



## Ubotica Slashes Satellite Data Overload with On-Board AI Solution

**Dublin, Ireland: 7 March 2023**, Ubotica Technologies, the leading provider of smarts for smart satellites, today announced the CogniSAT-CRC solution which maximises Earth Observation asset utilisation using flight proven CogniSAT technology. Using state of the art lossless image compression, and a flight-proven AI-based Cloud Detection and Removal algorithm, CogniSAT-CRC delivers at least a six-fold increase in useful data capture per orbit for Earth Observation (EO) satellites thereby maximising the areas of interest scanned during each orbit.

As more complex EO sensors (multispectral, hyperspectral, etc.) produce more data and with more satellites flying, there is now a data bottleneck in space. The available downlink capacity is not keeping pace with the data generated and this results in the under-utilisation of these complex EO assets which reduces the system return on investment. CogniSAT-CRC directly addresses this challenge with an approach that can reduce downlink data costs by 80% while simultaneously trebling the amount of useful data gathered.

CogniSAT-CRC comes in a mechanical and power envelope compatible with small satellites, even down to CubeSats, and maximises the utilisation of EO assets by eliminating the impact of downlink data bottlenecks. CogniSAT-CRC is a self-contained system solution which acts as an AI coprocessor to the satellite On-Board Computer (OBC). The solution comes with an application which runs on the OBC and controls the operation of the CogniSAT-CRC solution. The system is designed to minimise the overhead requirements on the OBC.

According to John Doody, VP Product at Ubotica, *“With an average of 50% cloud coverage across the Earth, it is a huge waste of valuable downlink budget to send cloudy images down to ground stations. Ubotica developed CogniSAT-CRC to address this opportunity for satellite operators to significantly increase the operational efficiency of their space assets. Our analysis shows satellites designed using CogniSAT-CRC can reduce downlink costs by up to 80%.”*

CogniSAT-CRC will be released this year as Engineering and Flight Models. Satellite designers can also access Ubotica’s deep domain expertise to integrate their specific imager sensor with CogniSAT-CRC and to improve operational efficiency by fine tuning the space borne module.

CogniSAT-CRC will fly on the Ubotica CogniSAT-6 mission announced in November 2022. [<https://ubotica.com/news-release-cognisat-6/>]

Ubotica is at the heart of semi-autonomous satellite systems that provide real-time insights from flexible on-board processing and that use affordable, low energy hardware. The Ubotica CogniSAT platform was developed with deep insight of processing hardware, computer vision software and AI system integration. CogniSAT technology has already been proven in multiple space flown projects with partners in Europe and the USA, including NASA JPL and the European Space Agency (ESA).

In March, Ubotica will exhibit at Paris Space Week and Satellite 2023 in Washington, DC.

-ENDS-



Notes to Editors

**About Ubotica**

<https://ubotica.com/>

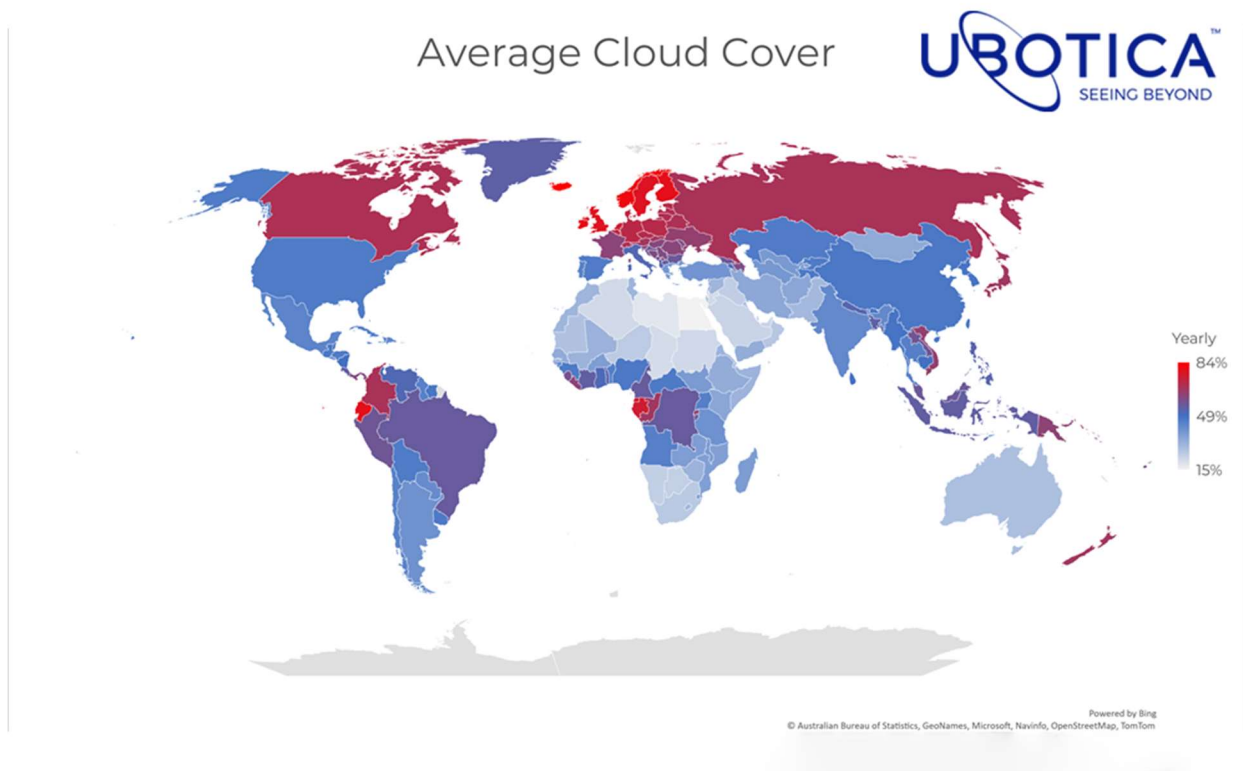
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Founded in 2017, Ubotica Technologies provides smarts for smart satellites. Our products and services are used by global space industry partners to deliver real-time insights directly to users.

Ubotica is headquartered in Dublin, Ireland with a team of AI Engineers based in DCU Alpha, and has a team of Computer Vision Engineers in Spain and Canada, and a team of space systems experts in the Netherlands based in the Aerospace Innovation Hub at the TU Delft Campus.

The founders of the company have deep expertise in the advanced technology sector globally and have developed innovative technology, successfully brought complex products to market and delivered high value exits including Parthus Technologies, GloNav and most recently Movidius.

Image :



Source: Ubotica Technologies  
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