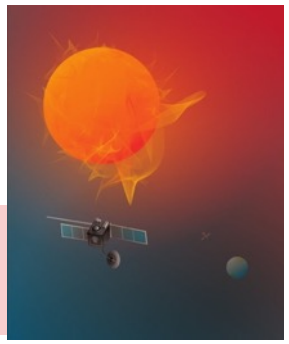

esa
ESA’s new Space Safety programme
European Space Agency

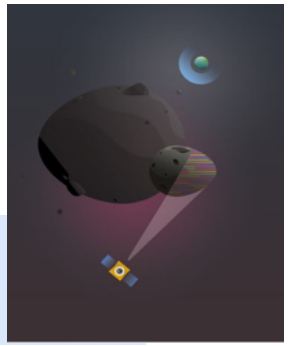
- Approved a last Council Meeting on Ministerial Level
- Funding for 3 years in place
- It is: The old Space Situational Awareness programme + space mission elements

Main activity areas and cornerstones

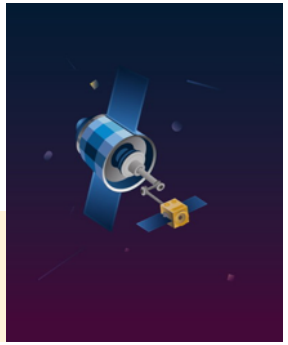
1 Core

2 Lagrange Mission

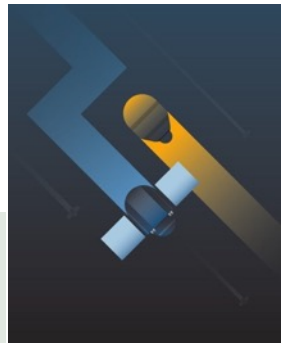




3 Hera



