Synspective

Small SAR(Radar) Satellite Intelligence Transforms Ocean Stewardship & Disaster Risk Reduction

27th Sep. 2025

Business dept.
Manager of Public & Enterprise Unit

Go OZAWA

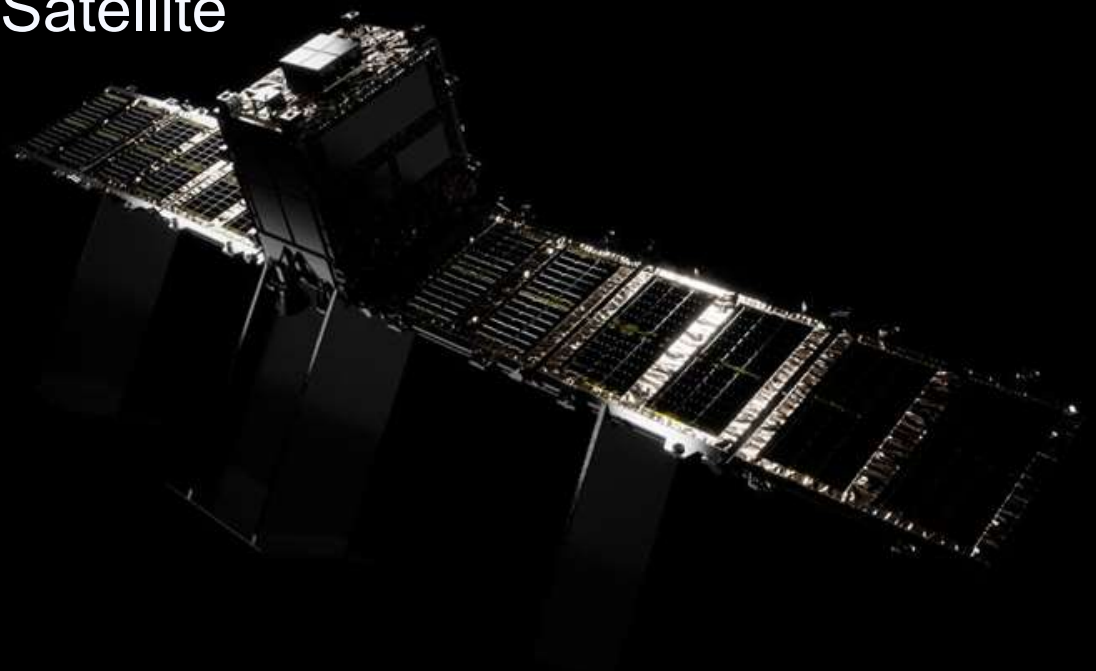
© Synspective Inc.

Index

01 Introduction of our company & Our SAR Satellite StriX

02 Ocean Stewardship by SAR Satellite

03 DRR (Disaster Risk Reduction) by SAR Satellite



© Synspective Inc.

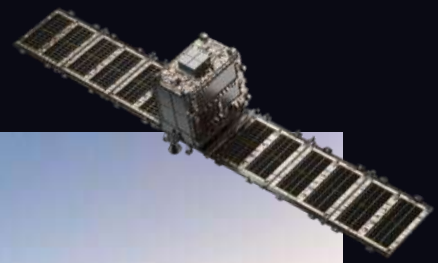
01 Introduction of our company & Our SAR Satellite StriX

© Synspective Inc.

