



MAXAR

RADARSAT-2 and RADARSAT-2 Capabilities

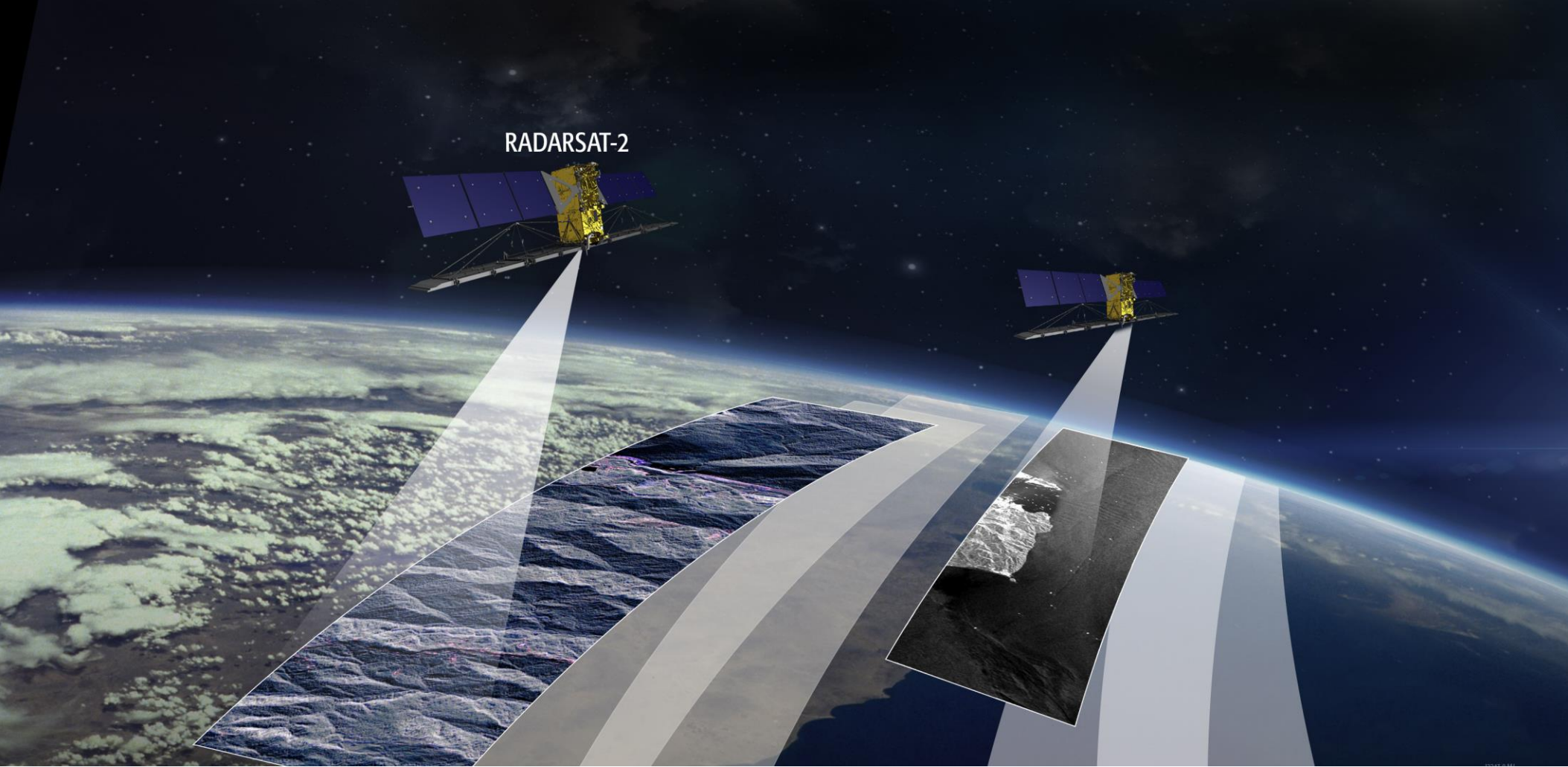


Outline

- RADARSAT-2 As An Enabling Technology
- Operational Radar Capabilities & User Stories

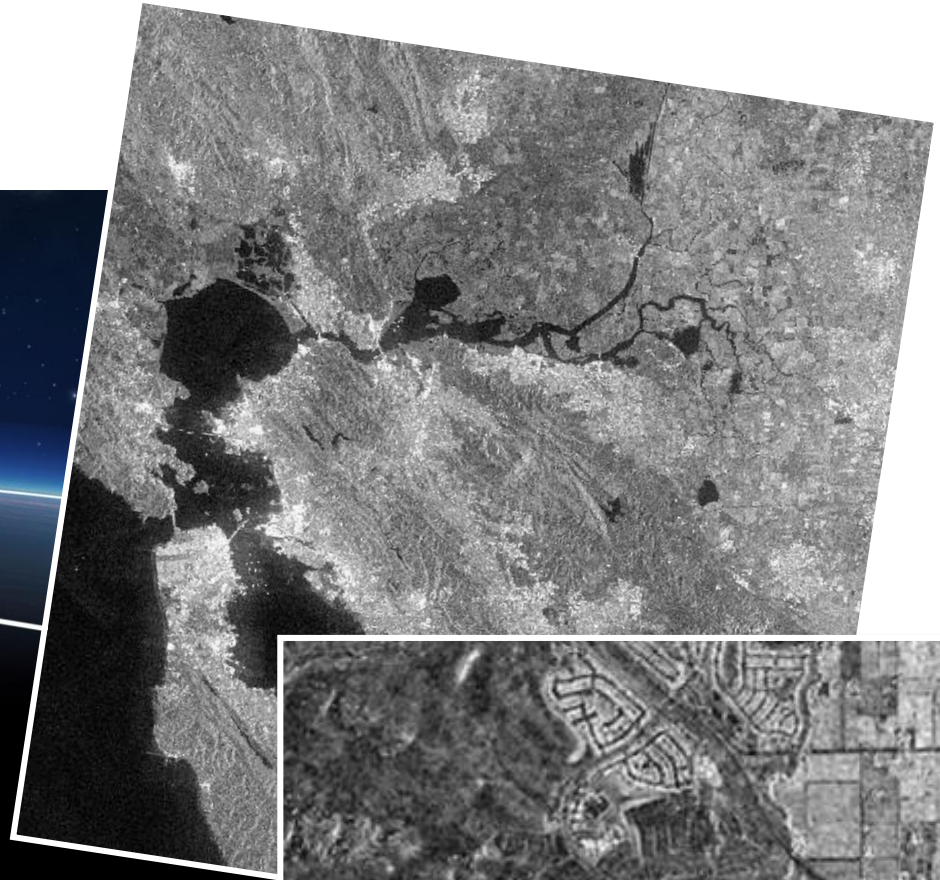
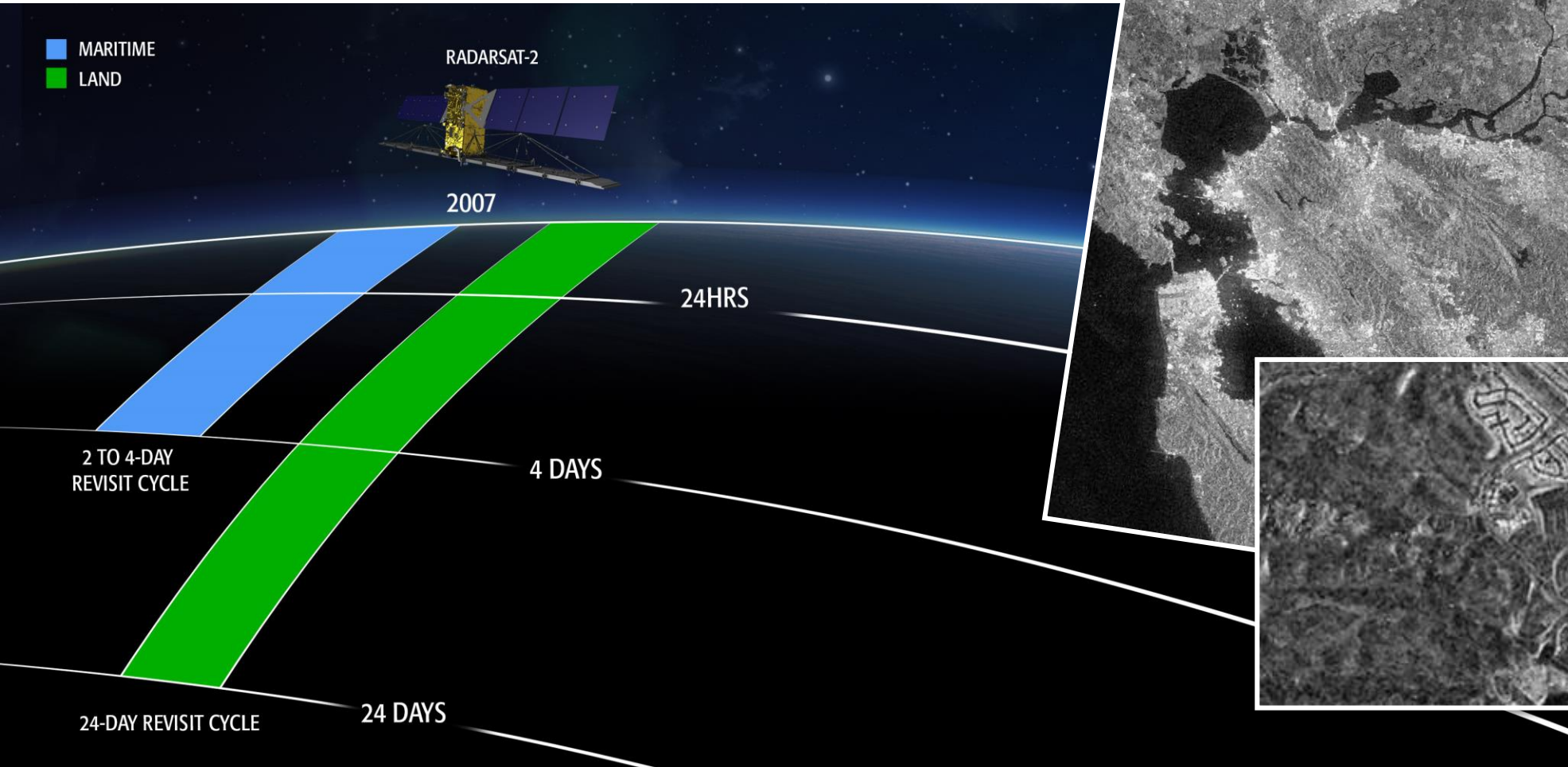


