



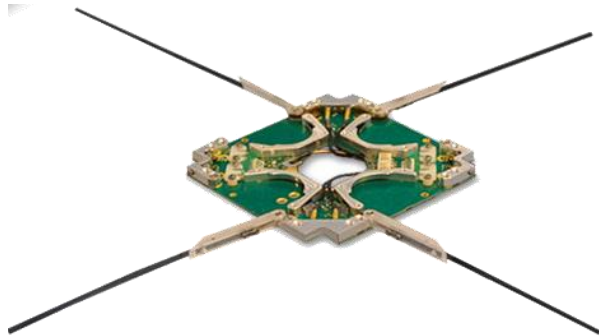
ISIS – Innovative Solutions In Space

This is not a toy – Overview of nanosatellite applications

ISIS – Innovative Solutions In Space BV

Company Presentation

We can provide all the components of your mission.



CUBESAT PRODUCTS

1000's of subsystems since 2006
Cover complete satellite avionics
Includes space and ground segment



LAUNCH SERVICES

271 satellites launched since 2009
World record: 101 satellites at once
Use ISIS' deployers and sequencers

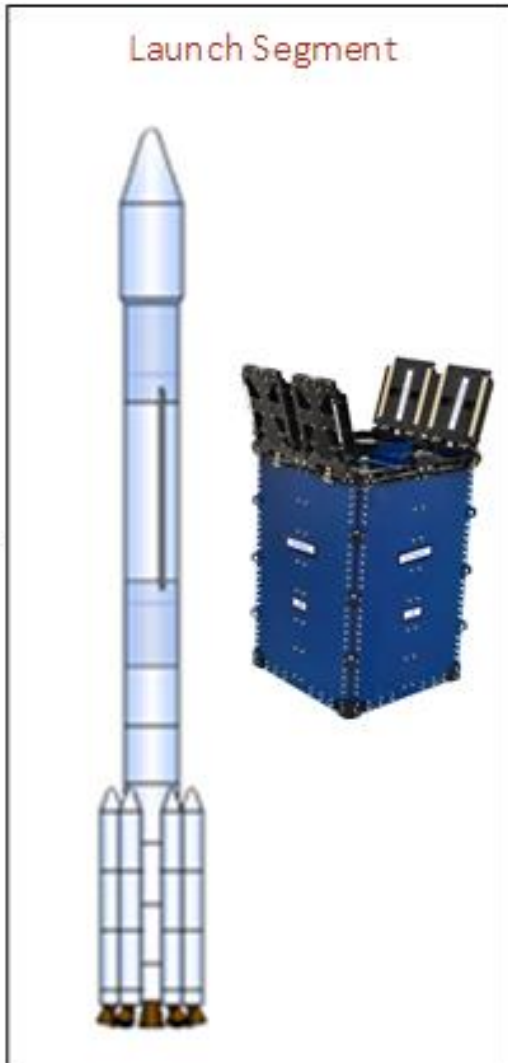


TURN-KEY MISSIONS

Involved in 30+ missions since 2013
Includes insurance & in-orbit delivery
Training and knowledge transfer