SAR Intelligence Company from Tokyo

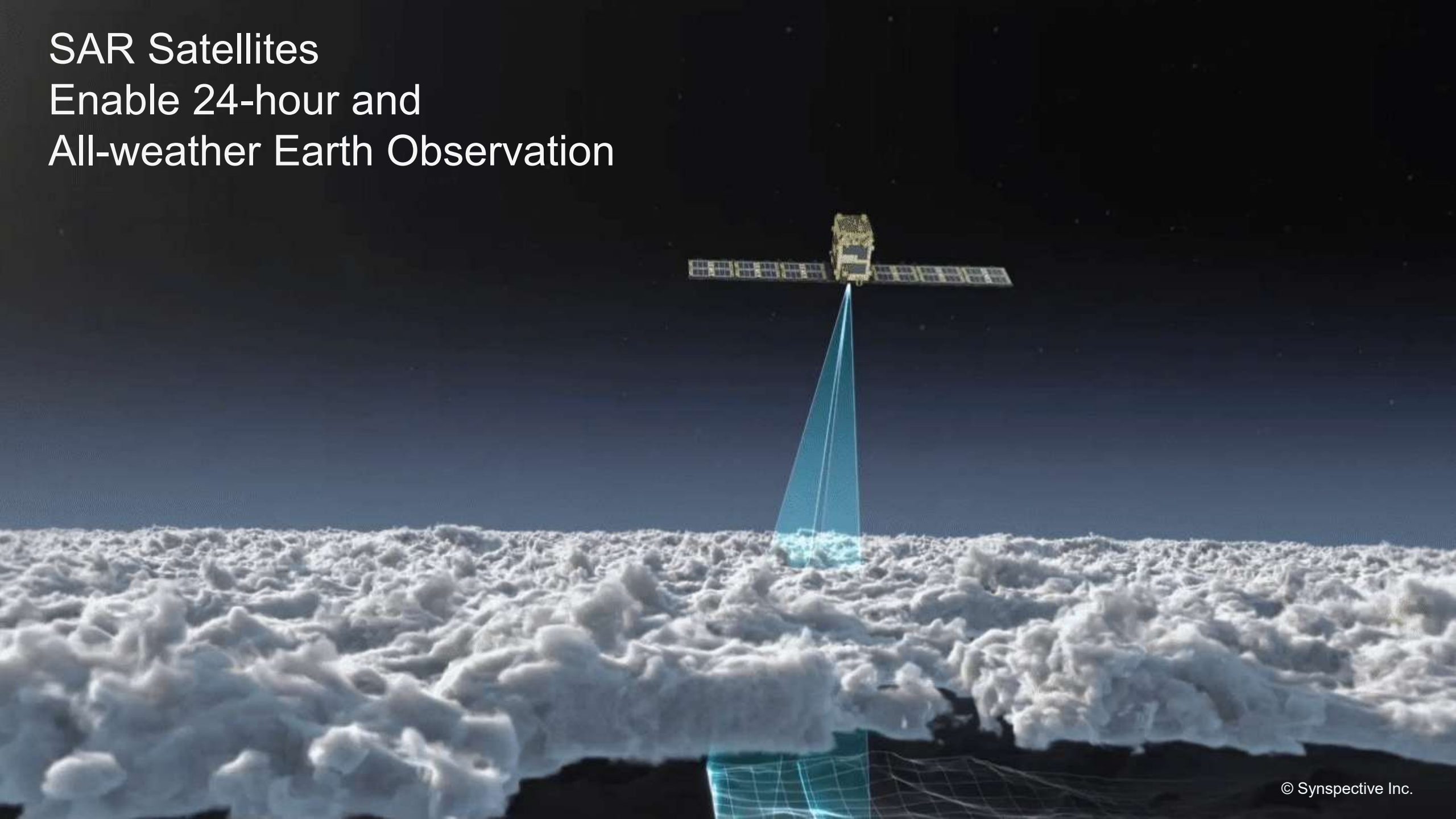
2018 Establishment in Tokyo with its origin from a Japanese cabinet R&D program

-**Small SAR Satellite** (Design + Manufacturing**)** + **Data** processing + Multi-Sensor **Analytics**
-Hundreds of Commercial projects with Global Gov + Enterprise
-220 Hot members from 23 countries !
-Global HQs in Tokyo, APAC HQs in Singapore, North + Latin America HQs in Colorado, USA
Europe Middle East & Africa HQs in EU (plan in 2026)
-6 Satellites launched, 4 operational today, 2 to add this year → **30 +** constellation in 2020's



© Synspective Inc.

SAR Satellites Enable 24-hour and All-weather Earth Observation



© Synspective Inc.

Power of daily snapshot of earth

Pasir Panjang terminal in South Singapore, taken on July 22, 2022. © Synspective Inc.