Reliable Broad Area Imaging





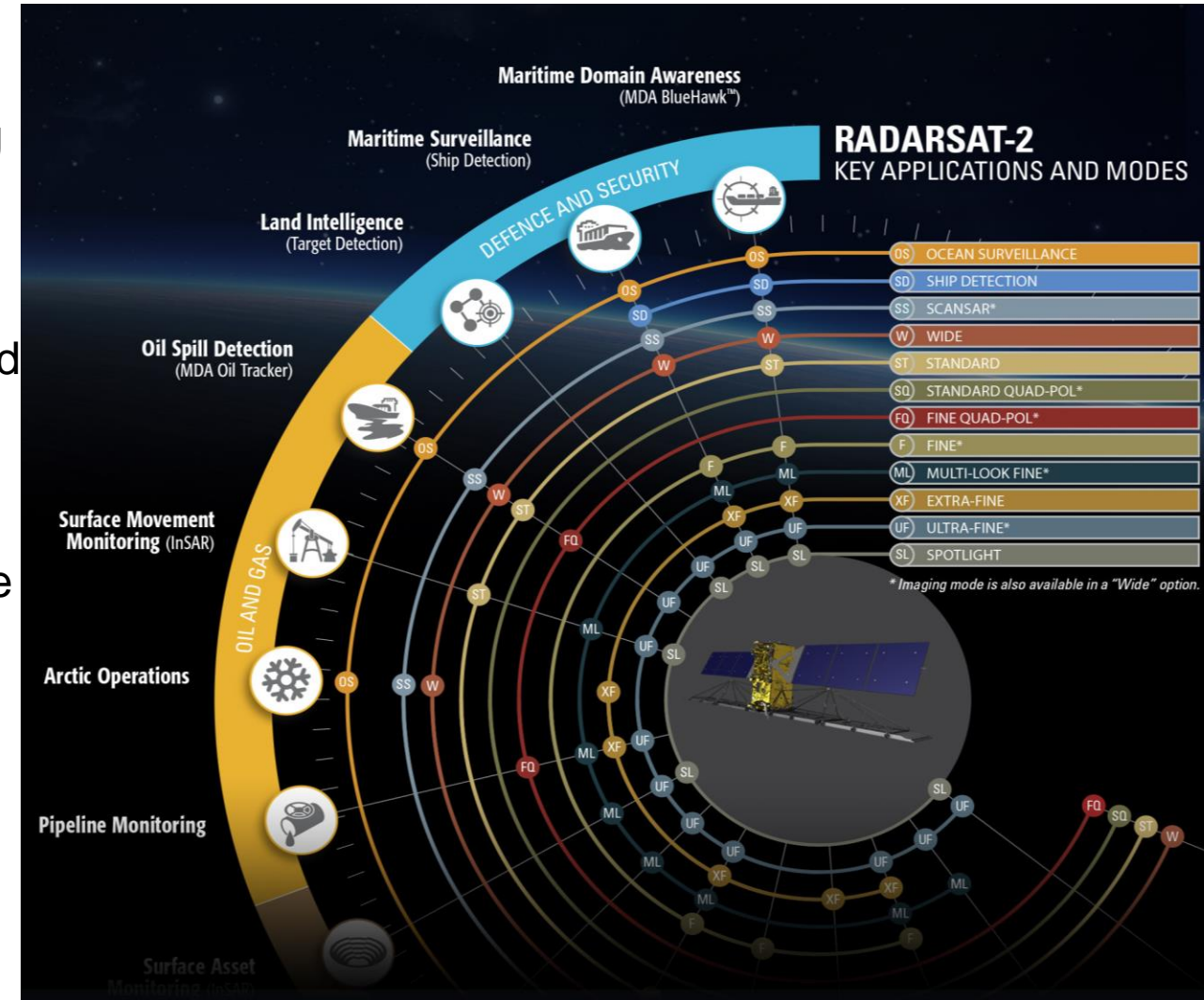
Frequent Revisit





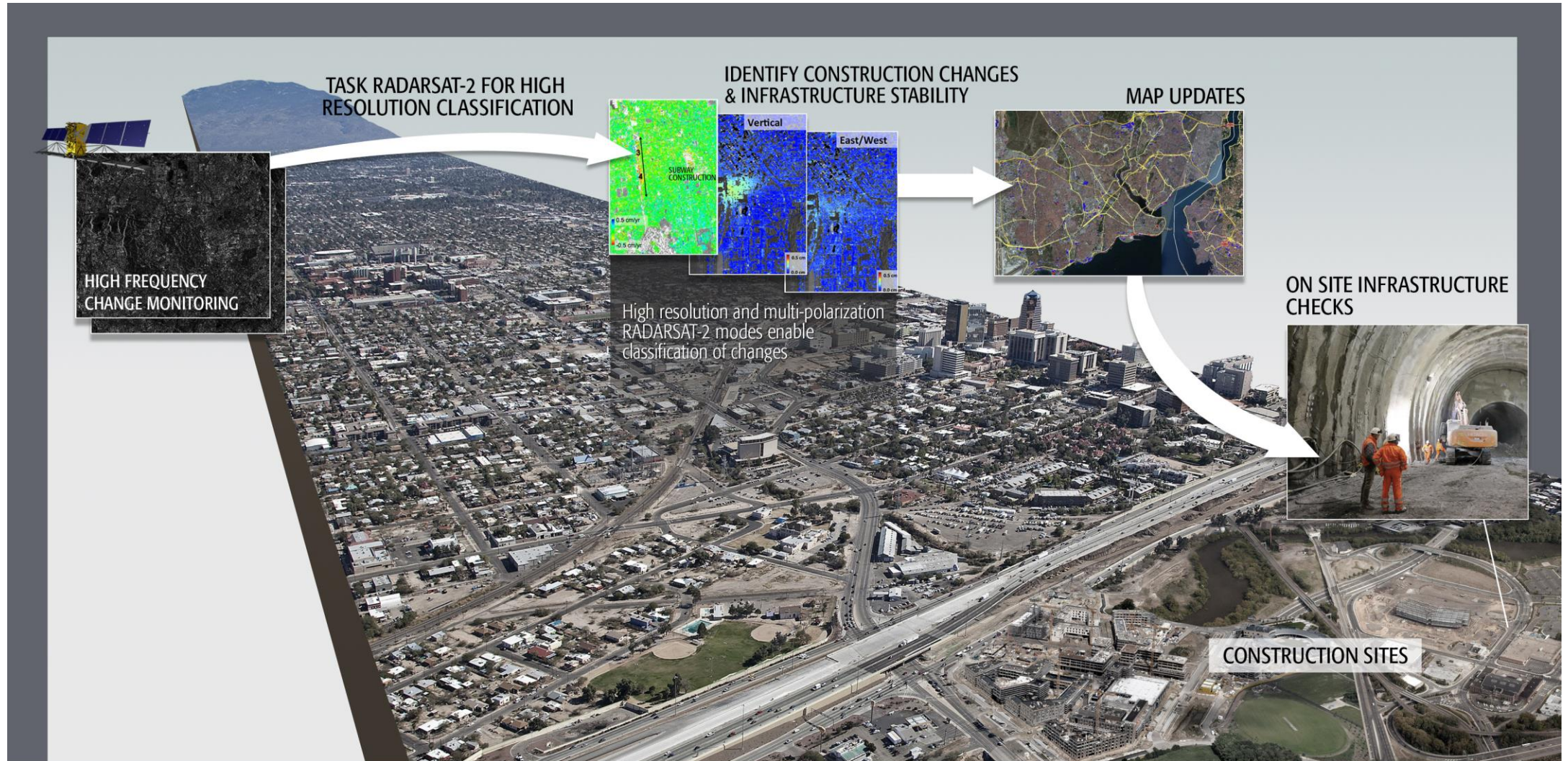
Superior Sensor Versatility

- Programmable sensor enables superior imaging flexibility (20 imaging modes)
- Imaging modes tailored to specific wide area and target monitoring
- Unparalleled radar expertise to tailor & automate solutions



