The use of prototypes within agile product development

Abstract:
Due to rapid technology change and increased innovation dynamic, product development is related with high uncertainty and complexity [2]. As a consequence of the shortened product life-cycles, agile development becomes more important. It fosters cross-functional project work and enables a team to react fast and flexible to a continuously changing environment. Central aspect of the agile approach within physical product development is prototyping. This work identifies criteria to analyze the use of physical prototypes within an agile set up. Therefore, a Makeathon has been analyzed. In contrast to plan-driven development, prototypes are used to explore, design, verify, test the usability or communicate product aspects. They support the learning process by providing important insights about the solution space on which the planning of the next iteration is based. The data also support the assumption that there is not "one" approach in agile product development. It is much more likely to be unique to each product, which is also one of the strengths of agile product development, as it allows you to react flexibly to changes.

Stichworte:
Agile Development, Physical Product Development; Prototyping; Makeathon

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