Chapter 8
Agile Enablers and Adoption Scenario in Industry Context

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ABSTRACT

In the globalization of fast changing business and technology environment, it becomes very important to respond quickly to changing user requirements. Traditional methodologies are not appropriate for the projects where user requirements are not fixed. Agile methodologies have been developed to cope up with user changing requirements and emphasize more on working software and customer collaboration. Agile is an umbrella term and it is used for many software development methodologies which shares common characteristics. This chapter mainly focuses on the working methodology of agile development and the usage areas of industry where agile development is implemented. Agile software development is difficult in distributed environment as the team members are at distributed locations. This chapter discusses agile industry applicability enablers which are useful for agile software development in distributed environment.

INTRODUCTION

The globalization that started in the last decade of the twentieth century has great impact on the development of various sectors of society and industry. Globalization not affected the social, cultural, behavioral, political and economic aspects of present society and industry but also the engineering and technology fields. It has affected the software industry sector immensely. Before globalization, there were sophisticated traditional software development methods, approaches, tools and techniques which made software development a time consuming and costly affair. The globalization of software development has an evolutionary impact on the industry. It has reshaped and reinvented the traditional software development methods, approaches, tools and techniques. Now days, customer priorities and requirements are changing in the projects at any time and at any stage, which really never suits to the traditional soft-

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ware development approaches, processes and methodologies. A set of new generation of processes and agile methodologies has been appeared in the picture. Due to simple rules, principles and light weight processes, the agile methodologies are the first choice for many software industries (Akbar et al., 2011). The objective of this chapter is to explore the usage areas of agile development and the key enablers for the agile applicability in distributed environment.

AGILE METHODOLOGY DEFINITION

Agile methodology is a "sunshade term for various iterative and incremental well-defined software development methodologies". Agile software development is a collection of software methods in which response to changing requirements; priority of requirements, adaptive planning, iterative and evolutionary development, early delivery of product, continuous improvements in product development is done through self organizing teams and cross functional teams, the teams can be co-located as well as distributed.

Now the question arises is that what do you understand by term "AGILE"?

In Dictionary agile means "nimble, quick, supple, limber, flexible, and lithe".

According to Alistair Cockburn, "Agile suggests being valuable and maneuverable. An agile process is weightless and capable. The weightlessness is a mean of staying maneuverable. The capability is a matter of staying in the race." (Rüping, A., 2003).

According to Barry Boehm, "Agile methods are an outcome of quick prototyping and rapid development experience as well as the resurrection of a philosophy that programming is a craft rather than an industrial process." (Abrahamsson, P. 2008).

The various popular agile methodologies are Extreme Programming (XP), Scrum, Crystal, Pair-programming and Lean development. Let's try to understand these models in detail and how they have impacted the industry? But before that we have to understand agile manifesto and agile principles.

AGILE MANIFESTO PURPOSE

The purpose of agile manifesto according to (Beck et al., 2001) is "We are uncovering better ways of developing software by doing it and helping others to do it. We value

- Individuals and interactions over processes and tools.
- Working software over comprehensive documentation.
- Customer collaboration over contract negotiation.
- Responding to change over following a plan."

That is, while there is value in the items on the right, we value the items on the left more.

Above manifesto purpose statement have a number of important aspects to consider. First, the word "uncovering" was selected to assure the people that all the Alliance members don't have all the answers. Second the word "by doing it" was selected to indicate that alliance members actually practice these methods in their own work. Third, alliance members group is about helping, not telling. The alliance members want to help others with agile methods, and to further their own knowledge by learning from those whom they try to help.