

EROSS – EUROPEAN ROBOTIC ORBITAL SUPPORT SERVICES

RENDEZVOUS AND ROBOTICS IN SPACE: STATUS AND APPLICATIONS OF THE
EROSS PROJECT

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EROSS: FROM TECHNOLOGY DEVELOPMENT TO OPERATIONAL MISSION

/// From a series of R&D projects funded by the European Commission since 2016, to mature robotics and autonomous rendezvous technologies for space:



/// Once technology maturation was on track, a **demonstration mission** was added

/// Now, based on strategic evolutions at the European Commission, the objective has become to directly develop an operational mission: a « Servicing Component »



CONSORTIUM & CAPACITY

/// 18 Partners / 9 European Countries

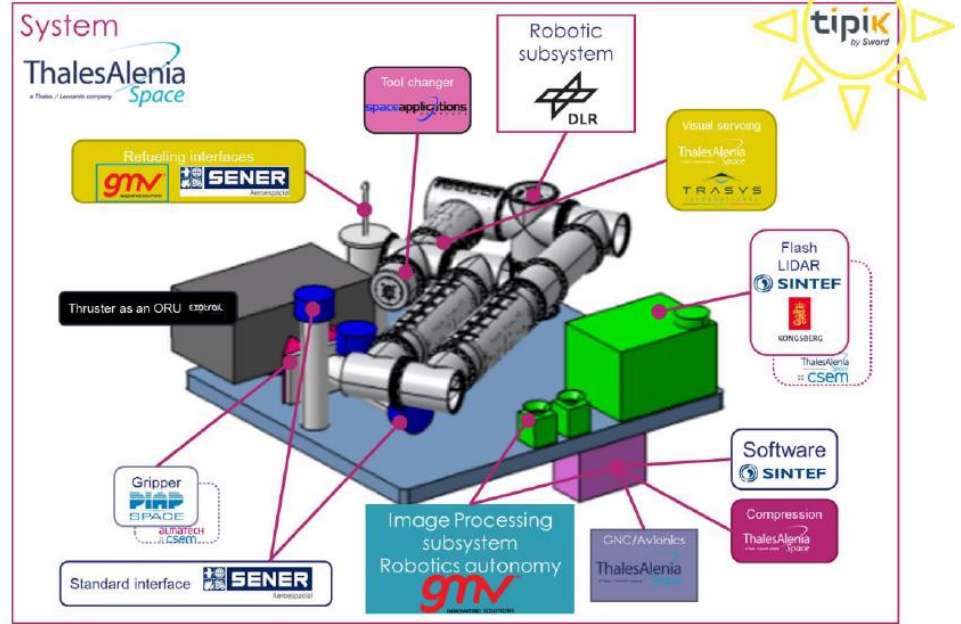
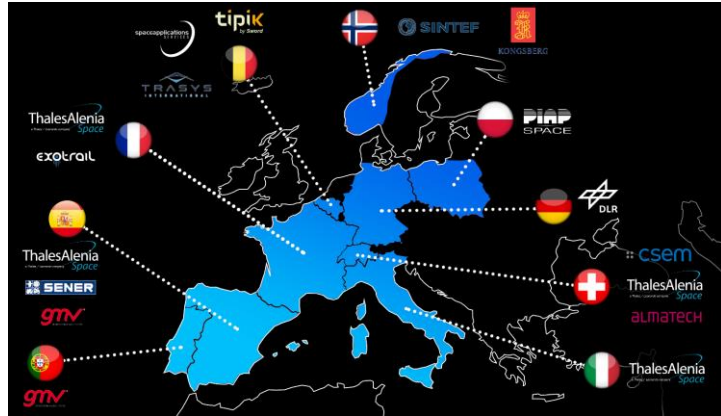