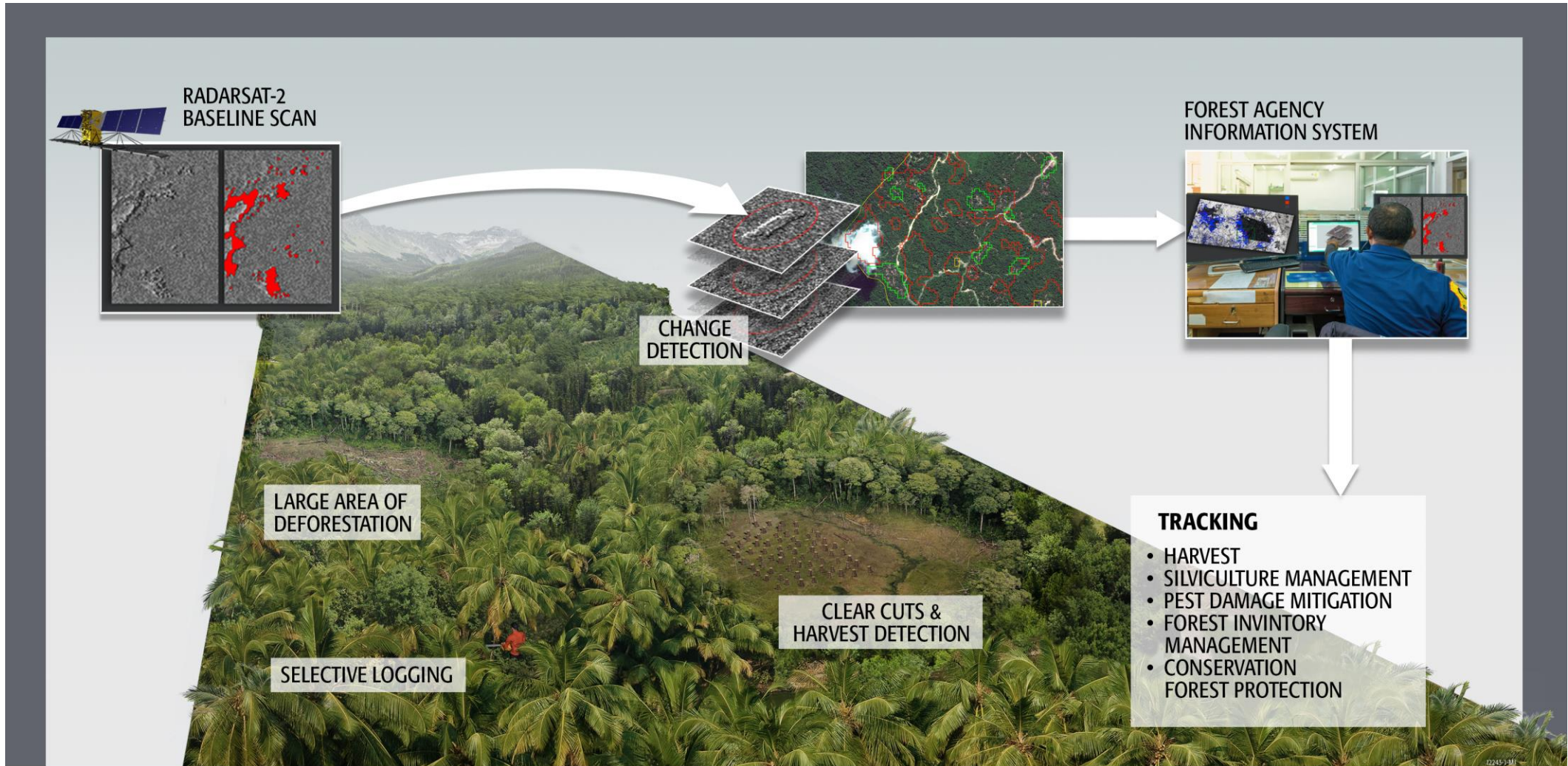


Urban infrastructure monitoring



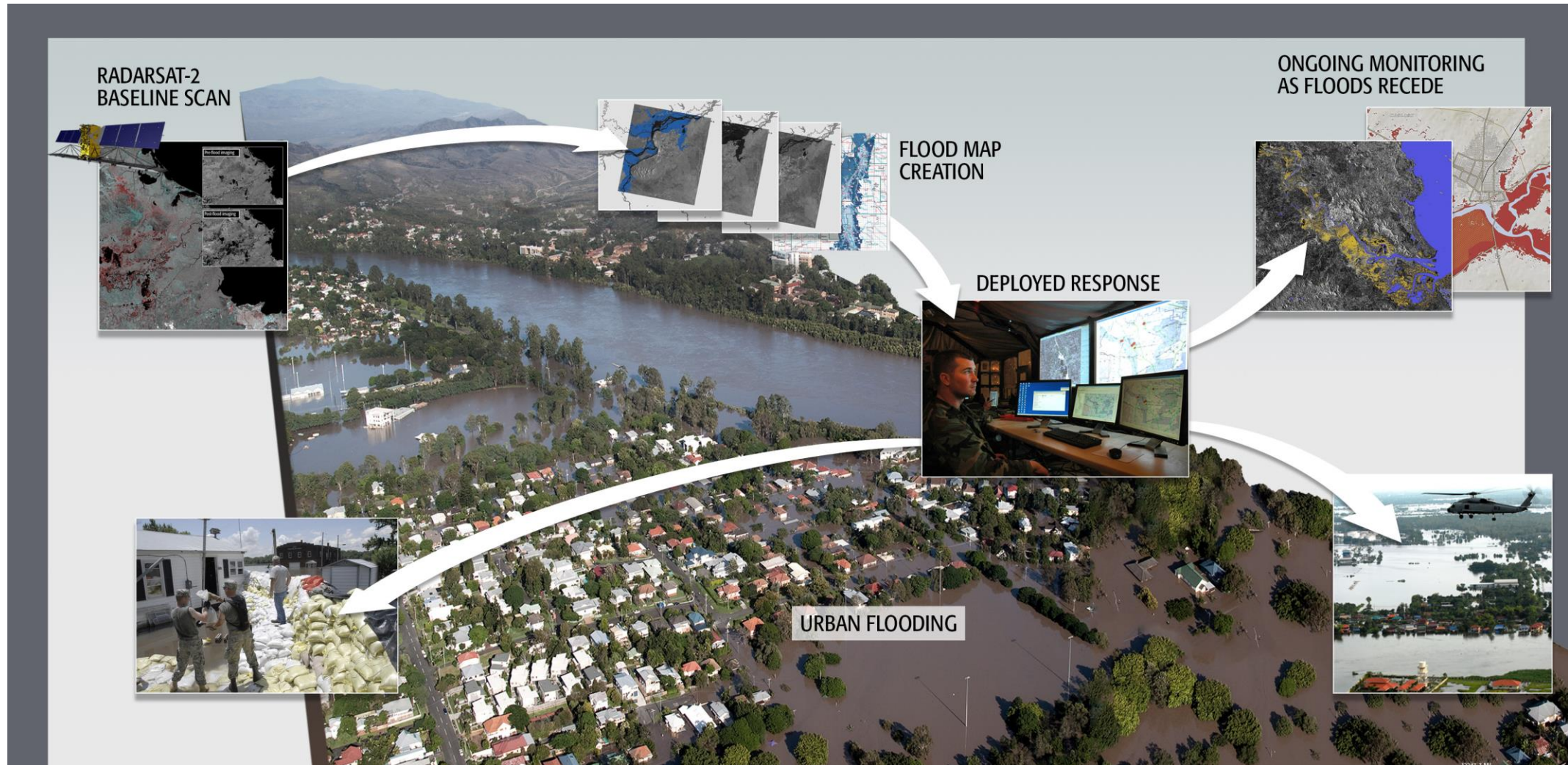


Forestry Monitoring





Disaster Monitoring





Surface Movement Monitoring

RADARSAT-2 WIDE AREA COVERAGE EVERY 24 DAYS

PIPELINE

PIPELINE MONITORING

TAILINGS DAM

OPEN PIT MINE

North Bridge: Vertical Deformation Apr-17-10 to Jun-28-10

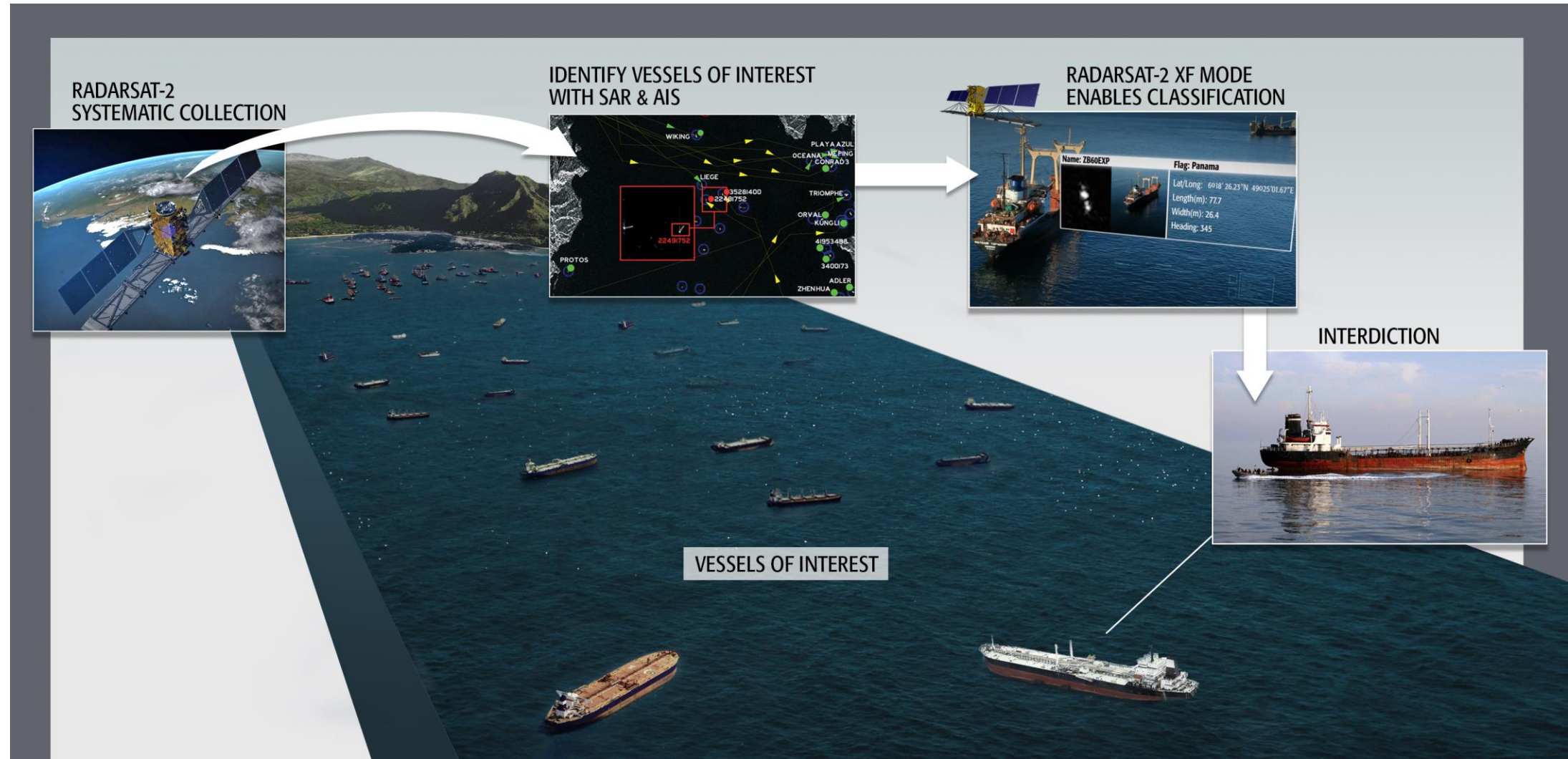
