D-ORBIT

NEW SPACE SOLUTIONS

IN-ORBIT SERVICING SOLUTIONS

ESA CLEAN SPACE INDUSTRY DAYS 2022

PHOTOGRAPH OF EARTH TAKEN FROM ION ORIGIN MISSION (SEP-20)

BUSINESS OVERVIEW

D-ORBIT
WE- SPACE SOLUTIONS

D-Orbit

Leader in Space Logistics and Orbital Transportation

250 people and growing

D-Orbit SpA
Production and HQ,
Como, Italy

D-Orbit PT
Critical software and
new space subsidiary,
Lisbon, Portugal

D-Orbit Inc.
Commercial subsidiary,
Washington DC, USA

D-Orbit UK, Ltd
AI Data Processing &
Robotics, Space
Safety, Responsive Launch
Harwell, UK

2021+
TODAY

Last-mile delivery solution
for satellites and advanced
infrastructure services

World's first
to provide in-space satellite transportation for paying customers

2023+
TOMORROW

Next-gen in-orbit
services across entire
satellite lifecycle

World's first
to demonstrate satellite-as-a-service capabilities in space

BEYOND

In-orbit recycling, manufacturing
& infrastructure

Our Vision

Creating the first space logistics infrastructure to enable the trillion dollar space economy and human expansion in sustainable space

IN-ORBIT SERVICING

STEP BY STEP

Building on **existing D-Orbit flight heritage**, generating **revenues at every step** to provide **commercially competitive** in-orbit services to the growing space market

TRANSPORTATION

01

Move existing satellites from one orbit to another new orbit

LIFE EXTENSION

02

Extend the life of satellites

END OF LIFE MANAGEMENT

03

Debris removal

04

Moving towards circular economy principles

- MAINTENANCE
- EMERGENCY
- RECYCLING

D-Orbit's roadmap is built on a scalable and modular solution

PROVEN SOLUTION

D-ORBIT ION SATELLITE CARRIER

"cargo" satellite capable
of transporting satellites
into the right orbit
and into the right place in space

ION aggregates multiple Payloads

Integrated and launched in large rocket

Each Payload precisely released into its target orbit

Payloads in position and ready to operate in few weeks!

Multiple orbits in the same mission!

MISSIONS: >70 PAYLOADS IN SPACE TODAY

ALREADY IN OPERATION FOR PAYING CUSTOMERS

Ariane VV16 launch carrying ION Mk01 carrier, September 2020

MISSION #1:	SEP-2020:	VEGA	COMPLETED
MISSION #2:	JAN-2021:	FALCON 9	COMPLETED
MISSION #3:	JUN-2021:	FALCON 9	COMPLETED
MISSION #4:	JAN-2022:	FALCON 9	COMPLETED
MISSION #5:	APR-2022:	FALCON 9	COMPLETED
MISSION #6:	JUN-2022:	FALCON 9	COMPLETED