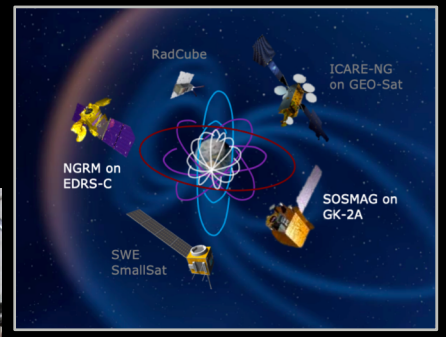
4 In-Orbit Servicing/Removal Mission



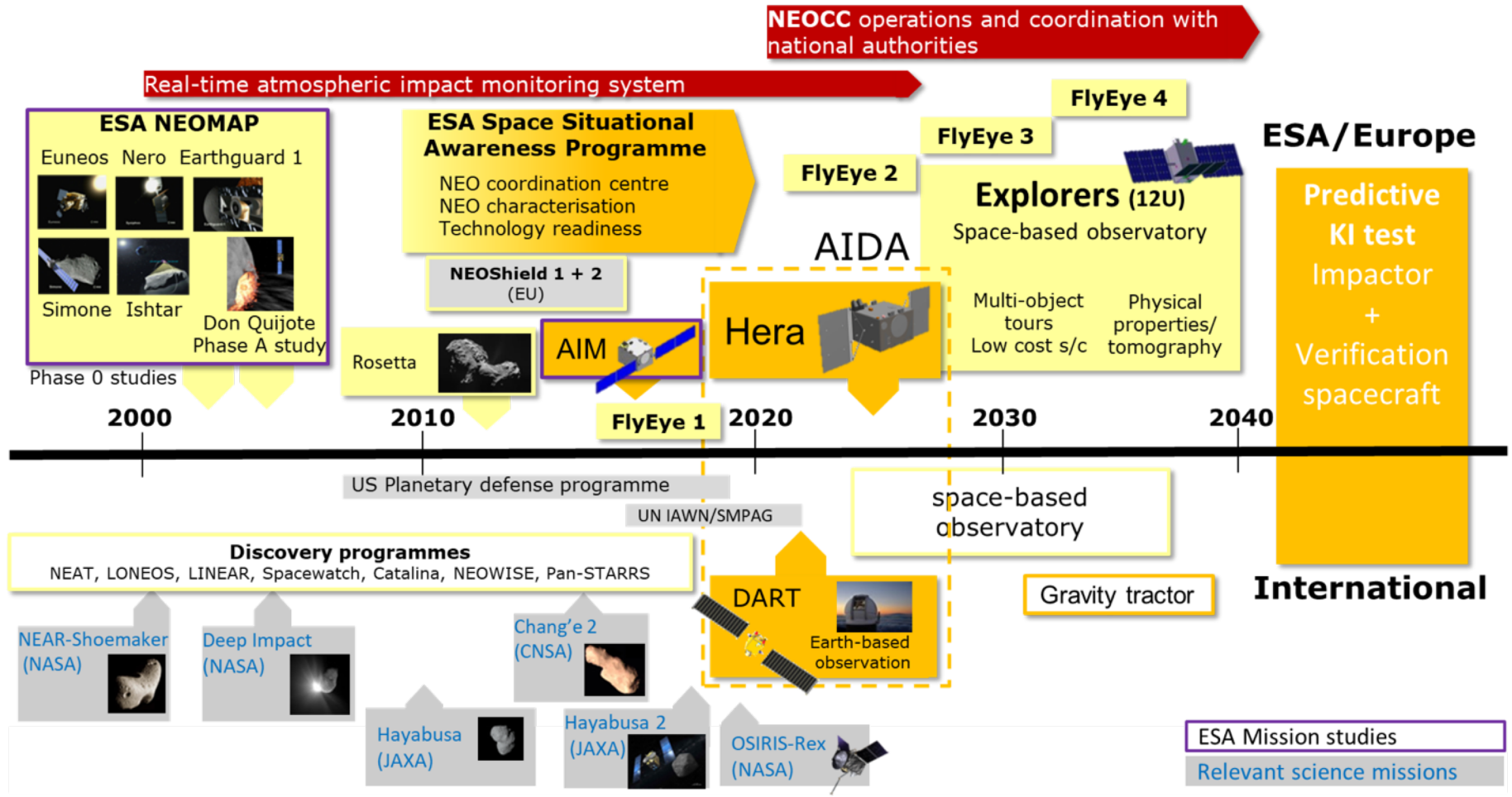
5 Collision Risk Estimation + Automated Mitigation

Core

- Fundamental activities in the areas of Space Weather, Planetary Defence, Space Debris and Cleanspace
- Highlights:
  - Space Weather Service Network
  - Distributes space weather sensor system
  - Fly-Eye Telescope
  - Orbital debris sensor
  - Laser tracking to space debris targets

