

A detailed illustration of the ENCORE Mission satellite in space. The satellite is a small, boxy spacecraft with a central body and two large, hexagonal solar panels extended outwards. It is positioned in the center-left of the frame, with the Earth's horizon visible in the background on the left. To the right, a larger, more complex satellite structure is partially visible, featuring a white body with gold-colored thermal insulation and various antennas. The background is a deep black space filled with stars.

# ENCORE Mission

 clearspace  
today



# We bring servicing to orbit



Aviation, road transportation or shipping have maintenance and servicing integrated in their ecosystem, but the space industry still applies a launch, single use and discard approach.

In-orbit servicing (IOS) is a **key enabler** for the future of the space industry.  
**We build the roadmap for sustainable space.**





# In-orbit servicing, the backbone of the space economy

## Overview of ClearSpace's current in-orbit services

### Active Removal (ADR)

Failed satellites  
Spent rocket bodies



### Mission Extension

Attitude control  
Station-keeping  
Refueling



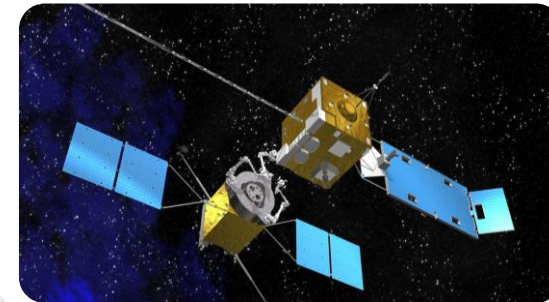
### Transport Logistics

Last-mile deployment  
Relocation



### Repair & Construction

Inspection  
Component replacement  
In-space manufacturing



**In-orbit servicing is a rapidly growing market** with projected revenue of \$14.3 Billion by 2031\*

\*NSR In-Orbit Services Report 2022: Satellite Servicing, ADR, and SSA, 5th Edition (IoSM5)

