Performance Metrics in Engineering Change Management: Towards a Methodology to Investigate the Efficiency of Handling Engineering Changes

Abstract:

The efficient management of engineering changes highly influences the success of an engineering design project. Additionally, the increasing complexity, the faster development cycles and the growing competition in many industries turn the focus in engineering science to the engineering change management and its improvement. Although the research activity increased steadily in recent years, the literature lacks a broad understanding of performance metrics either to analyze the structural implications of the applied engineering change management process or to measure its efficiency in its implementation. Therefore, the paper presents a first draft of a procedure to support the project management in investigating its engineering change management. Consequently, a method is introduced which defines and details the steps necessary for the analysis. Hence, Performance criteria are developed to leverage the performance measurement. In addition to criteria developed in advance for the investigation, historical data of change orders is used to take company...
specific change characteristics into account. By utilizing the given data, pattern within the engineering change data can be found to further improve the quality of the performance criteria. Finally, the application is enabled by introducing a way to implement the criteria and conduct a performance analysis.

Stichworte: Engineering Change Management, Performance Metrics, KPI

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