Get fresh EO data and useful past data anytime, anywhere

Near Real-time (*1)

All-Weather,
Day-and-Night

High-Resolution,
0.25 – 2.6 m (*2)

30 + Satellites
by 2030

	2024	2025	2026	2027	2028
Number of satellites	4	6	11	20+	30+
Observation frequency	Daily	Every several hours	Every few hours		～Every hour

Before

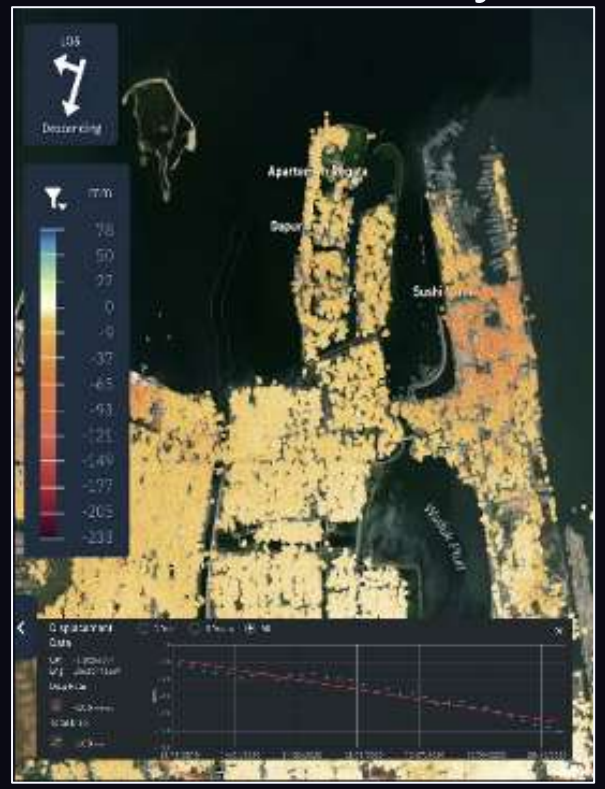
After

(*1) MTTA: Mean Time To Availability
(*2) Azimuth resolution

© Synspective Inc.

