## 44th SYMPOSIUM ON SAFETY AND QUALITY IN SPACE ACTIVITIES (D5) A Big Challenge : Safety in Aerospace Missions (1)

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## RISK MANAGEMENT AT ESA: EXPECTING THE UNEXPECTED

## Abstract

Space programmes face risks, generated not only by the technical challenges linked to the complexity of systems and to the extreme environments in which they expected to work, but also by many situations which may happen during the execution of its different phases and that may cause project delays and costs overruns with impacts also on the relationships with international partners. That's why risk management is a major component of ESA's management activity. Risk management, carried out at different levels in the Agency, aims at systematically identifying and assessing the risks that future events, situations or circumstances that may occur, and which could adversely affect the achievement of ESA strategic and programmatic objectives. On the basis of the assessment made, appropriate arrangements preventing those risks from materialising and to mitigate their consequences to a level which is acceptable by stakeholders can be planned and implemented, and the necessary reporting to allow overall supervision ensured. Whereas each programme manager is responsible for risk management relevant to his project, the Director General's Policy Office, according to the ESA Risk Management Policy in force, is implementing Agency-level risk management in support of strategic planning and decision making processes. This paper will illustrate the methods applied to identify and manage strategic risks within the Agency and how the established process contributes practically to an Agency-wide knowledge management at ESA. It finally stresses some risks Europe and ESA in particular will face in the near future as a global space player.