Security & Monitoring Management Solutions

A proposed presentation by

KSF Space

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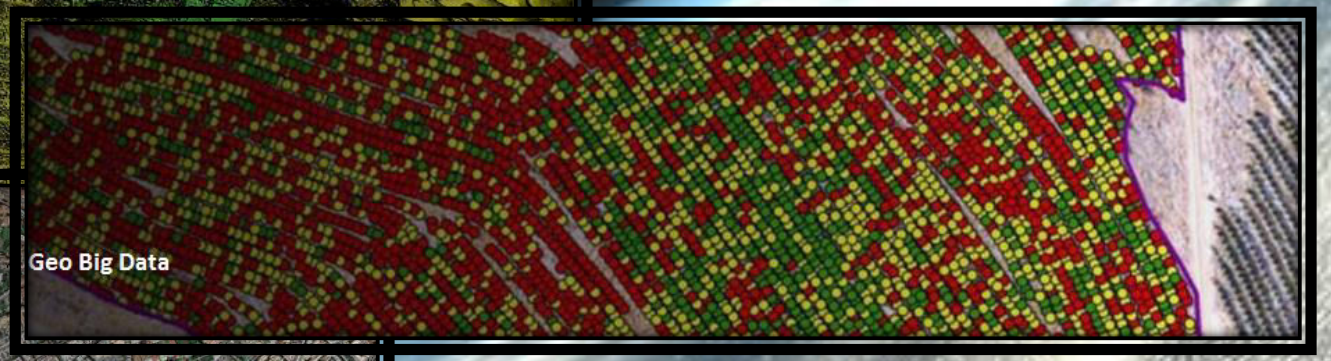
Better data. More answers



INDUSTRY APPLICATIONS »

Evacuation planning »
Emergency aid Planning »
Damage assessment »
Defense and homeland security »
Risk analysis

Image coverage and revisit:

- Daily everywhere at 3 to 4m resolution using one supplier (subject to cloud)
- Daily everywhere at 0.5m resolution using multiple suppliers (subject to cloud)
- Every few days at 0.5m resolution for any location using one supplier (subject to cloud)

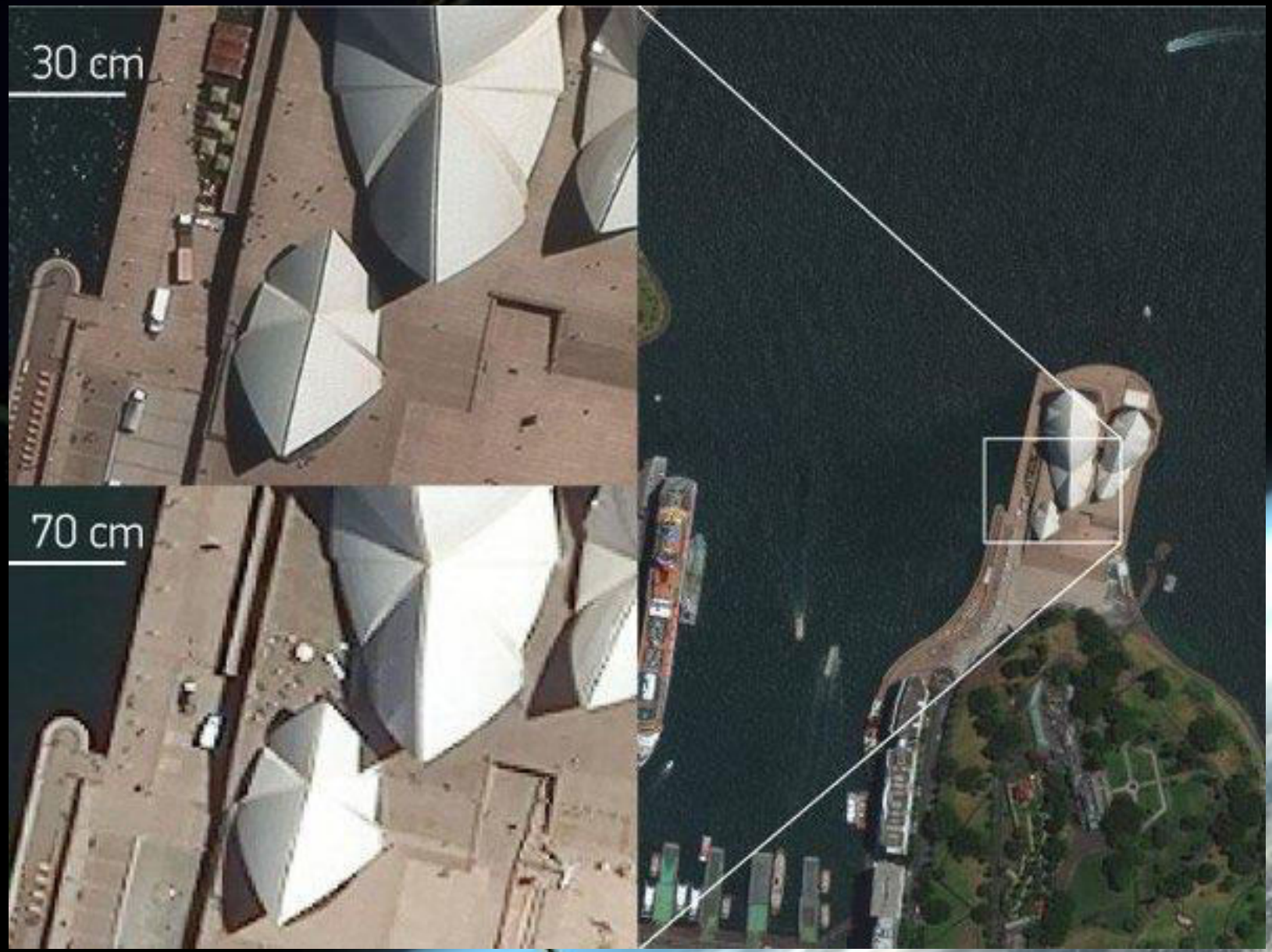
Image delivery times:

