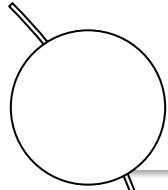


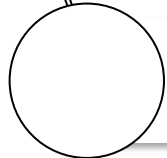


Solutions Contributing to the Outer Space Sustainability

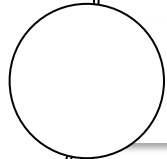
May 10th, 2016
Washington, D.C.



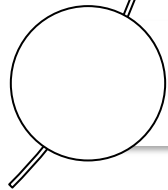
About us



Our Focus



Our Solutions



Next Steps



*ASTROSCALE's mission is
to develop cutting-edge technologies to help
maintaining a sustainable space
environment*

Presence



ABOUT
FOCUS
SOLUTIONS
NEXT STEPS



KEY MILESTONES

- 2013** Incorporation
- 2015** **Series A – USD 7.7M**
Manufacturing Facility Inauguration
- 2016** **Series B – USD 35M**
- 2017** **IDEA OSG 1 - In-Situ Environment Monitoring**
- 2018** **ADRAS 1 – Satellite Deorbiting Demonstration**

Space is becoming congested...

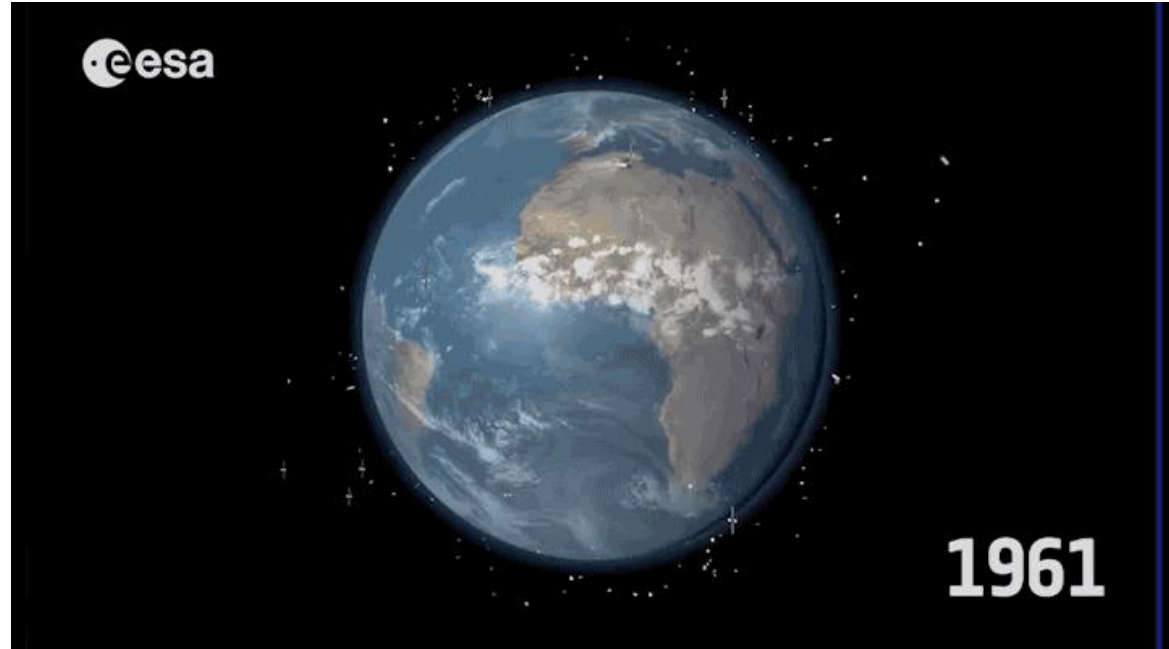


ABOUT

FOCUS

SOLUTIONS