Our Analytics Solution

Ground/Infrastructure subsidence Analysis



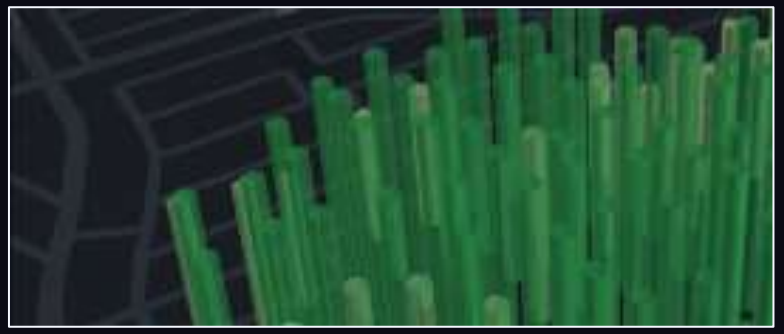
Land Displacement Monitoring

Disaster Assessment

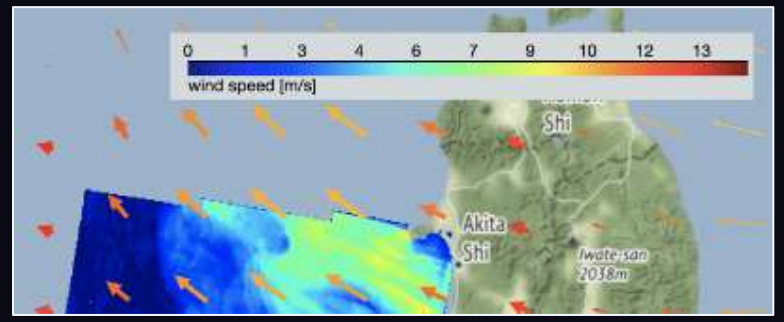
Flood Damage Assessment

Disaster Damage Assessment

Environment Analysis



Forest Inventory Management



Offshore Wind and Wave

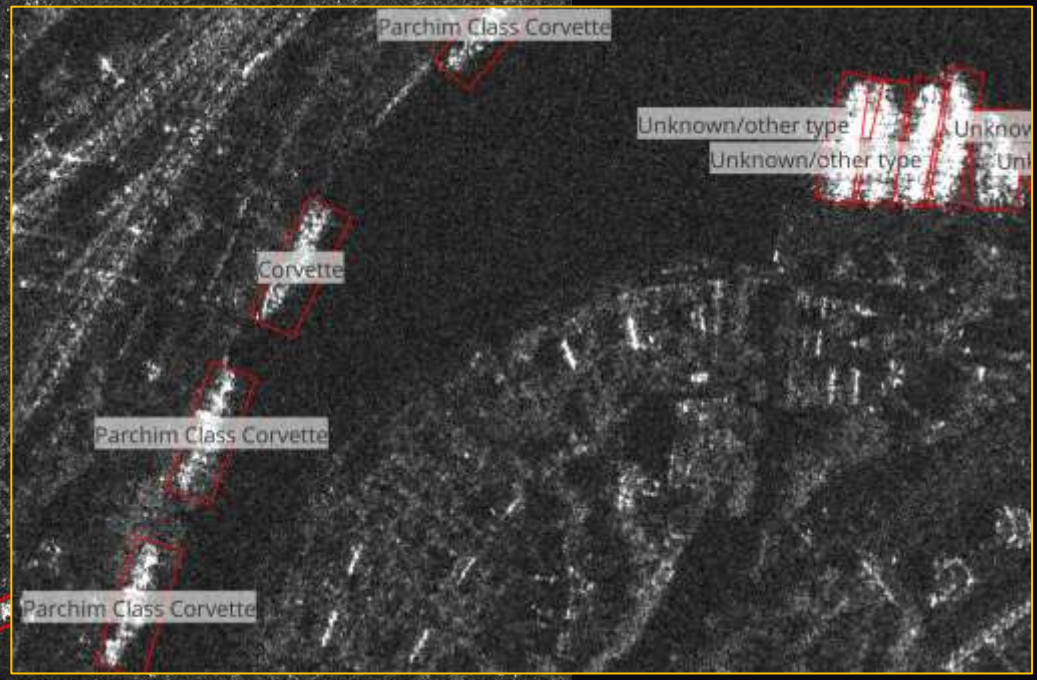
© Synspective Inc.

02 Ocean Stewardship by SAR Satellite

© Synspective Inc.

StriX vessel detection/classification sample

Confidential

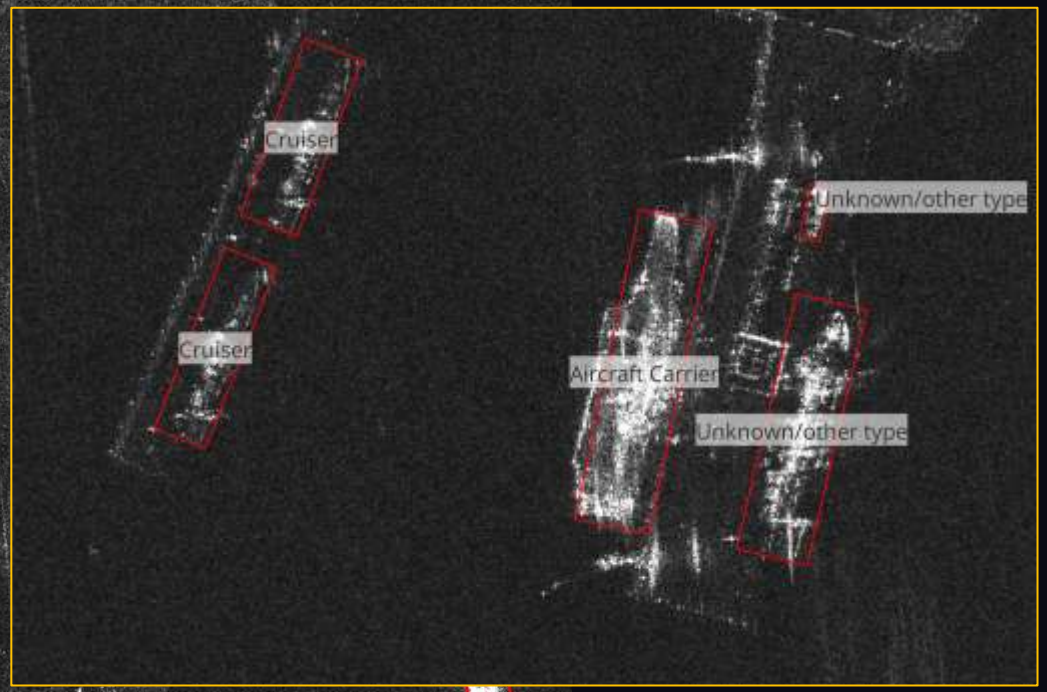


Date：2024-08-15
02:14:20 UTC
Satellite：StriX-3
Mode：Sliding Spotlight
AOI：Kaliningrad
F1：
Detection = 0.94
Detection + Classification = 0.88

Synspective satim

StriX vessel detection/classification sample

Confidential



Date：2024-09-09 07:12:22 UTC
Satellite：StriX-3
Mode：Sliding Spotlight
AOI：Qindao
F1：
Detection = 0.91
Detection + Classification = 0.91

Synspective satim

03 DRR (Disaster Risk Reduction) by SAR Satellite

03-1 Pre-Disaster Solution (Infrastructure Monitoring)

Land Displacement Monitoring (LDM)

©Mapbox, ©OpenStreetMap and Improve this map, ©Copernicus Sentinel data, ©Synspective Inc.

