

# Ubotica achieves further breakthroughs in Live Earth Intelligence with Cognisat-6

*Ubotica announced another significant milestone in Live Earth Intelligence with its CogniSAT-6 satellite mission.*

DUBLIN, IRELAND, August 1, 2024 /EINPresswire.com/ -- Ubotica, the leader in SPACE:AI, today



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*Fintan Buckley, CEO of Ubotica*

announced another significant milestone in Live Earth Intelligence with its [CogniSAT-6](#) satellite mission: successful onboard AI detection of objects on Earth and immediate relay of insights to users on the ground. This marks the world's first commercial deployment of Live Earth Intelligence, setting a new standard for real-time space-based insights.

The Challenge of Traditional Earth Observation  
Earth has an observation problem. Today's Earth Observation (EO) satellites don't understand what they're observing; they simply gather data and downlink it all for

delayed on-ground processing. Earth Observation today is slow, expensive, and overly complex.

## SPACE:AI: The Future of Earth Observation

Ubotica's CogniSAT-6 mission, launched in partnership with Open Cosmos in March this year, changes this paradigm. Powered by Ubotica's SPACE:AI platform, it revolutionises Earth Observation by enabling satellites to understand what they see and to deliver affordable, real-time and actionable insights crucial for economic growth, climate monitoring, and global security.

## Groundbreaking Milestone in Live Earth Intelligence

CogniSAT-6 recently captured an image over Khor Fakkan, UAE, and within minutes, SPACE:AI identified 142 ships outside the port at an impressive rate of 21.3 km<sup>2</sup> of image data processed per second. Rather than today's methods that wait until a satellite passes over a downlink ground station to transmit images, which can delay insights by days, CogniSAT-6 uses a real-time inter-satellite communications network to immediately relay insights to ground.

Another observation was of Galveston, Texas, USA, which is the gateway to Houston. Again in seconds, SPACE:AI identified 37 ships entering the channel and instantly relayed insights to

ground.

Our team pioneered a sophisticated synthesis flow, creating realistic image training sets that precisely simulated the CogniSAT-6 imager's output. This advanced approach enabled our algorithms to generate accurate insights from the very first images captured in orbit, demonstrating Ubotica's leading-edge expertise in space technology.

#### Beyond Ship Detection: Metadata and Multimodal Earth Observation Applications

SPACE:AI not only identifies vessels but also extracts valuable metadata, including location, size, and orientation. This metadata, relayed to ground in real-time, can then be combined with AIS (Automatic Identification System) data to detect potentially "dark" ships engaged in illegal or suspicious activities.

Ship detection is just one Earth Observation application of SPACE:AI. The platform supports hundreds or even thousands of different Earth Observation applications by making it easy for developers to train, test, and deploy different models for their specific use cases. In the examples above, SPACE:AI could detect illegal bilge or oil discharges from ships or assess the health of marine habitats, such as early detection of algal blooms that can impact marine ecosystems and human activities.

#### Unlocking Live Earth Intelligence

SPACE:AI is more than just image capture and processing; it's about unlocking the valuable, real-time insights hidden within Earth Observation data. Ubotica's technology is revolutionising the industry, making Earth Observation faster, more affordable, and more actionable.

"This is a paradigm shift for Earth Observation. The industry has long sought a model of live Earth intelligence, where insights are generated onboard satellite and instantly relayed to ground. The CogniSAT-6 mission is the first to achieve Live Earth Intelligence, revolutionising the capabilities and cost-efficiency of Earth Observation", said Fintan Buckley, CEO of Ubotica.

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