

OSK's proprietary analytics platform and satellite payload architecture provides space-based monitoring solutions powered by hyperspectral imaging (HSI). OSK's unique radiometric and change detection capability enables unparalleled target monitoring services for both commercial and defense users on a global scale.

Utility patent for pipeline monitoring using hyperspectral sensors on aerial and space platforms:

"Aerial and Space-Based Hyperspectral Imaging System and Method for Hydrocarbon and Chemical Industry Regulatory Compliance, Leak Detection and Product Speciation"

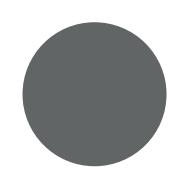


\$2.1B **REGULATORY COMPLIANCE**

Was the pipeline monitored per regulation? Is the pipeline leaking? Are there any encroachments?

What is the scope of the spill? Were the remediation efforts successful? Are there any security threats?

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\$12B, 8% CAGR **SAFETY & MONITORING**



INITIAL CONTRACTS WITH MAJOR ENERGY COMPANIES & US GOVERNMENT



SIGNED MSAs

\$600K COMMERCIALIZATION **INVESTMENT**

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DEFENSE



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TOTAL COSTS (INC LAUNCH)



SPACECRAFT MISSION LIFE PIPELINES MONITORED (100% UTILIZATION) POTENTIAL PIPELINE REVENUE VIA SIGMA

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6 SATELLITES \$24M

REVISIT RATE GSD

- SPECTRAL RANGE 400 2500 NM, 512 BANDS
 - 5 METERS

DAILY

- **5-7 YEARS**
- 900,000 KM/DAY
- >\$600M /YR
- ROI 1 MONTH



We have recently closed a \$16M Series A and \$16M in non-dilutive Air Force funding to launch 6 spacecraft, hire new staff, and scale our SIGMA platform for new commercial markets

\$4.7M SERIES SEED - 2018

Grow Team from 2 to 8

Launch First Space Mission to ISS

Develop First Satellite Mission

Release SIGMA Beta

Grow Sales Pipeline

Grow Team from 8 to 22 Launch 6 Spacecraft **Grow Sales Pipeline**

- \$16M SERIES A 2021
- Scale SIGMA to Capture \$600M ARR
- 24 Months Runway (w/o Revenue)



\$16M US AIR FORCE CONTRACT

A vital national security need for our specific technology exists within the US Air Force and the greater intelligence community.

The US Air Force is MATCHING our capital fundraise for the Series A.

Potential Phase III sole-source contract to follow.

Enables: Launch 6 Satellites in 2021/2022 for Daily Target Revisit Scale Geospatial Solutions



ROADMAP TO COMMERCIALIZATION/GROWTH

Q2 2018 MVP	Q3 2021 Intermediate	Q1 2022 Commercialization
ISS-HEIST	Aurora	GHOSt (1&2)
400-1000 nm 30m GSD	400-2500 nm 30m GSD	400-2500 nm <10m GSD
Risk reduction	Gross level pipeline leak detection	Oil & Gas Pipeline compliance &
Software development	Mineral & material	regulations
Data pipeline development	identification	Defense applications
Limited Ag use case	Site monitoring	Infrastructure monitoring
Limited material	Sustainability	Sustainability
classification	Environmental	
Limited defense	Monitoring	Product classifications
applications	Defense applications	Surveying

