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Synspective Inc.

# Harnessing SAR Data and Solutions for National Security

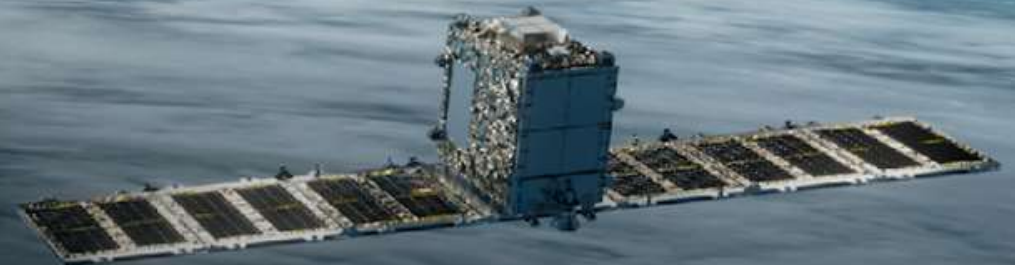
December 03, 2025

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**Dr. Kapil Kumar Malik**

Synspective Inc.

Regional Sales Manager



Synspective was co-founded in February 2018 by our CEO, Motoyuki Arai, and Seiko Shirasaka, who was in the IMPACT Program

## ■ Company Overview

Company Name	Synspective Inc.
Established	February 22, 2018
Capital	¥ 8,395 million, as of June 30, 2025
Head Office	3-10-3 Miyoshi, Koto-ku, Tokyo, Japan
Group Companies <sup>(2)</sup>	Synspective SG Pte. Ltd. (Singapore) Synspective Japan, Inc. (Tokyo) Synspective USA HD, Inc. (Delaware, USA) Synspective USA, Inc. (Colorado, USA)
Employees	210 (Consolidated, as of the end of June 2025) A global team with members from 22 countries
Business	<ul style="list-style-type: none"> <li>• Sales of SAR image data</li> <li>• Solution services using SAR data</li> <li>• Development and operation of small SAR satellites</li> </ul>