SPOT MOVEMENT FASTER & SOONER

EVACUATE VEHICLES AT THE BOTTOM OF THE MINE

- 5m or 3m resolution change monitoring for asset and slope stability at large sites on a 24 day basis
- Pipeline monitoring using RADARSAT-2 wide area modes

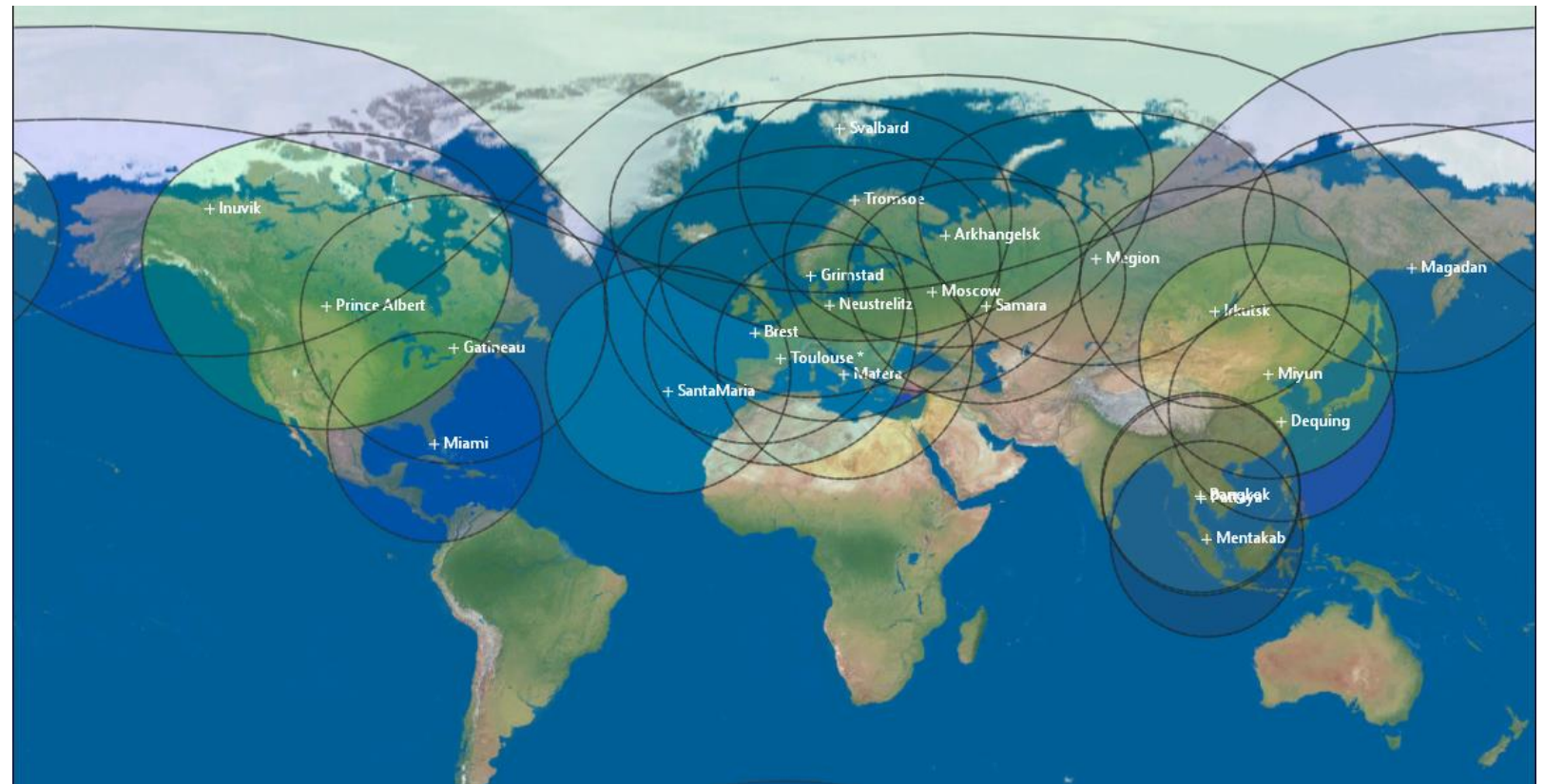


Maritime Domain Awareness



Our Network Enables Near Real-time Operations

- Near Real-Time Monitoring & Tracking
- Seamless Delivery
- Anywhere...

