

57th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE
ACTIVITIES (D5)

Emerging trends of knowledge management in organizations (2)

Author: Mr. Andrew Murphy

Singtel Optus, Australia, andrew.murphy@optus.com.au

Mr. Yaqoob Alqassab

National Space Science Agency (NSSA), Bahrain, yagoob.khalid@nssa.gov.bh

Ms. Chia Tian-Brearne Chen

Singtel Optus, Australia, brearne.chen@optus.com.au

Mr. Omar Laamoumi

Centre National d'Etudes Spatiales (CNES), French Guiana, omar.laamoumi@cnes.fr

Mr. Matthew McKay

NASA, United States, matthew.d.mckay@nasa.gov

Ms. Natasha Nogueira

Planet Labs Inc., United States, natasha.nfn@gmail.com

Mrs. Isi Casas del Valle Pacheco

Space Generation Advisory Council (SGAC), Chile, isicasasdelvalle@gmail.com

Mr. Masaru Saijo

Japan Aerospace Exploration Agency (JAXA), Japan, saijo.masaru@jaxa.jp

Ms. Maura Sordello

Thales Alenia Space Italia (TAS-I), Italy, maura.sordello@live.it

Ms. MIRIANA VALENTINO

Thales Alenia Space Italia (TAS-I), Italy, miriana.valentino.mv@gmail.com

KNOWLEDGE CONTINUITY IN SPACE ORGANIZATIONS: ADAPTIVE STRATEGIES FOR
SUCCESSFUL INTERGENERATIONAL KNOWLEDGE SHARING**Abstract**

In the vast expanse of space exploration, the management and transmission of knowledge within space organizations represents a significant challenge. This research focuses on effective knowledge sharing across generational divides, and exploring the critical role of cultivating essential soft skills that facilitate knowledge transfers and foster a culture of learning and innovation. The recommendations provided in this paper delve into the evolving landscape of Knowledge Management (KM) amidst the obstacles and opportunities presented by digital transformation and workforce dynamics. As space organizations navigate through the complexities of high turnover rates, impending waves of retirement, and the integration of diverse generational cohorts, the urgency for a robust KM strategy becomes paramount. To ensure operational stability and continuity of knowledge, the proposed strategy will simultaneously prioritize soft skills alongside technical knowledge, as the retention of both are crucial for ensuring successful knowledge continuity across generations.

The study advocates for a knowledge-sharing culture within the space industry that merges Young Professionals' (YPs) fresh perspectives with senior professionals' tacit and explicit knowledge through mentorship. Such a reciprocal workforce dynamic not only strengthens the KM framework but also bolsters organizational resilience. This approach invites contributions from all levels, enhancing operational stability and equipping organizations for future challenges. By promoting an adaptable, dynamic

environment, this research proposes innovative practices to foster continuous learning and inclusivity, thereby expanding the knowledge base and positioning space organizations to be better prepared for future advancements and challenges. In an agile-aerospace context, adapting technologies such as Artificial Intelligence (AI) may significantly enhance the capture and dissemination of tacit and explicit knowledge. By emphasizing the centrality of end-users and stakeholders, there is advocacy for strategies that prioritize user engagement. This leads to the tailored delivery of knowledge, accommodating diverse learning preferences within the KM framework.

This paper emerges from a collaboration among ten YPs from seven countries around the world, focused on providing recommendations on how KM can be improved within space organizations, as a part of the International Project/Programme Management Committee (IPMC) YP workshop. By converging the perspectives of YPs from around the globe, these recommendations offer fresh insights into the symbiotic relationship between technology, soft skills, and KM strategies in the unique context of space organizations. These aim to contribute to the exploration of emerging trends, innovations, and practical challenges in KM, creating a foundation for a future where knowledge is more freely exchanged across new frontiers.