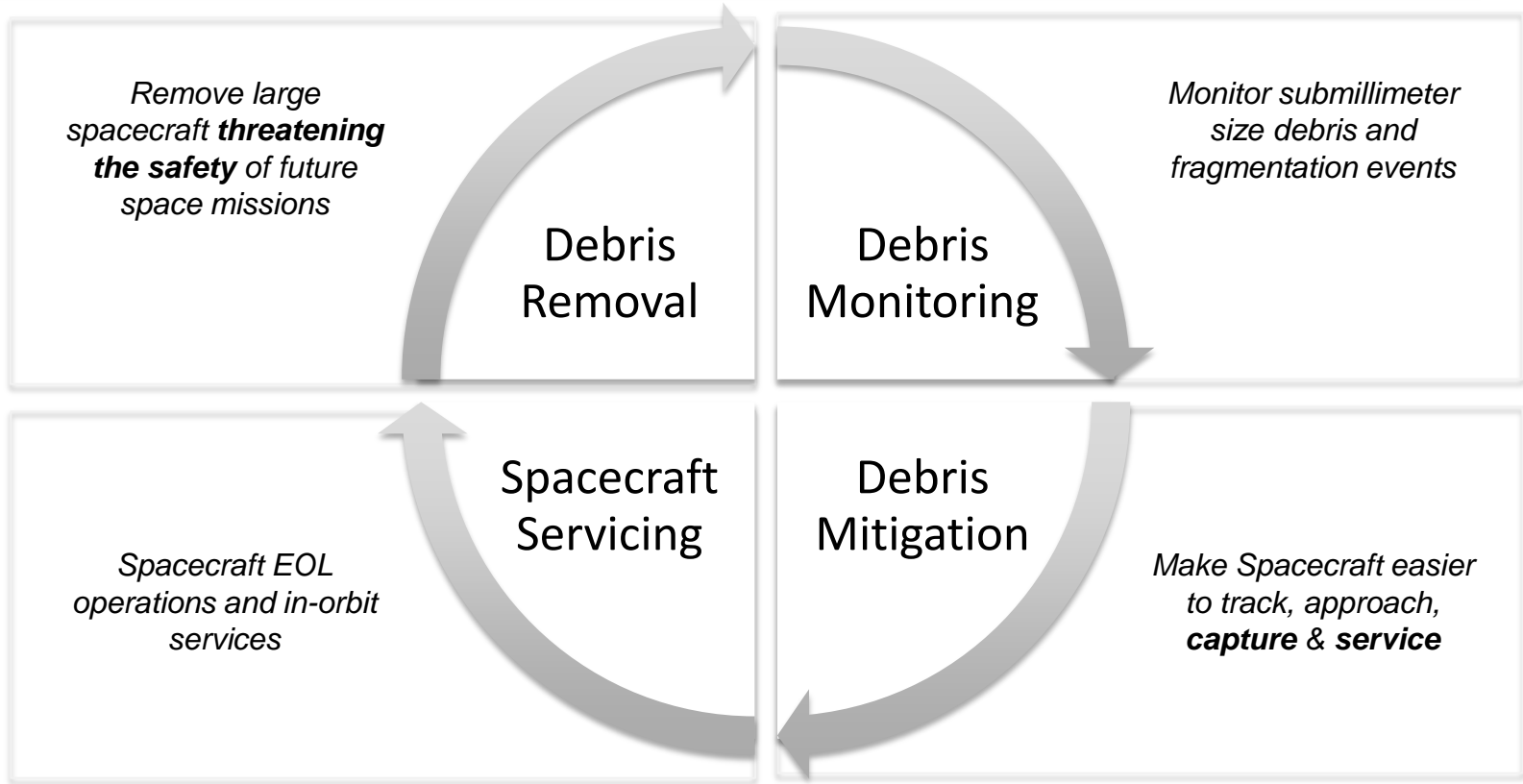
NEXT STEPS



Our Activities



- ABOUT
- FOCUS
- SOLUTIONS
- NEXT STEPS



IDEA OSG 1



ABOUT

FOCUS

SOLUTIONS

NEXT STEPS



SIZE	380mm x 380mm x 600mm
MASS	20kg
INSERTION ORBIT	End 2016 - Early 2017 Apogee Altitude (800km) Perigee Altitude (540km) Polar Orbital Plane
MISSION MODULES	Space Debris Monitor 350mm x 350mm x 2sheets
ATTITUDE CONTROL & DETERMINATION SYSTEM	Sun Sensor, Magnetometer, MEMS Gyro, 3 axis-control Magnetorquer
ON BOARD COMPUTER	Bus OBC (SH4 BoCCHAN-1) Mission OBC (FPGA) Watch Dog Controller (PIC)
POWER SUPPLY	GaAS Solar Cell (30W) NiMH Battery (10Ah)
TIME & ORBIT DETERMINATION	GPS Sensor
COMMUNICATION	S-band (Downlink / Uplink)
GROUND STATION	Japan
DE-ORBIT MECHANISM	Expandable / Fold-controllable Deorbit sail
SEPARATION MECHANISM	Single Pryo Lock System

