

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)  
Launch Vehicles in Service or in Development (1)

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THE ARIANE 6 LAUNCH SYSTEM, STATUS

**Abstract**

In December 2014, the ESA Council at Ministers level in Luxemburg decided the start of the Ariane 6 / VEGA-C programme development. The project is composed of: - Launcher System, with Airbus-Safran-Launcher (ASL) as Prime Contractor - Launch Base, with CNES as Prime Contractor - The motor P120C, a common element between Ariane 6 and Vega C projects that is jointly developed by ASL and ELV (VEGA Prime Contractor).

ESA has the role of Procuring entity and Launch System Architect.

The aim of Ariane 6 is to provide guaranteed access to space for Europe at a competitive price without requiring public sector support for exploitation.

The architecture is composed of the following elements: - LOX/LH2 Main Stage (LLPM) loaded with 140 tons and with a Vulcain 2.1 engine - LOX/LH2 Upper Stage (ULPM) loaded with about 32 tons and with the Vinci engine - Upper stage compliant with single and dual launch capability and fairing - P120C common solid rocket motor in the class of 130 tons

Launcher modularity is achieved by modifying the number of SRMs (two or four). The A-62 configuration is sized to launch 4.5 tons in SSO and 5 tons in GTO. The A-64 configuration is sized to launch 9.5 tons net P/L in GTO.

A new Launch Complex ELA-4 is under development. The operational scenario consists of: - The integration of the Main Core (ULPM+LLPM) in a dedicated building (BAL) that is transported to the Launch Pad under a Mobile gantry - The integration of the SRM's and upper part is performed under the Mobile Gantry on the Launch Pad.

The maiden flight is planned in 2020 and a full operational capability in 2023.

This paper will present the current status on the above-mentioned topics at Launch System level.