RISE
ESA's Resilient In-orbit Servicing mission for Europe

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16/09/2025
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In-Orbit Servicing News

MEV-1 from SpaceLogistics Inc. separated in March from Intelsat 901 in March following 5 years of AOCS Takeover

MEV-1 mission timeline:

- **Launched** by Northrop Grumman in 2019

- **Captured** Intelsat-901 in February 2020

- Provided continuous **station keeping** (AOCS takeover) to Intelsat-901 until March 2025

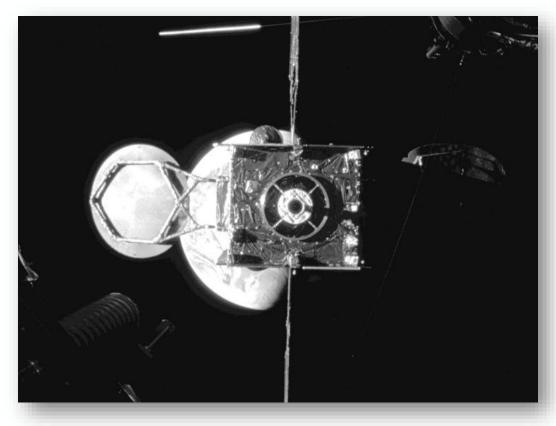- Recently undocked, **en-route** to next target

Image taken by MEV-1 during separation from Intelsat 901 in March this year. Credit: Northrop Grumman

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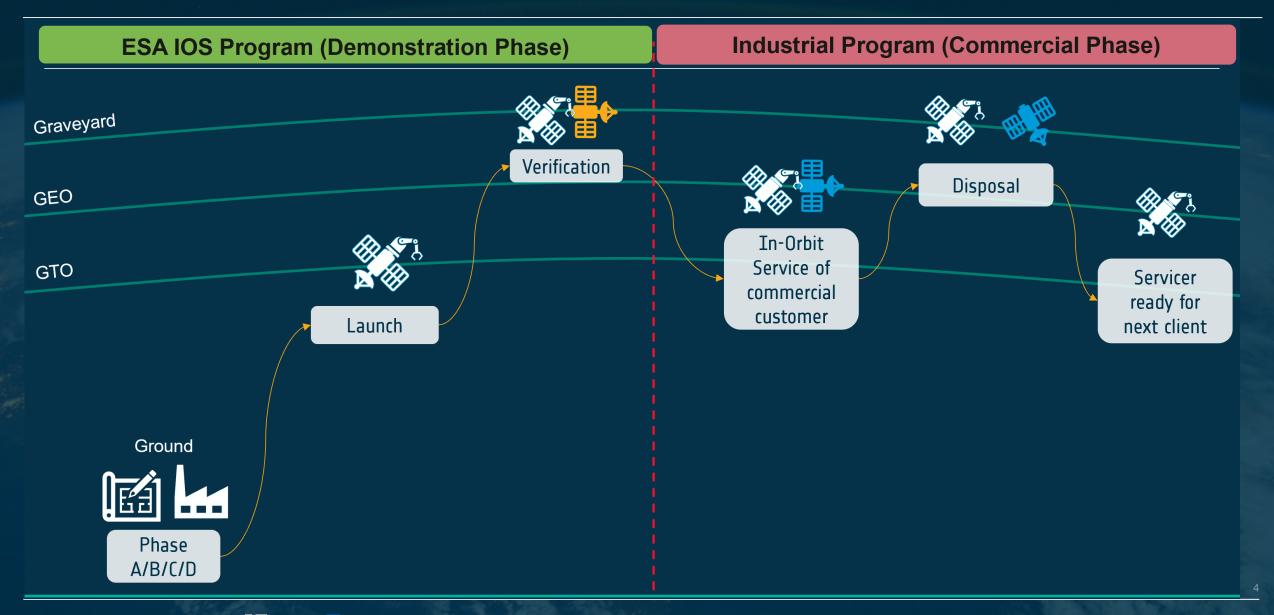
RISE Mission Summary

RISE aims to bring together a **service provider** and **a customer** for the verification of life extension of a satellite through Attitude and Orbital Control Takeover (AOCS Takeover) in geosynchronous graveyard orbit (GGO).