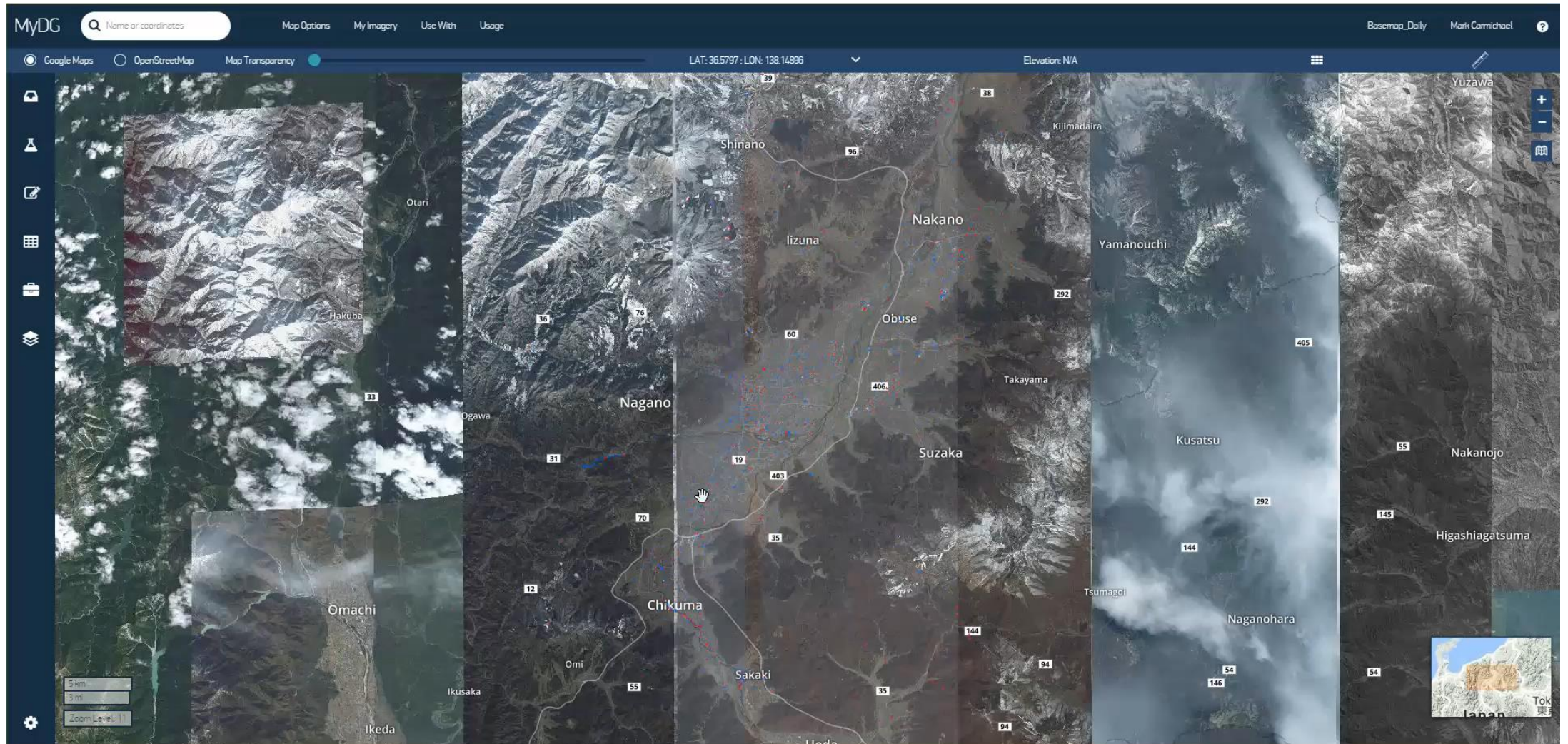




Operational Radar Capabilities and User Stories

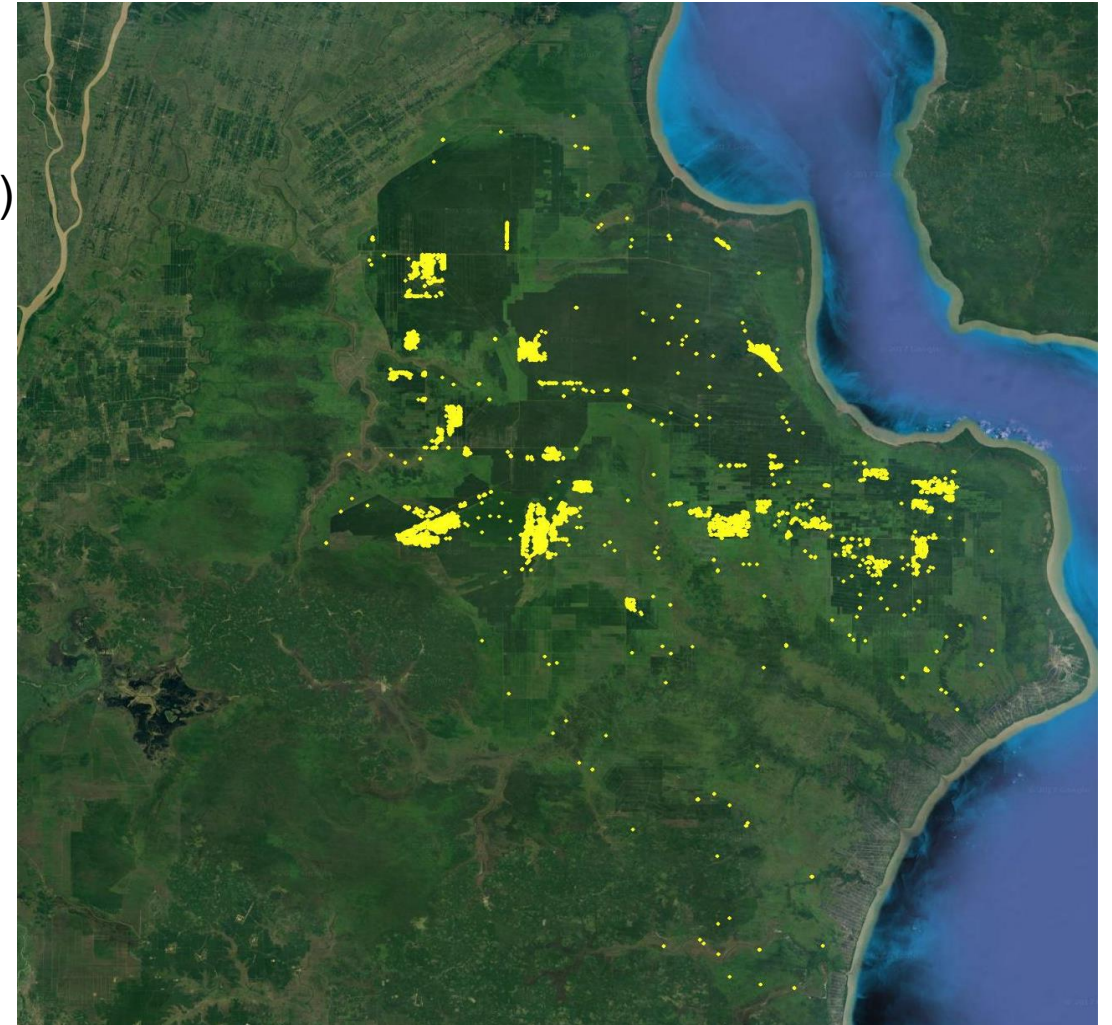
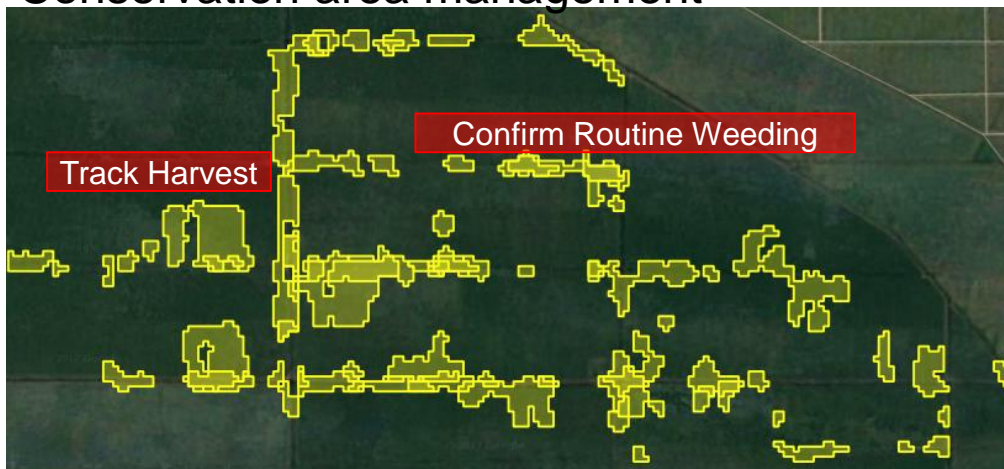


Urban Change Monitoring – Nagano, Japan



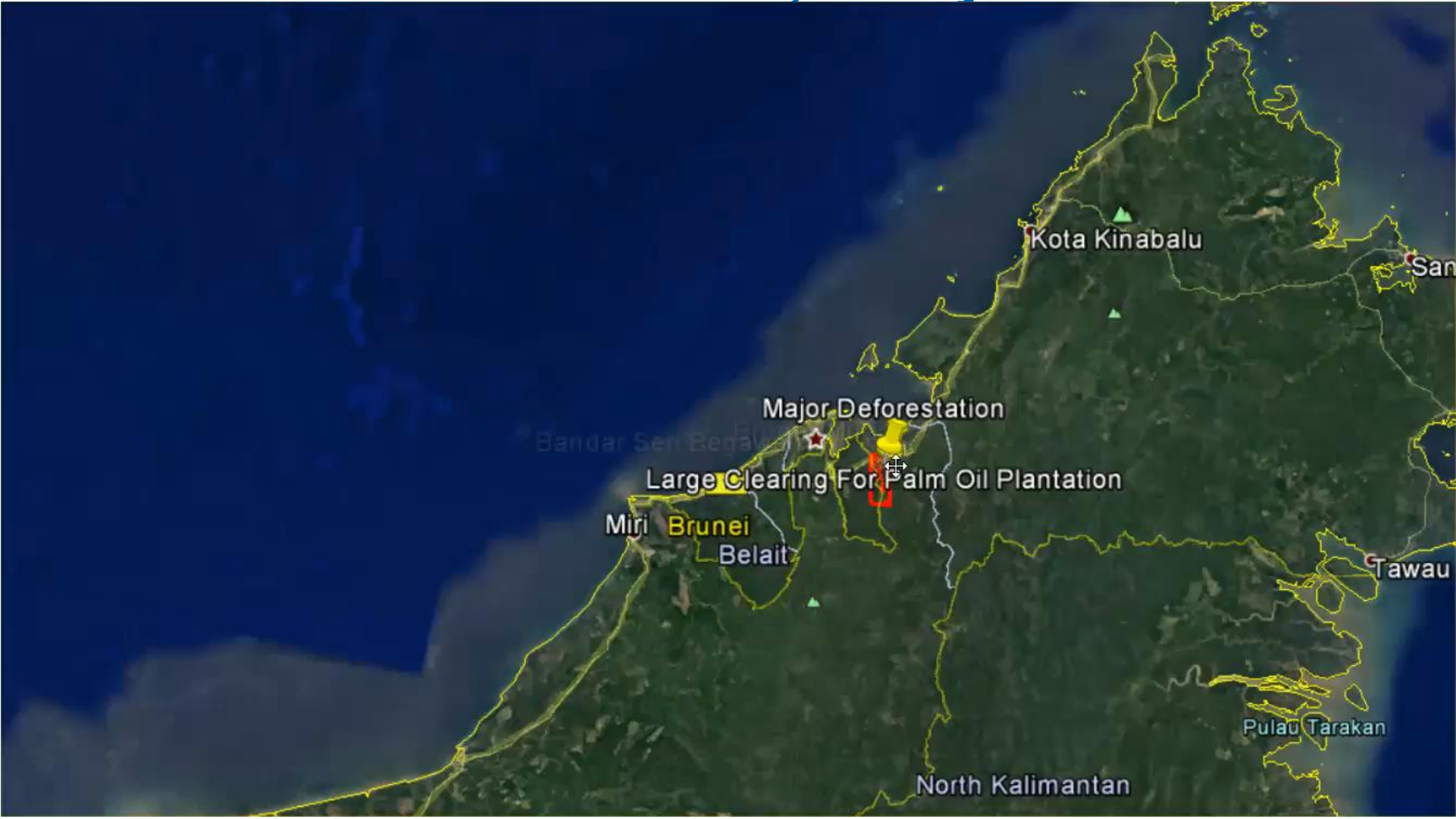
Forestry Monitoring

- Harvest tracking
- Silviculture Management (seed tree blown down, etc.)
- Pest Damage Mitigation
- Human activity monitoring over protected forest
- Plantation age group management
- Conservation area management





