Titel des Beitrags: A Knowledge Discovery in Databases (KDD) Approach for Extracting Causes of Iterations in Engineering Change Orders

Abstract: This paper describes an implementation of a Knowledge Discovery in Databases (KDD) process for extracting the causes of iterations in Engineering Change Orders (ECOs). A data set of approximately 53,000 historical Engineering Change Orders (ECOs) was used for this purpose. Initially, the impact of iterations in ECO lead time and uncertainty is assessed. Subsequently, a semi-automatic text-mining process is employed to classify the causes of iterations. As a result, cost and technical categories of causes were identified as the main reasons for the occurrence of iterations. The study concludes that applying KDD in historic ECO data can help in identifying the causes of iterations of ECO which subsequently can provide a framework for companies to reduce these iterations. In addition, the case represents an example of benefits that can be achieved with the application of KDD in engineering change management.

Intellectual Contribution: Discipline-based Research