Supporting the Implementation of Engineering Change Management with the Viable System Model

Abstract:
Engineering change management (ECM) is crucial for the overall success of engineering projects in general. Engineering changes (ECs) are required to react to internal and external dynamic influences surrounding projects. Proper implementation of ECM supports projects in coordinating EC processes, which results in more efficient operations. There are, however, many challenges when it comes to implementing ECM in an organization. One of the identified challenges is that there are no approaches that address and support the implementation of ECM from systemic perspective. In this paper such an approach is introduced, based on the Viable System Model (VSM). For this, functional abstraction is used as a research methodology to derive a functional description of the as-is ECM control system and the should-be one. Comparing both reveals the potential to improve the as-is ECM. The developed approach is then applied in a case study to describe how it supports ECM. The paper concludes with suggestions for future research.

Stichworte:
Engineering change management, Viable System
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  · Einrichtungen > Fakultäten > Fakultät für Maschinenwesen > Institut für Mechatronik > Lehrstuhl für Produktentwicklung und Leichtbau (Prof. Zimmermann) > Konferenzbeiträge
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