Mission Overview

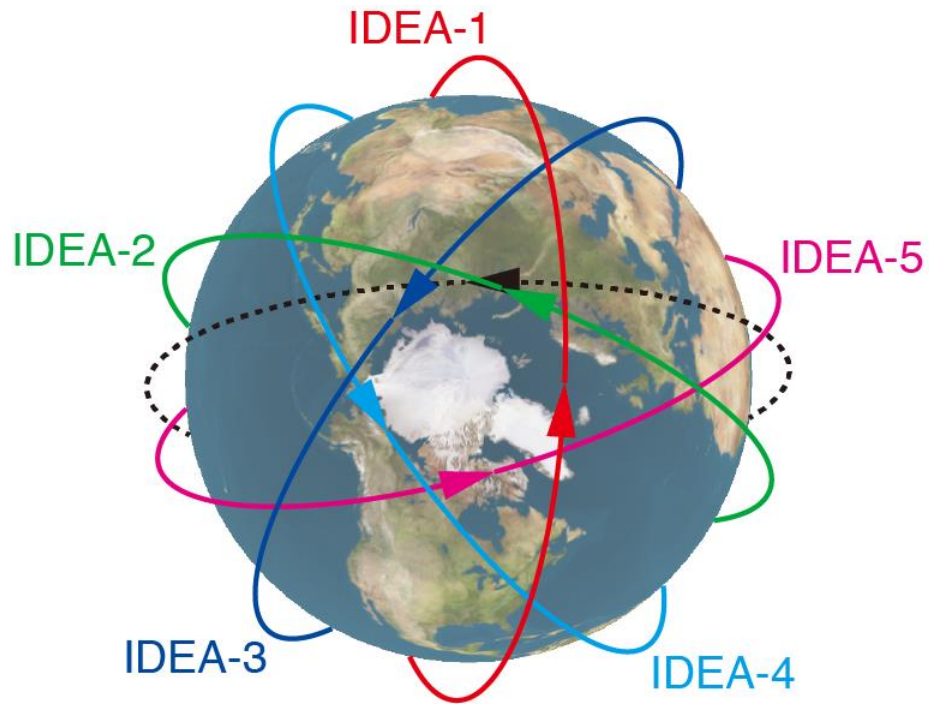


ABOUT

FOCUS

SOLUTIONS

NEXT STEPS





ABOUT

FOCUS

SOLUTIONS

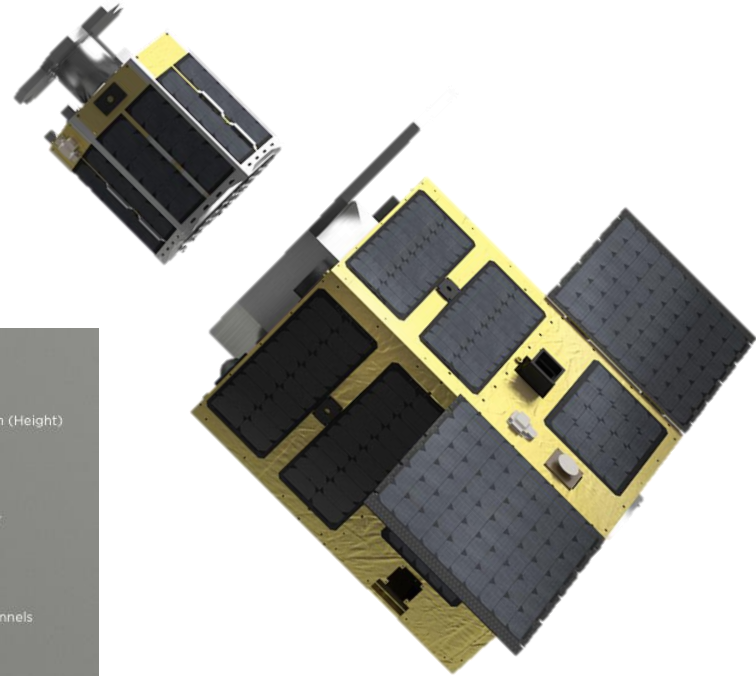
NEXT STEPS

MOTHER

SIZE	600mm x 600mm x 1000mm
MASS	90kg
ATTITUDE CONTROL SYSTEM	GPS, Star Tracker Sun Sensor, Magnetic Sensor Gyro Sensor
ACTUATOR	Magnetic Torquer Reaction Wheel
COMMUNICATION	S-band X-band
POWER SUPPLY	2 Solar Array Paddles And Body Mounted Solar Array Panels At 6 Dimensions
PROPULSION SYSTEM	Electric Propulsion Thrusters H2O2 Propellant Thrusters
MISSION MODULES	Optical Cameras Stellar Compass Infrared Camera Laser Range Radar Chaser Separation System

BOY

SIZE	380mm (Length) And 500mm (Height)
MASS	30Kg
ATTITUDE CONTROL SYSTEM	GPS, Sun Sensor Magnetic Sensor, Gyro Sensor Acceleration Sensor
