Paper ID: 25086
oral

SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT (D3)
Space Technology and System Management Practices and Tools (4)

Author: Ms. Nadja Wolf
Airbus DS GmbH, Germany

Mr. Ludger Froebel
Airbus DS GmbH, Germany

INNOVATION AT ASTRIUM SPACE TRANSPORTATION – HOW TO BRING TECHNOLOGY FROM TRL1 TO TRL6

Abstract

The ability to innovate constantly is gaining more and more importance for companies. In order to enable a company quickly to respond to technology demands and to prepare for future challenges, an InnovationOffice had been created for implementing a contextual environment to innovate and to foster the creativity in the company. New technological skills, the proof of technical concepts and appropriate Intellectual Property (IP) processes to secure the knowledge is the base for new business, products and services which needs to be maintained by innovation processes.

This paper addresses the management of technology innovation within the Research & Technology (R&T) program at Astrium Space Transportation (ST). The R&T program is the main program to mature technology up to Technology Readiness Level (TRL) 4/5 before starting the product development process. Main objective is to catch advanced technologies following the trends and state of the art of academic and research center's world. In order to select the appropriate technology an "Innovation Pipeline" process had been introduced for studies at TRL 1 or 2. The paper describes the "Innovation Pipeline" process managed by Astrium ST's InnovationOffice. The process contributes and prepares R&T activities by providing a framework for early-stage bottom-up feasibility studies and proof of concepts.

The management of the "Innovation Pipeline" process will be explained supported by best practice examples. The main phases of the process will be detailed which are (1) the initiation of new studies with Call for Proposals, (2) the management of chosen studies as well as (3) the tracking of the activities for further advancement.

Results of the "Innovation Pipeline" are transferred to the next, higher level of R&T management which will be addressed and explained by examples and best practices.

The paper recommends a method and process how to mature low TRL technologies and proposals for further development and prototyping within the R&T program. Practical challenges for an innovation management in large scale enterprises (LSE) will be addressed which are the organizational frame, awareness of the process and results across the company, how to secure intellectual property and knowledge, the recognition of inventors and dissemination of the created results.