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Press release

ArianeGroup selected for two European Commission calls for projects to speed up the development of Europe's first reusable and eco-friendly launchers

Vernon, 4, July 2022

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- ArianeGroup has been selected by the European Commission to run two major projects in its Horizon Europe research framework program.
 - The SALTO project will facilitate the first flight tests of the Themis reusable stage demonstrator in Kiruna, Sweden.
 - The ENLIGHTEN project will speed up the development and introduction of reusable engine technologies.
 - Each project is built on the joint expertise of ArianeGroup, industry, research institutes and start-ups, to accelerate Europe's transition to increasingly innovative, competitive and eco-friendly access to space.
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Following the call for projects issued by the European Commission as part of its Horizon Europe program designed to encourage and accelerate innovation, ArianeGroup has been given responsibility for two particularly ambitious projects to speed up the development of reusable, eco-friendly European launchers. ArianeGroup will be heading the SALTO and ENLIGHTEN projects, bringing together numerous academic and industrial partners, including innovative start-ups.

"This European Commission initiative will enable us to accelerate the development of the first reusable and eco-friendly launchers in Europe, by mobilizing all the expertise on our continent and by combining the know-how of the major groups, research institutes and innovative start-ups," said André-Hubert Roussel, ArianeGroup CEO. *"After the unfailing support of the European Space Agency for the Prometheus reusable engine demonstrator and Themis reusable stage demonstrator, this further support from the European Commission – via the financing of ambitious projects – is excellent news for European sovereign access to space."*

The SALTO (reusable Strategic space Launcher Technologies & Operations) project will test vertical landing by a reusable launcher stage prototype within the next two years, with a budget of 39 million euros.

SALTO aims in particular to validate the landing phase, which is essential for launcher recovery. This phase is highly complex and entails a real learning curve – by means of situational tests – to speed up European expertise in this technology. The target vehicle, which comprises a number of technologies matured by ArianeGroup and its partners, will pave the way for even more ambitious

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demonstrations to reproduce the high-energy trajectory representative of an actual operational launch.

The SALTO project includes a full-scale demonstrator, which will carry out a number of low-altitude flights from the Kiruna site in Sweden. These tests are being prepared in synergy with ESA's Themis reusable stage program for which ArianeGroup is lead contractor. The maturity of the technologies will be achieved through in-flight experimentation, and is inspired by Agile development methods. These projects are preparing key technological building blocks for the next generation of reusable and eco-friendly European launchers.

For SALTO, ArianeGroup will be coordinating a consortium of 26 partners from 12 different countries and consisting of:

- industrial firms: MT Aerospace AG, ArianeGroup GmbH, Safran Data Systems, Safran Electronics & Defense, Avio S.p.A., Sabca, Thales Alenia Space Belgium S.A., GTD Sistemas de Información S.A., GMV Aerospace and Defence SA, Deimos Engineering and Systems S.L.U, Sener TAFS SAU, Swedish Space Corporation, Amorim Cork Composites A,
- research institutes: DLR Institute, CNES, ONERA, IRT Jules Verne, INCAS, and
- start-ups: ETAEM, ID-Services, Shark Robotics SARL, G.L.Electronics s.r.o, SIA WIT Berry, Realtime Technologies Ltd, SpaceForest sp. z o.o.

ENLIGHTEN (European iNitiative for Low cost, Innovative & Green High Thrust Engine) is designed to develop and test advanced production and deployment technologies for reusable rocket engines, following on from the Prometheus program. The project has a budget of 17.4 million euros.

ENLIGHTEN will strengthen the new propulsion system initiatives that ESA has entrusted to ArianeGroup in order to create a family of reusable, high-power engines using bio-methane or green hydrogen. These engines will power Europe's future family of reusable, eco-friendly launchers.

The goal will notably be to continue with development of key technologies for rocket engines, such as additive manufacturing and artificial intelligence, which are essential for monitoring and maintenance applications for reusable engines.

The ENLIGHTEN consortium, headed by ArianeGroup, comprises 18 partners from eight countries (Austria, Belgium, Estonia, France, Germany, Italy, Netherlands and Portugal) and consists of:

- industrial firms: ArianeGroup GmbH, Avio S.p.A., APP, ADIRA Metal Forming Solutions,
- research institutes and universities: DLR, Fraunhofer, IREPA, KU Leuven, ONERA, Silicon Austria Labs, and
- SMEs and start-ups: Aiko, Areelis, AZO, Edgise, Erneo, Laser Cladding Venture, Proekspert.

About ArianeGroup

ArianeGroup is lead contractor for civil and defense space launcher systems, responsible for the design and the entire production process of Europe's Ariane 5 and Ariane 6, including marketing and operation by its Arianespace subsidiary, as well as for the design, manufacture, and operational condition maintenance of the missiles of the French oceanic deterrent force. Internationally



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recognized for its innovative, competitive solutions, ArianeGroup has expertise in all aspects of state-of-the-art space propulsion technologies. ArianeGroup and its subsidiaries also offer their specialist skills in space equipment, services, space surveillance, and critical infrastructure to benefit other industrial sectors. ArianeGroup is a joint venture equally owned by Airbus and Safran, and employs around 7,000 highly qualified staff in France and Germany. Group revenues in 2021 amounted to €3.1 billion.

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