

Title of Dissertation

The Importance of Iteration Lengths in Agile Software Development Methods

Abstract

Traditional, monolithic waterfall methodologies for developing software have given way to different types of Incremental and Iterative development over the last twenty years. The reasons for this have been cited as reduction of risk, better management of evolving user requirements, greater interaction and involvement of users and the ability to develop and deliver software functionality quicker. A group of these methods are classed under “Agile software development”. These methods place emphasis on delivering many, small chunks of software increments through collaboration, cross-functional and self-organising teams, in fixed time intervals usually known as iterations. Organisations that have embraced agile development, have either adopted one of the existing methods, or selected various features or aspects from across existing methods, to create their own agile method suitable to their nature.

One of the salient features in almost all agile methods is the duration, or length of the iteration. As of today, there has been no comprehensive study or research into the various factors that impact the choice of the iteration length for a software development project. Literature does exist around Incremental / Iterative development, Agile methodologies and also on iteration lengths. But there is no single piece of literature that has consolidated all possible factors that influence the choice or determination of the iteration length. This research contends that it is not only important to understand what factors influence the choice of iteration lengths, but also to understand how each of these factors impacts the choice.

In this paper, an attempt is made to gather and explore all possible factors that influence the choice of the iteration length; these factors are organised and classified based on how they impact the choice of the iteration length.