- Standard may be up to 3 days after acquisition
- Priority or emergency will be within ~hours
  (not available from every supplier at every location)

- Non-commercial imagery at 10m resolution is available also, with wide coverage

Satellite imagery and analysis can provide you with timely access to information so you can understand evolving situations that may have an impact in your area of responsibility.

Sana'a Airport attack in Yemen on March 27, 2015.


30 cm
70 cm

Damage assessment layers over the city of Tacloban in the wake of Typhoon Haiyan

- ✓ Damaged Roads
- ✓ Undamaged Roads
- ✓ Crowdsourced Damage
- ✓ Damaged Bridges

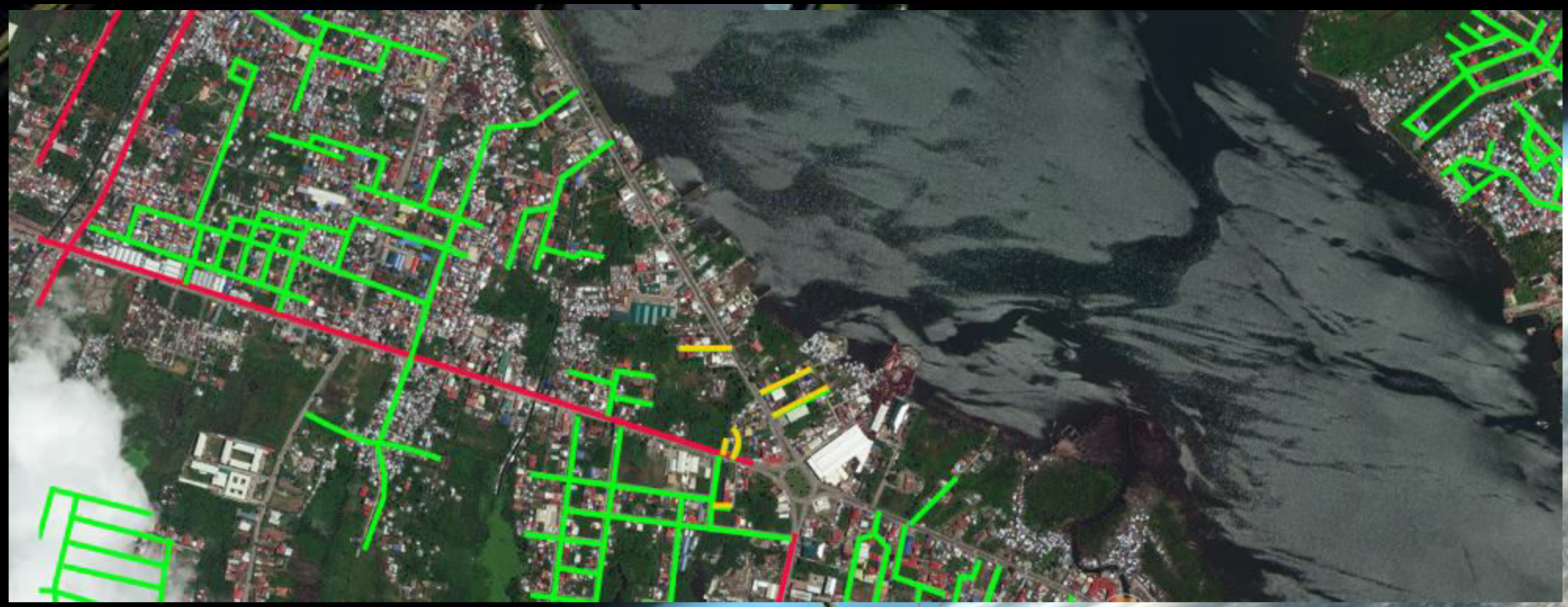


Image within Smoke

Image within Smoke

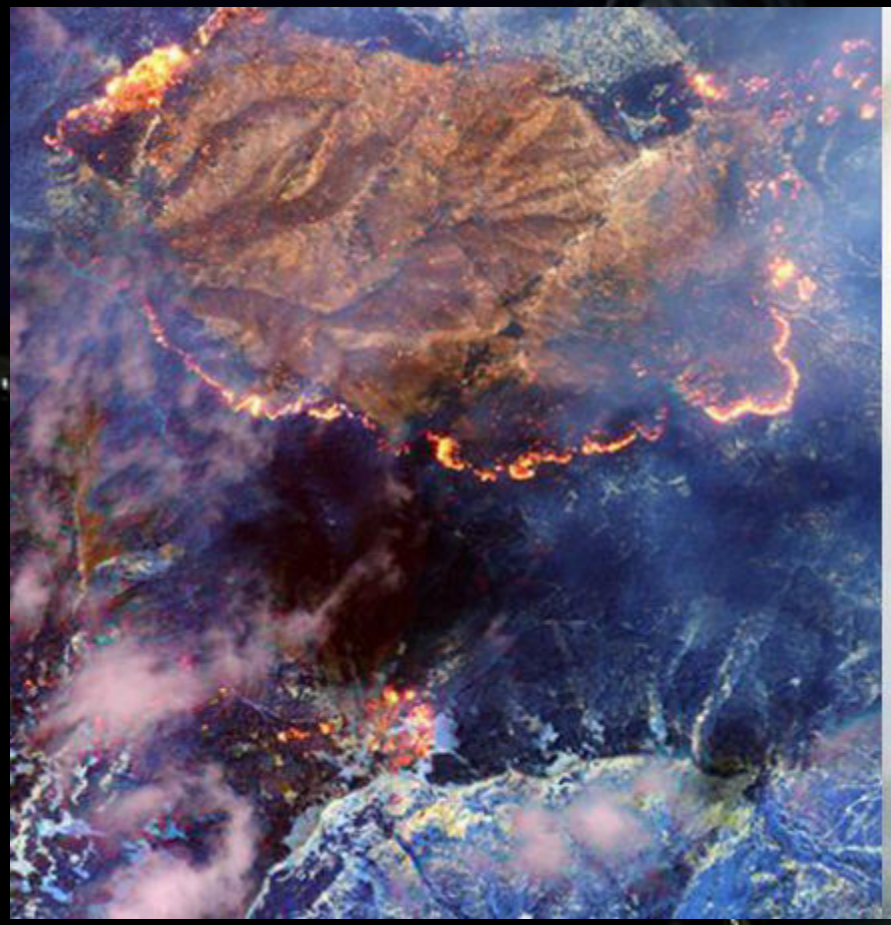


Image within Smoke


Even with all of the data-gathering techniques employed by intelligence agencies, information gaps persist.
Canards clearly visible
Su-25 Frogfoot

Satellite imagery in conjunction with other intelligence sources can provide a more well-rounded and clearer picture of what is happening around you.