Further missions planned for 2022 and 2023, booking already started

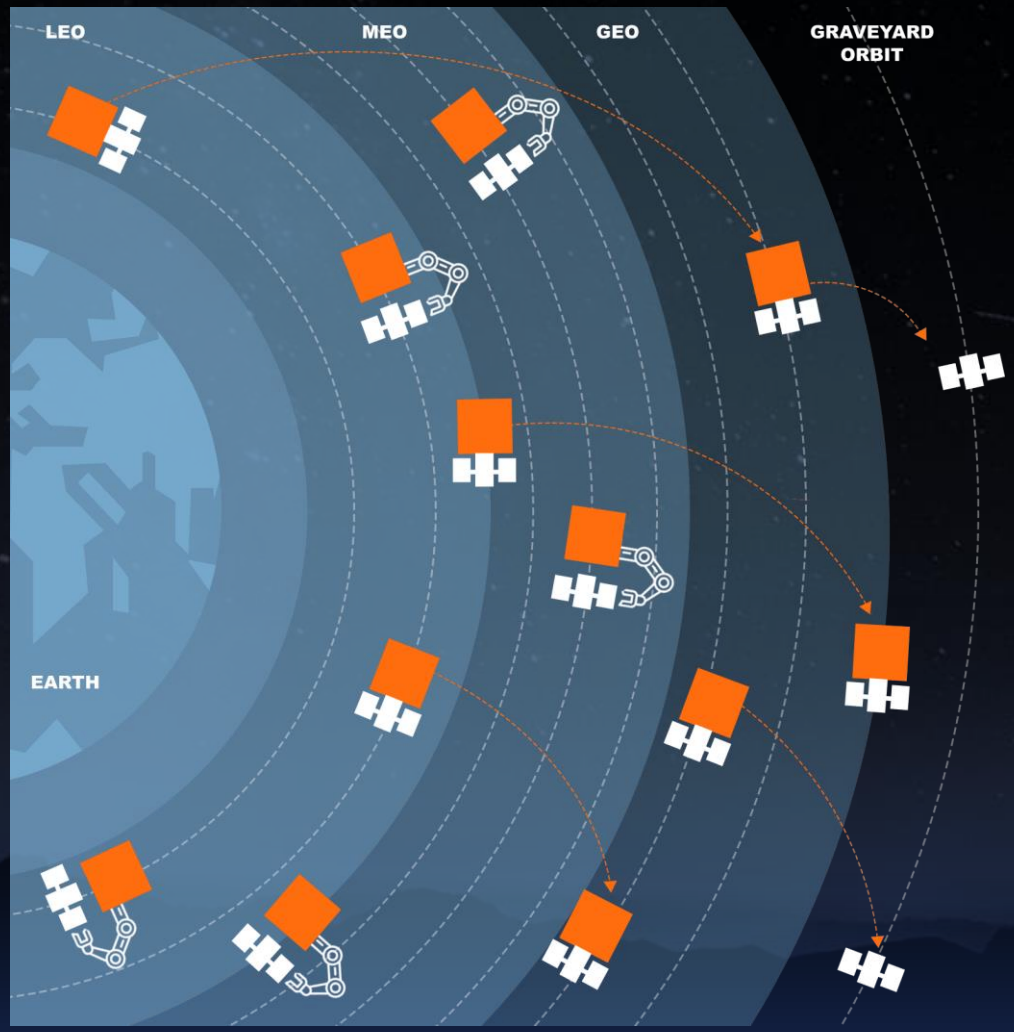
As of July-22 - Mission Updates | D-Orbit (dorbit.space)

PAYING PASSENGERS: astrocast, planet., SATREV, ENDUROSAT, Istituto di Astrofisica di Canarias, Lockheed Martin, eutelsat, deimos space, Orbital Micro Systems

TOMORROW

OUR CAPABILITIES

IN THE SHORT TERM



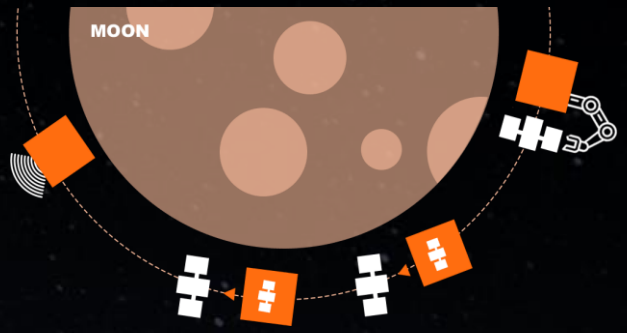
IN-ORBIT SERVICING LEO to GEO

Optimizing satellite revenues:

- Life Extension
- Orbit-Orbit
- LEO/GTO to GEO transportation
- Inspection
- End-of-Life / Disposal

RESCUE and EMERGENCY MISSIONS

Support and rescue stranded or lost satellites



MOON-BASED LOGISTICS

Support incoming Moon Exploration missions:

