

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Enabling the Future - Developing the Space Workforce (5)

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THE FUTURE WORKFORCE ON LEARNING FROM AND WITH PEERS WHILE NAVIGATING  
THROUGH THE ERA OF SPACE 4.0

**Abstract**

The IPMC Young Professionals Workshops gathers ideas and recommendation from early career employees in the international space community and provides the International Program/Project Management Committee (IPMC) and IAF member organisations with greater knowledge, insights, and perspectives to better develop and empower the next generation workforce. The annual workshop itself represents the culmination of the outcomes of working groups focusing on various discussion topics. These groups discuss and investigate the topics and reach preliminary conclusions. The groups meet face to face for the first time at the workshop, and present a preliminary report to the entire workshop along with several representatives of the IPMC. Following the 2017 workshop, the topic groups have conducted research in the area of On the Side projects, Learning Partnership between Young Professionals and Senior / Retired Aerospace Professionals, and Reshaping the Space Industry 4.0.

On the Side (OTS) projects are projects undertaken outside the bounds of predefined work responsibilities, often by highly motivated individuals based on their professional and/or personal interest. OTS projects do not necessarily result in successful products or financial revenue, but may still be of great value. It can serve the purpose for spurring creativity by offering the change to creative minds to explore new domains, pursue their personal objectives, and to innovate. OTS projects thus contribute to the personal growth, motivation and company commitment, and may generate professional opportunities.

The application of advanced networking and data exchange technology to the manufacturing industry has been termed Industry 4.0. This fourth industrial revolution uses digitalization and digital networks to create intelligent networking of products and processes along the value chain. Similarly, Space 4.0 refers to the next generation of conducting space activities. It is driven by digital technology advances and will bring together the traditional government-led space programs and the existing and new commercial entities entering the space industry.

Whether looking at the changes produced by Space 4.0, or the additional knowledge gained by OTS project, it is more and more important to ensure the capture of this knowledge. Learning from and with our peers is of great value. Knowledge Transfer (KT) is key for organizations to be able to maintain their unique critical knowledge and develop for the future. Without a proper KT/Learning partnership plan, an organization may face problems; loss of key technologies, an increase in mistakes and the need for rework, more safety incidents and a loss of quality and profits.