Abstract  Knowledge Management (KM) is a relatively new area that has been evolving at an astonishing pace since mid-1990 as organizations increasingly recognize the importance of developing an internal environment where the knowledge is effectively managed. As in other technical fields, space operations face the challenge
of preserving and sharing knowledge. At the ESA Space Operations Centre, ESOC, KM is considered a strategic issue for maintaining and strengthening the leadership in spacecraft operations and ground systems infrastructure in an expanding international context. The article provides first a general background of the knowledge management approach, then describes the knowledge audit experiment that was conducted in ESOC as a pilot project in a specific area, then focuses on the current knowledge capture and sharing project.

**Keywords** European Space Operations Center · Knowledge management · Knowledge sharing · Knowledge criticality

**Introduction**

Continuing technological evolution, the search for ever-increasing capabilities and a more complex external environment have placed an emphasis for the Centre to identify, capture and share knowledge effectively and efficiently. This includes learning from the past, identifying the knowledge needed in the future and infusing KM practices into the daily work, thus making the workforce as effective as possible when dealing with operations, ground systems, and customers.

The European Space Operations Center (ESOC) located in Darmstadt, Germany, is one of the five establishments in Europe of the European Space Agency (ESA). The Agency, whose convention was signed in May 1975, is the European organization in charge of promoting, exclusively for peaceful purposes, cooperation among European States in space research and technology and their space applications. It has the mandate to establish and maintain the infrastructure of ground segment facilities (including control centre, ground stations, dedicated computers and network communications), and is specifically responsible for the operations of

![ESOC and the ESA ground stations network](image-url)