ISIS – Innovative Solutions In Space BV

Turnkey missions



CubeSat form factors

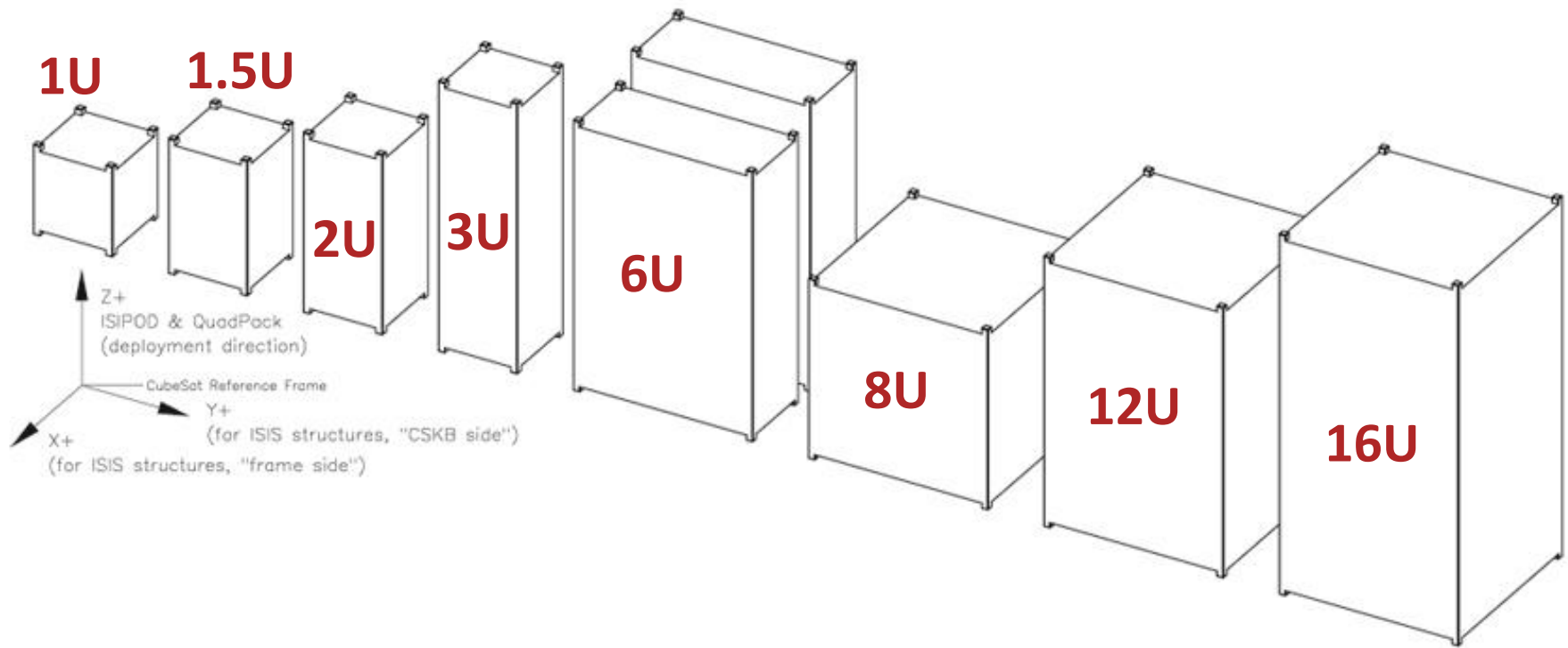
Different capabilities, different applications



1U	3U	6U
1 kg, 10x10x10 cm	6 kg, 10x10x34 cm	12 kg, 10x22x34 cm
Cost-effective	Increased performance	High-power, large surfaces
Education and training	Small science and tech-demo	RF-based application