Use Cases

Linear Transportation Infrastructure:
Roads, Railways, Bridges & Viaducts, Tunnels

Urban Environments:
City-Wide, Building, Utility Infrastructure, Underground Construction

Extractive Industries & Energy:
Mining, Oil & Gas, Geothermal Energy, Volcanic, Dam

Critical Facilities:
Airports, Ports & Harbors, Power Plants

Use Case: Ground Risk in Guatemala

Guatemala constantly faces ground risks such as subsidence and landslides caused by earthquakes. In 2021, JICA and Synspective conducted a demonstration project to improve the efficiency of disaster prevention information using satellite data.

Subsidence Risk
Three points indicating subsidence risk displayed by LDM (Land Displacement Monitoring)

- Ground displacement analysis for three years (2018 - 2021).
- Estimated locations of ground subsidence and landslide risks.
- By transferring LDM and its usage methods, we contributed to the efficiency of local surveying operations that continuously utilize satellite data.

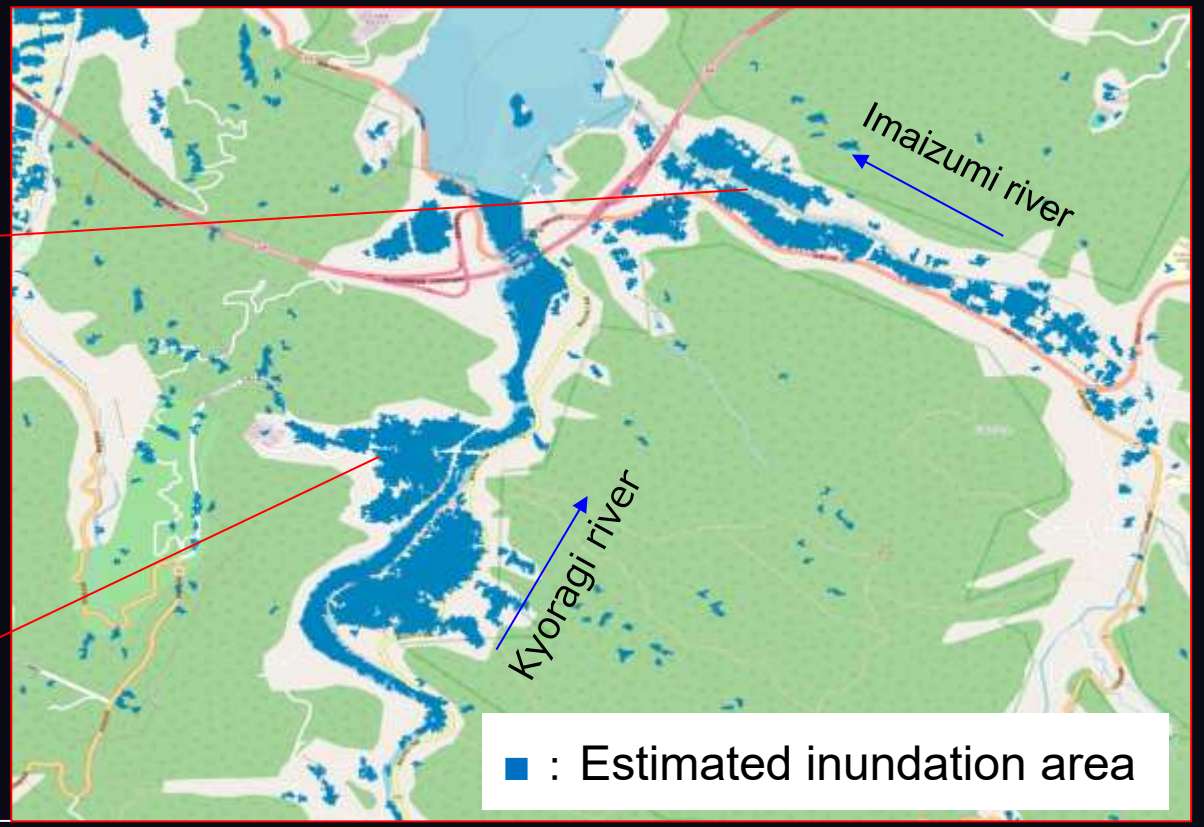
©Copernicus Sentinel data [2014 – 2021], ©Synspective Inc., ©Earthstar Geographics

