

IAF SPACE SYSTEMS SYMPOSIUM (D1)

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

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AGILE CHANGE OF PRODUCT DEVELOPMENT METHODS IN A MICROSATELLITE COMPANY

Abstract

Agile development methods are implemented two-fold in the described change of product development methods within a small system integrator company. Some of the implemented methods are agile product development methods and the change of the product development methods is also managed in an agile way. To prepare this new way of developing products within microsatellite industry, 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. Essential is the quick feedback of implemented changes. This allows to 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. Methods of agile product development have been implemented in two microsatellite projects in different development stages. Lessons learned from this implementation are summarized and an outlook is presented. To conclude, facing the challenges of affordable micro-satellite constellations requires not only a paradigm shift in the satellite architecture, but also an evolution if not revolution in the product development approach and the way these changes are performed.