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Q3 2022 Growth

GHOSt (1-6) 400-2500 nm <10m GSD



Oil & Gas Pipeline compliance & regulations

Defense applications

Infrastructure monitoring

Sustainability

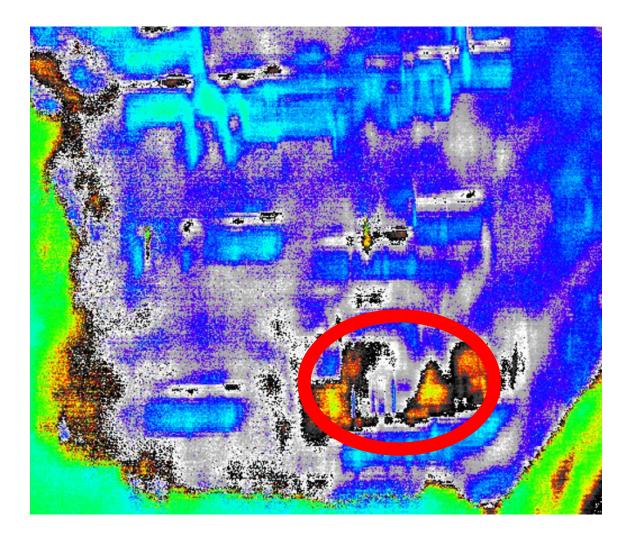
Industrial footprint & site monitoring

New Energy Exploration

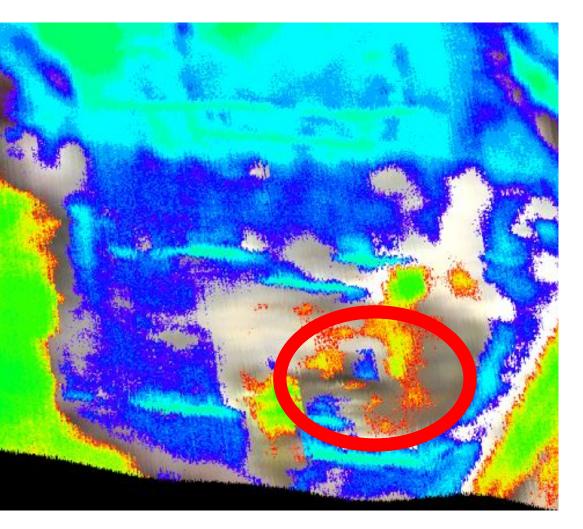


CHANGE DETECTION AND SOIL DISTURBANCE

Underground Gas Leak – Discovery and After Repair

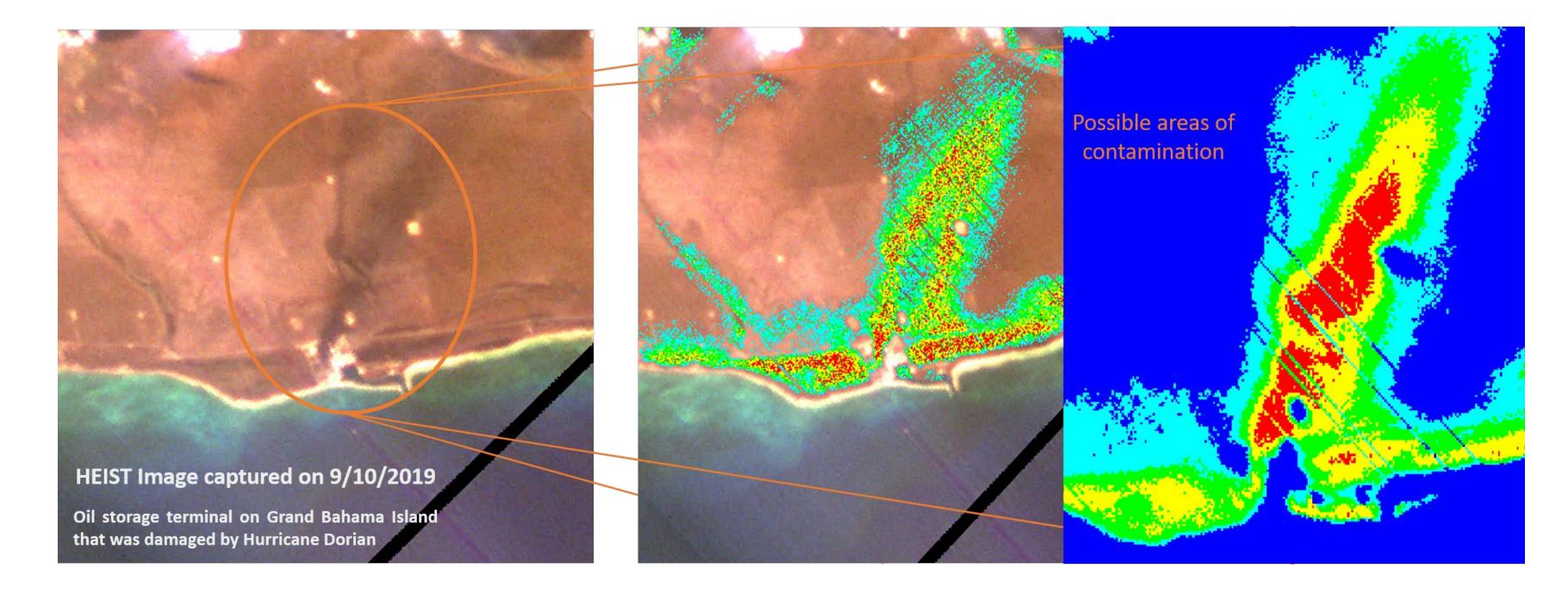








OIL SPILL IN BAHAMAS FOLLOWING HURRICANE DORIAN – ISS-HEIST



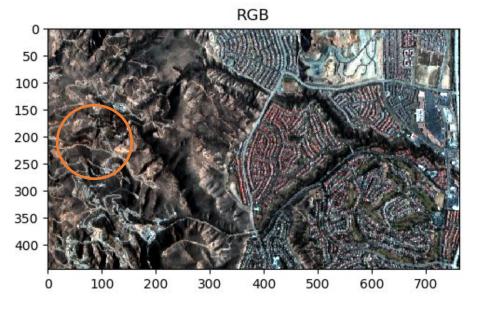
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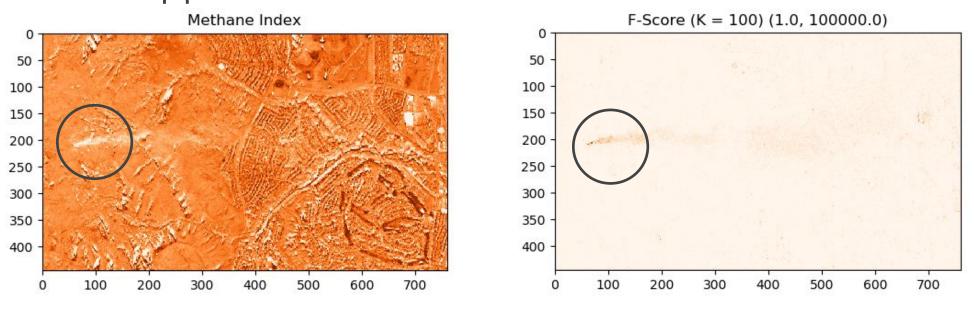