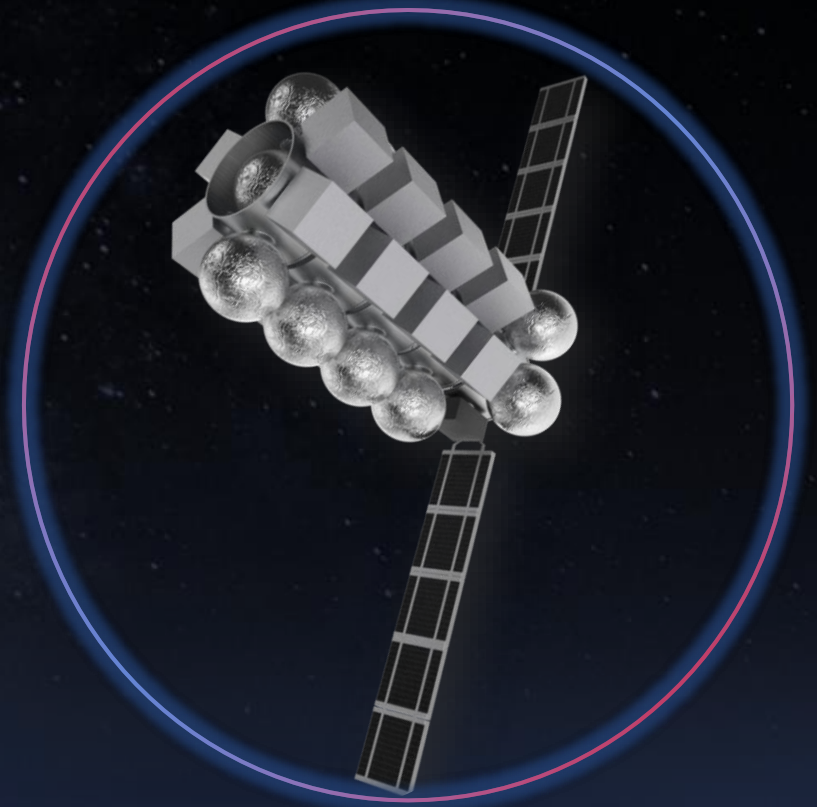
- Lunar satellite constellations transportation and maintenance (IOS)
- Advanced Services
- Connect Moon with Earth

KEY PARTNER
esa

CURRENT ESA PROJECTS

TO DEVELOP AND DEPLOY OUR SOLUTIONS

TODAY



IOS Maturation Phase

De Orbiting Kit Program

PHOTOGRAPH OF EARTH TAKEN FROM ION ORIGIN MISSION (SEP-20)

FOCUS ON...

ESA IOS MATURATION PHASE

ESA IOS MATURATION PHASE

OVERVIEW

CGI

Mission Analysis, Security

CATAPULT Satellite Applications

Business Support

D-ORBIT NEW SPACE SOLUTIONS

Prime

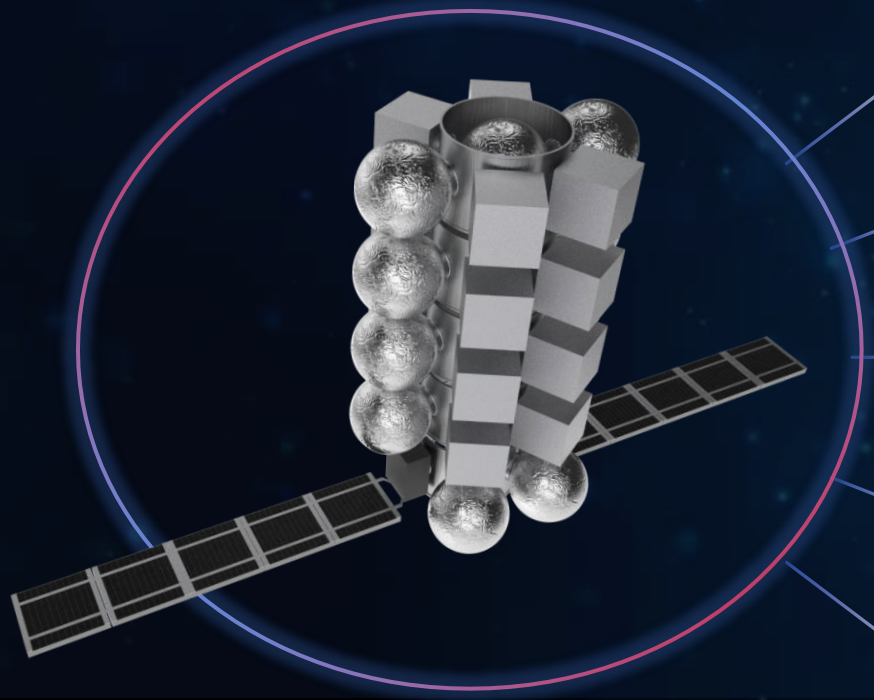
D-Orbit's first commercial In-Orbit Servicing mission:

- Life Extension Services in GEO
- 3+ satellites from multiple GEO satellite operators to be serviced
- Starting in 2027