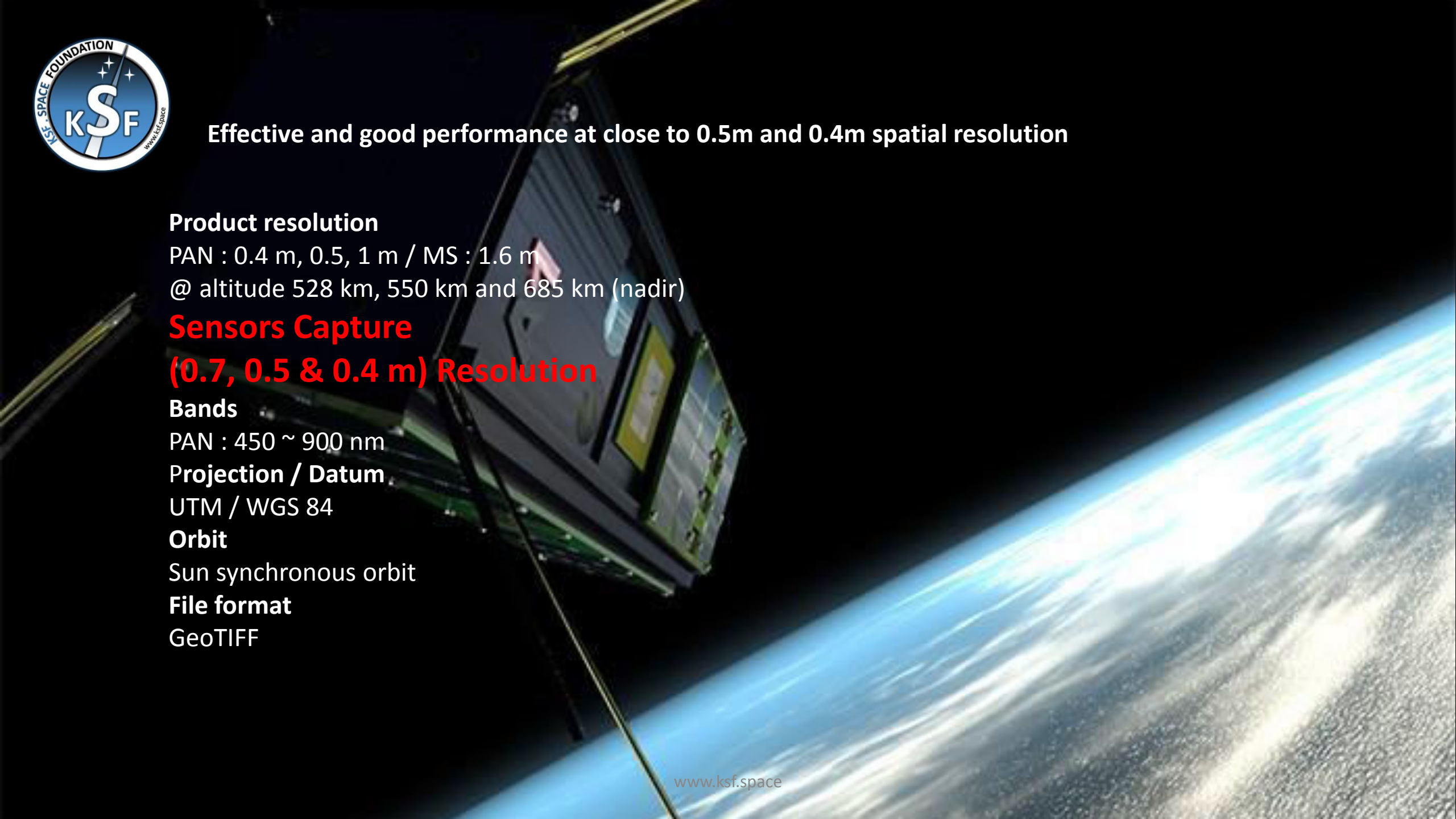
After

An insecure border can open a country to terrorism, drug trafficking, weapons proliferation, smuggling, and illegal immigration.

Border monitoring is essential for maintaining national security.

Using consistent monitoring along with historical imagery allows you to observe changes in the terrain that may indicate when illegal passage is happening.

Features / objects extraction and processing (independent order)



Effective and good performance at close to 0.5m and 0.4m spatial resolution

Product resolution
PAN : 0.4 m, 0.5, 1 m / MS : 1.6 m
@ altitude 528 km, 550 km and 685 km (nadir)

Sensors Capture

(0.7, 0.5 & 0.4 m) Resolution

Bands
PAN : 450 ~ 900 nm
Projection / Datum
UTM / WGS 84
Orbit
Sun synchronous orbit
File format
GeoTIFF

Monitoring Strategies

For large area monitoring, it is often practical and cost effective to monitor a large region daily at 3-5m resolution and use change detection to identify key locations for high resolution analysis and investigation.