Forest Alert Service – Sarawak, Malaysia





Papua New Guinea Earthquake Response

February 26, 2018

CNN World » Papua New Guinea earthquake death toll rises to 67

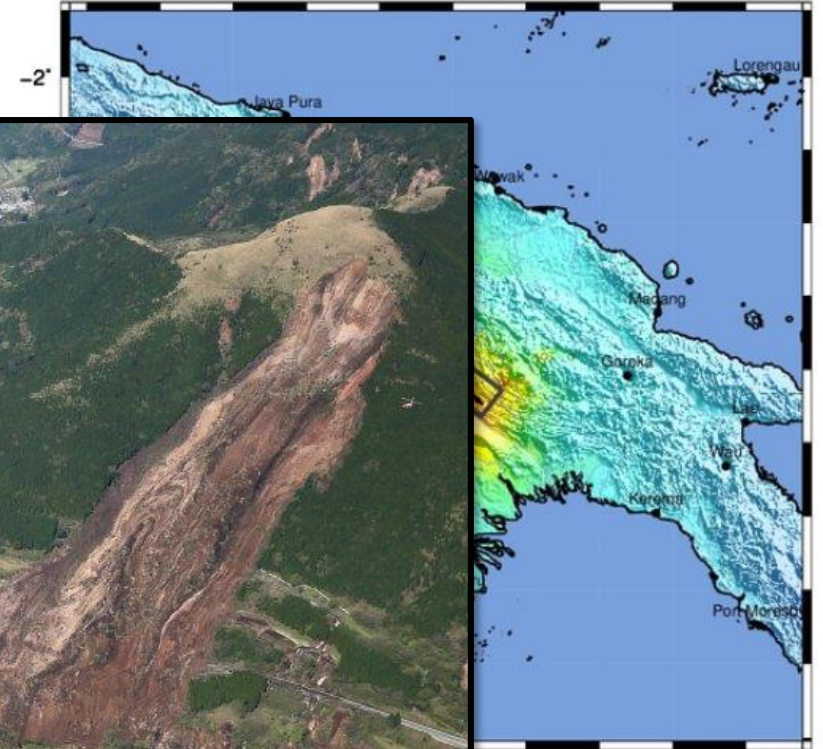
Papua New Guinea earthquake death toll rises to 67

By Isambard Wilkinson, CNN

Updated 1:11 PM ET, Mon March 5, 2018



USGS ShakeMap : NEW GUINEA, PAPUA NEW GUINEA
Feb 25, 2018 17:44:43 UTC M 7.5 S6.07 E142.77 Depth: 23.4km ID:us2000d7q6



Very strong	Severe	Violent	Extreme
Moderate	Mod./Heavy	Heavy	Very Heavy
22	40	75	>139
20	41	86	>178
VII	VIII	IX	X+



Papua New Guinea Earthquake Response

The screenshot displays the MyDG web application interface. At the top, there is a search bar with the text "Name or coordinates" and navigation links for "Map Options", "My Imagery", "Use With", and "Usage". The user's name "Mark Carmichael" and a help icon are visible in the top right. Below the search bar, there are controls for "Google Maps" and "OpenStreetMap", a "Map Transparency" slider, and coordinates "LAT: -6.73008 : LON: 128.49609". The main map area shows Papua New Guinea and surrounding regions like North Maluku, West Papua, and New Britain. A "Layers" panel on the left lists various custom layers with checkboxes and sliders. The "IS2017Q1" layer is currently selected and highlighted. At the bottom of the layers panel, there are "Clear Selections" and "Add Layer" buttons. The map includes a scale bar (0-200 km), a zoom level indicator (Zoom Level: 6), and an inset map of Oceania.

Layer Name	Checked	Slider Position
PNG-Afra...	<input type="checkbox"/>	~50%
PNG-Befo...	<input checked="" type="checkbox"/>	0%
MS_PipeL...	<input type="checkbox"/>	~50%
MS_Mudfl...	<input type="checkbox"/>	~50%
MS_BB	<input type="checkbox"/>	~50%
N2017Q1	<input checked="" type="checkbox"/>	~50%
N2017Q2	<input checked="" type="checkbox"/>	~50%
N2017Q3	<input checked="" type="checkbox"/>	~50%
N2017Q4	<input checked="" type="checkbox"/>	~50%
N2018Q1	<input type="checkbox"/>	~50%
NaganoBB	<input checked="" type="checkbox"/>	~50%
IS2017Q1	<input checked="" type="checkbox"/>	~50%
IS2017Q2	<input type="checkbox"/>	~50%
IS2017Q3	<input type="checkbox"/>	~50%
IS2017Q4	<input type="checkbox"/>	~50%
ISBB	<input type="checkbox"/>	~50%
SF2017Q1	<input checked="" type="checkbox"/>	~50%
SF2017Q2	<input checked="" type="checkbox"/>	~50%
SF2017Q3	<input checked="" type="checkbox"/>	~50%
SF2017Q4	<input checked="" type="checkbox"/>	~50%
SF_BB	<input type="checkbox"/>	~50%
PNG Chan...	<input checked="" type="checkbox"/>	100%



Montecito Mudflow





Montecito Mud Slide Impacting Communities & Pipelines

The screenshot displays the MyDG web application interface. At the top, there is a search bar with the text "Name or coordinates" and navigation options like "Map Options", "My Imagery", "Use With", and "Usage". The current map coordinates are LAT: 34.4732 and LON: -119.5812, with an elevation of N/A. The map shows a satellite view of the Montecito area, with a yellow line representing a pipeline route. The pipeline starts near Gould Park and runs through Montecito, crossing CA 192 and E Valley Rd, then continues through Summerland and Santa Barbara. A red line indicates a mud slide path. The left sidebar shows a "Layers" panel with a list of custom layers, each with a checkbox and a slider. The right sidebar features a vertical timeline of dates from 2018-01-26 to 2018-04-18, with a small inset map showing the location of Santa Barbara. The bottom of the interface includes a scale bar (500m, 2000ft) and a zoom level of 14.



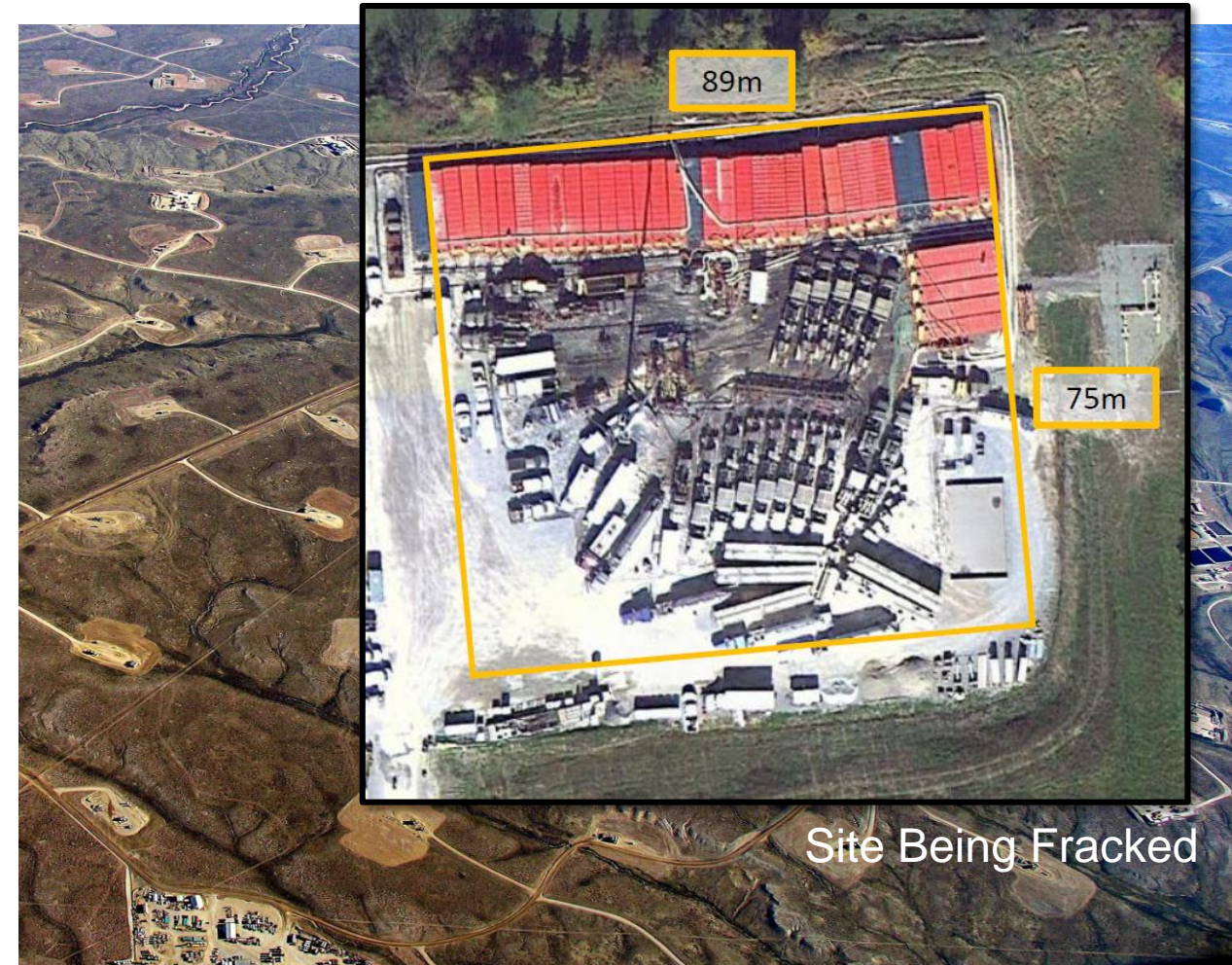
Oil Supply Monitoring

Huangdao Port, China
June 25, 2017



Detect Fracking Activities Over Large Areas

- Know Production Metrics Sooner
- Reliable Weekly Collections & Reporting
- Detection of Activity and Confirmation With VHR Optical



FRACKING ACTIVITY MONITORING



MyDG Map Options My Imagery Use With Usage Basemap_Daily Mark Carmichael

Google Maps OpenStreetMap Map Transparency LAT: 53.64464 : LON: -116.96045 Elevation: N/A