→ Industry led mission – industry defining the mission and system requirements

→ End-to-end contract covering Phase A to E

→ Following the verification in graveyard orbit, ESA role ends, industry to continue with commercial service

→ First European Mission for AOCS Takeover in Europe

→ Requires cutting edge technology for rendezvous and capture

→ Depends on customer (e.g. telecom operator) participation in development, and customer satellite in GGO

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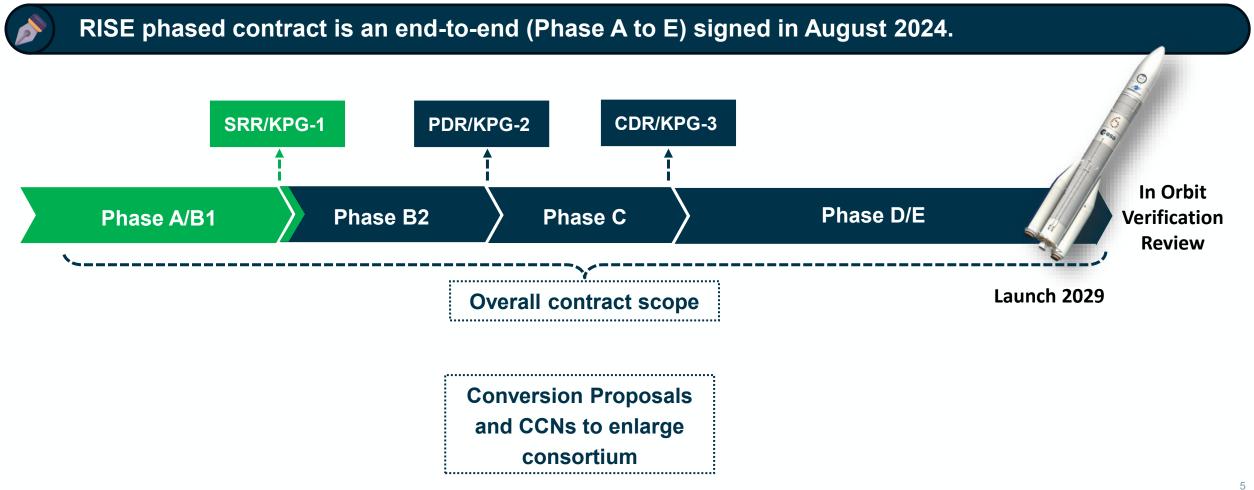
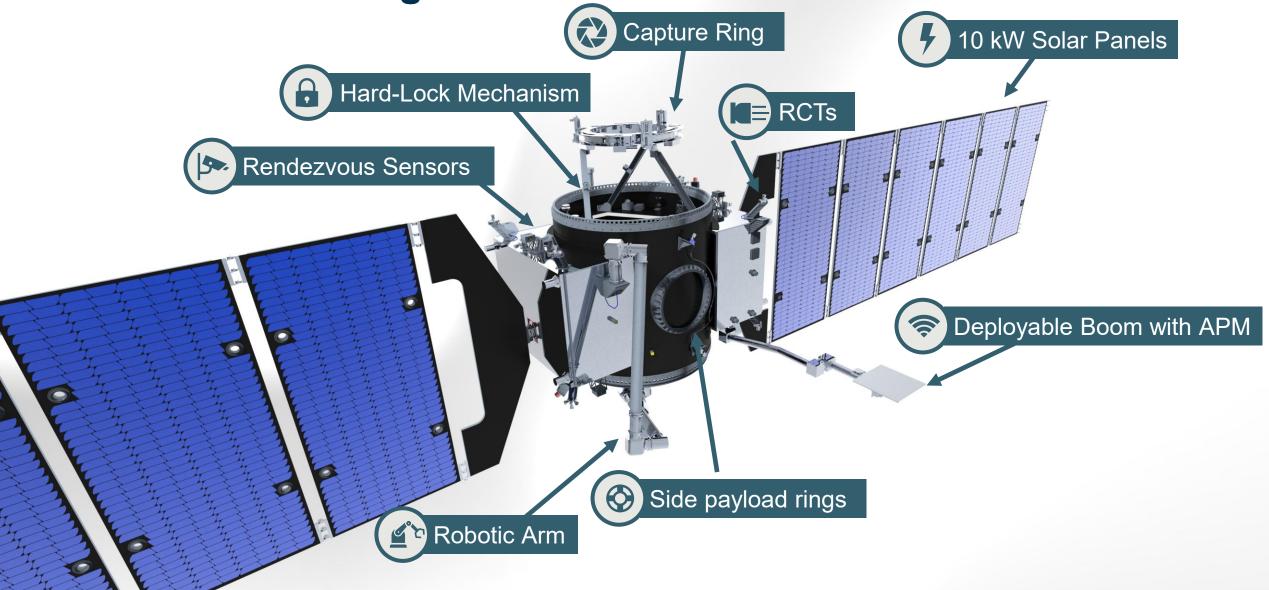# RISE Concept of Operations