## ■ Company Overview



## ■ Synspective SG Pte. Ltd.

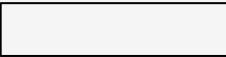


## ■ Yamato Technology Center

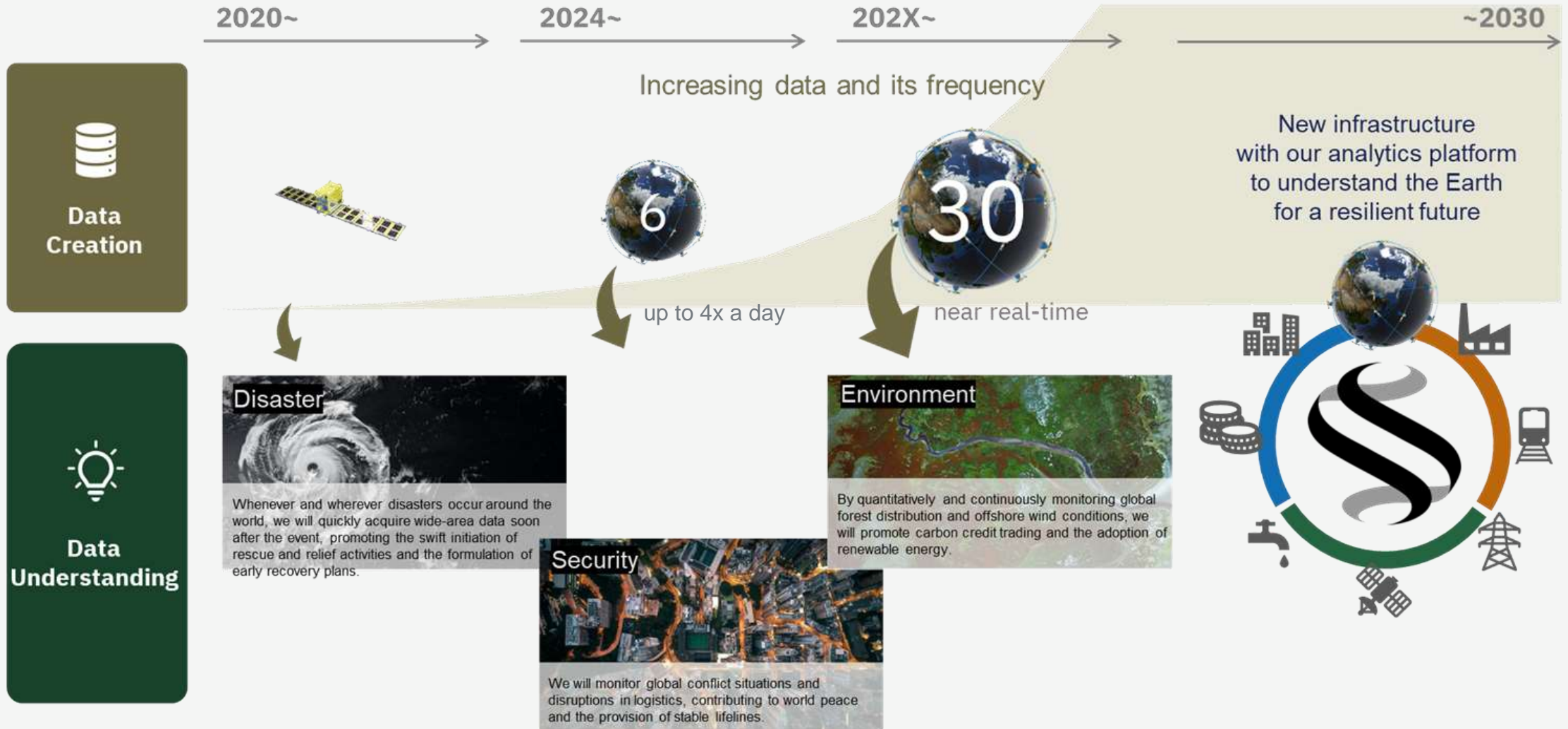


(1) Japanese national R&D program led by Cabinet Office <https://www.jst.go.jp/impact/>

(2) Synspective USA, Inc. is a wholly-owned by Synspective USA HD, Inc., while the others are a wholly-owned company by Synspective Inc.



Synspective aims create a new infrastructure that enables the next generation to understand our Earth and achieve a resilient future.



