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MATURITY ASSESSMENT PROCESS FOR USAF NEW ENTRANT LAUNCH SYSTEMS

Abstract

In 2011, the United States Air Force (USAF) formally adopted the New Entrant Certification Guide (NECG) to codify the Air Force's approach to certification of new launch systems. The NECG defines the entire scope of Non-Recurring Design Validation (NRDV) that must be completed prior to a new launch system's first USAF certified launch. NRDV consists of validation of both vehicle and infrastructure design/qualification along with verification of the provider's engineering, manufacturing, and integration processes.

It was subsequently noted that a process was needed to evaluate the maturity of a launch system prior to completion of all planned NRDV activities. This assessment was necessary to provide USAF leadership insight into the progress being made in a certification effort, and assess the maturity through different stages of development. The Maturity Assessment Process described herein was therefore jointly developed by the USAF and The Aerospace Corporation to provide the framework for this periodic evaluation. The tool allows for the assessment of both the quantitative and qualitative factors associated with the performance of NRDV for an individual launch system. The final process utilizes 15 key factors, which can be evaluated by the certification team and combined into a single maturity determination. It is expected that this maturity determination would be one of several factors included in any certification or procurement decisions made by the USAF decision authority.