# Unique proprietary technologies to deliver services in orbit



ClearSpace capability focus: technology, systems engineering and operations

## Sensors

Low-cost space-grade  
sensors  
Compression algorithms



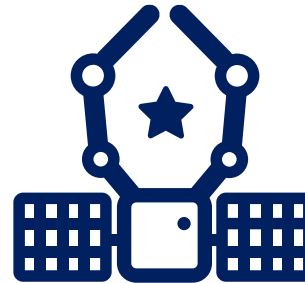
## Navigation

Deep neural networks  
Proximity operations



## Robotics

Capture and stabilization  
Space robotics  
Docking interfaces



## Integration

Mission design  
Systems engineering  
Testing



## Operations

Ground system design  
Mission operations



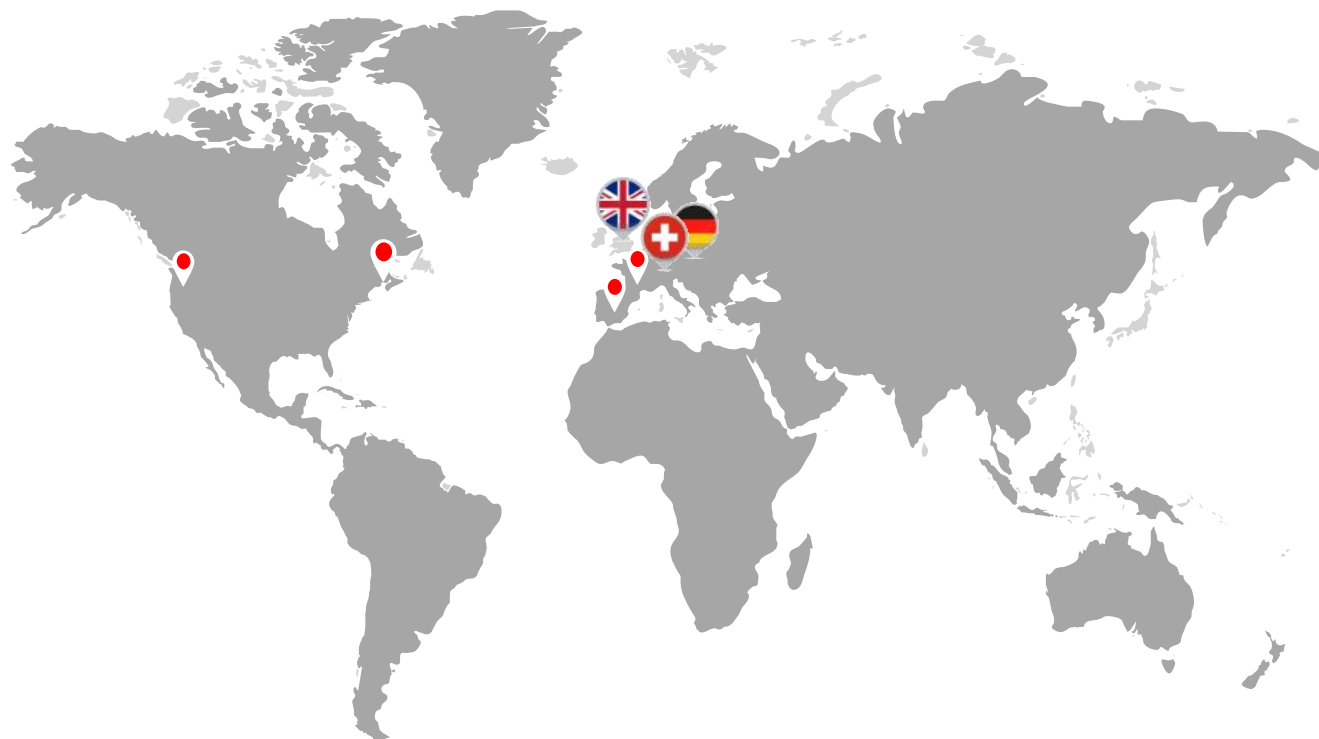
ClearSpace's Enabling Core Technologies (IPR)

ClearSpace's System-Level Capabilities



# A Swiss-based company quickly expanding globally

A few bright minds behind our mission



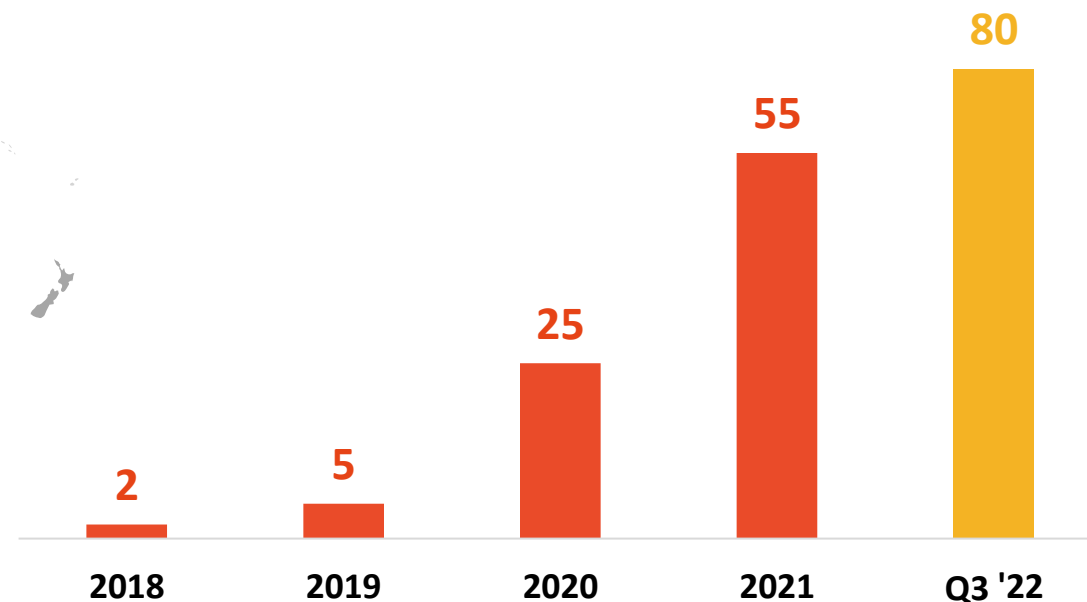
**80**  
ClearSpace  
Team  
Swiss Office  
UK Office  
Germany Office