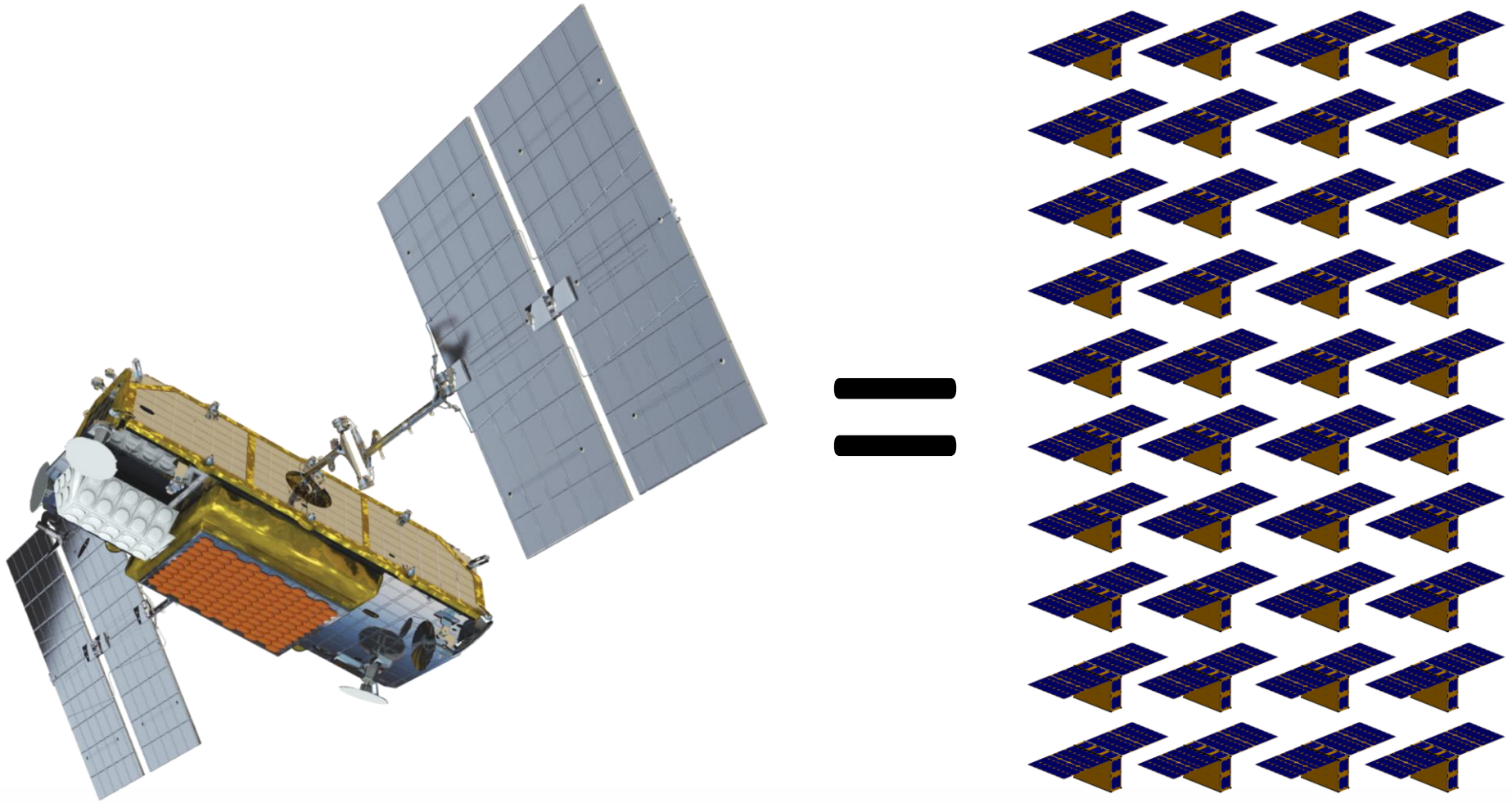
CubeSat form factors

Different capabilities, different applications



Small is beautiful...