# StriX Launch Missions

## StriX-α

Launch date 2020/12/15



## StriX-β

Launch date 2022/03/01



## StriX-1

Launch date 2022/09/16



## StriX-3

Launch date 2024/03/13



## 6th Unit

Launch date 2024/01/21



## 7th Unit

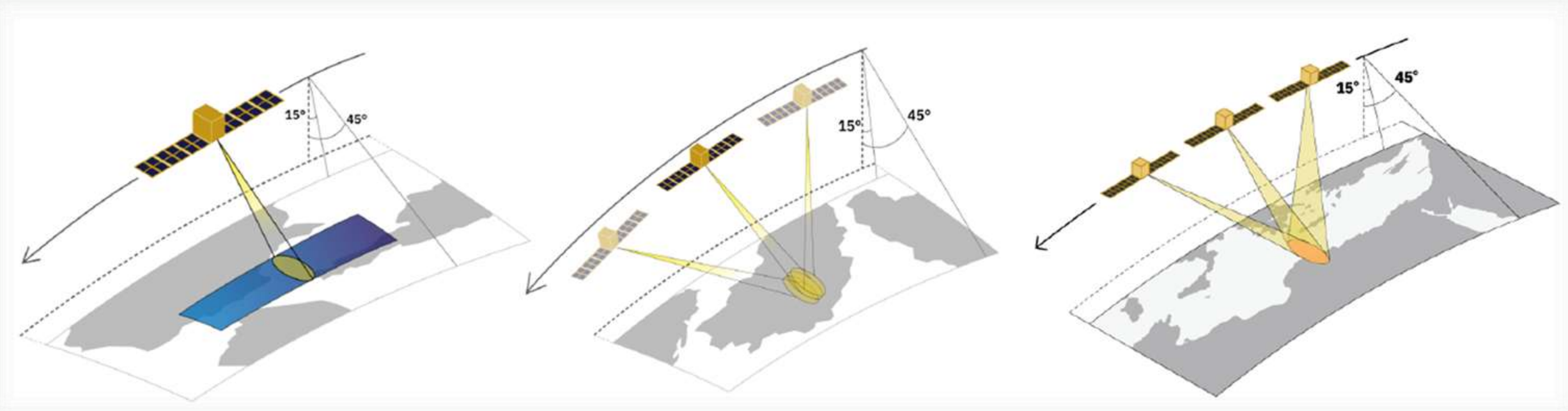
Launch date 2025/01/14



## 5th Unit

Launch date 2024/08/03





### Stripmap

Coverage (swath x length): 20km x 50km  
Resolution: 3m

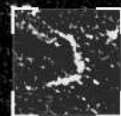
### Sliding Spotlight

Coverage (swath x length): 10km x 10km  
Resolution: 0.9m / 0.5m

### Staring Spotlight

Coverage (swath x length): 10km x 3km  
Resolution: 0.5m / 0.25m

# Object Detection & Classification





## Challenges of optical satellite imagery

- Clouds
- Night-time imaging



## Challenges of ground-based radar / patrolling

- Cost
- Limited Area Coverage





StriX small SAR satellites + advanced analytical algorithms



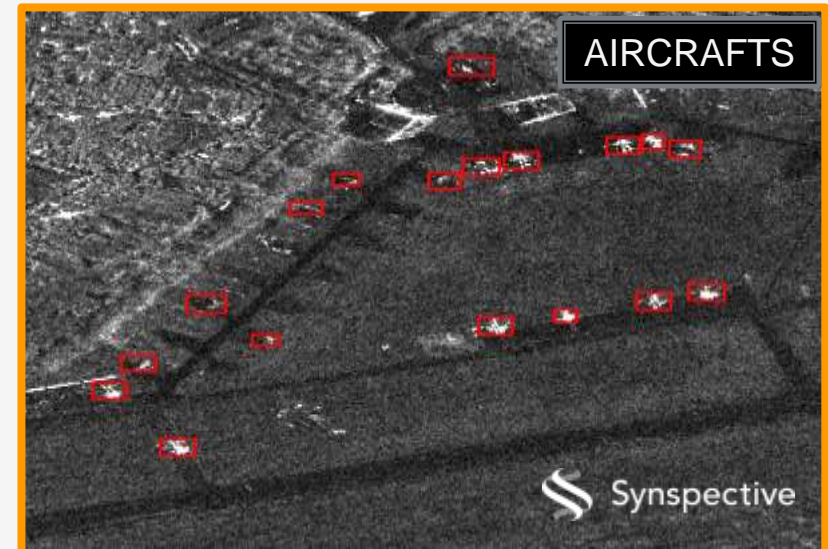
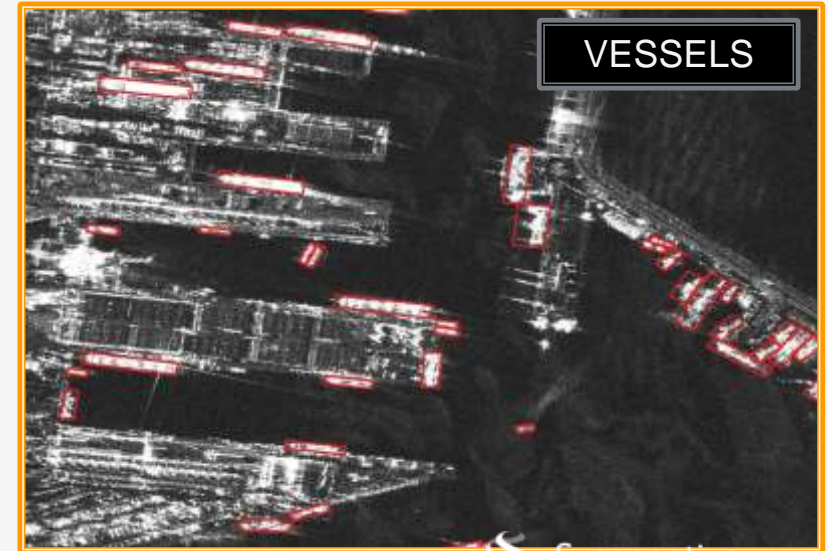
**Rapid and accurate** detection of the **locations and types** of vessels and aircraft

