

50th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE
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A FRAMEWORK PROPOSAL IN SUPPORT OF RISK AND KNOWLEDGE MANAGEMENT
INTEGRATION AT THE EUROPEAN SPACE AGENCY**Abstract**

This paper looks at a proposed framework integrating existing risk and knowledge management practices and tools at ESA. The aim is to analyze how Enterprise Risk Management (ERM) as well as program/project-related risk management processes may be supported by Knowledge Management (KM) practices currently in place and vice versa.

This paper will compare the commonalities between the risk and the knowledge management functions and tasks to identify common areas of influence. For example, risk identification may be supported by already collected project lessons learned or by locating a subject matter expert. Likewise, risks, which have been mitigated, may be considered candidates for knowledge capture and sharing opportunities across the whole Agency. Given the requirement set by ESA Member States to perform risk management in all ESA programs/projects and also at the Agency level, the network of risk coordinators provides an efficient channel for the sharing of risk-based knowledge. Specifically, the analysis will aim at identifying those KM processes lessons learned that can influence positively the future risk assessments, impact the decisions on mitigation actions to be taken and future controls to be applied. For example, when risk mitigation actions and decisions have been implemented, the sharing of such information between different layers and groups at ESA, will develop awareness among all the players and may constitute warning signals within the Risk Management process. Putting knowledge to work in the context of risk management is likely to have positive effects on mitigating risk at ESA, which translates into higher mission success rates.

A synthesis of existing risk and knowledge management models at ESA will be used as a starting point for this paper. While the concept of integrating RM and KM is not new in the literature, there are specificities which apply for large public organizations and this paper will compare some best practices observed. Finally the paper will conclude by suggesting some steps that can be taken to improve the relevance of KM within the Agency, deriving new requirements on the process, which will in turn strengthen the RM process in place.