

The UK Space Agency's Active Debris Removal Mission

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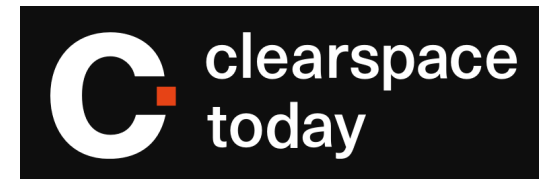
ESA Clean Space Industry Days, ESTEC

SUSTAINABILITY

Deliver capabilities to track objects in orbit and reduce or remove debris, and lead global regulation and best practice to make space activities more sustainable.

Overview of UK ADR

- Removal of **two** defunct UK-licensed satellites from LEO
- Targets must be **unprepared for capture**
- **2026** launch
- Compliant with IADC guidelines
- Servicer to be refurbishable to enable follow-on mission(s)



Phase 0/A Timeline



KO: Kick-Off

MCW: Mission Concepts Workshop

MDR: Mission Definition Review

MTR: Mid-Term Review

FA: Final Assessment

COSMIC

Cleaning Outer Space Mission through Innovative Capture



- Based on an adapted ELSA-M platform
- Utilises a robotic capture system
- ELSA-M leverages flight heritage from ELSA-d



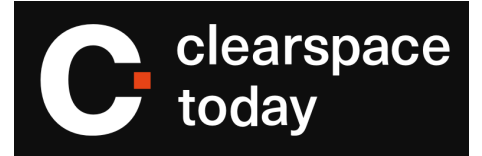
Astroscale's Space Debris
Removal Mission, ELSA-d -
ConOps Video



In-Orbit Servicing Control Centre (IOSCC) developed by Astroscale (prime) and embedded in the Satellite Applications Catapult

CLEAR

Clearing the LEO Environment with Active Removal



Capture mechanisms:

- 4 robotic tentacles
- Robotic arm



In-orbit services to shape the future
of sustainable space operations



The CLEAR servicer spacecraft

LEOPARD

Low Earth Orbit Pursuit for Active Removal of Debris

Capture Mechanism:

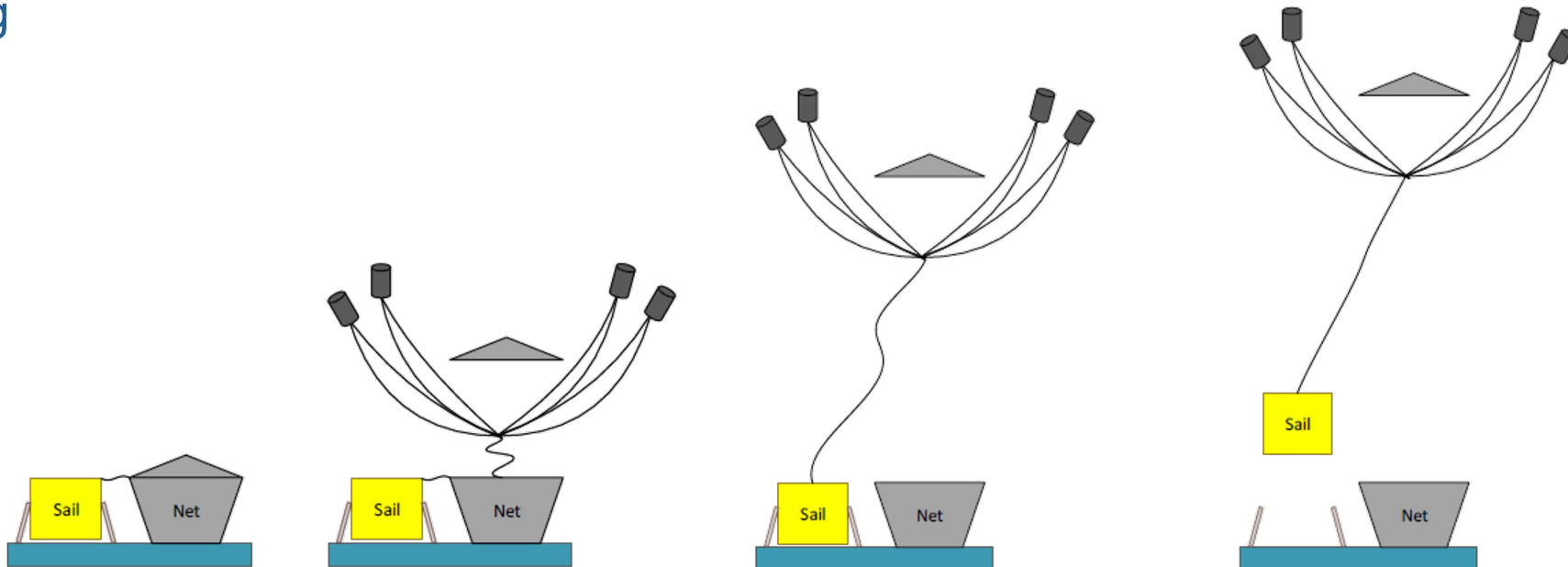
- Robotic arm
- Passive net with sail



Refurbishment:

- Refuelling

RemDeb Net Experiment
Raw Footage



Phase B

£4M awarded to Astroscale and ClearSpace to perform Phase B

ClearSpace

Alden Legal, AstroAgency, Critical Software, Deimos, MDA, Orbit Fab, Satellite Applications Catapult, University of Surrey

Astroscale

MDA UK, Thales Alenia Space UK, Nammo, GMV-NSL, NORSS, Goonhilly, Satellite Applications Catapult, Willis Towers Watson, and other advisory and industrial partners

Press release

UK builds leadership in space debris removal and in-orbit manufacturing with national mission and funding boost

Thank you

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