Transfer and Reuse of Knowledge from the Service Phase of Complex Products

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The reuse of knowledge generated during the different phases of a product’s lifecycle is crucial for a company in order to achieve competitive advantage. This thesis investigates knowledge transfer within the service phase and between service and design phases through case studies from the oil industry. Knowledge generated during the service phase was analysed from the point of view of service engineers and engineering designers. Furthermore, the mechanisms involved in the transfer of knowledge within the service phase and between service and design were investigated. Both service engineers and engineering designers were interested in knowledge about changes, issues and improvements generated during service; however, engineering designers were more orientated towards knowledge of the equipment at a component level while service engineers were interested in obtaining an overview of the systems. The study showed that knowledge transfer between the service and design departments was not systematic and consisted primarily of knowledge pushed by service engineers to engineering designers. The issues that posed a barrier to a systematic reuse of service knowledge were taken into consideration whilst developing a model for managing the knowledge generated during the service phase. The core of this model, called the RSK model, is the analysis phase, in which information from service cases is evaluated and integrated into existing documentation. The RSK model has been developed based on the case studies from the oil industry, however an auxiliary case study from the aerospace industry indicated it is also suitable to answer the needs of the variant design industry.

General information
Publication status: Published
Organisations: Department of Management Engineering
Contributors: Vianello, G.
Number of pages: 265
Publication date: Aug 2011

Publication information
Place of publication: Kgs. Lyngby
Publisher: DTU Management
ISBN (Print): 978-87-92706-24-9
Original language: English
Keywords: oil industry, knowledge, knowledge management, service
Electronic versions:
Giovanna.pdf
Source: orbit
Source ID: 283148