TODAY in progress

IN-HOUSE TECHNOLOGY : GEA

DESIGNED TO SUPPORT IN-ORBIT SERVICES



01 **GEA = GENERAL EXTENDED ARCHITECTURE**
To extend D-Orbit capabilities into In-Orbit Servicing in all orbital regimes

02 **D-ORBIT'S NEXT GENERATION OF SPACECRAFT**
Based on the heritage of ION carrier flying

03 **MODULAR PLATFORM, AT MULTIPLE LEVELS**
To allow the space segment to be compliant for all potential missions

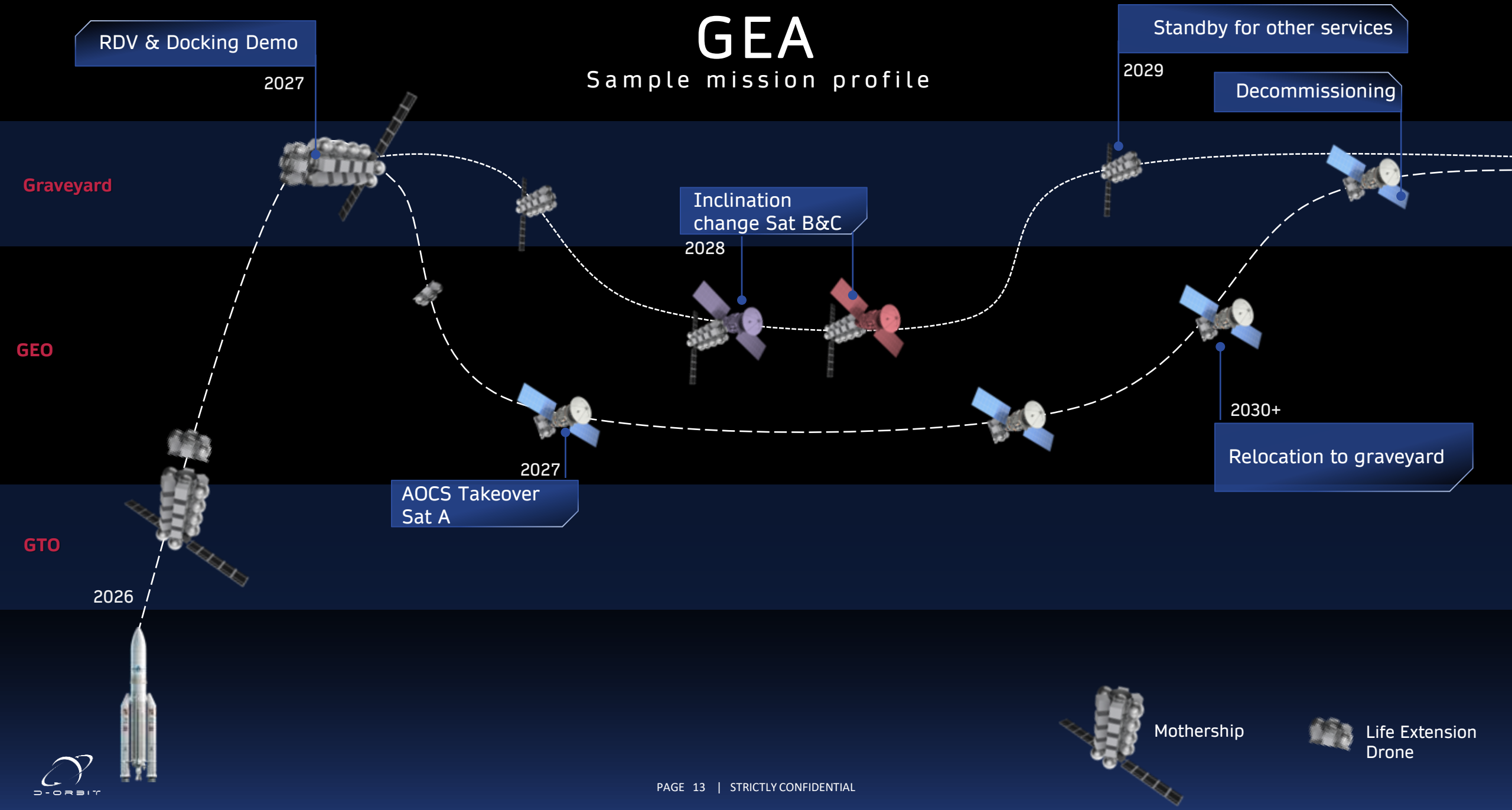
04 **COMPETITIVE PRICING**
Thanks to a cost effective and scalable approach

