

## Master/Study Thesis

# Application of agile methods on ship design

Ship design is handled project-wise nowadays. Despite similar characteristics, each ship that is designed, is deemed as an one-of-a-kind product. The same description applies to software development. Every software, even if it serves the same purpose as another, is uniquely designed, as each program differs in terms of architecture, components and objects. While since the 1950s, the Design Spiral is the dominating approach utilized in most shipyards and design offices, software development has been a field of application for various different approaches of project management. E.g., in recent years, the established V-Model is more and more evicted by agile methods.

Due to the similarities in software development and ship design projects, the feasibility of agile methods for the ship design process shall be further investigated. The goal of this thesis is to work out a guidance for the application of agile methods in ship design. In order to accomplish the goal, the following research questions need to be answered:

1. Should agile methods be applied to ship design?
2. What are the specific agile tools that should be further investigated regarding usage in ship design?
3. Can those tools can be applied to ship design and if yes, how?

Eventually, derived from the outcome of the questions, a proof of concept shall be delivered based on an exemplary subsection of the Design Spiral.

**This Thesis can be written in English as well as in German.**

**Diese Arbeit kann sowohl in Englisch als auch in Deutsch bearbeitet werden.**

Interested? Please contact Junheng Zhang for further information.

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