**4**  
Experienced  
board  
members

**60+**  
Talented  
and Proven  
Engineers

**780+**  
Years of combined  
experience in space  
engineering

Team joined from

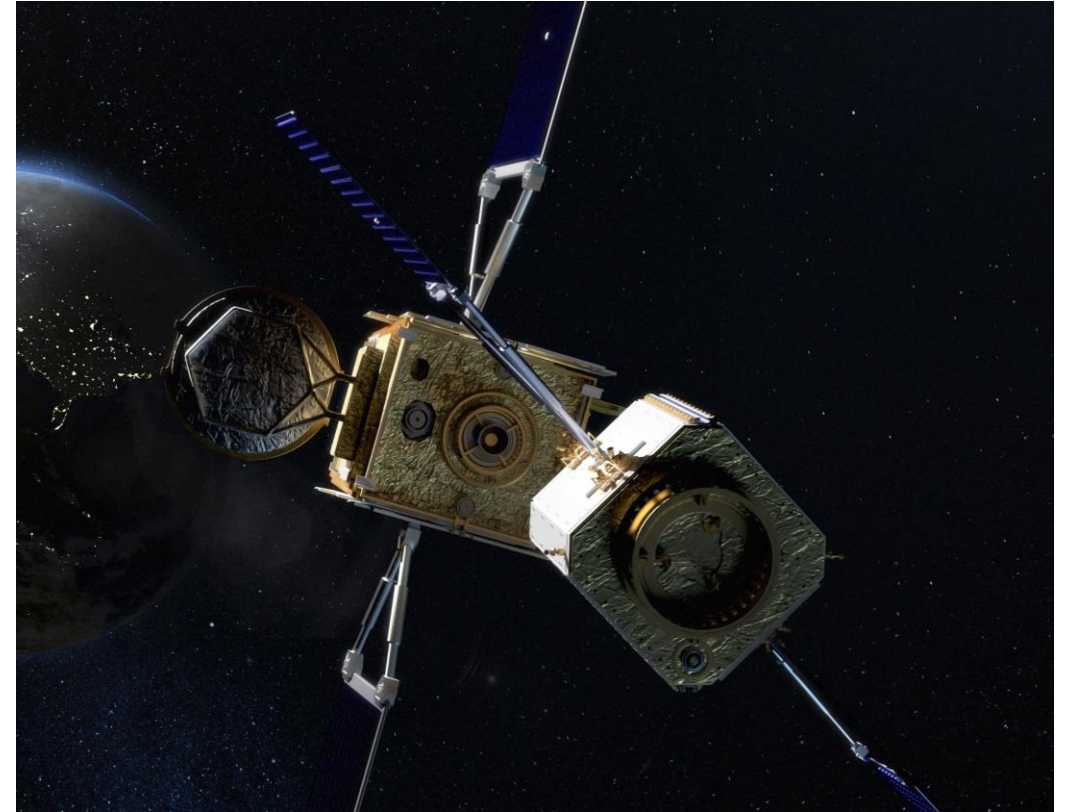




ENCORE =

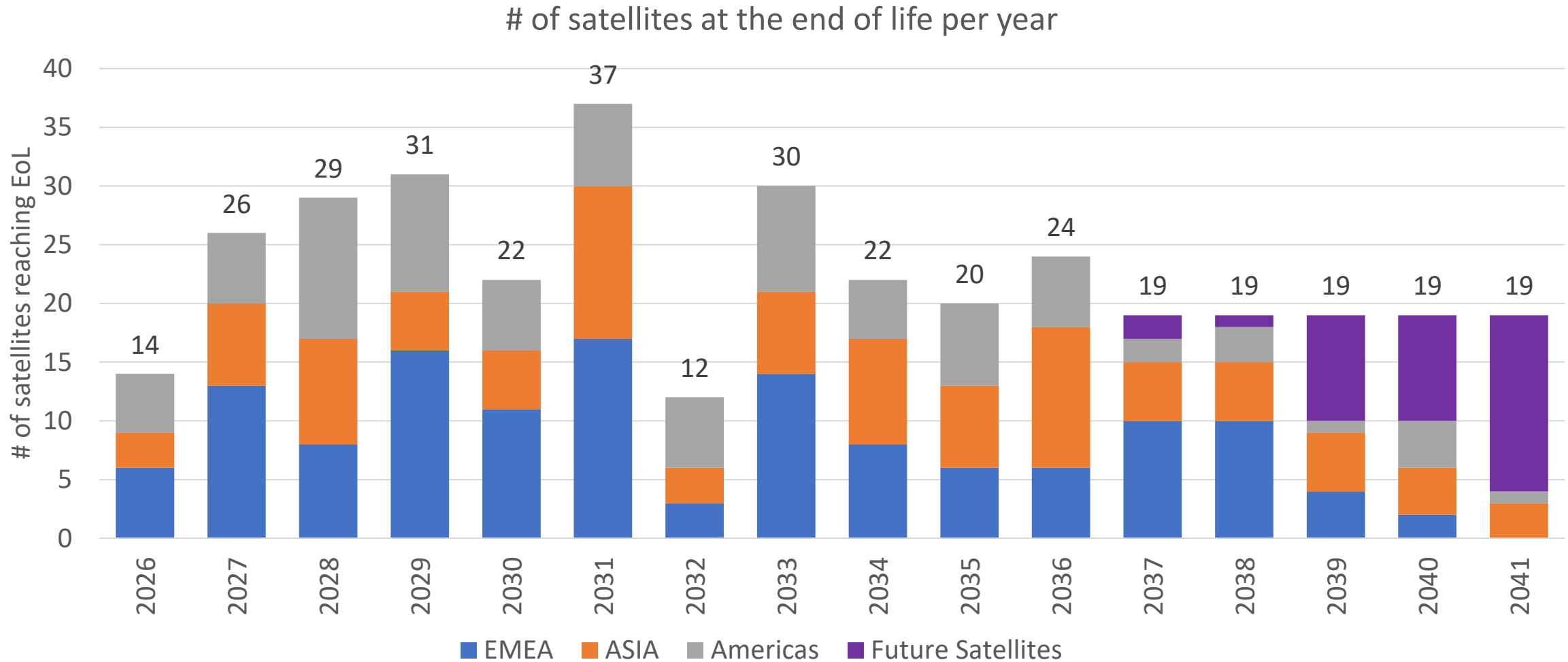
# A refuellable servicer extending satellites' life

- **Commercial mission** to extend the life of a GEO telecommunication satellites
- First step towards a **fleet of in-orbit servicers** catering to GEO operators' needs
- Development of an in-orbit servicing product line composed of **refuellable servicers**
- Based on an existing **market demand** and providing a healthy business model



The ENCORE servicer can provide the following services:  
Longitude relocation — station-keeping — inclination reduction — attitude control — disposal