05 **LIFE EXTENSION AND END OF LIFE MANAGEMENT**
Services in GEO by 2027

D-Orbit aims to leverage GEA platform to ensure **MISSION LONGEVITY** and success for commercial and government space endeavors. It is a service using infrastructure to **CREATE VALUE**. Services that ensure **SUSTAINABILITY** by increasing flexibility

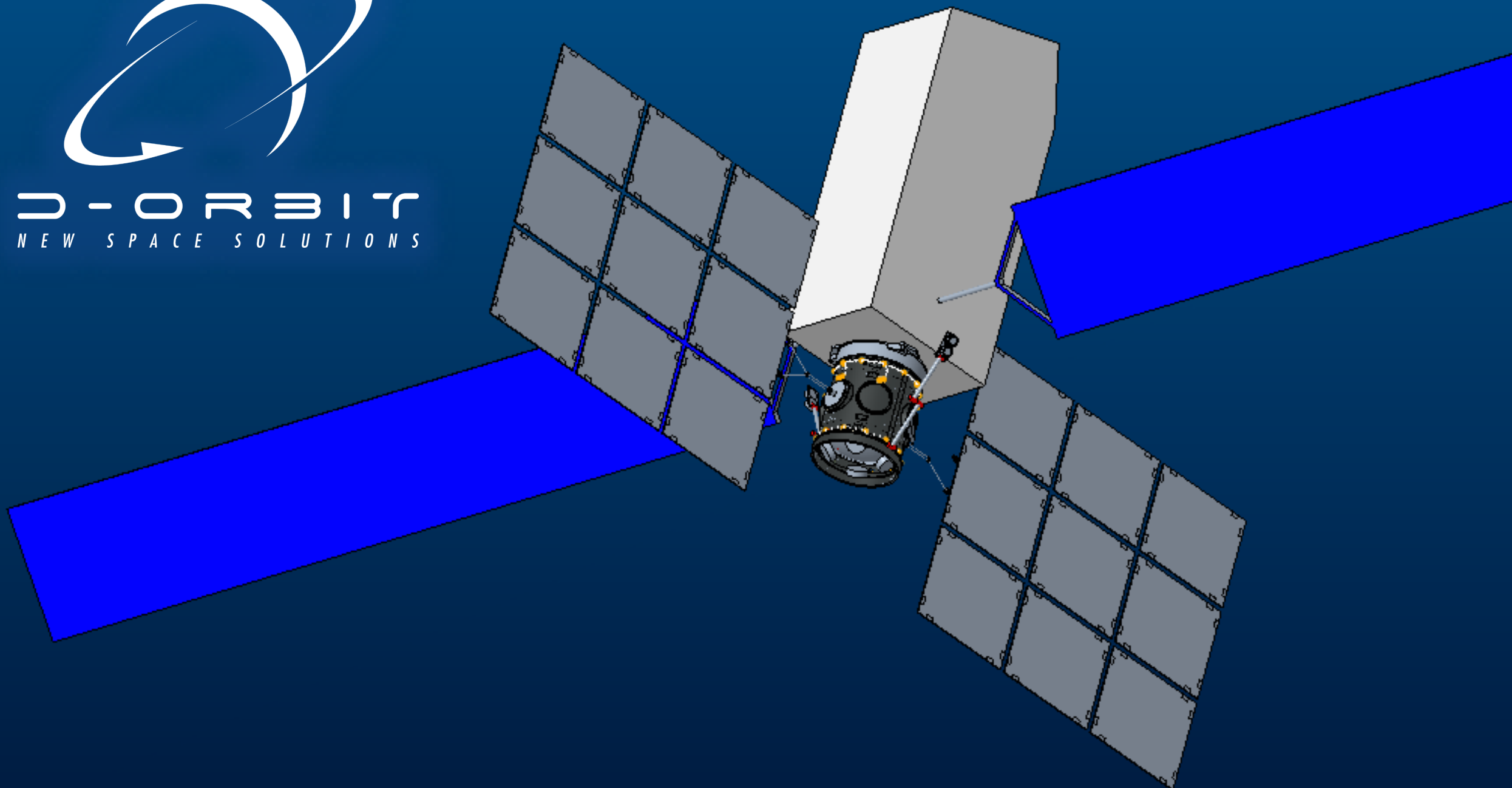
GEA

Sample mission profile



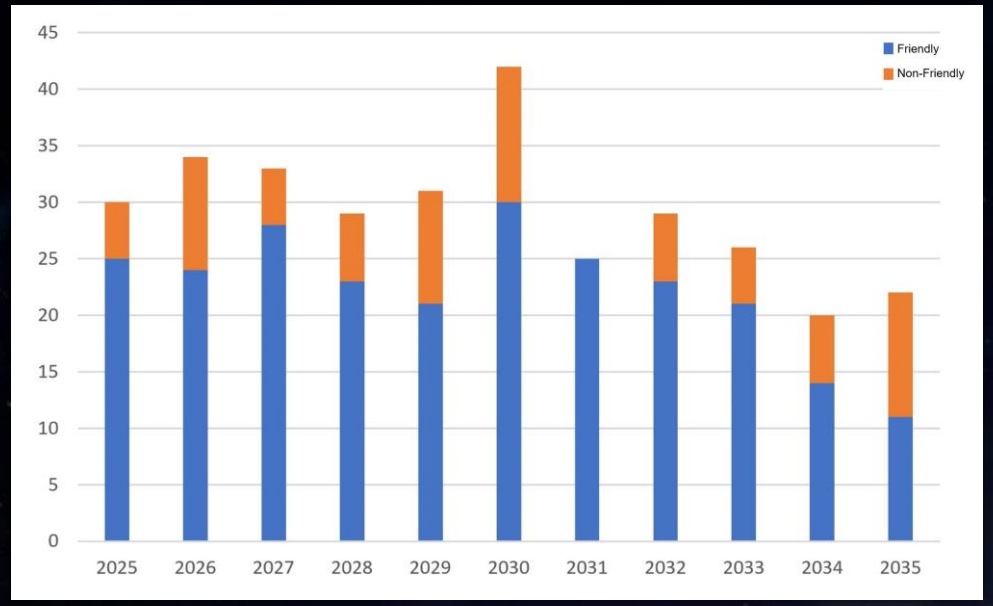
D-ORBIT

NEW SPACE SOLUTIONS



MARKET OPPORTUNITY

MARKET SIZE FOR LIFE EXTENSION IN GEO



No. Of GEO Satellites reaching end of life per year

- 245 GEO satellites reaching EoL by 2035 (friendly nations).
- D-ORBIT CUSTOMER ENGAGEMENT : High level of customers support secured – working closely to jointly develop the mission

Customer names not disclosed for confidentiality purposes

ESA Program

Enabling Europe to be competitive on a global stage

- IOS – disruptive technology
  - Customers need evidence of success before buying in
- Requires high levels of initial investment
- Europe needs local solutions
- Key enabler circular economy in space

Commercial Approach

D-Orbit's vision for working with ESA to develop Europe's first commercial IOS service