... and cheaper to build and launch



Power in strength

Advantages of a constellation of small satellites

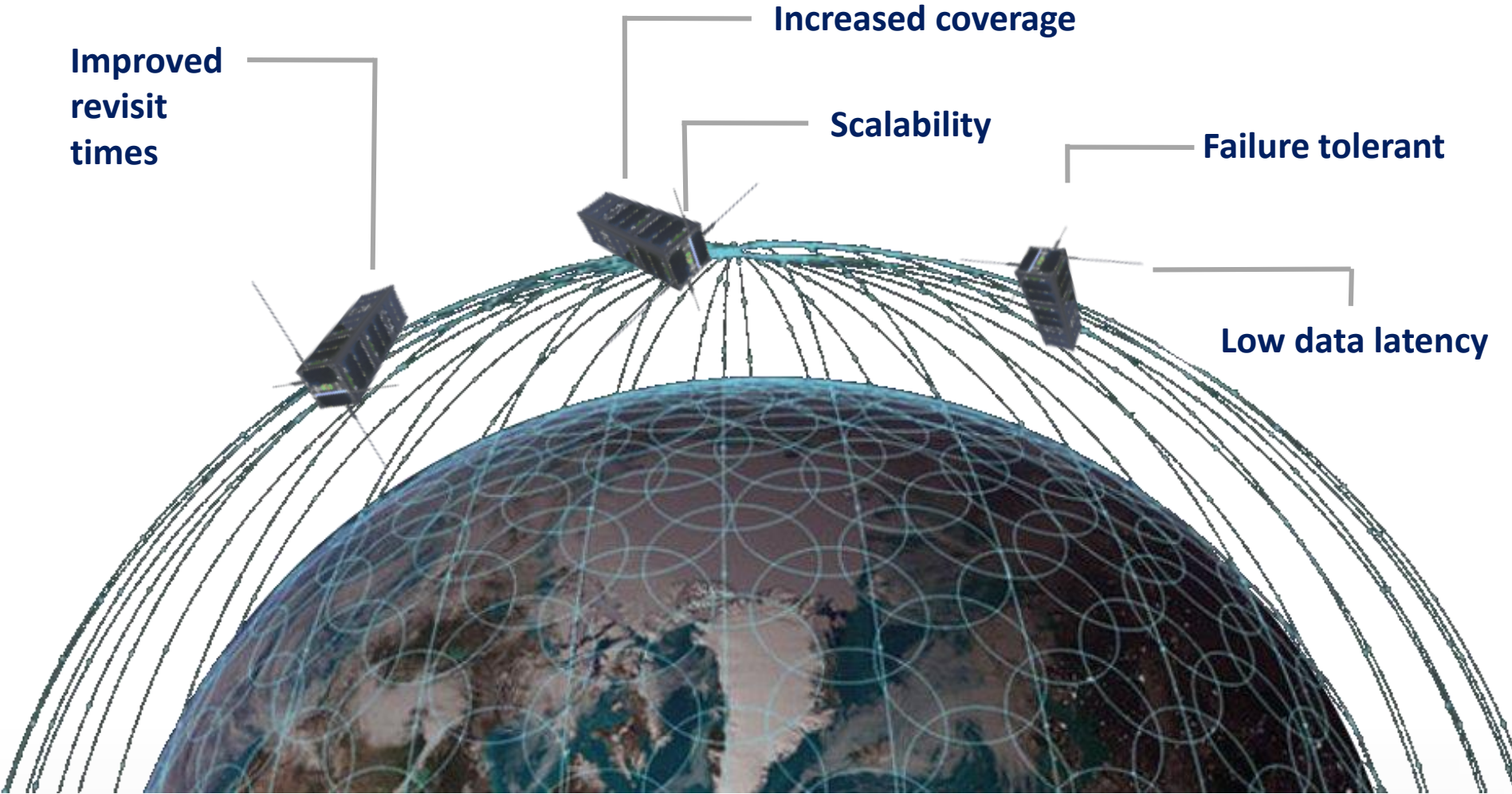
Improved
revisit
times

Increased coverage

Scalability

Failure tolerant

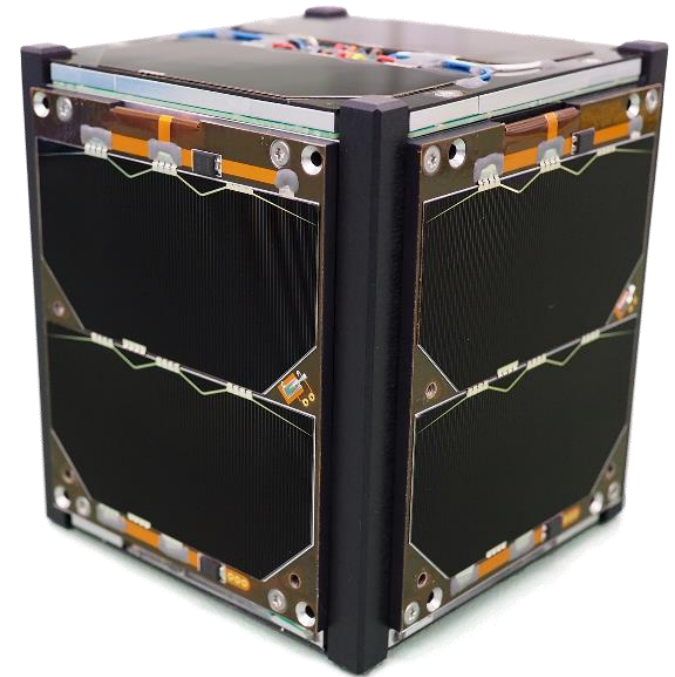
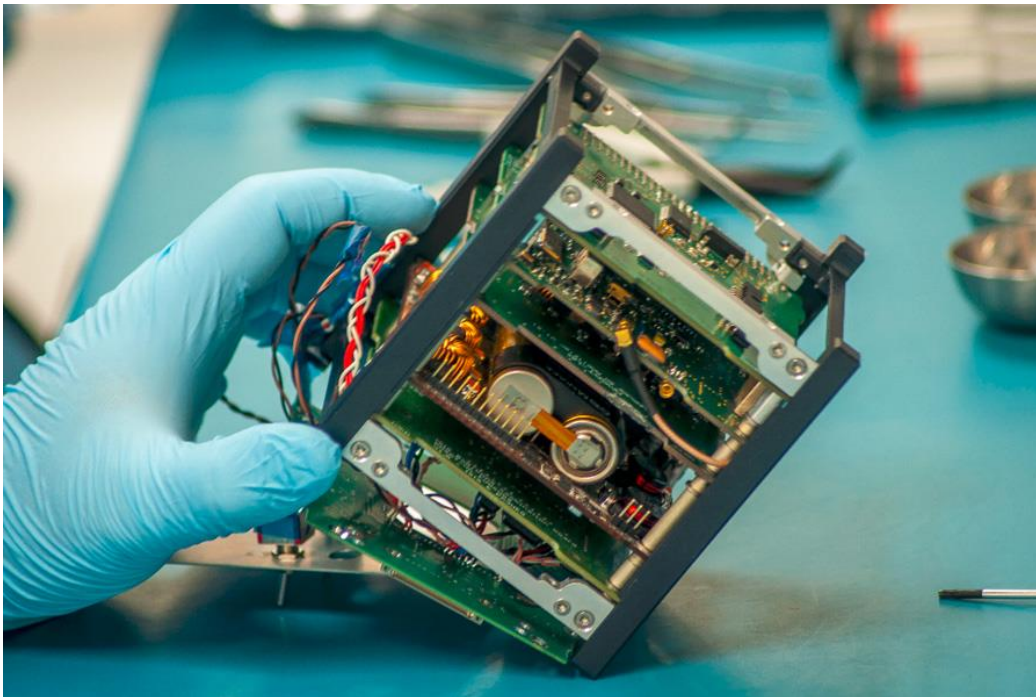
Low data latency



