PRESS RELEASE

Discover the Technologies Powering Europe's Future Launchers – ENLIGHTEN Fact Sheets Now Available

Explore the innovations behind Europe's next generation of rocket propulsion

MUNICH, Germany, 6 March 2026 – The ENLIGHTEN project has released a new series of **technology fact sheets**, now available for download on the project website. These fact sheets provide an accessible overview of the key propulsion technologies being developed to support **smarter and low-cost efficient European launch systems**.

Designed for academia, the research community, satellite manufacturers, industrial suppliers, policymakers, space and non-space technology users, as well as anyone interested in next-generation propulsion technologies, these fact sheets provide concise insights into the innovations that could shape future European launch systems.

Each fact sheet highlights one of the innovative technologies developed within ENLIGHTEN, explaining its purpose, technical approach and expected contribution to future rocket engines.

Among the technologies featured are the **Multiplexed Laser Ignition System**, which replaces traditional ignition methods with lightweight laser-generated plasma for multiple engine restarts, and the **Single Element Nozzle Extension**, a large-scale 3D-printed component designed to improve engine performance while reducing cost and mass.

The collection also includes the **High-Pressure Multi-Functional Lines**, which simplify engine architecture by integrating multiple functions into a single system, as well as advanced manufacturing approaches such as **Laser-based Directed Energy Deposition (L-DED)** and **Powder Bed Fusion with Laser (PBF-LB/M)**. These additive

manufacturing technologies enable the production of complex, high-performance components with greater flexibility and efficiency.

In addition, one of the fact sheets introduces the **AI-powered Engine Health Monitoring System**, designed to detect anomalies, diagnose failures and support predictive maintenance for future reusable rocket engines.

Together, these innovations demonstrate how ENLIGHTEN is advancing propulsion technologies that will strengthen Europe's competitiveness and sustainability in space transportation.

Explore and download the ENLIGHTEN technology fact sheets on the project website: www.project-enlighten.eu

About ENLIGHTEN

ENLIGHTEN (**E**uropean i**N**itiative for **L**ow cost, **I**nnovative & **G**reen **H**igh **T**hrust **EN**gine) 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.

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