

48th SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE  
ACTIVITIES (D5)

Safety and quality: "SUCCESS" is the goal (1)

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QUALITY ASSURANCE – BENEFITS AND IMPACT ON PROJECT SCHEDULE

**Abstract**

Currently, when mission budgets are cut, there is an ongoing discussion that high quality assurance costs can be reduced. Indeed, for a project with unit redundancy, lower single unit reliability can be accepted and lower grade parts can be used. However, even for such missions reliability needs to be assessed during the design phase in order to establish the acceptable level of risk. When schedule pressure is high, quality can often be seen as a complication that is stopping the project from progressing and meeting its schedule milestones. In reality, insufficient QA involvement in the early planning of the project results in significant schedule impact. In the scope of this paper issues that can be avoided while implementing quality assurance are examined and evaluated in terms of schedule delays. Some issues with schedule impact are: design that is difficult to manufacture, manufacturing issues detected late due to delayed incoming inspections, material incompatibility, missing process certification. Based on the statistical data available in the literature, it can be shown that the majority of issues are caused by errors during design and manufacturing phases. As for the QA involvement in the testing phase, options that are discussed are implementing an independent entity during the tests or training the test personnel and accepting the risk of independent operations.