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CAPTURING TACIT KNOWLEDGE FOR SPACECRAFT OPERATIONS IN ESOC

**Abstract**

Over the past few years, several steps were undertaken towards the introduction of a knowledge management system at ESOC, the European Space Operations Centre.

The latest KM project included the breakdown of the ESOC technical domains in knowledge areas, fields and components and the analysis of the knowledge criticality and coverage for each technical domain to be able to identify the knowledge existing in specific areas and to perform a gap analysis. Through this analysis, it was possible to identify those areas requiring improvement and therefore to allow management to make educated decisions on whether it is worthwhile or not to invest in those areas to increase the knowledge level.

The paper will describe the current KM activities in ESOC specifically in knowledge capture, sharing and preservation. The paper will focus on the methods we are developing and adopting and the results obtained related to the process of knowledge capture using video-recording of experts.

In the first part, the paper will describe the steps which have been identified for the knowledge capture process: setting expectations and communication rules, structuring and conducting the interviews, preparing the list of questions to encourage the sharing of the tacit knowledge, reviewing the recorded material, etc. In the second part, the paper will illustrate the different techniques used for knowledge capture and emphasis will be put on the challenges posed by some of these techniques, like for example: capturing key content in a limited time, conveying the value of the content, determining the appropriate role of videotaping in the process, determining what is the most important information to be shared, making the information available to the largest number of potential users, determining the extent and frequency of the interviews, encouraging the review of the draft captured materials. The paper will provide some lessons learned based on the different knowledge capture experiences. The paper will provide some lessons learned based on the gathered knowledge capture experiences. Different approaches for the capture of tacit knowledge were needed as this type of knowledge is the result of human experience and intuition. The individual culture required some adaptations in the capture techniques.

Different solutions will be negotiated for each interviewer(s) concerning objectives, their and their team's availability, the number of individuals to be interviewed, the nature and depth of materials to be prepared for further distribution, locations of interviews and d many more considerations. The paper will conclude with the series of recommendations summarizing those formulated at the closing of each knowledge capture session.