# The GEO In-Orbit Servicing Market







# Customer Interest

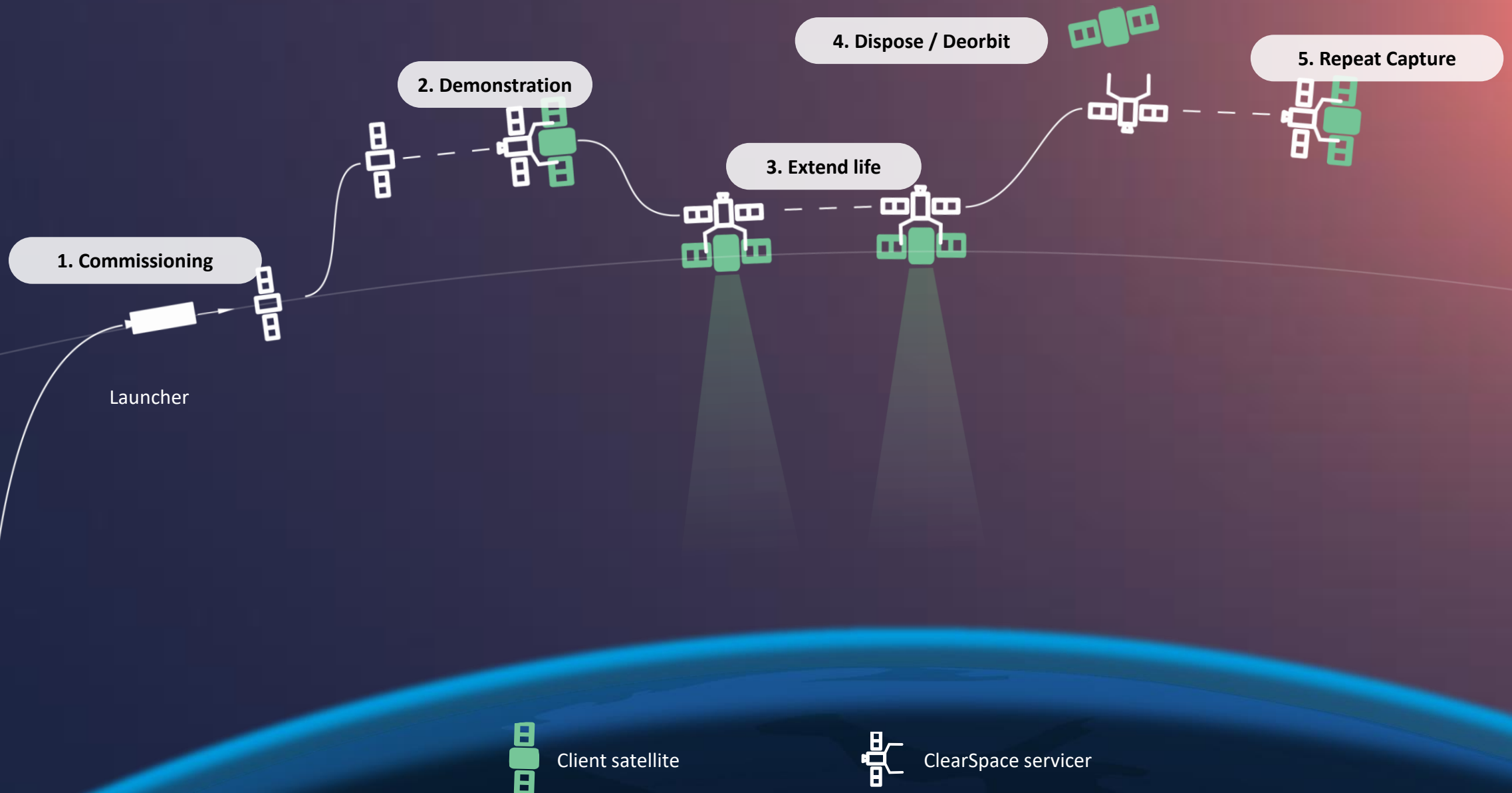
What are the main motivators for potential customers?

- Continue to **utilize revenue generating assets**
- Protect **slot and frequencies** filings
- To **defer CAPEX** on new satellite programs
- Allows to **sell satellites** to third parties

Market value expect to **\$5 billion** (2022 to 2044)\*

\*Space Logistics market, Euroconsult report (2022)

# ENCORE – GEO Life Extension





# ENCORE Maturation Phase – Team





# ENCORE Maturation Phase – Status

## Overview of ENCORE Maturation Phase

- ClearSpace has been working closely with **ESA**, the **ENCORE consortium**, potential **customers** and the **wider industry** to advance the ENCORE mission development
- Activities have included:
  - Customer engagement
  - Technical development: overall mission, servicer and key subsystems
  - Programmatic development: cost, schedule and geographical distribution
- Next steps:
  - Preparation for the ESA Council of Ministers 2022
  - Conclusion to the maturation phase activities





# Thank you!

## Key Contacts

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