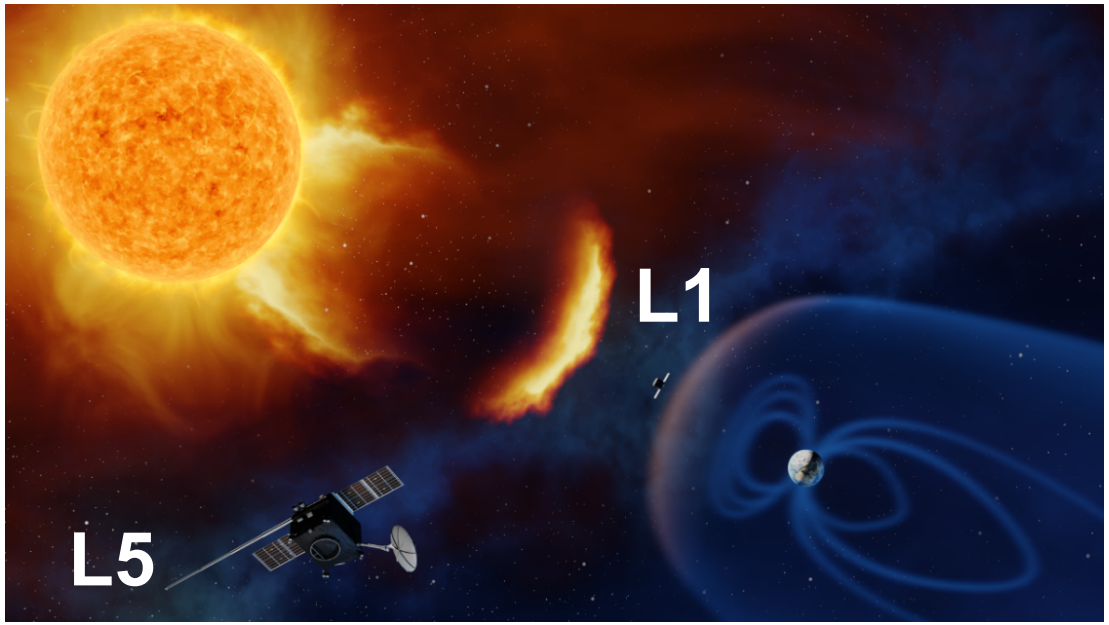


Core – Planetary Defence



2 Lagrange Mission

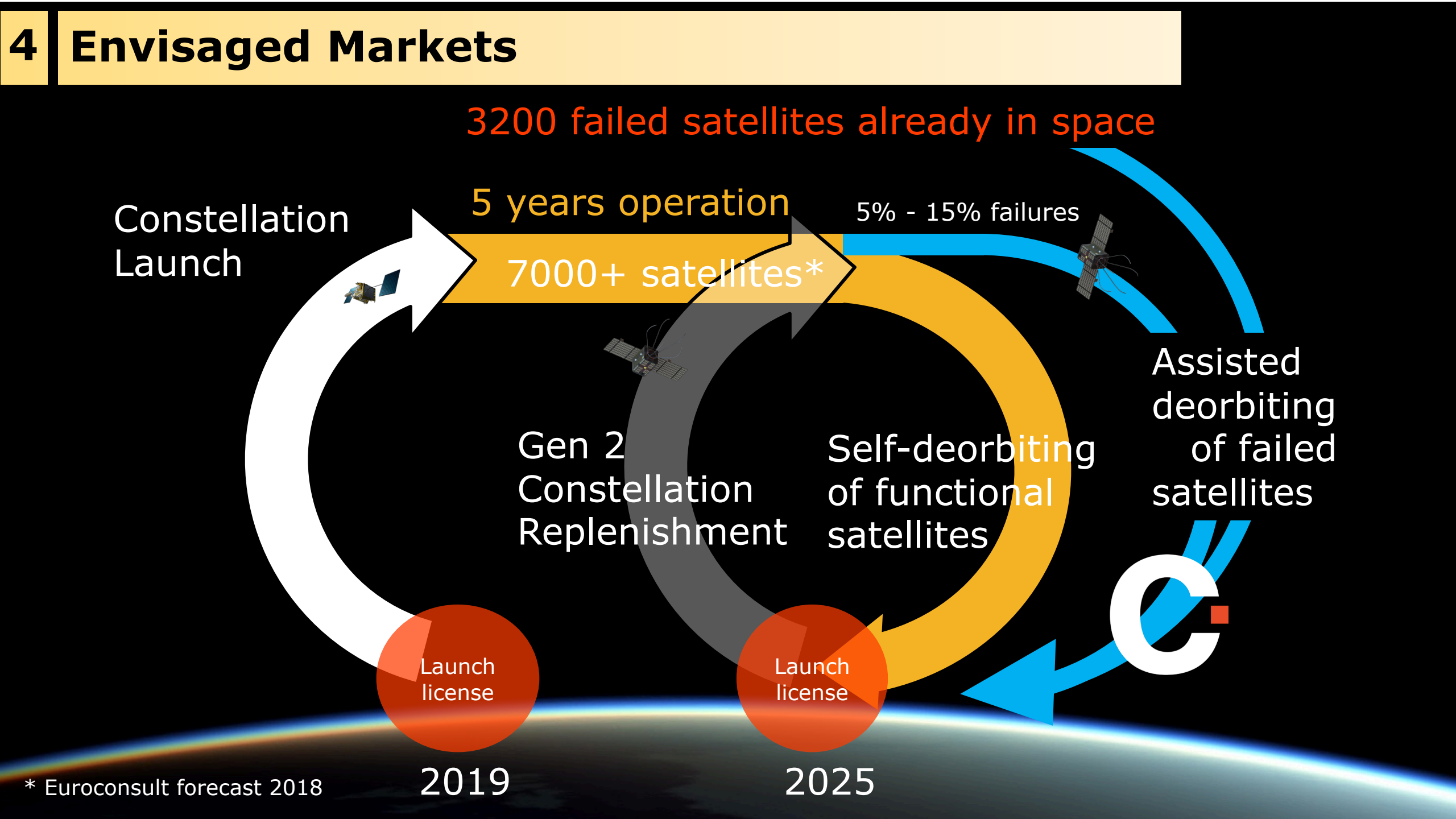
- First ever operational Space Weather mission (outside of Earth-Sun line)
- Mission funded above threshold
- Alternate mission concepts studied to cope with the sub-optimal geo-return situation
- Close collaboration with NOAA/NASA
- Launch in 2027
- First mission to L5



