

IAF KNOWLEDGE MANAGEMENT TECHNICAL COMMITTEE (KMTC)

1. Introduction

Working on complex space missions requires virtual teaming, learning lessons, sharing knowledge between generations, and developing deep expertise within an organization. The IAF Knowledge Management Technical Committee (KMTC) recognizes the importance of Knowledge Management to conduct space activities, and the mutual benefit of sharing experiences, best practices, promoting individual, team, organizational excellence, and new techniques with knowledge officers, managers, human resources actors, in space agencies, industries, universities and professional societies throughout the world.

In this age of big data, analytics, artificial intelligence, Internet of Things (IOT) and others, knowledge management can enhance the power of big data and help decision makers in today competitive economy. Digital transformation and innovations have changed how employees' access and share the knowledge and therefore KM processes need to adapt to the new environment in supporting and helping the users in how they collaborate and interact with the knowledge daily.

2. Summary

Key topics addressed by the Committee are strategies and tools for the sharing of the knowledge to develop new projects, the impact of the culture and the internal social network in driving innovation and creating new knowledge, processes, and technologies that organizations are using to sustain, energize and invigorate their ability to learn, innovate, and share knowledge. Examples of case studies of particular interest include successful projects and innovations in the application of knowledge management, grounded research in knowledge and risk management, methods that allow data, information, or knowledge exchange within or amongst organizations in support of actual

programmes and capturing engineering knowledge and information in computer models.

3. Highlights

The COVID-19 pandemic has had a profound and lasting impact on organizations. Industries have been forced to reassess their entire business model, assessing new ways to use advanced technology tools, pushing digitalization and automation to drive productivity. The pandemic has also shaped a new working life/environment with a combination of remote and on-site working, i.e a hybrid working model, in which some employees are on premises, while others work from home. In many organizations, employees working remotely were struggling and unable to access needed documents and information stored on local area networks, not knowing where to find answers, without colleague interaction, and struggling to remain on task without the structure of face-to-face meetings.

Terms such as digitalization, smart working, New Work or Work 4.0 have become in use. The changes that have taken place following the pandemic, e.g. virtual meetings, are all examples of "new work" having an enormous influence on organizations and are likely to remain. The forced digital transformation helped accelerate the appreciation of digital workplace concepts like remote work, people-centred processes and experience, and the value proposition of good KM practices. However, this has posed new challenges for collaboration and sharing knowledge virtually.

With the explosion of workforce conversations on digital collaboration tools, knowledge is flowing dynamically across the digital communication channels that have become the medium of new working relationships. This implies that the organizations' approaches to knowledge management need to consider how emerging technologies, such as Artificial Intelligence,

can support problem-solving and help workers innovate and uncover new insights. For example, AI technologies can take a contextualized information and push it to the organization's teams and systems, allowing the knowledge to flow through the workforce, and asking questions and seeking answers became more an electronic experience.

4. Future Outlook

The development of digital technologies has triggered substantial changes in the collaborative learning approaches and infrastructure, thus promoting an integrative approach to the areas of big data, knowledge management and innovation. This has taken a key role during the pandemic and the changes are likely to remain. With the radical diffusion of artificial intelligence, a new data-knowledge ecosystem has emerged where knowledge artifacts and human and social entities interact through new business models and applications powered by numerous new technologies, cloud computing and others.

The sharing of knowledge has become even more essential as COVID-19 has scattered staff among homes and different work sites. The digital technology enables knowledge to be transferred, with platforms and tools helping dispersed teams stay connected. However, the technology alone is not enough to harvest the value of knowledge management. It is necessary to shift the focus from knowledge capture to knowledge creation

and transfer, and promote a knowledge-sharing culture together with the digital tools and platforms.

According to several recent statistics, it is expected that the post-COVID-19 workplace will retain the hybrid on-site and remote presence. Therefore, the organizations will require new ways of driving more effective collaboration across the remote teams of employees.

The emphasis of knowledge management until recently was on search and findability and expertise location. The pandemic has forced companies to operate in a virtual world leading to an acceleration in the evolution of the toolbox of knowledge management toward the digital workplace. Knowledge management has not changed direction, in the sense that we all continue to do things that we were doing before, but the balance has shifted toward the creation of digital communities and digital workplace.

5. Committee activities

The plan for early summer next year is to organize a Knowledge Management Virtual Event, possibly held in CNES, Paris. The topics are Collaboration platform, Digital transformation, Digital community of practice, Public-private partnerships, Data protection and sharing. The challenge to be addressed is how companies use products of space, i.e. ontologies..