Layers

- FM11-12 CustomLayer
- FM1101-1... CustomLayer
- FM10-11 CustomLayer
- FM09-10 CustomLayer
- FM08-09 CustomLayer
- FM07-08 CustomLayer
- FM04-07 CustomLayer
- SendaiEx... CustomLayer
- Sendai CustomLayer
- PNG-Afte... CustomLayer
- PNG-Befo... CustomLayer
- MS_PipeL... CustomLayer
- MS_Mudfl... CustomLayer
- MS_BB CustomLayer
- N2017Q1 CustomLayer
- N2017Q2 CustomLayer
- N2017Q3 CustomLayer
- N2017Q4 CustomLayer
- N2018Q1 CustomLayer
- NaganoBB CustomLayer
- IS2017Q1 CustomLayer
- IS2017Q2 CustomLayer
- IS2017Q3 CustomLayer

100 km 50 m Zoom Level: 8

Clear Selections Add Layer

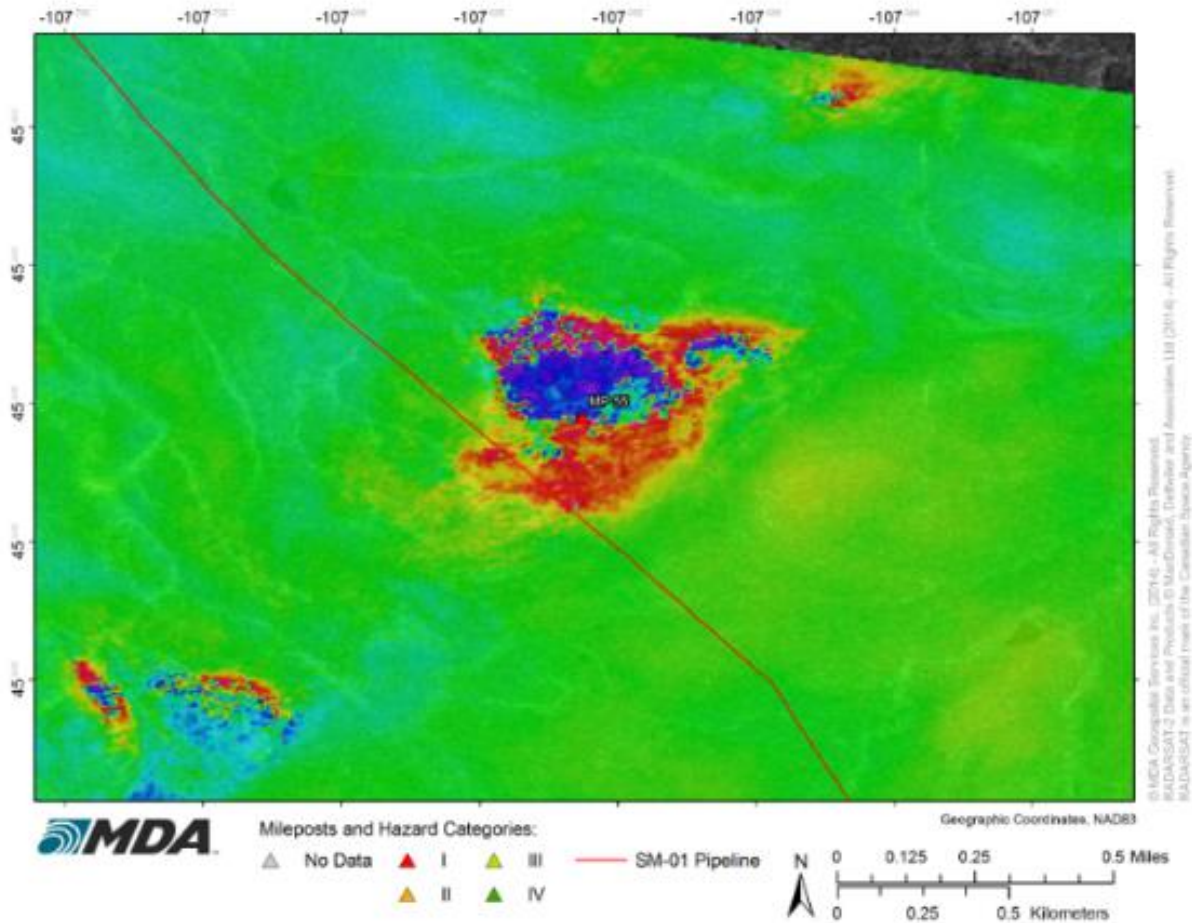




Pipeline Asset Monitoring

Pipeline Stability Monitoring:

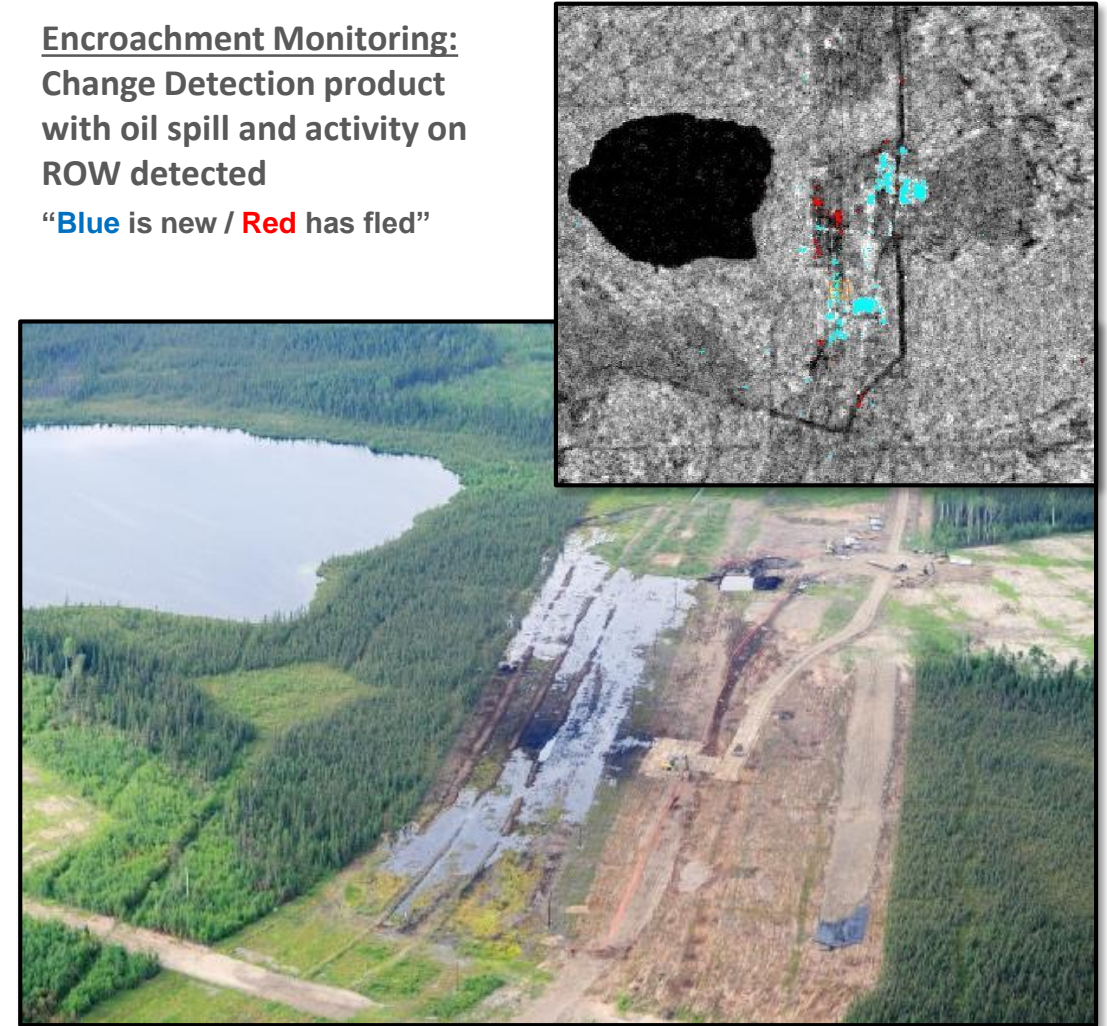
Unstable ground below and near a pipeline corridor is a known cause of pipeline incidents.



Encroachment Monitoring:

Change Detection product with oil spill and activity on ROW detected

“Blue is new / Red has fled”



Commercial Performance Analysis



Grand Tour
CLASS A DIESEL
Starting at: \$518,719*
[VIEW MODEL >](#)

UNFINISHED CHASSIS

FINISHED VEHICLES



PARKING LOTS

Forest City, IA –
Winnebago Plant

Commercial Performance Analysis

UNFINISHED CHASSIS

FINISHED VEHICLES

EMPLOYEE PARKING
LOTS 75-80% FULL

Forest City, IA –
Winnebago Plant
Thursday, May 25, 2017

Commercial Performance Analysis

UNFINISHED CHASSIS
NUMBERS SIMILAR

FEWER FINISHED
VEHICLES

EMPLOYEE PARKING
LOTS 0-5% FULL

Forest City, IA –
Winnebago Plant
Sunday, June 4, 2017

Radar for Oil & Gas + Mining Production Monitoring

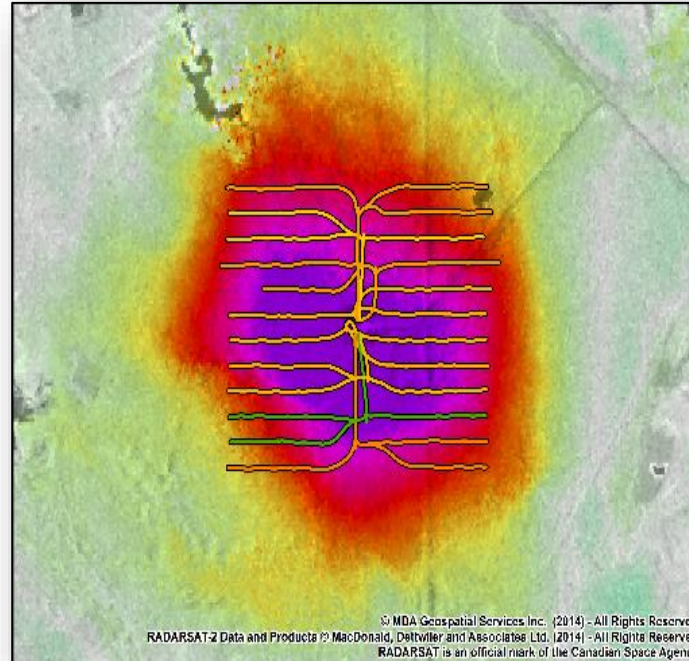
Mine Stability

Improve safety of mining operations, abandoned mines, open pits, underground mining, and tailings dams.