Radio amateur 1U mission

Hands-on learning with an actual satellite

Platform	1U
Payload	RF transponder
Frequencies	Amateur UHF and VHF
Secondary features	File download, various sensors



Earth observation 3U mission

Ship detection and more with visible spectrum camera



Platform	3U
Payload	1.5U RGB camera
Ground resolution	5.2 m @ 550 km
Image size (swath)	21 x 16 km @ 550 km

A 5-meter resolution camera allows to detect medium sized ships (> 30m) as well as the wake from fast-moving ships.

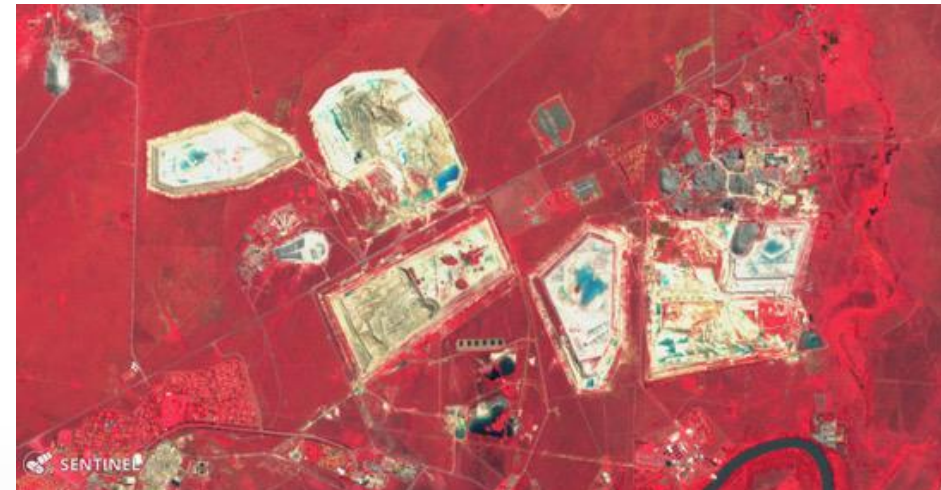
However such a camera can be used for many other application, with the same satellite.

Earth observation 3U mission

True color (RGB) vs. Multispectral (7 bands, 'false color')

Detect physical objects ("direct")

Detect events in specific spectral bands ("indirect")



RF monitoring 6U missions

Improving asset tracking and situational awareness

ISIS has worked and is working on several missions using technologies relevant to Situational Awareness. In particular:

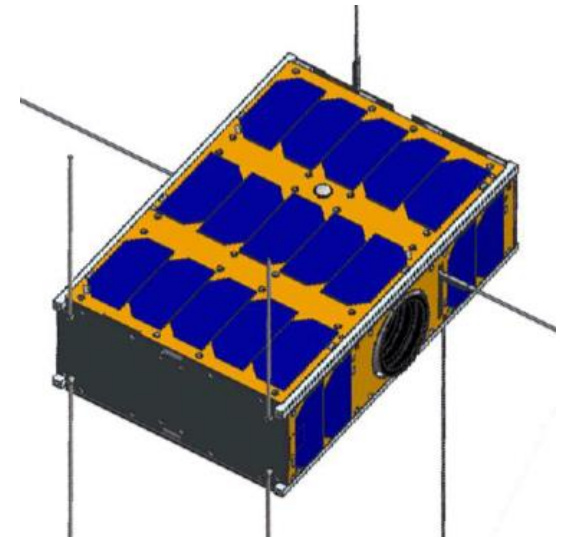
- We have developed an AIS receiver that has been used in space since 2013
- We have developed satellites for machine-to-machine missions
- We are developing satellites for radar detection