4 In-Orbit Servicing/Removal Mission (ADRIOS)

- First ever removal of a piece of space debris
- Funded significantly above threshold
- End-to-end contract as industrial service with contributions by investors
- Lean reviews concentrating around 3 Key Performance Gates with pass/fail criteria
- Removal target: VESPA

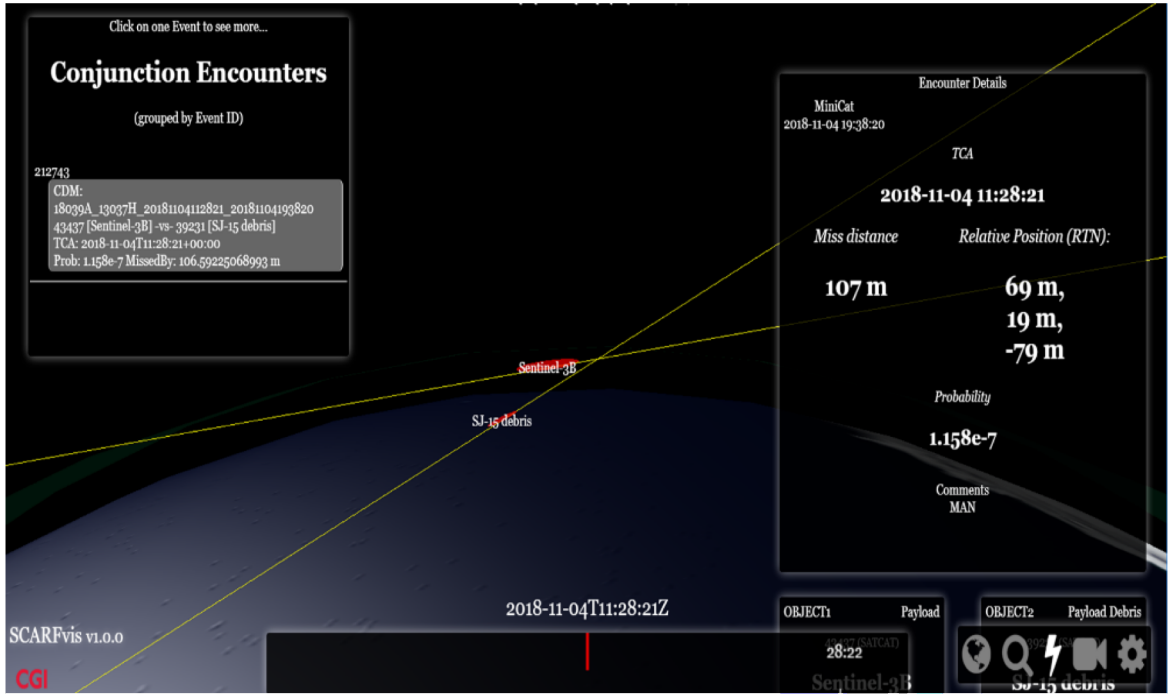
4 Envisaged Markets



* Euroconsult forecast 2018

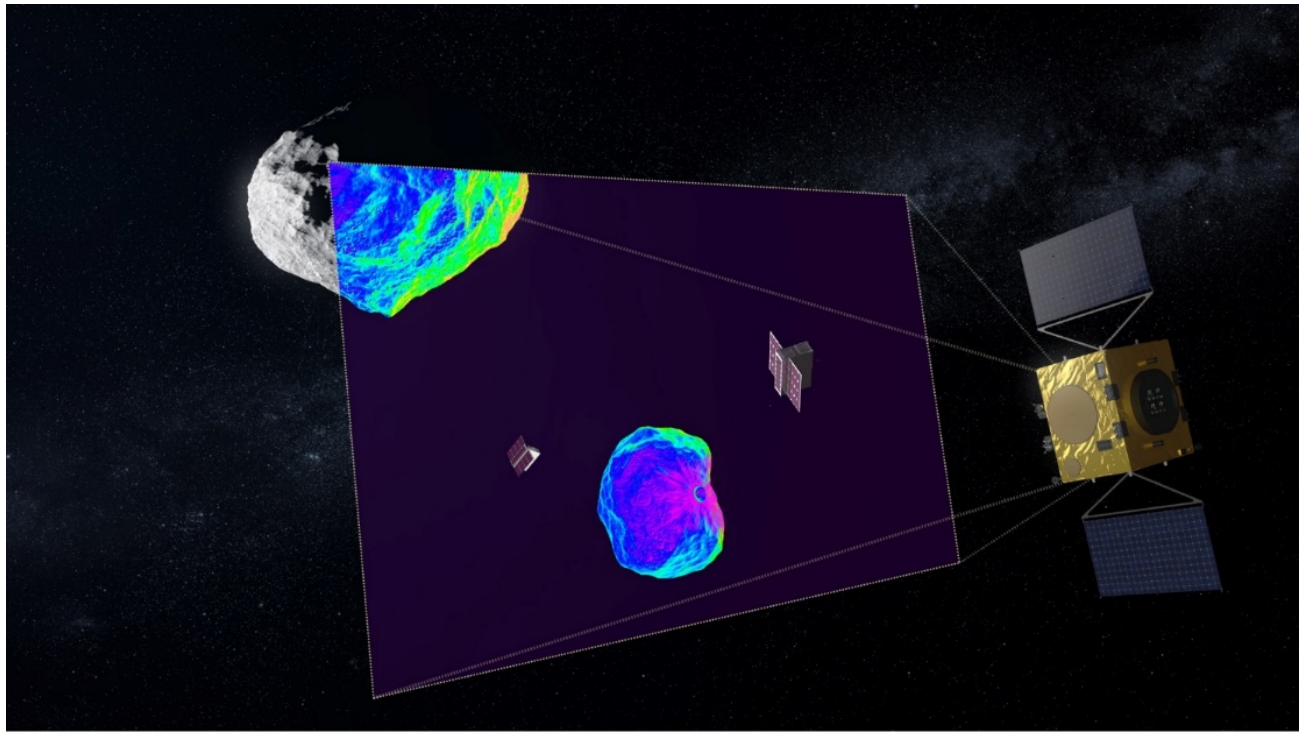
5 CREAM

- **CREAM = Collision Risk Estimation and Automated Mitigation**
- **Automated decision taking, alternate uplink routes, conflict-free maneuvering**
- **Successful machine learning competition held**
- **Demonstration by 2023**



3 HERA

- Asteroid inspection and interception test (jointly with NASA DART)
- Subscription above request
- Direct negotiations with OHB
- ITT under preparation
- Launch in 2024
- 2 interplanetary cubesats




www.esa.int
European Space Agency