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KNOWLEDGE MANAGEMENT STRATEGIES FOR AN EVOLVING SPACE SECTOR: A
COMPARATIVE CASE STUDY OF THE SWEDISH SPACE CORPORATION'S (SSC) AND THE
SPACE GENERATION ADVISORY COUNCIL'S (SGAC) METHODS

Abstract

Knowledge management is defined as the process of creating, using, gathering, organizing, and sharing collective knowledge within an organization. This transfer of knowledge is crucial for maintaining continuity, innovation, and skills across projects, especially in the context of an international environment.

This paper aims to observe the emerging trends of knowledge management within space organizations as they see their workforce evolve rapidly. Ensuring the transfer of knowledge across generations and international boundaries requires the deliberate implementation of strategies and processes to build upon past achievements and leverage the experience of former generations of space professionals. Capturing knowledge, harnessing technical skills, and establishing knowledge-sharing platforms are necessary to preserve institutional memory and facilitate continuous learning.

Knowledge management is key everywhere. Indeed, effectively training the new generation and ensuring knowledge transfer within international environments has become essential for organizations to retain talents and adapt in today's rapidly evolving space sector. However different organizations with different compositions, structures, and varieties of expertise have differing knowledge management strategies.

This paper offers a comparative case study of knowledge management within SSC – Swedish Space Corporation and the Space Generation Advisory Council's (SGAC) methods in sustaining the ability to learn, access, and share knowledge. SSC is one of Europe's only accesses to space thanks to sounding rockets and balloon launches at Esrange Space Center. Known for its world-leading expertise in balloons and frequent suborbital rocket launches, the decades-old Rockets & Balloons department is facing a rapid change in its workforce through a wave of retirement and significant new recruitments. Meanwhile, the largest space organization for students and young professionals, SGAC, is led by volunteers aged only between 18 and 35, inherently imposing a large turnover of its members across its initiatives. It has hence developed a certain set of techniques for retaining knowledge.

Thanks to the insights of these two different space organizations, this study will focus on highlighting the trends, concerns, lessons learned, challenges, and solutions for the future of knowledge management in the space sector. Some areas of focus of this study will be training programs, digital tools, and the importance of the work environment in enabling a sustainable transfer of knowledge. Indeed, fostering a culture of openness, collaboration, and mutual respect is vital in overcoming language barriers, cultural differences, and organizational silos in international organizations.

This paper compares these strategies and their suitability for their individual organizational structures, while highlighting their similarities.