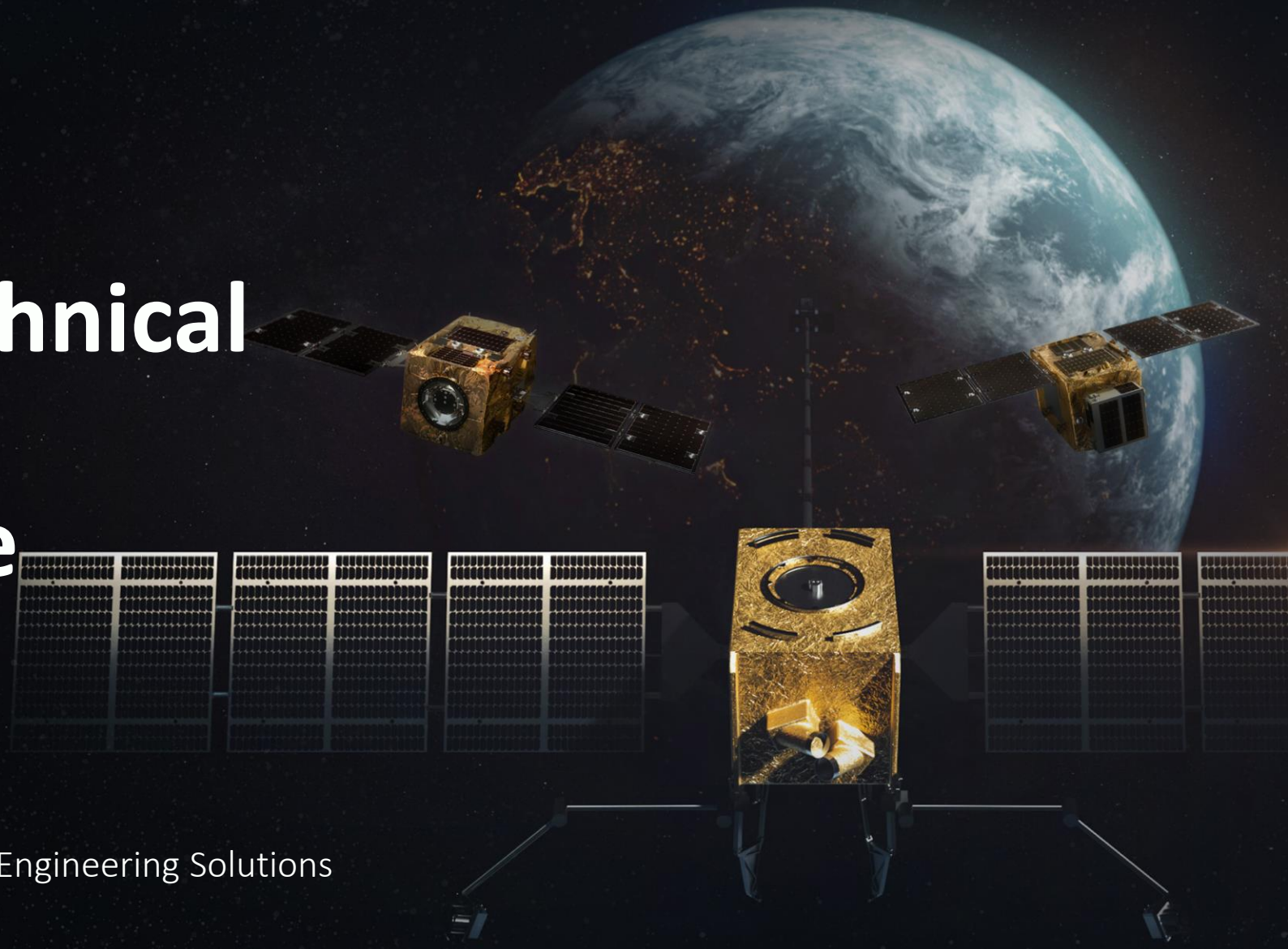
Zero Debris Technical Booklet – Astroscale's use



Zoé Tenacci – Senior Engineer, Strategy & Engineering Solutions

11 JUNE 2025

Astroscale – Who We Are

VISION

Safe and sustainable development of space for the benefit of future generations.