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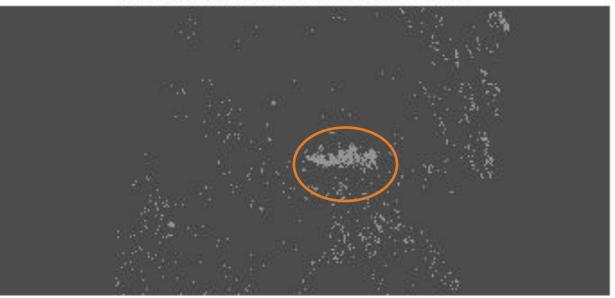
HYPERSPECTRAL NEURAL NETWORK – METHANE DETECTION

OSK-developed processes using traditional approaches





Methane Neural Net Results



RGB Image



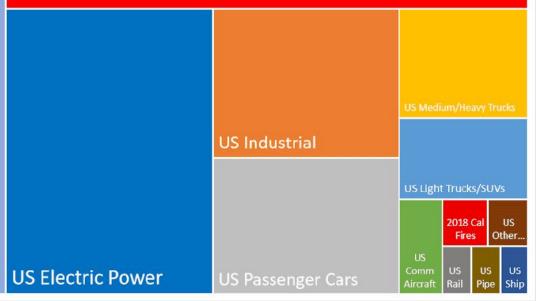


GLOBAL CARBON FOOTPRINT – WILDFIRES CONTRIBUTE 8GtCO2

International

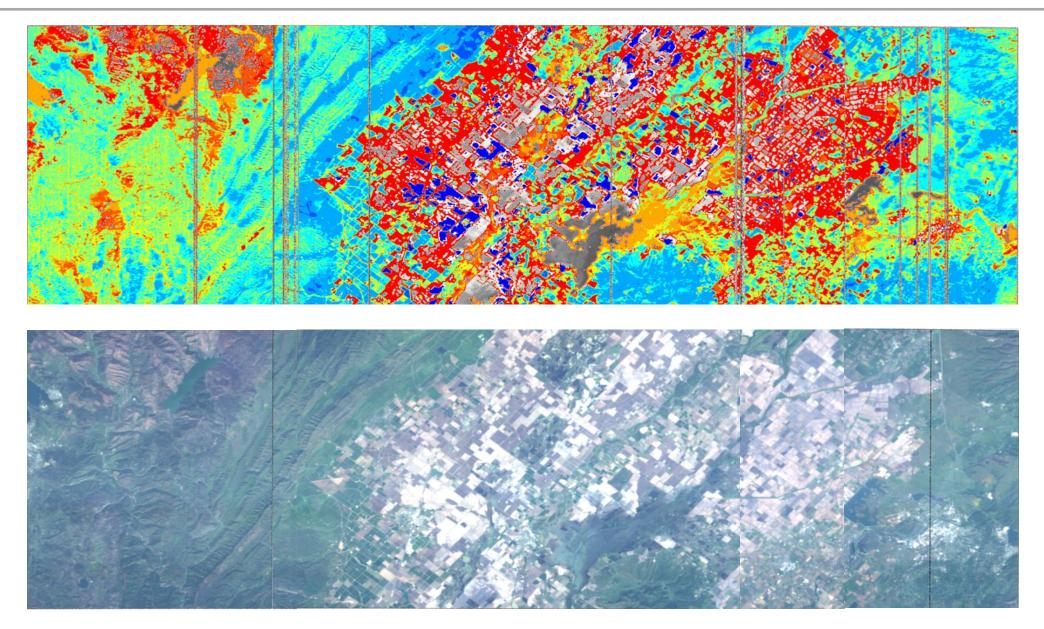
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Global Wildfires





OSK HYPERSPECTRAL FIRE RISK TOOL – FIGHTING WILDFIRES



Uses three vegetation indices to calculate *Fire Risk;* includes live fuel moisture content

- broadband/narrowband greenness a)
- b) canopy water content
- c) dry or senescent carbon
- Blue values indicate least fuel; Red values indicate most fuel.









\$2.1B **REGULATORY COMPLIANCE**

\$12B, 8% CAGR **SAFETY & MONITORING**

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\$240B, 13% CAGR **GEOSPATIAL SOLUTIONS** FOR NEW ENERGY **EXPLORATION & SUSTAINABILITY**



OSK's proprietary analytics platform and satellite payload architecture enables unparalleled target monitoring services for both commercial and defense users on a global scale.

OSK's objective and scalable value proposition has attracted initial monitoring services contracts with over a dozen of the largest pipeline operators in North America.

Strong financial backing and myriad new market opportunities have OSK well positioned for rapid growth.