ESA IOS Program (Demonstration Phase)

Industrial Program (Commercial Phase)

Graveyard

GEO

GTO

Verification

Launch

Disposal

In-Orbit Service of commercial customer

Servicer ready for next client

Ground

Phase A/B/C/D

RISE Contractual Setup

RISE phased contract is an end-to-end (Phase A to E) signed in August 2024.

SRR/KPG-1

PDR/KPG-2

CDR/KPG-3

Phase A/B1 → Phase B2 → Phase C → Phase D/E

In Orbit Verification Review

Launch 2029

Overall contract scope

Conversion Proposals and CCNs to enlarge consortium

RISE Satellite Configuration

- Capture Ring
- 10 kW Solar Panels
- Hard-Lock Mechanism
- RCTs
- Rendezvous Sensors
- Deployable Boom with APM
- Side payload rings
- Robotic Arm

RISE Schedule Summary

RISE Geo-return

RISE		S2P Period 2 (CM-22)
		Amount (Meuro)
AT	Austria	
BE	Belgium	
CZ	Czech Republic	
DK	Denmark	
EE	Estonia	
FI	Finland	
FR	France	
DE	Germany	10
GR	Greece	
HU	Hungary	
IE	Ireland	
IT	Italy	60
LU	Luxemburg	
NL	Netherlands	
NO	Norway	
PL	Poland	
PT	Portugal	
RO	Romania	0.8
ES	Spain	3.3
SE	Sweden	
CH	Switzerland	2.5
GB	United Kingdom	2.6
CA	Canada	0.5
LV	Latvia	
LT	Lithuania	
SI	Slovenia	
SK	Slovakia	
		79.6

RISE Needs:

Italy:
- DOrbit (Prime, System Engionereing..)
- Sitael (Electric propulsion)
- Telespazio (Ground segment infrastructure)

Germany
- DLR(ERCOLE Robot Arm Analysis)
- KINETIK (ERCOLE Robot Arm)
- iBOSS (Robotic Interfaces)

United Kingdom
- D-Orbit (UK) (Customer acquisition and market analysis)
- CGI (Security Analysis and Security Risk
- Management)
- LMO (Close Proximity Operations sensor selection and analysis)

Switzerland
- Almatech (Mechanisms)

Spain
- GMV (Relative Proximity Operations verification)
- DHV (Solar Arrays)

A number of roles remain open, this is reflected in the S2P Period 3 Subscription uncertainty!

Thank you!

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