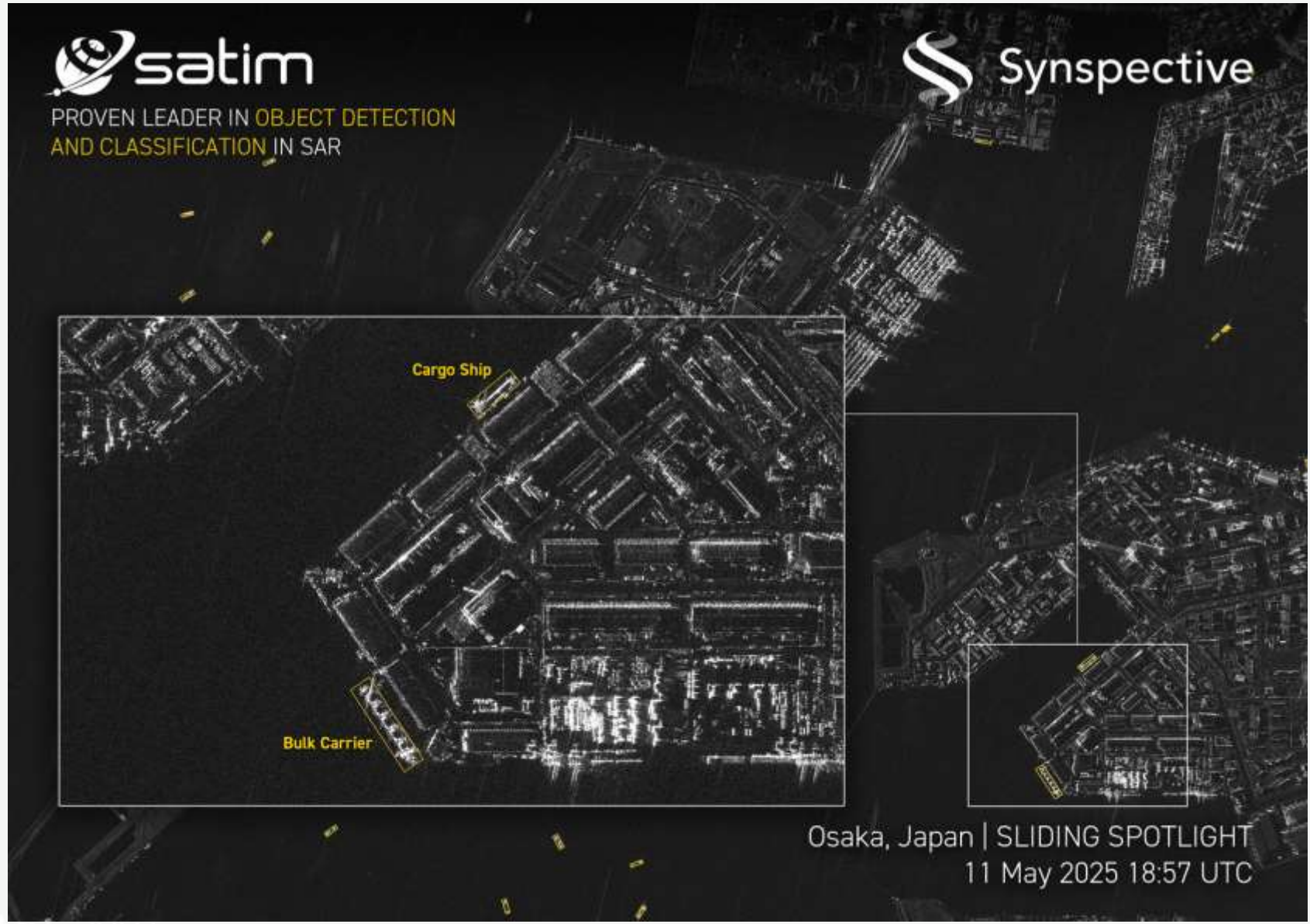


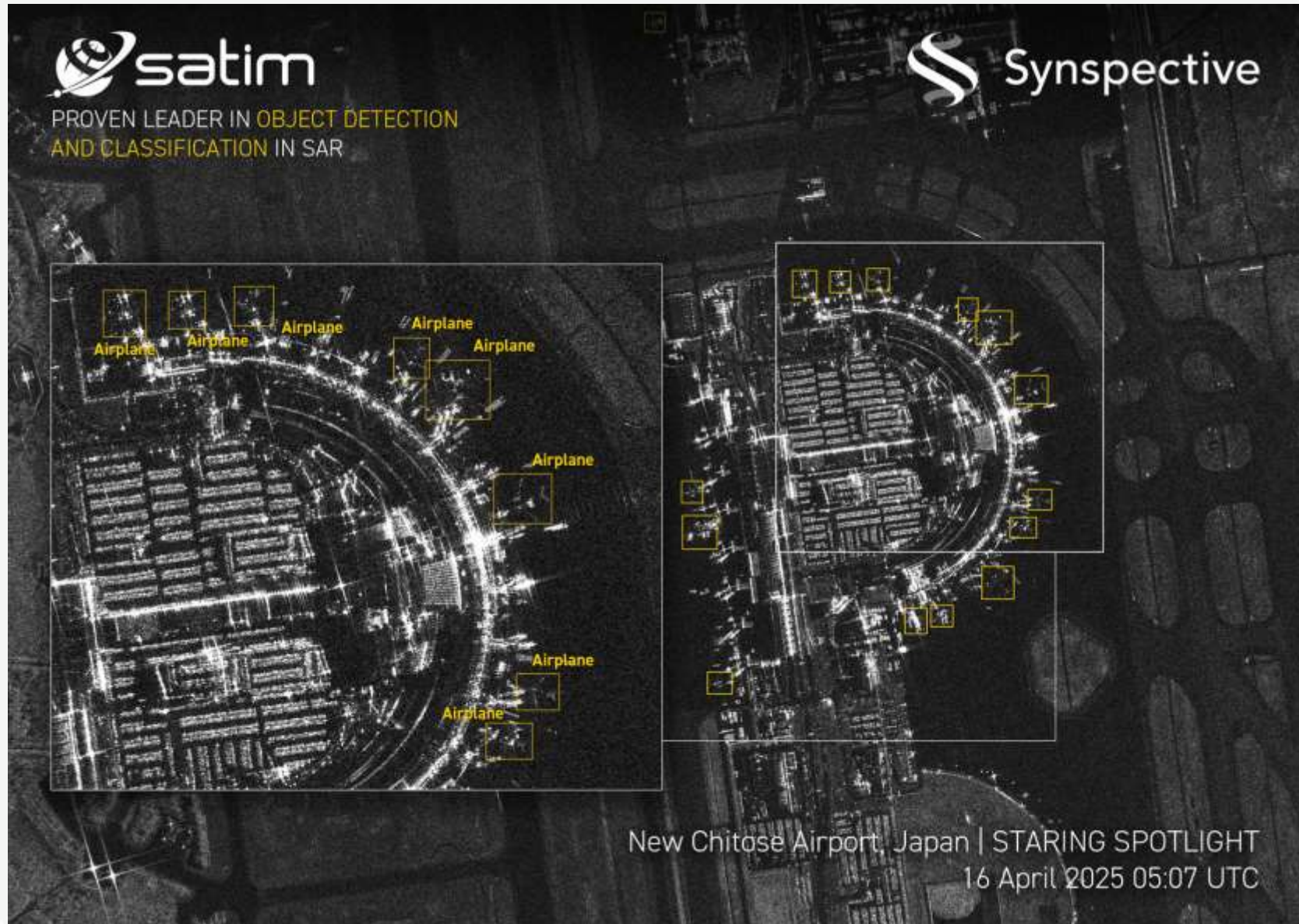
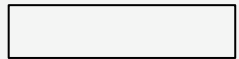
Use Cases

- Maritime Surveillance
- Airport Monitoring
- Security and Defense
- Global Supply Chain Monitoring

- **Reliable, all-weather, day-and-night surveillance:** SAR satellites provide monitoring capability that penetrates clouds, fog, and smoke, supporting 24/7, year-round operations.
- **High-frequency monitoring:** Synspective's satellite constellation (with plans to deploy over 30 satellites) enables more frequent revisits and timely updates.
- **Wide-area coverage:** Efficiently monitors vast ocean areas, coastlines, airports, and remote region.
- **AI-powered detection (vessels and aircraft):** Utilizes SATIM's OREC technology for object detection.
- **Intelligent classification:** Advanced algorithms classify detected objects to support more precise identification.