03-2 Post-Disaster Solution (Disaster Response)

Use Case: Inundation Analysis of the Kamiamakusa city in August 2025

- August 11, 12:40 Tasking
- August 11, 15:47 Image capture
- August 11, 16:27 Data provided
- August 11, 19:00 Flood analysis results provided

Rapid monitoring enables faster decision-making for evacuation and flood prevention activities.



※Source: Chiju National Highway Live Camera (https://livecam.asia/kumamoto/kamiamakusa/chijukokudou.html), Sonobe District Live Camera (https://livecam.asia/kumamoto/kamiamakusa/kamiamakusa-sonebe.html)

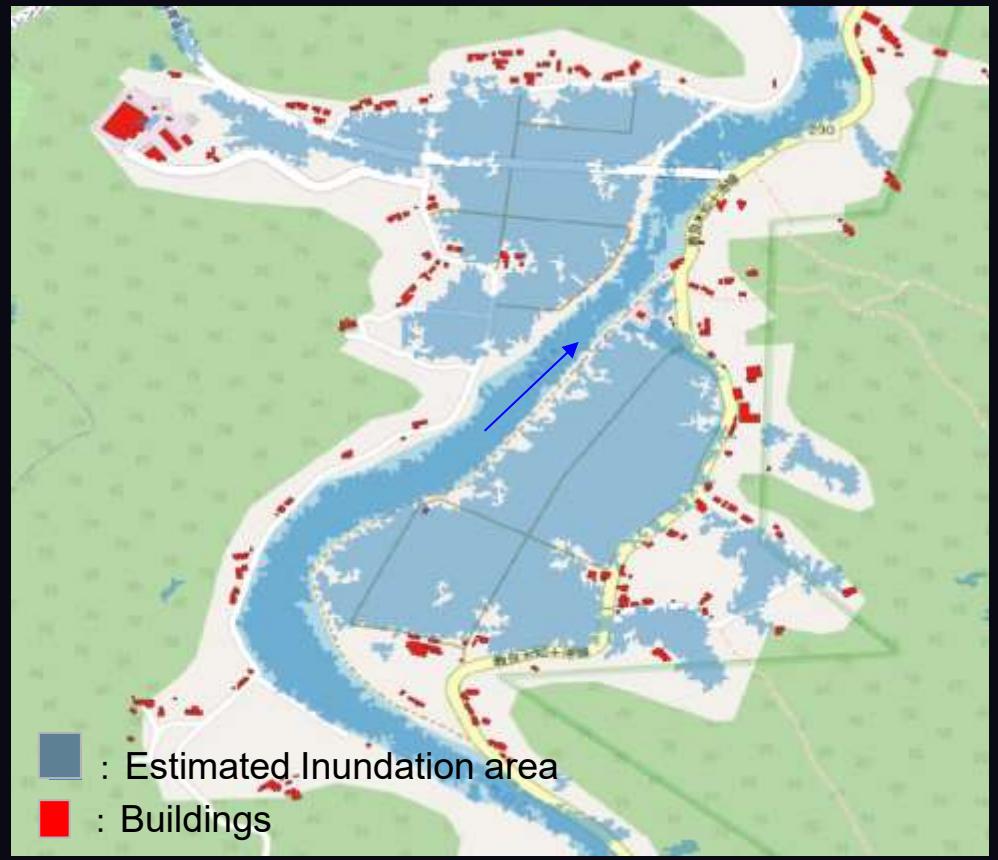
© Synspective Inc.

Intelligence by SAR satellite for Japanese ministry(MLIT)

- ## Estimation of Inundation Area & Depth

  To grasp the number of inundated houses and the magnitude of damage

Area of Inundation	**Number of houses flooded above the floor**	**Number of houses flooded under floor**
2.5km^2	1,250	420



- ## Estimation of Inundation Water Volume

  To be utilized to determine when to dispatch drainage pump vehicles

Drainage pump vehicles※

※Source: Kinki Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism (https://www.kkr.mlit.go.jp/kingi/disaster/setubi/kikai/ponpu.html)

© Synspective Inc.