MISSION

Develop innovative technologies, advance business cases and inform international policies that reduce orbital debris and support long term, sustainable use of space.

Life Extension + Fleet Management

LEX (GEO)

Keep GEO satellites in operation after fuel depletion

In-Space Situational Awareness/Inspection

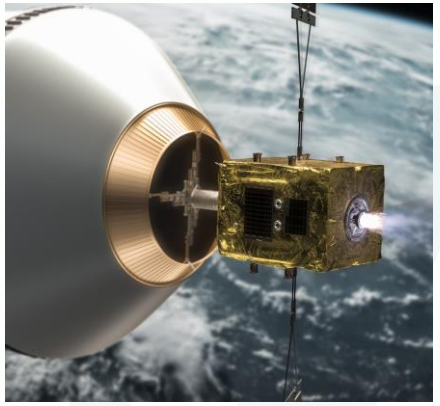
ADRAS-J, LEX

Diagnose and characterize objects

Orbital Transfer

ELSA-d, ELSA-M, LEX

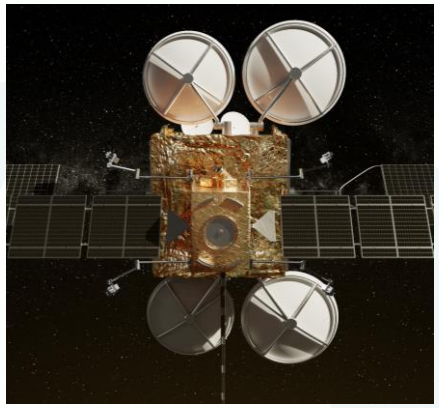
On-orbit maneuver, last mile delivery, and deorbit services



Active Debris Removal

CRD2, COSMIC

Remove large, non-prepared debris currently in orbit



Refueling + Maintenance

CRD2, LEX

Upgrade, refuel, repair, or assemble on-orbit

Zero Debris Context

ZERO DEBRIS CHARTER

Towards a Safe and Sustainable Space Environment

*…Establish this **non-legally binding** Charter as a major contribution towards space safety and sustainability, **fostering a community** of proactive actors working collectively towards jointly defined **ambitious** and **measurable targets for 2030***

*…Determined to **lead by example***

Astroscale

*Supports the Zero Debris Charter as a **company focused on space sustainability***

*Aims to implement the Zero Debris principles as a **satellite operator***

*Aims to provide solutions to the Zero Debris principles as a **satellite manufacturer***

Zero Debris Technical Booklet – Astroscale's view

Booklet purpose: define collaboratively how to reach Zero Debris by 2030, to achieve targets and principles of Charter. The Booklet serves as a **resource to support the Zero Debris Community** in directing its resources **towards research and future technology developments**.

Astroscale

Interest in all 'Chapters', i.e. development areas, to further mature space sustainable technologies

*Supports the Zero Debris Charter as a **company focused on space sustainability***

Responsibility to understand and implement the principles as best as reasonably practicable

*Aims to implement the Zero Debris principles as a **satellite operator***

As a in-orbit service provider, Astroscale already contributes to providing solutions to some of the focus areas

*Aims to provide solutions to the Zero Debris principles as a **satellite manufacturer***

Astroscale is also dependant on other technology developers to be able to implement all principles

Conclusions and Next Steps

The **Zero Debris Charter** sets **ambitious goals** toward a safe and sustainable space environment

The **Zero Debris Technical Booklet** helps identifying **technical needs and current gaps** to fulfil the principles set out in the Zero Debris Charter

As the Chapters describe, **space sustainability encompasses a wide range of technologies with each their own challenges and expertise**

There is no one-fits-all solution

Collaboration in these cross-discipline areas is critical to fill the current technology gaps, for which **funding is still a major accelerator**

Astroscale

Thank you!