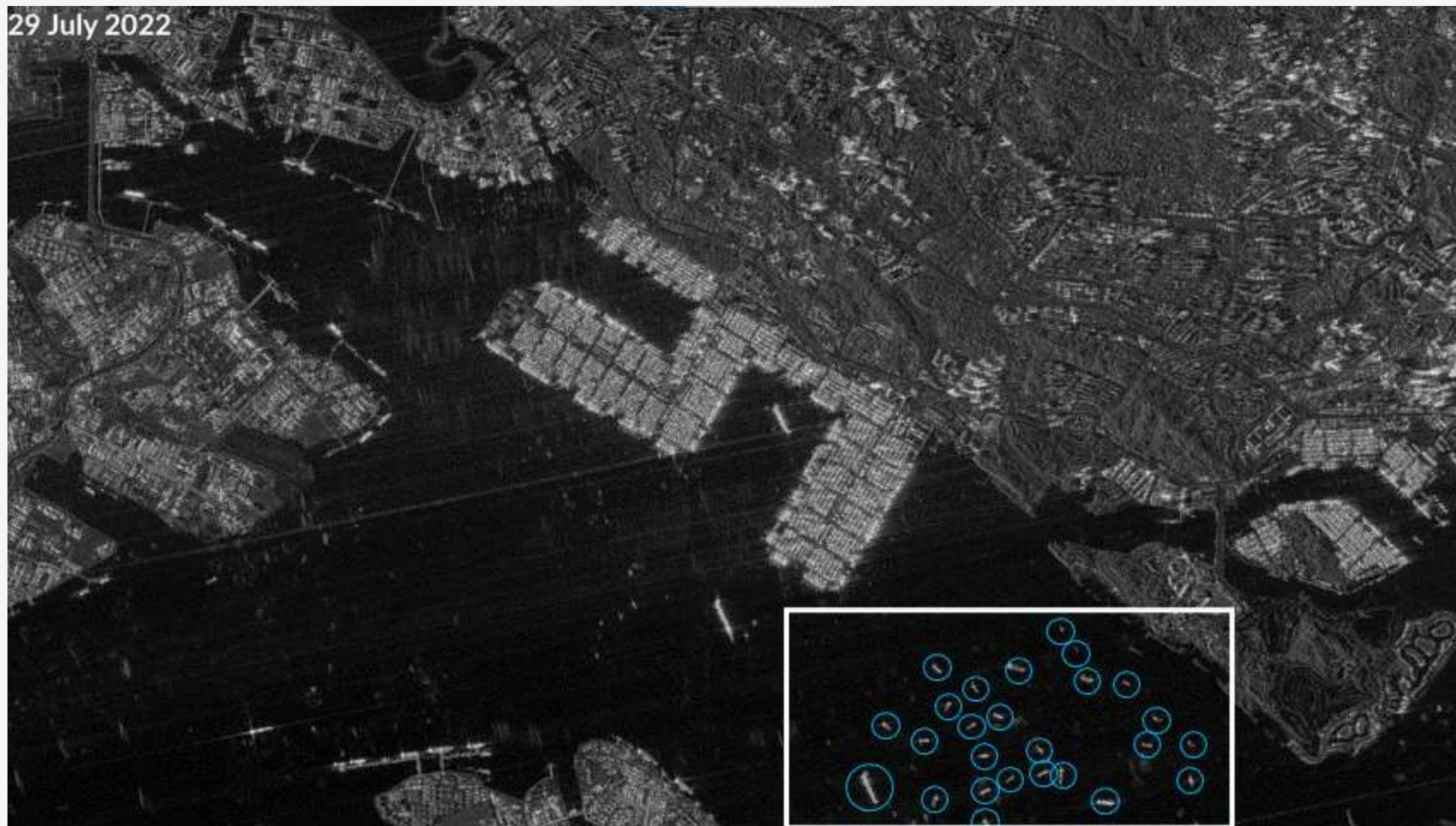


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# Persistent Monitoring



## Detection of Vessels



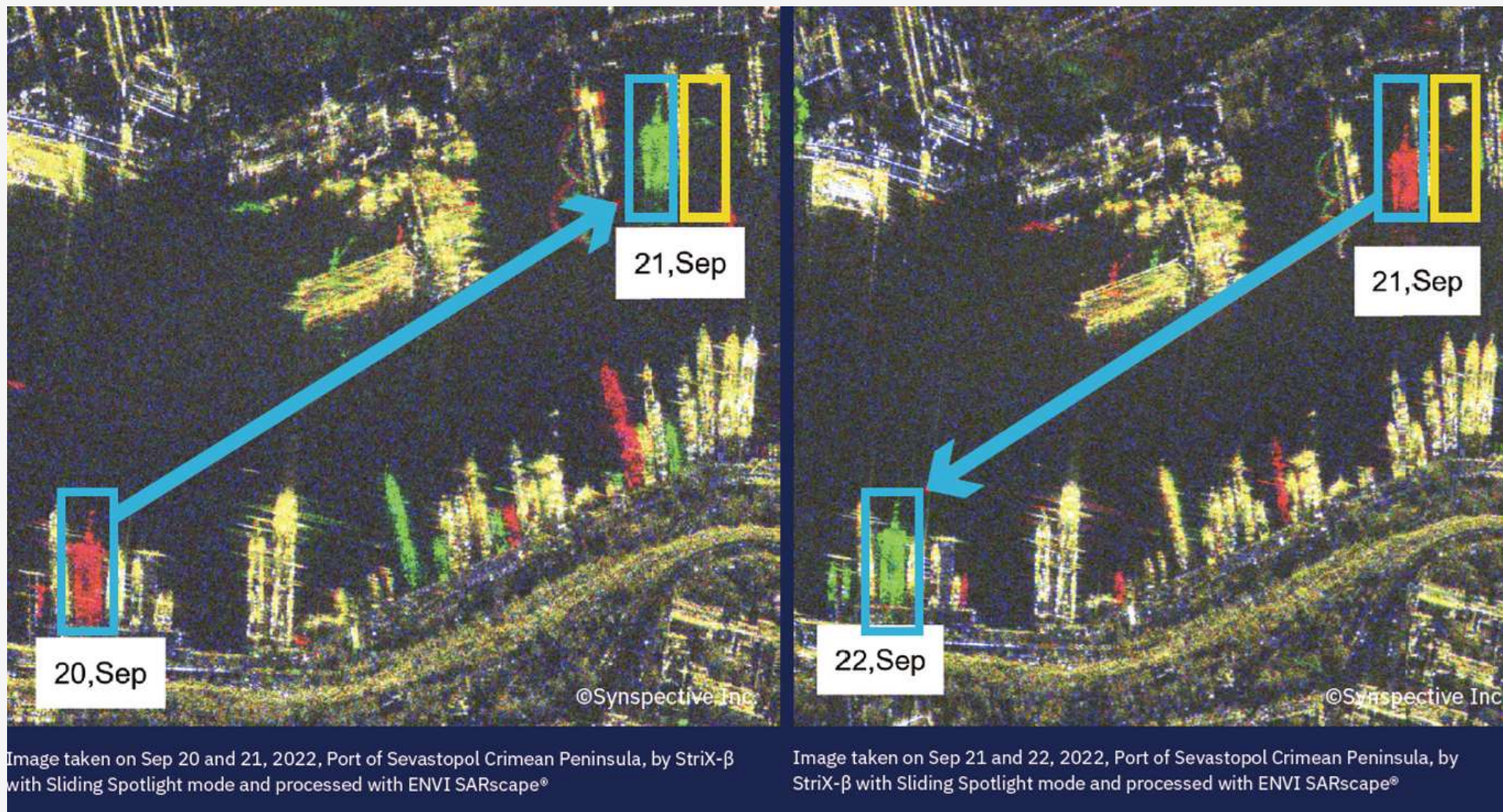


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# Change Detection



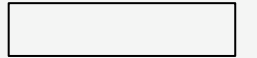
## Detection of Vessel Movement



Movement of a crane ship to unload supplies to a kilo-class submarine

Image taken on Sep 20 and 21, 2022, Port of Sevastopol Crimean Peninsula, by StriX-β with Sliding Spotlight mode and processed with ENVI SARscape®

Image taken on Sep 21 and 22, 2022, Port of Sevastopol Crimean Peninsula, by StriX-β with Sliding Spotlight mode and processed with ENVI SARscape®



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Objective data and effective solutions  
for maritime surveillance, airport monitoring, security and defense

- All-weather, 24/7 imaging
- High resolution
- High frequency monitoring
- AI-powered detection and classification
- Change detection analysis



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The SAR data was captured by the StriX series of satellites developed and operated by Synspective.



Synspective