Disaster Damage Assessment

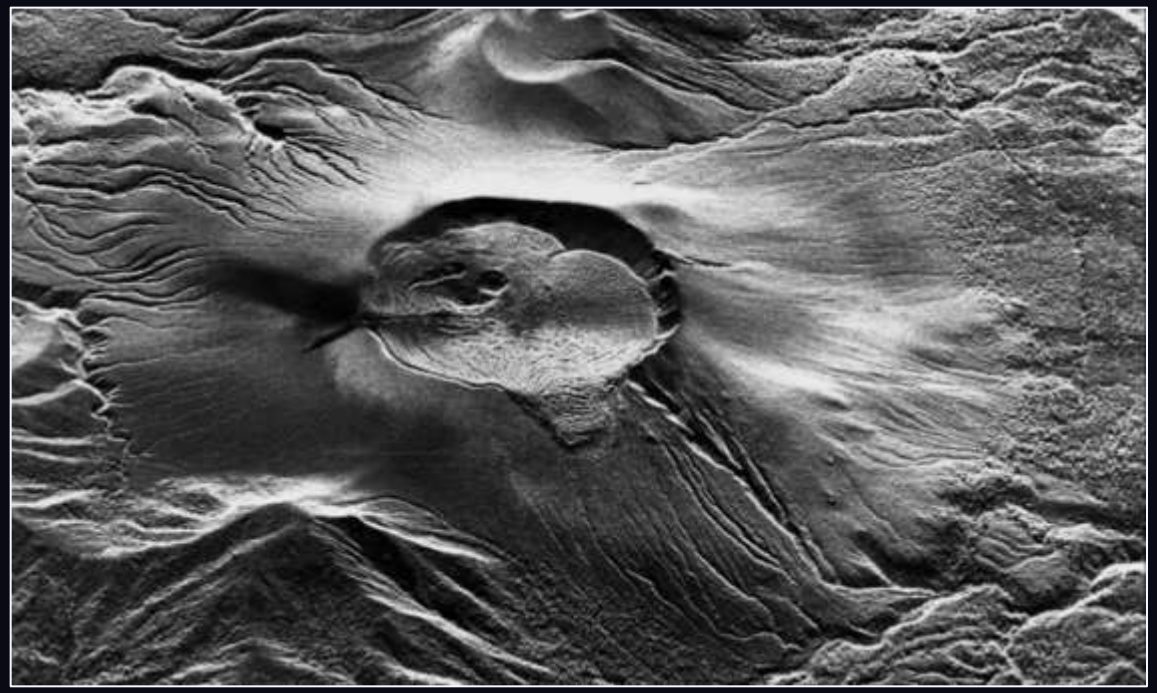
Downtown Shika, 2024 Noto Peninsula Earthquake, StriX SAR Satellite Data Analysis

© Synspective Inc.

