

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS (D2)
Launch services, Missions, Operations and Facilities (2)

Author: Mr. Pier Michele Roviera
European Space Agency (ESA), France, Pier.Michele.Roviera@esa.int

Mr. Jacques Bertrand
Centre National d'Etudes Spatiales (CNES), France, jacques.bertrand@cnes.fr

ARIANE 5 ME LAUNCH FACILITIES DEVELOPMENT AND QUALIFICATION

Abstract

The ground segment, and in particular the launch facilities, represent a key element in a launch system, since their reliability, availability and operational readiness significantly contribute to the success and to the performances of a launch system. The key issue for a launch vehicle ground segment has always been to comply with the vehicle needs. Nevertheless, in a global and competitive context where the financial considerations are key factors, it becomes necessary to take into account since the earliest stages of a launch system project both the development and operating costs, driven by relevant trade-offs and choices on the ground segment and the operational concept. Furthermore, the requirement to perform a new launch vehicle development atop an existing and fully operational infrastructure induces severe additional constraints. This paper intends to give a general overview of existing Ariane 5 integration and launch facilities, located at the Europe's Spaceport in Kourou, focusing on the development and qualification activities which will be needed for Ariane 5 ME (Mid-life Evolution) vehicle, characterized in particular by a new versatile upper stage, with an expander cycle re-ignitable engine (VINCI). The ground segment activities are fully integrated in the global A5 ME development plan; to this respect, the relevant outcomes of the SSCR-System and Stage Concept Review, planned in the first half 2010, will be outlined.