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THE PATHFINDER MISSION

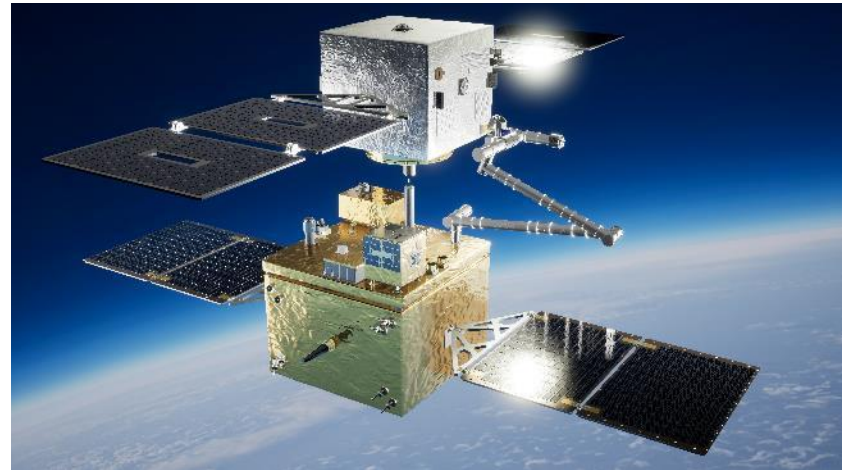
/// **Objective:** to demonstrate autonomous rendezvous and robotics technologies in space

/// **Main CONOPS steps:**

- / Prepared and unprepared rendezvous
- / Prepared and unprepared capture
- / Refueling interface leakage test
- / Robotic displacement of ORU from servicer to client

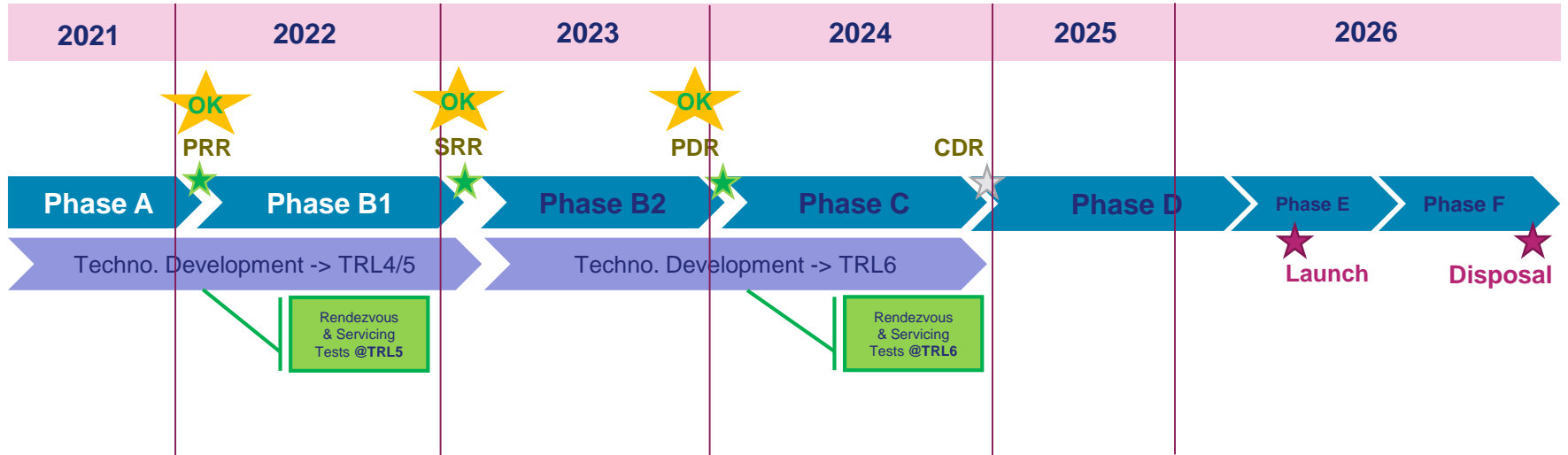
/// **To pave the way for:**

- / Inspection
- / Life extension by:
 - Station keeping
 - Refueling
- / Upgrade
- / Assembly