- ESA IOS is to develop a **service** not a one off mission
- Co-funding required from service provider
- The goal is to create a sustainable, fully commercial service provision that meets the needs of the customers & market:
- Competitively priced, reliable, scalable

D-ORBIT

NEW SPACE SOLUTIONS

portia.bowman@dorbit.space

BEYOND IN-ORBIT SERVICING

ENABLING THE INCOMING TRILLION DOLLAR SPACE ECONOMY

IN-ORBIT & IN-SPACE

RECYCLING

There is an estimated **8,000+ TONS**[1] of space debris in orbit containing valuable resources. **SIGNIFICANT COST SAVINGS** are possible by recycling material that has already been launched into orbit

MANUFACTURING

Microgravity enables the production of lighter and bigger structures that could not be manufactured on Earth. This includes **RESOURCING** from orbital recycling and **FACILITATING EXPANSION** in space

SPACE LOGISTICS INFRASTRUCTURE

We believe the extended capabilities of D-Orbit's fleet of cargo and servicing spacecraft will enable new **SPACE LOGISTICS INFRASTRUCTURE**. We believe this infrastructure will also be essential for **SUSTAINABLE** space business as well as the **HUMAN EXPANSION IN SPACE**

[1]Source: ESA, Feb 2020
Note: Potential future business not included in financial projections