

SPACE SYSTEMS SYMPOSIUM (D1)

Lessons Learned in Space Systems: Achievements, Challenges, Best Practices, Standards. (5)

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FIRST LESSONS LEARNED**Abstract**

There are various engineering and management approaches in the space industry, in the micro-satellite branch and even in micro-satellite companies. Facing the new challenges of affordable micro-satellite constellations requires not only a paradigm shift in the satellite architectures, but also evolution if not revolution in the engineering and management approaches. To prepare this new way of designing, building, integrating and testing satellites a dedicated change roadmap has been defined. Firstly, strengths, weaknesses, opportunities and threats of engineering and management approaches within and outside space industry were analysed. Secondly, selected methods of agile product development are implemented. Thirdly, the initially implemented methods are analysed to understand their impact. Fourthly, depending on the identified impact further adjustments of the engineering and management approach are suggested and implemented. It is foreseen to also update the change roadmap based on this feedback loop. The current paper focuses on the description of the change roadmap and a discussion of first results from the second step. These results focus on the impact of implemented means to improve information exchange, prioritisation, task management and development team coordination. These means of agile product development have been implemented in two microspace projects: a) a project in the detailed design phase and b) a project in the conceptual design phase. Further adaptations will improve the engineering and management approach and finally the quality of the resulting products.