

## Integration of Agile Philosophy and Scrum Framework to Missile System Design Processes

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**Abstract :** In today's world, technology is competing with time. In order to catch up with the world's companies and adapt quickly to the changes, it is necessary to speed up the processes and keep pace with the rate of change of the technology. The missile system design processes, which are handled with classical methods, keep behind in this race. Because customer requirements are not clear, and demands are changing again and again in the design process. Therefore, in the system design process, a methodology suitable for the missile system design dynamics has been investigated and the processes used for catching up the era are examined. When commonly used design processes are analyzed, it is seen that any one of them is dynamic enough for today's conditions. So a hybrid design process is established. After a detailed review of the existing processes, it is decided to focus on the Scrum Framework and Agile Philosophy. Scrum is a process framework. It is focused on to develop software and handling change management with rapid methods. In addition, agile philosophy is intended to respond quickly to changes. In this study, it is aimed to integrate Scrum framework and agile philosophy, which are the most appropriate ways for rapid production and change adaptation, into the missile system design process. With this approach, it is aimed that the design team, involved in the system design processes, is in communication with the customer and provide an iterative approach in change management. These methods, which are currently being used in the software industry, have been integrated with the product design process. A team is created for system design process. The roles of Scrum Team are realized with including the customer. A scrum team consists of the product owner, development team and scrum master. Scrum events, which are short, purposeful and time-limited, are organized to serve for coordination rather than long meetings. Instead of the classic system design methods used in product development studies, a missile design is made with this blended method. With the help of this design approach, it is become easier to anticipate changing customer demands, produce quick solutions to demands and combat uncertainties in the product development process. With the feedback of the customer who included in the process, it is worked towards marketing optimization, design and financial optimization.

**Keywords :** agile, design, missile, scrum

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