COMMUNICATION	S-band
POWER SUPPLY	Body Mounted Solar Array Panels At Outer Peripheral Side
MISSION MODULE	Adhesive Unit Gimbal Unit Clustered Solid Rocket Boosters Small Optical Camera



Mission Overview

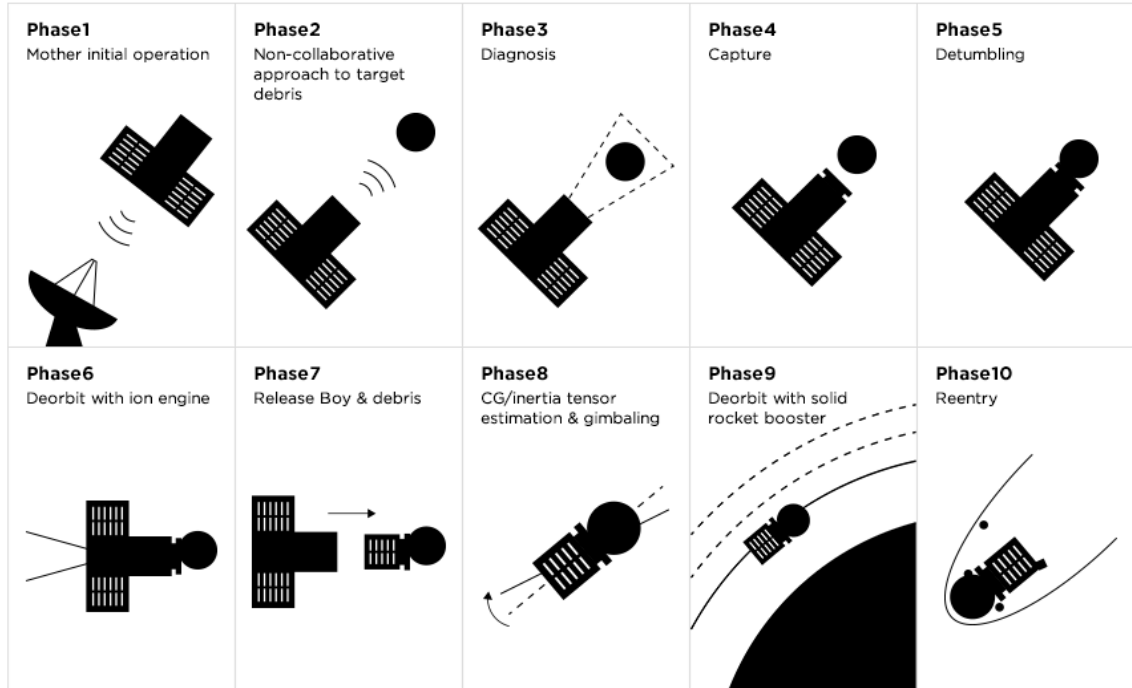


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SOLUTIONS

NEXT STEPS



What's needed?



- Admit that space is getting congested and increase awareness
- Improve environmental data accuracy and access to all
- Remove legal and political barriers
- Define rules of road and develop best practices for spaceflight safety

ABOUT

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SOLUTIONS

NEXT STEPS



ASTROSCALE

**For a Sustainable Space
Environment**