EROSS IOD PROGRESS STATUS

Initial Mission: In Orbit Demonstration of Rendez-vous & Robotics technologies



EUROPEAN TECHNOLOGIES

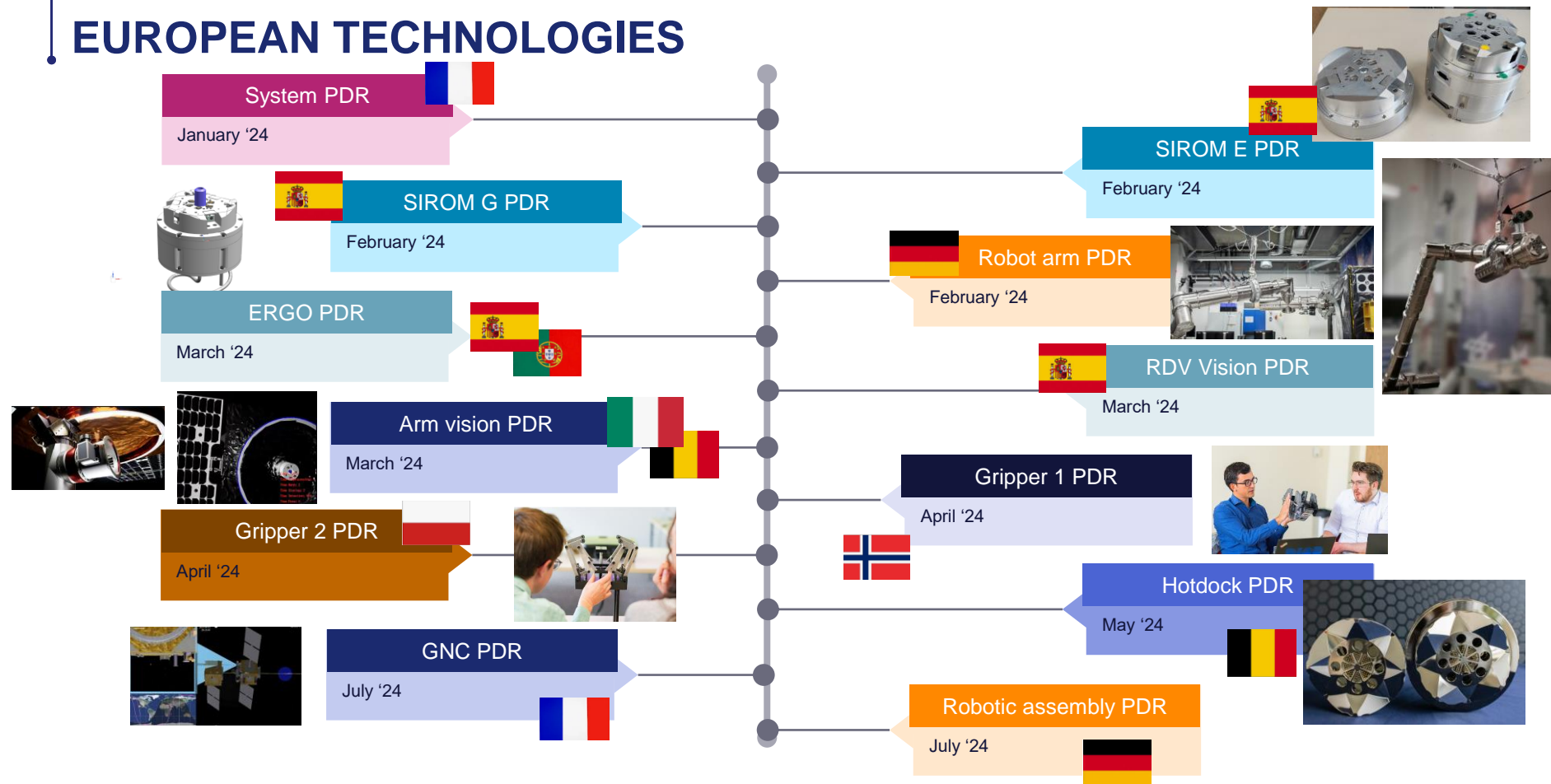


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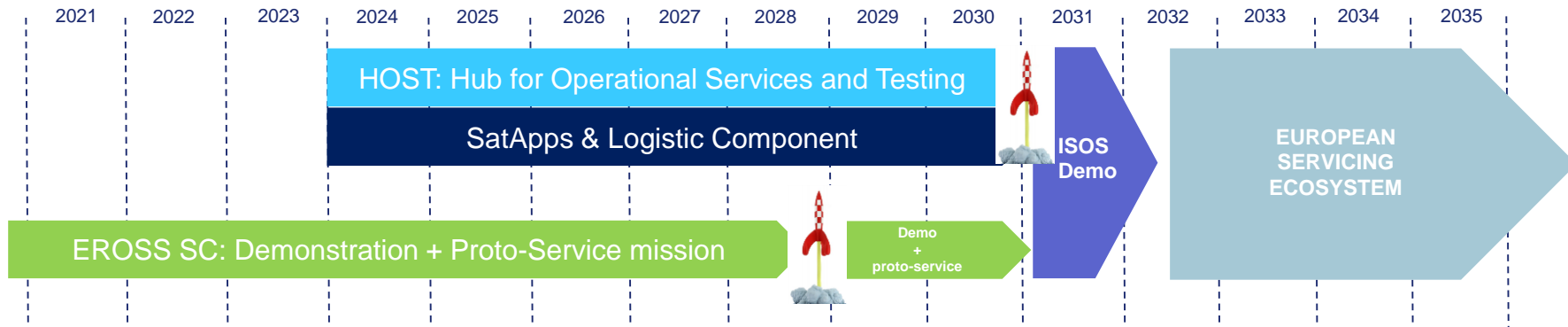
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ISOS – NEW AMBITIONS FOR EROSS

EROSS SC = ISOS Servicing Component

first stone of a global servicing ecosystem



