Abstract:
The complexity in all products and processes increases and the need for operative agility is seen as a key factor of success (Link and Lewirck, 2014). Agile approaches are extremely beneficial for situations with high uncertainty and a continuously changing environment. During the exploration new insights are gathered and an abstract vision becomes a concrete product idea. Based on testing and user feedback the feature set is adapted. The guiding principles are the interdisciplinarity and the strong design orientation. Rapid implementation of ideas (“manifestation”) triggers internal and external communication and feedback mechanisms. The prototype is seen as a process- and phase-spanning driver of the innovation process. However to date, there is no clear understanding of how an agile development actually looks like in the field of mechatronics and what the role of prototyping is in this context. Thus, the goal of this explorative study is to evaluate how prototyping is
related to a mechatronic project path with regards to agile development. To this end, a prototyping roadmap is used to derive an agile mechatronic product development.

Stichworte:
Case study, Decision making, Early design phases, Innovation, Mechatronics

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