

PRESS RELEASE

ENLIGHTEN at Space Tech Expo Europe 2025

Innovative, Smart & Low-Cost Propulsion Technologies for Future Launchers

At Space Tech Expo Europe 2025 in Bremen, ENLIGHTEN showcased how Europe is redefining access to space. Through a unique combination of advanced materials, intelligent systems, and green technologies, the project is driving the development of next-generation, smart, and cost-efficient high thrust propulsion solutions for future European launchers.

BREMEN, Germany, 21 November 2025 – The European research project ENLIGHTEN successfully presented its latest advancements in innovative, smart, and low-cost high thrust propulsion technologies at Space Tech Expo Europe 2025 in Bremen. From 18 to 20 November, ENLIGHTEN took the stage and welcomed visitors at its exhibition booth to reveal how its pioneering solutions are paving the way for the next generation of European launch systems.

Led by Loïc Debeugny (ArianeGroup) and Pablo Humanes (Anwendungszentrum GmbH Oberpfaffenhofen), ENLIGHTEN's presentation highlighted how Europe can achieve smarter, greener, and more affordable access to space through a combination of advanced materials, artificial intelligence, and additive manufacturing.

During the event, ENLIGHTEN showcased a range of key innovations, including:

- Additive manufacturing technologies to reduce production costs and improve design flexibility,
- AI-powered engine health monitoring systems for predictive maintenance and enhanced engine efficiency,

- Electric regulation valves and laser ignition systems for more precise and sustainable propulsion,
- and high-pressure multifunctional lines for more compact, lightweight, and robust engine subsystems.

A major highlight of the presentation was the discussion of upcoming testing and demonstrator phases, where ENLIGHTEN technologies will undergo hot-fire testing to accelerate technology readiness and bring Europe closer to its vision of independent, sustainable space access.

“ENLIGHTEN demonstrates how Europe can secure independent access to space through innovative materials, intelligent systems, and sustainable manufacturing methods,” said Loïc Debeugny, ENLIGHTEN Project Coordinator at ArianeGroup.

“The feedback we received at Space Tech Expo Europe underlines the growing interest in European high-tech solutions for a more competitive and environmentally responsible space industry,” added Pablo Humanes, ENLIGHTEN Project Manager at Anwendungszentrum GmbH Oberpfaffenhofen.

With its strong presence at Space Tech Expo Europe 2025, ENLIGHTEN reinforces its position as a driving force in Europe’s transition toward smarter and greener launch systems, contributing to a more competitive and sustainable European space sector.

About Space Tech Expo Europe

Space Tech Expo Europe is an annual trade fair held at the Messe Bremen in Germany. This year 10,000+ visitors were welcomed, and 950+ exhibiting companies and organisations presented their services, products and solutions in the exhibition halls. The event also includes four conferences with more than 200+ speakers.

About ENLIGHTEN

ENLIGHTEN (**E**uropean **i**nitative for **L**ow cost, **I**nnovative & **G**reen **H**igh Thrust **E**ngine) is an EC-funded project focused on one big objective: developing new technologies to reduce costs of access to space, while increasing competitiveness of current and future

Space Transportation Systems (STS) in Europe. It is led by ArianeGroup SA, supported by a team of 18 entities across Europe, each covering a specific topic or task. project-enlighten.eu

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