ISIS Spaceborne AIS receiver
In orbit since 2013



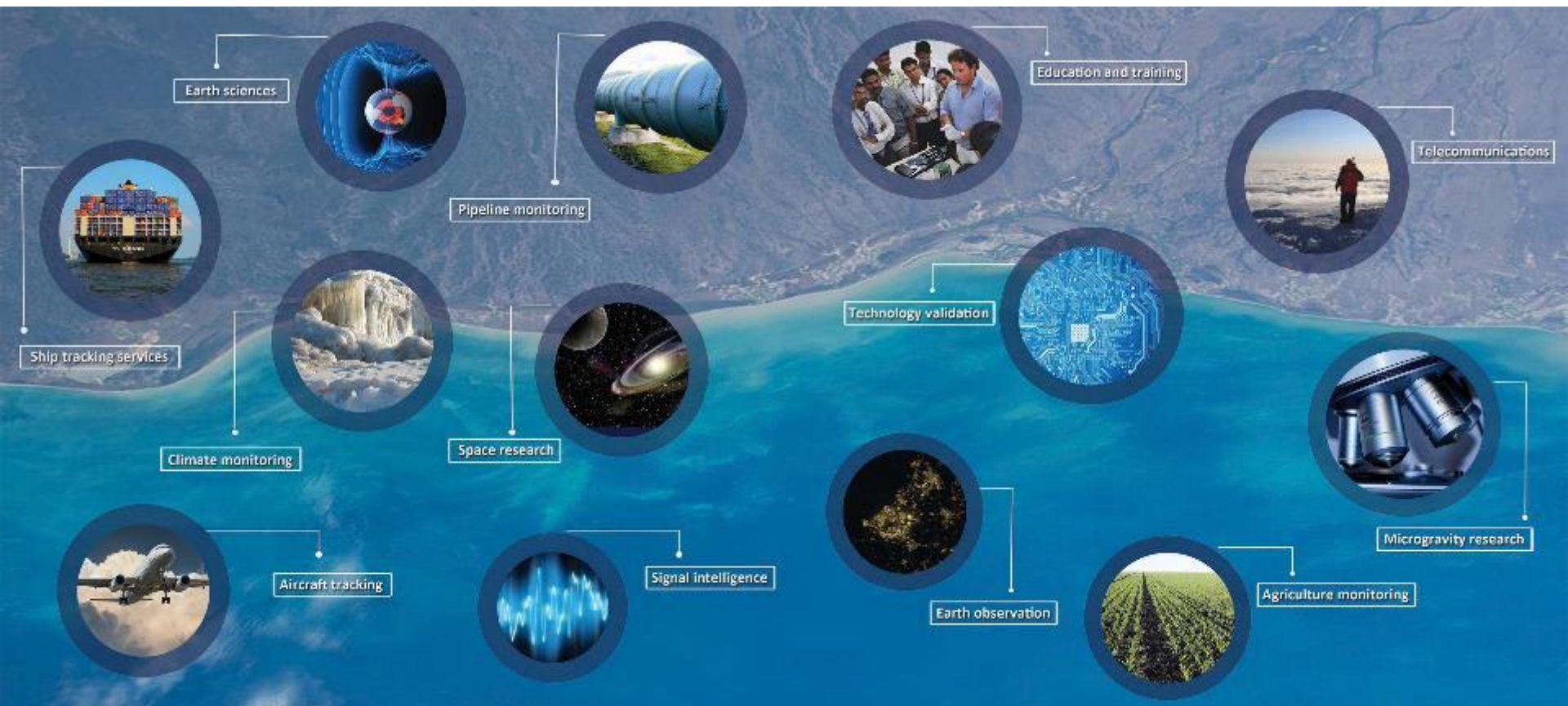
ISIS 6U Platform for M2M
In orbit since 2018



ISIS 6U Platform for radar detection
In development. Launch in 2019

Applications

Nanosatellites are used to solve real problems





Thank you for your attention

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