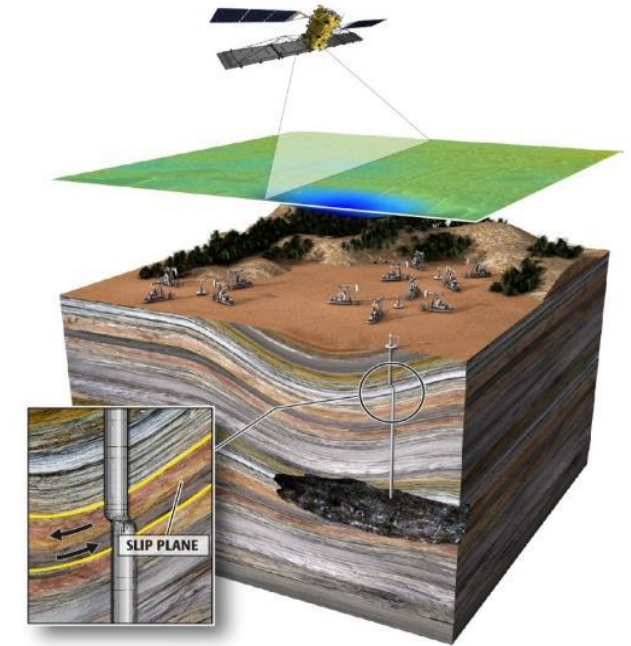
Enhanced Oil Recovery

InSAR results used to compare behaviour with reservoir engineering models.



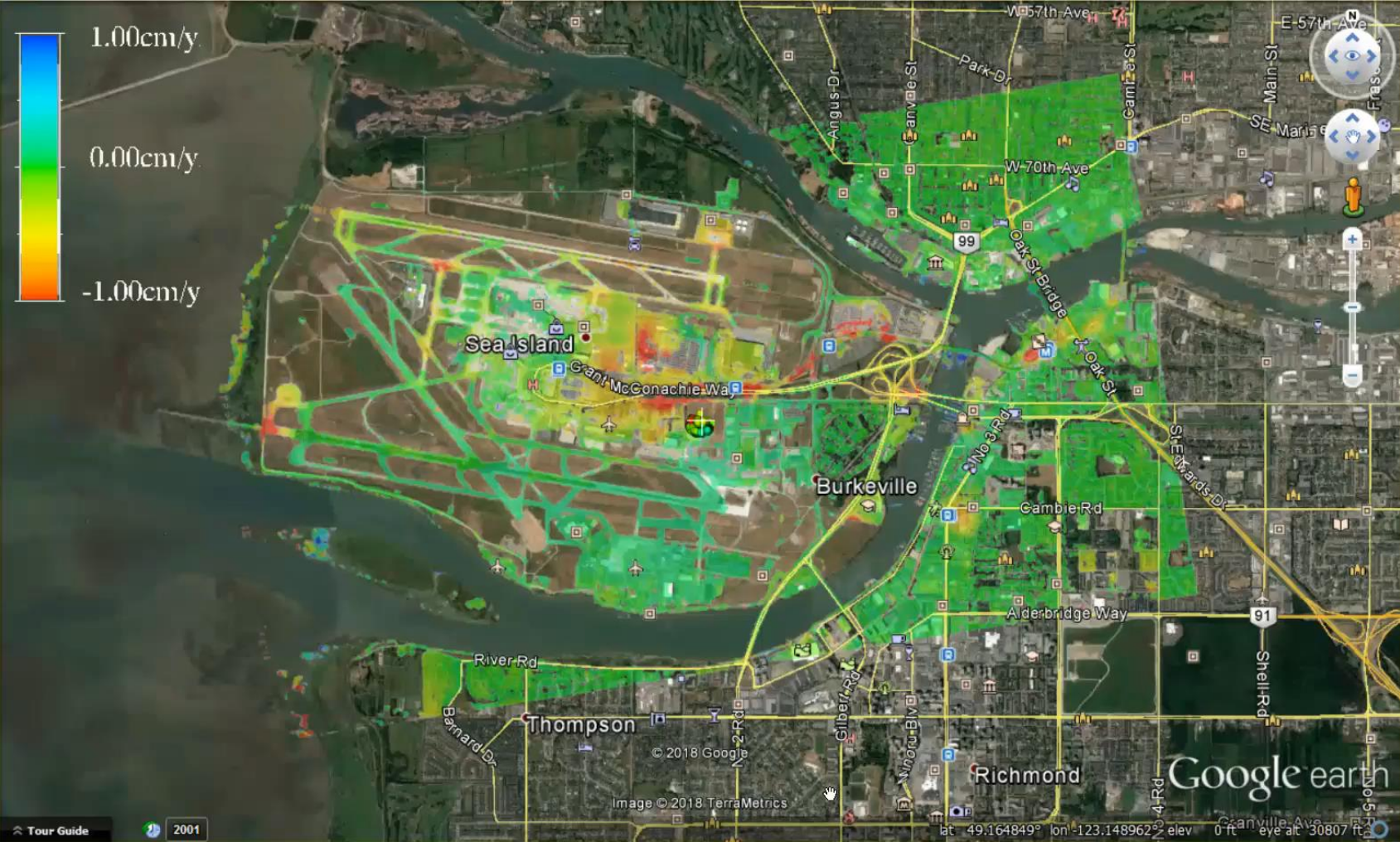
Asset Protection

Customers in California were able to significantly minimize damage to well pipes caused by ground movement.





InSAR Monitoring For Asset Security

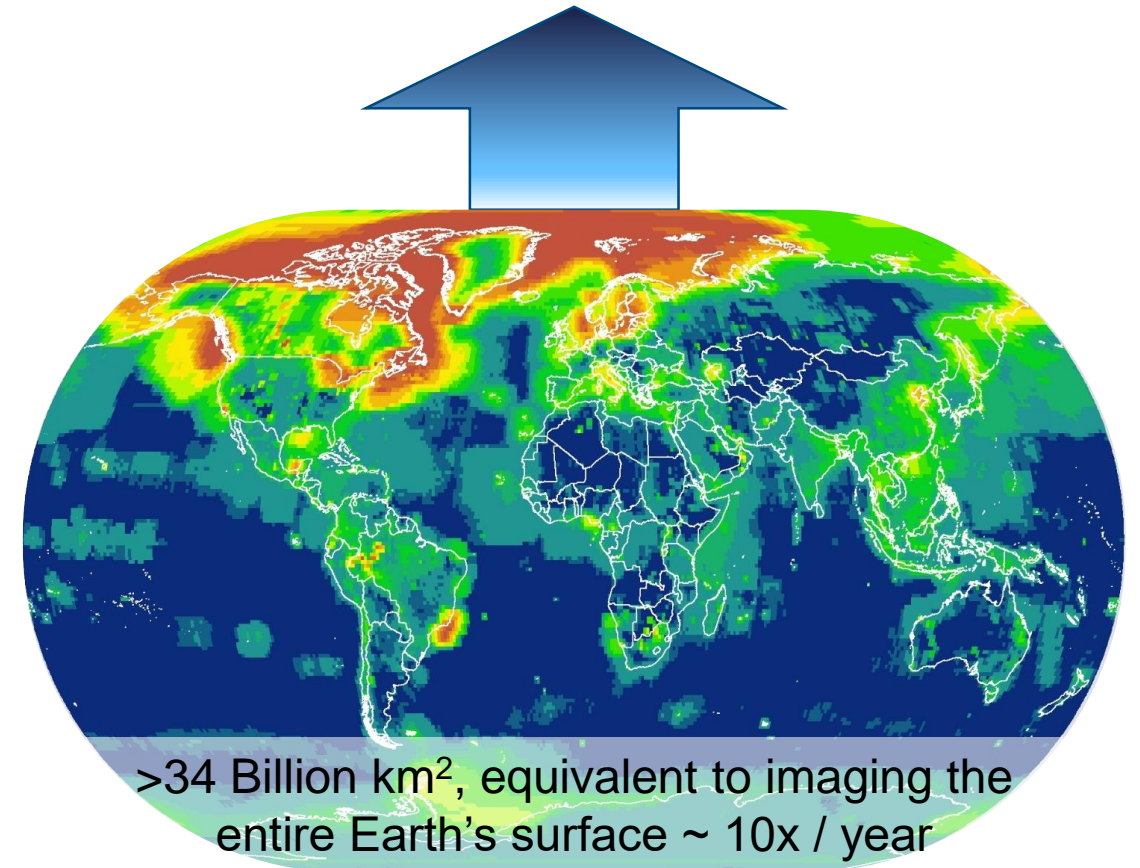


RADARSAT-2 Available in GBDX

RADARSAT-2 imagery in the cloud enables:

- At scale computing for machine learning, large area change monitoring and more
- Streamlined image delivery & access

GBDX



MAXAR

MAXAR.COM

