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Strategic Risk Management for successful space & defence programmes (6)

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RISK AND KNOWLEDGE-INFORMED DECISION-MAKING FRAMEWORK

Abstract

This research elaborates on the question: How do the relationships between risk management, knowledge management, and decision-making processes interact to achieve mission success? Each process may be performed independently for programmatic, technical or safety-related decisions or they may be utilized in an integrated fashion (a triad) to perform what can be referred to as risk and knowledge-informed decision-making. A comparative case study approach using three well-known National Aeronautics and Space Administration program failure scenarios (Apollo 1, Challenger and Columbia) will be utilized to examine the interaction of these processes and how uncoupling one or more elements can lead to disjoint, fractured and/or confusing information increasing the probability of programmatic or mission failure. The coherent interaction between elements of the triad leverages significantly more available information and is believed necessary to improve residual risk acceptance decisions. It is asserted here that the concept of organizational decision competency cannot be obtained without a disciplined approach in each of these areas. A set of heuristics will be formulated to improve complex decision-making. The findings of this research should be extensible to other organizations, which undertake high-risk projects.