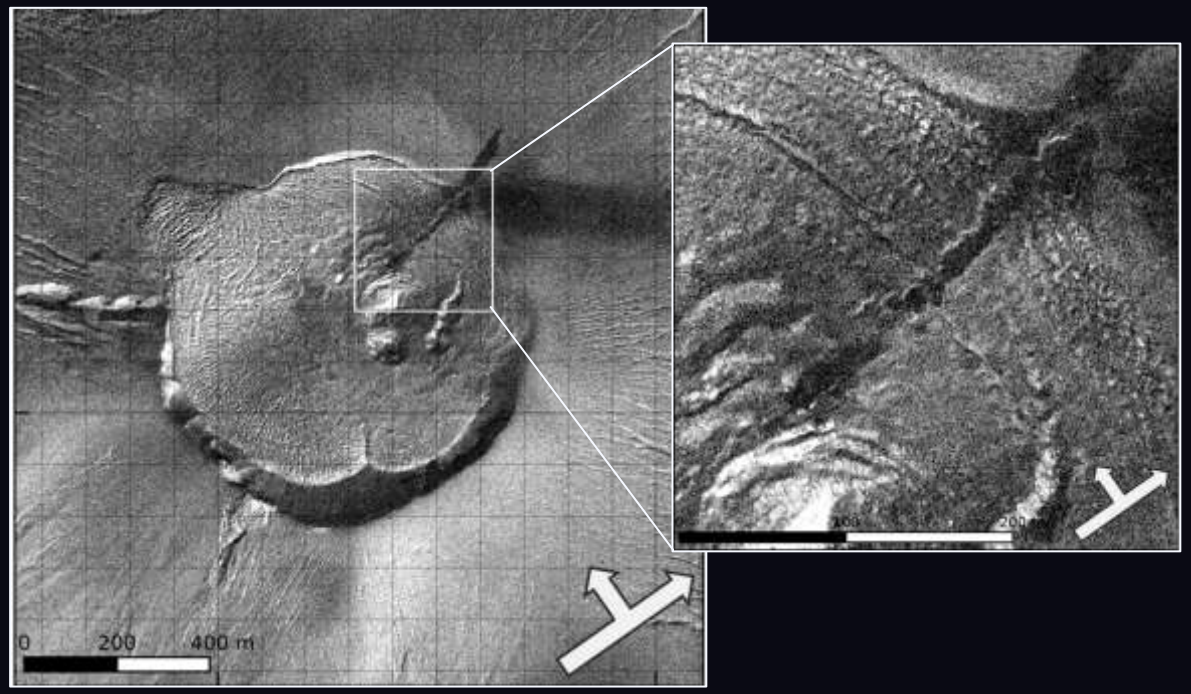
Features

1. Rapid Damage Mapping: Buildings, Infrastructure, Land Areas
2. Landslide Detection

Use Case: Continuously Monitoring the 2025 Shinmoedake Eruption



SAR Satellite (StriX) Observation Data
Continuous observations were conducted from June 28, following the eruption, to record daily surface changes.



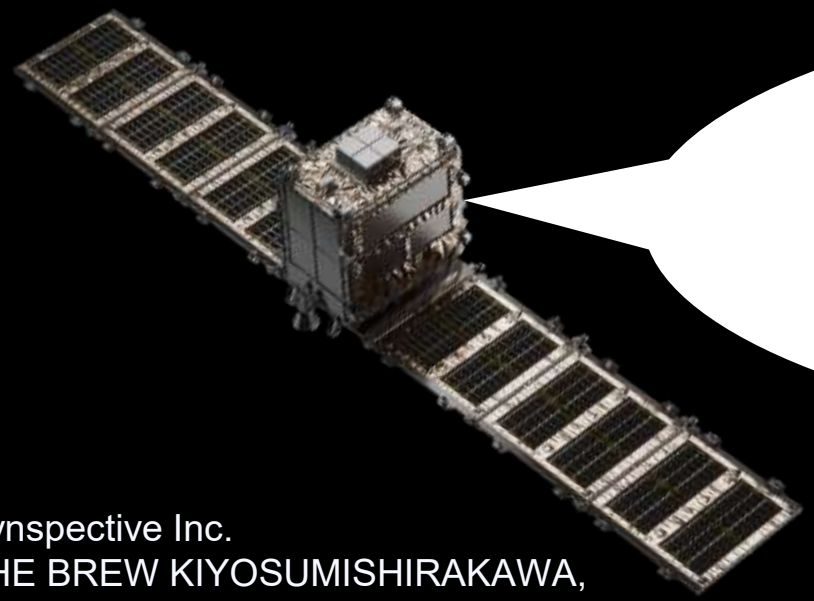
SAR Intensity Image and Enlarged View During Eruption (2025-07-03)
Leveraging StriX's high resolution of up to 0.46 x 0.25 m, it is possible to capture detailed and subtle changes from the eruption that might otherwise be missed.

We observed with StriX SAR satellite, capturing subtle topographical changes and ash fall area without interference from weather conditions or volcanic plumes (smoke).

Rewlative Webpage: https://synspective.com/usecase/2025/sahinmoedake/

© Synspective Inc.

Synspective



Let us meet to confirm what we can do together to solve your challenges!

Synspective Inc.
THE BREW KIYOSUMISHIRAKAWA,
3-10-3 Miyoshi, Koto-ku,Tokyo, JAPAN
www.synspective.com

This document is protected under the copyright and any applicable laws in Japan as an unpublished work.
This document contains information that is proprietary and confidential to Synspective Inc. or its technical alliance partners, which shall not be disclosed outside or duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate Synspective Inc.
Any use or disclosure in whole or in part of this information without the express written permission of Synspective Inc. is prohibited.
The SAR data was captured by the StriX series of satellites developed and operated by Synspective.

Synspective

© Synspective Inc.