

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)  
Future Space Transportation Systems (4)

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RECOMMENDATIONS OF THE STUDY ON A NEW EUROPEAN LAUNCH SERVICE (NELS)

**Abstract**

This paper presents the main recommendations of the NELS study, contracted by ESA in 2012–13 to a team formed by the OHB Group and Roland Berger Strategy Consultants, supported by other industrial partners. The objective of the study was to investigate the feasibility of a new European launch service which would be economically self-sustainable in stabilised exploitation. The study covered all aspects driving the definition of a new European launch system, such as launch demand, technical concepts of the launch vehicle and launch complex, detailed modelling of development and production risks and costs, elaboration of a governance model, public-private partnership models and the industrial organisation. All elements were integrated into a business model simulating the net result of a European launch service provider over a production life-cycle of 20 years. The results of the NELS study show that, given a realistic market model, a self-sustainable business case for a private launch service provider can be established under favourable conditions. Key enablers of a cost-efficient, self-sustainable launch service are: a technical concept optimised for production and operations, an overall governance providing clear allocation of risks to public and private entities, and a streamlined industrial organisation providing incentives for continuous process optimisation. The three major recommendations resulting from the study are: (1) To clearly allocate the design authority role, (2) To set up as prime contractor an industrial consortium of core industrialists and (3) To have a supply chain with a reduced number of suppliers (-30% to -50%) compared to today's Ariane 5 scenario.