Options	Description	Revisit frequency	Spatial resolution	Coverage	Change detection	Comments
1	Wide coverage	~11 days or worse	~10m	Very large (regional or national)	Automated with manual QA	Coverage not guaranteed; have to accept cloud; opportunitistic; coarse resolution; minimal cost
2a	Daily optical monitoring	Daily (around mid-day local time)	3 m - 4 m	Large (e.g. entire border)	Automated with manual QA	Have to accept cloud; less sensitive to change than radar; useful to assist interpretation; not cost effective for large areas
2b			0.5 m	Targeted location	Manual or algorithm assisted	
3a	Daily radar monitoring	Daily 5.30 – 7.30am local time (all-weather)	0.5 m	Targeted location	Automated with manual QA	Very sensitive change detection with or without cloud. Natural events can cause false alarms (animals)
3b			3 m	Large (e.g. entire border)	Manual or algorithm assisted	

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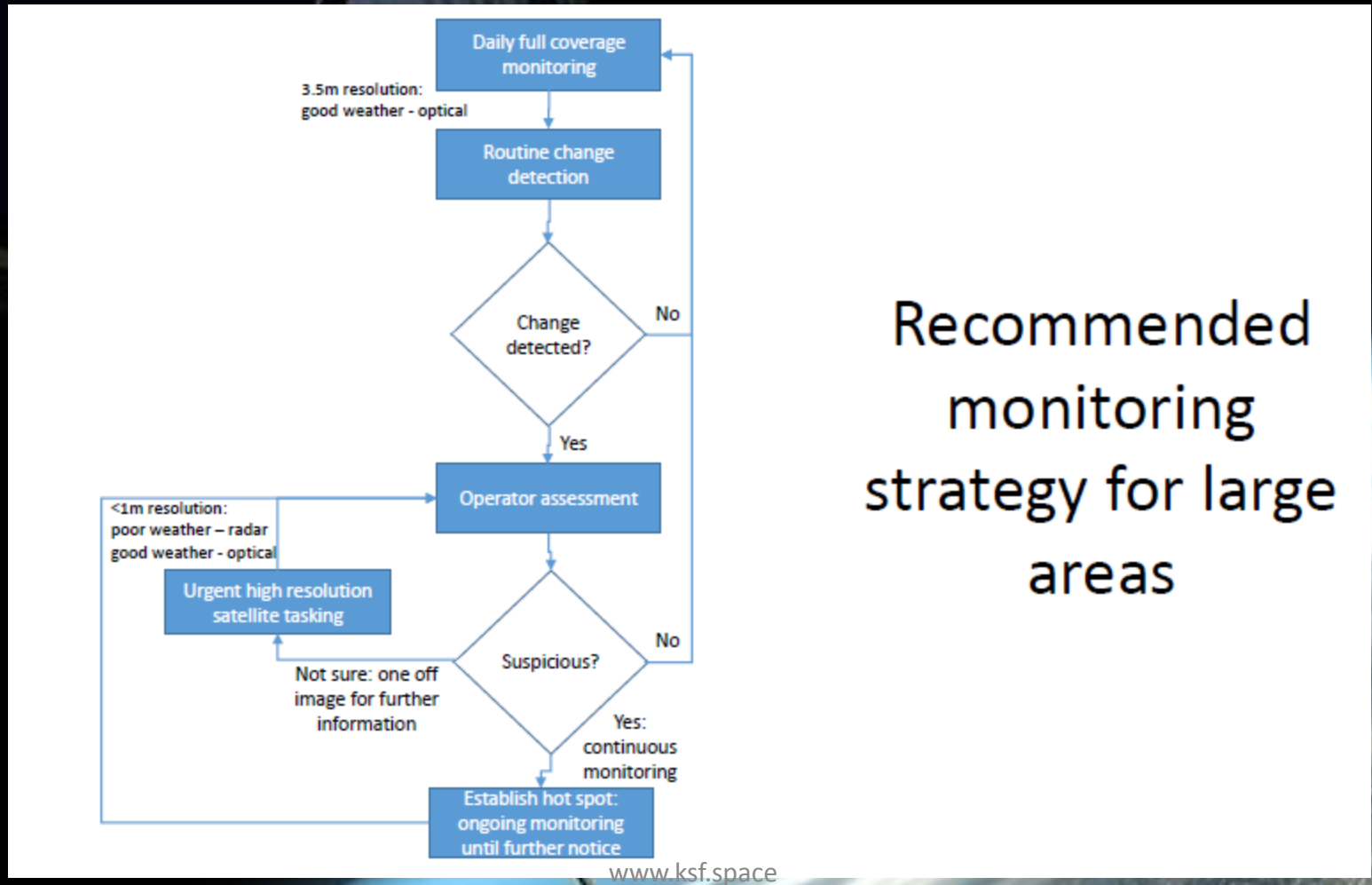

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