FROM EROSS IOD TO EROSS SC

EROSS IOD

- / A 3-months mission
- / Low reliability
- / Technology demonstration

EROSS SC

- / Demonstration mission
- / Plus increased lifetime to:
 - Add demonstration with other ISOS components
 - Proto-services

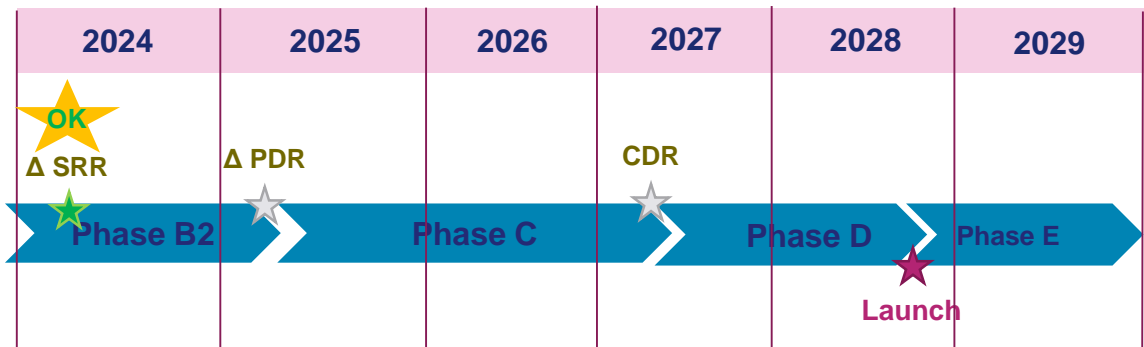
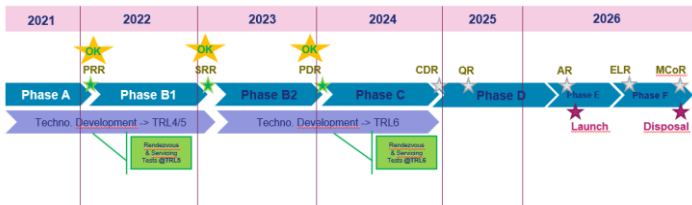


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VIDEO

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